

# TRE HOLDINGS CORPORATION Integrated report 2024

Publisher TRE HOLDINGS CORPORATION

15th floor of Tokyo Sankei Bldg., 1-7-2 Otemachi, Chiyoda-ku, Tokyo

Website https://tre-hd.co.jp/en

# **Editorial policy**

The TRE Group's Integrated Report 2024 has been published to provide a review of the TRE Group's First Medium-Term Business Plan and to communicate the strategies of the Second Medium-Term Business Plan, which started in April 2024, from both a financial and non-financial perspective.

# Scope of report

### Organizations covered

TRE HOLDINGS CORPORATION and consolidated subsidiaries (including some affiliates accounted for by the equity method)

### Period covered

April 1, 2023 to March 31, 2024 (including some information from outside the coverage period)

# Guidelines referenced

- $\bullet \ \, \text{The International Financial Reporting Standards (IFRS) Foundation "International Integrated Reporting Framework"} \\$
- Japan's Ministry of Economy, Trade and Industry, "Guidance for Integrated Corporate Disclosure and Company-Investor Dialogue for Collaborative Value Creation"
- Global Reporting Initiative "GRI Standards"
- Task Force on Climate-Related Financial Disclosures (TCFD) Final Report
- Japan's Ministry of the Environment, Ministry of Economy, Trade and Industry, "Basic Guidelines on Accounting for Greenhouse Gas Emissions Throughout the Supply Chain (ver. 2.4)"



# Cover design concept

This graphic design features multiple layers of TRE's green circular loop, symbolizing our aim of accelerating the shift to a circular economy.





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Note regarding forward-looking statements
The information contained in this report, with the exception of historical facts, constitutes forward-looking statements based on certain assumptions, and represents the judgments of the Group's management based on currently available information. Accordingly, actual business performance and other information disclosed in the future may differ due to a variety of factors.





# -Origin

Formed through the integration of two of Japan's leading waste management companies with the vision of realizing an efficient recycling and carbon-neutral society.

In October 2021, TAKEEI CORPORATION and REVER HOLDINGS CORPORATION (currently REVER CORPORATION), two leading companies in Japan's waste treatment and recycling industry, integrated their operations to form a joint holding company—TRE HOLDINGS CORPORATION. This management integration was driven by a shared aspiration to revolutionize Japan's waste management industry and create an efficient recycling and carbon-neutral society.

# Today

TRE HOLDINGS CORPORATION continues to grow as a comprehensive environmental management company. We are driving collaboration between the waste management industry and other industries to create a circular economy.

The 20th Century economic model based on mass production, mass consumption, and mass disposal has been a major factor in growing environmental problems such as climate change, resource and energy issues, and waste-related concerns. A shift to a circular economy is a vital step in creating an efficient recycling and carbon-neutral society. Accordingly, we are working to strengthen collaboration between the waste management industry and other industries to drive this shift. These efforts are beginning to take shape in the form of new business models and systems.

# HUTUIC Where is the TRE Group headed next?

Driving change in the way society produces, consumes, and disposes of products in order to further accelerate the shift to a circular economy.

In April 2024, we established a new long-term vision. As a WX (Waste Transformation) environmental company, we are pursuing a new growth strategy aimed at becoming a leading company in the circular economy by expanding our business domain. In order to achieve further growth as a company we will strive to solve environmental issues by working to overcome the technological and economic hurdles involved in transforming traditionally difficult-to-recycle waste and end-of-life products into recyclable resources.



# TRE HOLDINGS' current position

TRE HOLDINGS CORPORATION was established in October 2021 through the integration of TAKEEI CORPORATION and REVER HOLDINGS CORPORATION (currently REVER CORPORATION), based on a spirit of equal partnership. At the time of the integration, both companies were major players in the waste treatment and recycling industry (waste management companies) listed on the Tokyo Stock Exchange. Each had an established presence in the industry, with TAKEEI known for its industrial waste treatment and REVER for its metal recycling.

While pursuing growth independently was an option for both companies, the respective management teams opted to integrate their business operations. This management decision was driven by a shared vision of creating an efficient recycling and carbon-neutral society by pursuing overall optimization to achieve a sustainable society, rather than simply pursuing the growth of each company alone. The two companies also shared a strong sense of mission to transform Japan's waste management industry.

At the time, trends in Japan were undergoing a major shift, with the Ministry of Economy, Trade and Industry (METI) announcing its Circular Economy Vision 2020, which advocates a shift from the linear economy—mass production, mass consumption, and mass disposal economic model prevalent in the 20th century to a circular economy that recycles and utilizes resources and energy.

In order to achieve this shift to a circular economy, coordination between the manufacturing industry and the waste treatment and recycling industry is vital. However, there was one issue that hindered this cross-industrial collaboration —the fact that operations in the waste management industry were relatively small in scale.

Compared to the manufacturing industry, companies in the waste management industry tended to be smaller in terms of financial capital, human resources, technological capabilities, and the size of their facilities, which meant that they were unable to build an equal relationship with their counterparts in the manufacturing industry.

In order to overcome this challenge and accelerate Japan's shift to a circular economy in tandem with companies in the manufacturing industry, we believed that the best solution was an integration between two companies that shared the same vision and in which both companies would invest capital to increase the size of the company and strengthen its operations.

This year marks approximately three years since TRE HOLDINGS was established in October 2021. Looking back over the past three years, my honest feeling is that the decision to integrate the two companies was the correct one. I feel that we are making steady progress in strengthening our management foundation, developing our business environment, and achieving unity within the company, and this is a testament to the dedication of each and every one of our employees.

Upon reflection, I am reminded once again that it is our people that have been the driving force behind the integration of the two companies. At both the management level and the operational level, it is our shared vision that has been a major factor in promoting smooth integration between the two companies, and our management team has a key role to play in clearly defining our vision, uniting the resolve of all Group employees in the same direction, and encouraging cooperation, collaboration, and co-creation.

I believe that our constructive ambition to create a better waste management industry is the driving force behind TRE's value creation, and will enable us to help solve societal challenges.

### **Review of First Medium-Term Business Plan**

At the time of TRE's foundation in October 2021, we announced our growth strategy in the form of our First Medium-Term Business Plan, and subsequently worked to enhance our corporate value based on this plan. For the fiscal year ended March 31, 2024, the final year of the Plan, net sales were 92,860 million yen (a year-on-year increase of 2.4%), operating profit was 7,769 million yen (an increase of 3.5%), ordinary profit was 7,787 million yen (an increase of 2.5%), and profit attributable to owners of parent was 3,623 million yen (a decrease of 30.3%). Although we achieved the sales target set out in our initial plan, we fell short of our profit targets (operating profit and net profit). With regard to our financial KPIs, both our ROE of 5.5% (target: 8% or higher) and operating profit margin of 8.4% (target: 10% or higher) fell short of their respective targets. Although we upwardly revised our financial targets for the fiscal year ended March 31, 2023, the second year of the Plan, based on strong performance in the fiscal year ended March 31, 2022, the Plan's first year, we ultimately fell short of these revised targets, largely due to the impact of high costs stemming from the conflict between Russia and Ukraine and a decline in the volume of waste handled, among other factors.

Another reason is that while we made large-scale growth investments, such as capital expenditures and M&A, it has taken longer than anticipated to realize returns on these projects. From a short- to medium-term perspective, I believe that my first responsibility as CEO is to strengthen the Group's earning power going forward.

On the other hand, from a medium- to long-term perspective I feel that we have made solid progress in

# **CEO Message**

advancing our planned growth strategy measures.

We positioned the First Medium-Term Business Plan as a phase for laying the foundations required to realize Group synergies through the management integration. In other words, we placed a greater emphasis on building a strong management foundation from which to achieve future growth than on short-term performance. In this regard, over the past three years we have made steady progress in our efforts to develop this foundation.

The integration increased the size of our business, both in financial and non-financial terms. From a business perspective, we have been able to leverage the strengths of TAKEEI and REVER, which have a complementary and synergistic relationship, while also making proactive investments, including capital expenditures and M&A, to expand our operations and increase our treatment capabilities as a waste management company.

As we advance these growth strategies, the industrial community's view of TRE is beginning to change. Over the past three years, we have seen a significant increase in the number of inquiries regarding potential collaborations from other industries, governments, municipalities, universities, and research institutions. As Japan's industry undergoes a shift toward a circular economy, TRE is beginning to establish a definite presence as a leading co-creation partner in the waste management industry.

# Pursuing growth for recycling businesses

In our First Medium-Term Business Plan, which concluded at the end of March 2024, we set four basic strategies: (1) pursuing growth for recycling businesses, (2) promoting eco-friendly energy businesses, (3) developing new technologies, and (4) sustainability management.

Of these, pursuing growth for recycling businesses is an important strategy that is deeply related to our core business.

The first key approach in this strategy is to secure a sufficient volume of received waste, which serves as the starting point for our recycling efforts. As society moves toward a circular economy, a shift to circular production is taking place across a range of industries, and efforts to extend product lifetime and reduce waste, including containers and packaging, are progressing.

From the perspective of a shift to a circular economy, these types of process shifts represent rational changes. At the same time, however, this trend also reduces the amount of waste generated, which results in a lower volume of waste disposed of and recycled. This trend is becoming evident across all industries and is expected to become even more pronounced in the future.

Although a reduction in the amount of waste treated

and recycled is positive in terms of reducing the burden on the global environment, for the waste treatment and recycling industry it also means fewer business opportunities. In this rather paradoxical situation, one of the major management challenges in the waste management industry going forward will be how to secure a sufficient volume of waste.

Another important task in pursuing growth for our recycling businesses is refining our intermediate treatment and recycling capability for waste received. In addition to the integration between TAKEEI and REVER, the TRE Group is also pursuing proactive capital expenditure and M&A opportunities. As a result, we have successfully increased the number of waste materials we are able to treat and recycle, significantly improving the TRE Group's treatment and recycling capabilities. Through these efforts, we have developed a business environment that enables us to offer one-stop treatment and recycling of both diverse and large volumes of waste.

TRE GLASS CORPORATION, which we acquired as part of our strategic M&A efforts, exemplifies our focus in this direction. Glass is a material that is used in a wide variety of applications, including automobiles, housing, and building structures. Although the disposal of a variety of products generates a large amount of glass waste, glass is a very difficult material to recycle. Previously, TRE also lacked the capability to handle glass recycling. Accordingly, we worked to enhance our ability to recycle glass by adding a waste management company specializing in waste glass recycling to our corporate group. This has resulted in many new inquiries from a wide range of industries, including the automotive, housing, and construction industries.

I believe that by pursuing growth for our recycling businesses, we will make it easier for other waste management companies throughout Japan to participate in the TRE Group, and that our role as a platform company in the waste management industry will lead to a revolution in the industry, making a significant impact in Japan's shift to a circular economy. Going forward, we will continue to proactively pursue mergers and acquisitions to further strengthen our business.

# An even speedier approach to management

Looking at societal developments over the past three years, it is strikingly apparent that the shift to a circular economy in the other industries is progressing even more rapidly than we had anticipated. This has been driven by changes in the international community with regard to policies related to carbon neutrality as well as resource and energy, which are in part linked to economic security policy from the perspective of securing and competing for resources, including recycled resources.

For example, in the EU, the policy of "decoupling



economic growth from environmental harm (resource consumption)" has been adopted under the European Green Deal\*1 policy, and moves to strengthen resource recycling within the European region are accelerating. Meanwhile, in Japan, the Ministry of Economy, Trade and Industry (METI) formulated the Growth-Oriented, Resource-Autonomous Circular Economy and Strategy\*2 in 2023, and is advancing policies aimed at accelerating the shift to a circular economy.

Against this backdrop, Japanese industries, including the manufacturing industry, are accelerating their efforts to build new recycling-oriented business frameworks with a greater sense of urgency than ever before.

Given these circumstances, although we feel that we have made solid progress toward our growth strategy over the course of our First Medium-Term Business Plan, we are also aware of the management challenges ahead. One particularly important task is enhancing the speed of our management. Considering the seriousness of environmental issues such as climate change as well as resource and energy problems, we believe that the transition to a circular economy must be implemented with a greater sense of speed. However, much of the waste management industry is operated based on a permit and licensing system, and when implementing strategies such as new capital investments it can take from several months to several years to obtain the necessary permission from administrative agencies or municipalities. At TRE, we have created a new five-year Medium-Term Business Plan, which began in April 2024.

Under this new business plan, we intend to make concerted efforts to push our strategy forward as quickly as possible.

In this new Medium-term Business Plan, we have established a new long-term vision of a WX (Waste Transformation) environmental company to support a circular economy. Waste Transformation, or "WX" as we commonly refer to it, is a new phrase and concept that expresses our determination to transform waste and used products that have conventionally been difficult to process into recycled resources by overcoming technological and economic challenges.

This term also embodies our intention to reconsider what used to be thought of as "waste" as "resources" to promote a change in people's mindset and behavior, as well as our desire to work across boundaries to co-create with other industries or through industry-government-academic partnerships to transform the way manufacturing and consumption takes place and the shape of industrial society in order to create an efficient recycling society. We will take on the challenge of further enhancing our capabilities as a WX environmental company in order to make this vision a reality. For details of TRE's new Medium-Term Business Plan, see Part 2: Vision and Strategy ( $\rightarrow$  p.17)

- \*1 A policy initiative by the European Commission (EU). The policy sets out goals related to the reduction of greenhouse gas emissions and the decoupling of economic growth from environmental harm (resource consumption).
- \*2 A comprehensive policy package aimed at achieving an autonomous and robust domestic resource recycling system and capturing demand in international markets through the reconstruction of resource recycling economic policies, etc.

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# The TRE Group Principles and Code of Conduct

# **Principles**

# We are committed to the conservation of the global environment.

With the serious impact of destruction of environments and climate change across the globe underway, we strive to support the creation of an efficient recycling and carbon-neutral society.

As a comprehensive environmental management company that places value on harmony with nature and coexistence with the local ecosystem, we are pursuing growth for recycling businesses and promoting eco-friendly energy businesses. To that end, we also actively pursue the development of innovative technology.

We work to develop further well-balanced relationships with all stakeholders and implement sustainability management to facilitate the delivery of continuous socioeconomic growth.

# The meaning behind our company name

We are committed to trying and innovating (Try) to develop new technologies (Technology), expanding our recycling business (Recycling), and furthering our renewable energy business (Renewable Energy) in order to conserve the global environment (Earth, Ecology).



# The TRE Group Corporate Code of Conduct

We are aware of our corporate social responsibility as a company involved in the environmental business. Accordingly, in addition to faithfully complying with all laws and ordinances, we will act as follows with good common sense.

# 1. Act on a customer-first basis

We will act in a way that earns trust and satisfaction from our customers while always thinking from their standpoint.

### 2. Consider balance with the environment

We will proactively work on saving energy and reducing CO<sub>2</sub> emissions based on our outstanding technological capabilities and abundant experience with a strong awareness to build a carbon-neutral society and to engage in recycling and use of resources in our business activities. In addition, we will fully consider the natural environment around us and our living environment.

### 3. Provide corporate information suitably and appropriately

We will provide corporate information suitably and appropriately to customers, business partners, shareholders, investors, and other stakeholders while aiming to communicate widely with society.

### 4. Respect human rights

We will respect the human rights of each person. We will not permit discrimination or harassment, based on race, ethnicity, religion, nationality, social status, gender, age, or disabilities. We will also not allow child labor or forced labor.

# 5. Compete fairly

We will engage in business while respecting fair and transparent competition. In addition, we will maintain sound and appropriate relationships with politicians, government officials, customers, their agents, and all other third parties while not engaging in any kind of extortion, bribery, or other form of corruption for the purpose of acquiring unfair profits.

### 6. Strive to ensure safety at work sites

We will strive to ensure safety at work sites with the whole company working together to achieve that. We will aim for zero work accidents together with our business partners and associated companies.

### 7. Strive to form workplaces that make the most of individualities and abilities

We will aim to form workplaces in which each of our employees can demonstrate their individuality, motivation, and abilities to the maximum possible extent. Moreover, we will ensure a pleasant working environment and strive to achieve comfort and affluence.

### 8. Do not provide benefits to antisocial forces

We will not provide economic benefits to antisocial forces that threaten the social order and the sound activities of companies.

# How TRE HOLDINGS CORPORATION generates value as a comprehensive environmental management company

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Part 1 Value creation model

# Toward an efficient recycling society and a carbon-neutral society —how the TRE Group creates value as a comprehensive environmental management company

Contributing to a sustainable global environment An efficient recycling society A carbon-neutral society Reduce CO<sub>2</sub> emissions Prevent environmental pollution Reduce quantity of landfill waste Promote use of renewable energy Reduce use of Conserve forest resources natural resources Consumers Other industries Use products with care for Receive recycled resources and as long as possible. create materials and products and dispose of them properly Build a circular economy by promoting cooperation between waste management industry and other industries **( )** 

**Waste management industry** 

Receive and recycle waste

The TRE Group receives waste of products that were originally produced by other industries and used by consumer society, and recycles almost all of these materials. Furthermore, we are expanding our renewable energy business in order to contribute to a sustainable global environment by realizing an efficient recycling society and a carbon-neutral society.

# 1,354,000 tons/year

# Waste & Scrap

- Waste from
- construction industry - Waste wood
- Waste plastic
- Waste liquid
- Waste glass (bottles/plate glass)
- Ferrous and non-ferrous scrap
- End-of-life vehicles
- Used home appliances
- Televisions - Washing machines
- Air conditioners
- Refrigerators
- Used small home appliances/electronic devices
- Solar panels

# Fuel for power generation

- Thinned wood
- Underused forest resources
- Timber damaged by insects or disaster
- Refuse derived paper and plastics densified fuel (RPF)

# TRE HOLDINGS

未来へ、捨てない創造力を。

**Waste Treatment & Recycling Business** 

Resource Recycling **Business** 

Renewable Energy Business

# Other

- Environmental Engineering Business
- Environmental Consulting Business

# Resources recycled 1.240.000 tons/year

# **Recycled resources**

- Construction work materials [recycled crushed stone (RC-40, sand products, etc.)]
- Ferrous and non-ferrous raw materials
- Recycled plastic raw materials
- Glass cullet
- Raw materials for gypsum board and cement-based solidification materials
- Fuel for woody biomass power generation
- Raw materials for papermaking
- Raw materials for compost
- Raw materials/fuel for cement production
- Secondary material for steelmaking processes (Eco-Foam™)
- Fuel for waste material power generation
- etc.

# **Renewable Energy**

- Electricity from woody biomass power generation
- Electricity from solar power generation



### Financial capital

- · Healthy financial foundation
- Ability to generate ample
- Stable transactions with financial institutions



# Intellectual capital

- · Waste treatment technology
- Recycling technology experience Woody biomass power generation technology
- Environmental plant and product-related patents



### Manufactured capital

- and recycling facilities

Relationships of trust with



authorities and local governments

Partnerships with raw material

assembled products and others

Collaborations with universities

producers, manufacturers of



# Human capital

- Managers with expertise in environmental businesses
- Employees that support



# Natural capital

- Eneray
  - Water Sunlight
  - Forests

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The TRE Group is committed to creating environmental value, focusing on three main businesses: the Waste Treatment & Recycling

Business and the Resource Recycling Business, which are founded on its high-level sorting and classifying technologies, and the

Renewable Energy Business, which centers on woody biomass power generation.

TRE HOLDINGS' vision for a circular economy based on cross-industrial collaboration between the waste management industry and other industries

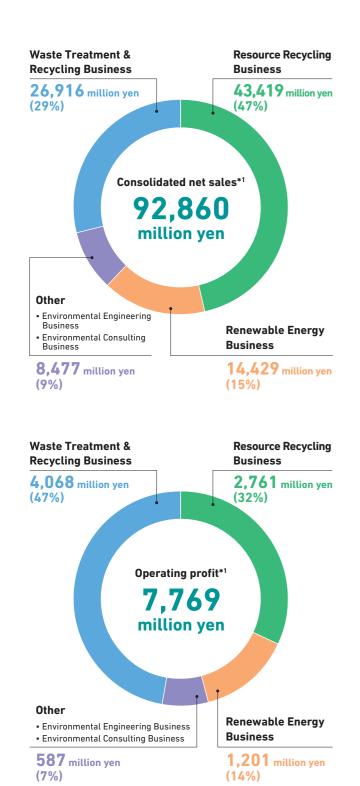
Final disposal amount 110,000 TRE landfill (final disposal) sites tons/year **Waste Treatment &** (Other companies' final landfill sites) Forest property area **Group-owned** 865 ha forests **Recycling Business** Woodland park golf courses and solar **Resource Recycling** nower generation facilities cultivation **Afforestation State-owned forests** Vood chips (construction waste) **Business** Forest thinning Intermediate **RPF** production plants processing facilities RPF raw materials Resources received Resources recycled Offcuts from forest thinn underused forest resour 1,354,000 1,240,000 Recycled resources tons/year tons/year Wood chips input Wood chips Renewable manufacturing plants 690,000 Recycling efficiency Material **Energy Business** tons/year manufacturers 92% Collection and transportation Wood chips Power generated 592 GWh/year Woody biomass power generation plants **Amount harvested** 10 tons/year Residual heat Electricity construction waste, ferrous and non-ferrous scrap, end-of-life eceived resources vehicles, used home appliances, Consumer goods manufacturers small home appliances Cultivation of agricultural produce Power retailing companies Consumers/consumer society **Construction sites** Local communities

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diverse businesses

With the TRE Group's three main businesses: the Waste Treatment & Recycling Business, Resource Recycling Business, and Renewable Energy Business, we are working to achieve our vision of a circular economy by developing an Environmental Engineering Business and Environmental Consulting Business, as well as promoting cross-linked collaboration between the waste management industry and other industries.



<sup>\*1</sup> Net sales and operating profits in each business represent figures before consolidated adjustment.

# Business segment

# Waste Treatment & Recycling Business

# Business function

- Collection and transportation
- Waste treatment (construction-related)
- Recycling
- Landfill (final disposal)

## Business overview\*2

TRE HOLDINGS offers integrated processing in waste treatment and recycling businesses. In collection and transportation, we collect waste from construction and building demolition sites and transport them to intermediate treatment facilities. In intermediate treatment, we accurately sort the delivered waste by item type, remove extraneous material, crush, compress and chemically treat it. In recycling, we process, compact and check the quality of recyclable waste such as construction work materials, gypsum board, wastepaper and plastics. In landfilling, we treat residue that is difficult to recycle at landfills for final disposal.

| Part 1 Value Creation Model | Part 2 Vision and Strategy | Part 3 ESG | Corporate Data

Operating companies TAKEEI CORPORATION and 16 other Group companies

# Resource Recycling Business



- Metal recycling
- Automobile recycling
- Home appliance recycling
- Waste treatment (metal-related)

We recycle a wide range of metal materials. In metal recycling, we purchase scrap metal from manufacturers, building demolition contractors and local governments, and shear, compress, crush, sort and recycle it into metal raw materials, depending on the type of material. In automobile recycling, we disassemble end-of-life vehicles sourced from dealers and auctions, collect and sell the reusable parts and crush and shred the reminder after disassembly.

In home appliance recycling, we receive the four home appliances collected under the Home Appliance Recycling Law from recycling system management companies, and manage designated transaction points and recycling facilities depending on the region. Finally, in metal waste treatment, we compress and crush metal waste.

Operating companies REVER CORPORATION and 2 other Group companies

# Renewable Energy Business



- Woody biomass power generation
- Power retailing
- Forest management
- Use of residual heat (for agricultural and other purposes)

We produce green power through woody biomass power generation and supply it to local elementary and middle schools and public facilities, ensuring the local production and consumption of energy. We have built a stable fuel procurement structure of unused forest resources such as offcuts from forest thinning and pruned branches through collaborations with surrounding authorities and forestry workers. We also use the residual heat that results from power generation in the cultivation of sweet tomatoes and wood ear mushrooms. The Group is strengthening its efforts in forestry management (planning, staged logging, afforestation) for the forests it owns. We are also promoting more renewable energies that can be recycled as resources.

Operating companies Tsugaru Biomass Power Generation Co., Ltd. and 12 other Group companies

# Other

Environmental Engineering Business Environmental Consulting Business



- Design and construction of environmental devices and plants
- Development, manufacture, and sale of special vehicles
- Environmental measurement, surveys, and analysis
- Real estate appraisal and valuation

The Environmental Engineering Business designs and constructs environmental equipment and plants and develops, manufactures and sells special vehicles with a focus on environmental device and plant-related businesses, LPG bulk lorries, and garbage collection trucks. It also offers a maintenance service structure so that the equipment and vehicles introduced can always be used in excellent condition.

We provide various consulting services in our Environmental Consulting Business. These include industrial waste management and measurement certification operations for companies, environmental protection work, environmental measurement, investigation and analysis of waste, soil, water quality and air. We also undertake environmental assessment work for local governments and authorities.

Operating companies Environmental engineering: Fuji Car Manufacturing Co., Ltd.
Environmental consulting: Environmental Conservation Co., Ltd.,
Earth-Appraisal Co., Ltd.

\*2 The number of operating companies is current as of April 1, 2024.

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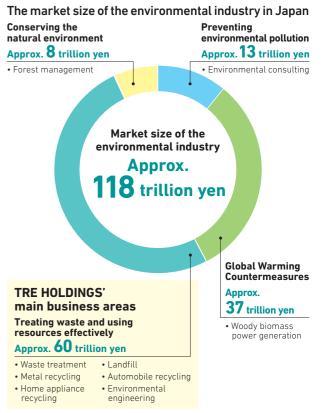
# Market outlook for the environmental industry

# Against a backdrop of deepening global environmental problems, the environmental industry continues to grow

The shift toward decarbonization is advancing, driven by the growing severity of climate change and resource and energy concerns. The need to reduce greenhouse gas emissions in order to achieve carbon neutrality by 2050 is greater than ever before. In addition, the accelerating shift to a recyclingoriented society means that the challenge of adapting to environmental challenges must be addressed immediately, through the advancement and practical application of recycling technologies, as well as by further strengthening cooperation between the waste management and recycling industries and other industries such as the manufacturing industry.

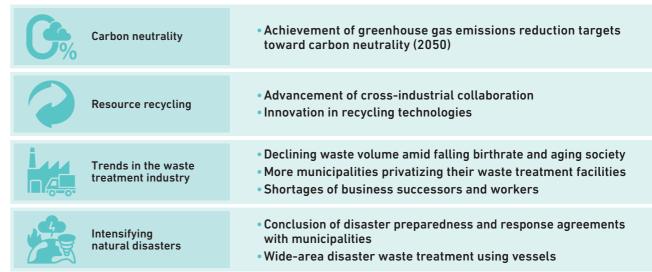
The current market size of Japan's environmental industry is approximately 118 trillion yen, of which the circular economy-related market, which is particularly closely related to the TRE Group's business, has grown to approximately 60 trillion yen. Furthermore, Japan's Ministry of the Environment has set a goal of increasing the market size of circular economy-related businesses to more than 80 trillion yen by 2030 in its Circular Economy Action Plan, which it developed as a roadmap toward the year 2050.

Amidst these circumstances, as a waste management company that offers a wide range of treatment and recycling services for industrial waste, end-of-life vehicles, used home appliances, and construction waste, the TRE Group is in a unique position within the environmental industry and is working to create new value in the circular economy era of the future.



Source: "Report on the Market Size and Employment of the Environmental Industry"

# Challenges facing Japan's environmental industry



Part 2 Vision and Strategy

Helping create an efficient recycling, carbon-neutral society

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Enhancing Japan's National Infrastructure Resilience

partnering with municipalities to handle disaster waste —

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— investing 1% of sales in R&D —



Mitsuo Abe, **President and COO** 

# Our long-term vision as a WX environmental company

According to documents published by METI (the Growth-Oriented, Resource-Autonomous Circular Economy and Strategy), the market size of the environmental sector, including the waste treatment and recycling industry, is estimated to reach approximately 80 trillion yen by 2030, and projected to 120 trillion yen by 2050. My basic understanding is that the environmental sector and the waste management industry represent the growth industries of the future era.

On the other hand, however, I feel that the stock (or capital) markets have been skeptical in their evaluation of the waste management industry, and that there is still a gap in how the growth potential of the industry is perceived.

As COO, I have an important responsibility to firstly enhance the TRE Group's profitability, as well as communicate the growth potential and societal importance and value of the environmental sector, including the waste management industry, to shareholders, investors, and the wider society. It is also important to strengthen information disclosure and communication with stakeholders in order to secure the proper understanding and support.

Having completed our First Medium-Term Business Plan, we announced our new long-term vision of becoming a WX (Waste Transformation) environmental company. WX expresses our aim of overcoming the economic and technological issues that have made the recycling of certain waste and end-of-life products difficult, allowing us to transform these materials into recyclable resources. This term also embodies our strong resolve to work across boundaries to enhance co-creation with other industries, or through industry-government-academic partnerships with the aim of transforming the way manufacturing and consumption takes place, as well as the structure of society, to realize a circular economy. We have further divided the period through to the year 2050 into three broad phases, and will pursue growth strategies across each phase to make our goal of WX a reality.

Going forward, as a leading company in the circular economy TRE will work to expand its business domain by further evolving into a WX environmental company, which is capable of recycling all types of waste into usable resources. Then, in the medium to long term (2040s), we aim to grow into a recycling-focused corporate group with sales of 300 billion yen—approximately three times our current level. Tripling our sales will be a challenging task, as it will not be possible to reach this target through organic growth alone.

Accordingly, in addition to strengthening and improving our existing businesses, we will continue working to expand the scale of our operations and create new value through mergers and acquisitions.

# **Starting TRE's Second Medium-Term Business Plan**

In order to realize this new long-term vision, we have launched our five-year Second Medium-Term Business Plan (FY ending 03/2025-FY ending 03/2029). Under this plan, we aim to enhance our profitability, setting targets for the fiscal year ending March 31, 2029 of net sales of 120 billion yen (FY03/2024: 92.8 billion yen), operating profit of 12 billion yen (FY03/2024: 7.7 billion yen), and EBITDA of 22 billion yen (FY03/2024: 14.2 billion yen). In our management we will also place an even greater focus on cost of capital, and will strive to increase the growth rates anticipated by the market by improving our ROE and pursuing sustainability management. To achieve these targets, we will pursue a growth strategy centered on making existing businesses more resilient and venturing into new businesses and fields.

Our goal of "making existing businesses more resilient" represents a realistic and important strategic direction that will improve our profitability from a short- to medium-term management perspective. Accordingly, we will strive to create new value and strengthen our functions in our existing business areas, namely the Waste Treatment & Recycling Business, Resource Recycling Business, and Renewable Energy Business. Specifically, in the Waste Treatment & Recycling Business, we will expand into the general waste business and plastic packaging recycling business, as well as increase the number of intermediate treatment facilities in the Tokyo metropolitan area. In the Recycling Business, we will make large capital investments to increase our shredder dust recycling capabilities and the volume handled. Meanwhile, in the Renewable Energy Business, we will strengthen our electric power retail sales framework. By advancing these measures steadily, we will strive to further solidify our management foundation, which will serve to improve our earning power.

Among these, plastics recycling is one of our most important strategies. With a wide range of industries focusing their attention on the treatment of plastic waste due to the introduction of the Act on Promotion of Resource Circulation for Plastics, which went into effect in April 2022, we have been working to develop plastic recycling technologies and establish new recycling systems while strengthening collaboration with other industries, such as chemical manufacturers, automakers, and home appliance manufacturers.

At the same time, "venturing into new businesses and fields" is vital in order for TRE to achieve significant growth in the future. Our efforts to venture into new businesses and fields are based on the following seven key initiatives:

# COO Message

# TRE's 7 priority initiatives to accelerate the Group's growth

- 1. Integrated environmental business concept in Ichihara City, Chiba, and Soma City, Fukushima
- 2. Develop new businesses through concrete cross-industrial
- 3. Handle general waste through public-private partnership
- 4. Contribute to building national resilience (enhancing functional resilience)
- 5. Generate competitive advantage by implementing in society new recycling technologies
- 6. Capitalize on Group synergy and widen operations through M&As and overseas business development
- 7. Enhance medium- to long-term initiatives for a carbon-neutral society (reforestation and forest management)

Of these, our integrated environmental business concept is a particularly important initiative. In September 2022, we announced the initial concept, entitled the TRE Integrated Environmental Business Concept. Under this business concept, we will establish a large-scale waste treatment, recycling, and processing facility in Ichihara City, Chiba Prefecture, focusing on four business areas: (1) crushing, sorting, and recycling of industrial waste; (2) waste incineration and power generation; (3) advanced sorting of metal resources; and (4) advanced sorting and recycling of waste plastics. Based on this structure, we are working to develop new technologies and apply them on a societal level in order to create an efficient recycling society, with the aim of sequentially commencing operations from 2025 to 2027. Following on from our Ichihara City, Chiba initiative, we have also launched a new integrated environmental business concept—the Soma Circular Park Concept (located in Soma City, Fukushima). We have initiated a project to establish a model for local production and local consumption of energy and industrial resources through industry-governmentacademia partnerships based on collaborative agreements aimed at creating an efficient recycling and carbon-neutral society through waste recycling technology. We believe that bringing these two integrated environmental business

concepts to realization and establishing them as stable, viable businesses will lay the foundation for TRE's future growth.

It is also critical that we further promote cross-industry collaboration in order to accelerate the shift to a circular economy. With a variety of industries shifting to business models that are compatible with a circular economy. TRE has also embarked on new challenges. One example is the "Demonstration of Manufacturing-and-Recycling Integrated Process for Horizontal Cycle Enabled by Automated Sophisticated Dismantling of ELVs (end-of-life vehicles)." This technology demonstration project, which is jointly led by DENSO Corporation and REVER CORPORATION in collaboration with companies in the automotive industry and academic institutions, has been chosen as an industry-governmentacademia collaborative project aiming to expand the recycle content for automobile in the fiscal year 2023 supported by Ministry of the Environment, Japan. This project, which aims to accelerate the shift to a circular economy in Japan's core automotive industry, is attracting significant anticipation and interest. Through such initiatives, we will continue working to promote further cross-industry collaboration.

Other focus points of our Second Medium-Term Business Plan include expanding into the general waste business through public-private partnerships and building national resilience through infrastructure projects. Thus far, general waste has typically been managed, collected, and processed by local municipalities. However, in recent years many municipalities have been considering transferring their general waste processing operations to the private sector due to the aging of municipal waste processing facilities and the need to properly treat the plastic containers and packaging contained in general waste.

Another important topic that local municipalities must

consider is how to deal with the waste generated by disasters. We will advance our growth strategy by making existing businesses more resilient and venturing into new businesses and fields

In recent years, natural disasters such as major earthquakes, typhoons, and flooding caused by torrential rains have become increasingly common. This requires preparedness for risks that municipal disposal facilities are unable to handle, such as a large volume of waterlogged household goods and appliances that must be disposed of in a short period of time. In January 2024, Japan was struck by the Noto Peninsula Earthquake in Ishikawa Prefecture, and TRE has been working on a Groupwide level to support recovery and restoration efforts. In order to help local municipalities solve their waste-related challenges, we established a new Public-Private Partnership Department in April 2024 to strengthen our business functions and meet the demands of the current era, including providing support for the privatization of general waste treatment functions and enhancing resilience by concluding cooperative agreements regarding disaster waste treatment, among other initiatives.

# Solidifying our management foundation to support TRE's evolution into a WX environmental company

As part of TRE's evolution toward a WX environmental company, we have set the enhancement of sustainability management as a key corporate strategy in our Second Mid-Term Business Plan. In 2021, we established five material issues that underpin our sustainability management efforts, and have been working to strengthen our management foundation ( $\rightarrow$  p. 31).

In developing the Second Medium-Term Business Plan, we also established quantitative targets (non-financial KPIs) for each material issue in the fiscal year ending March 31, 2029. Going forward, we will implement specific measures to achieve these targets.

For example, increasing recycling efficiency is an important KPI for TRE in our efforts to create an efficient recycling society. At TRE, we aim to achieve 93% recycling efficiency by 2030 and 94% recycling efficiency by 2040. As a milestone toward these targets, we aim to achieve a recycling efficiency of 92.86% in the fiscal year ending March 31, 2029. To achieve this, we will work to create additional capacity by enhancing our ability to propose waste treatment and recycling solutions to our customers as well as improving the layout of our intermediate processing facilities. We will also improve our sorting, intermediate processing, and recycling functions to increase recycling efficiency.

Another important objective is to reduce CO2 emissions to contribute to a carbon-neutral society. TRE aims to achieve net zero CO<sub>2</sub> emissions (Scope 1+2+3) by 2050, and as a milestone toward this goal, we are targeting a reduction in CO<sub>2</sub> emissions (Scope 1+2) of 46% or greater compared to fiscal 2013 levels by 2030. In line with this, we are aiming to achieve a reduction of 21,228t-CO<sub>2</sub> (40.59% of the fiscal 2013

level) in the fiscal year ending March 31, 2029. To this end, we are implementing energy-saving measures at our business sites, plants, and offices, replacing heavy machinery and vehicles with electric models, and purchasing non-fossil fuel certificates to reduce our CO<sub>2</sub> emissions from purchased electricity (Scope 2) to net zero. We have also established the following five objectives to solidify our management foundation and support sustainable growth:

- 1. Reinforce internal control
- 2. Ensure safety and improve working environments
- 3. Hire and develop talent
- 4. Streamline and optimize operations
- 5. Solidify the financial foundation

The key drivers for solidifying our management foundation will be DX and human capital management. In order to create a true circular economy, it will be essential to digitize the flow of all goods and to control the circulatory flow of raw materials, products, waste and scrap, and recycled resources. However, the progress of digital transformation in the waste and recycling businesses remains slow. TRE will therefore focus on developing a digital business environment for the future.

Human capital management is another key task. As we advance plans to expand our large-scale intermediate processing facilities, including our integrated environmental business concept, securing the talent required to achieve this is an important management task, and to this end we will work to enhance our recruitment efforts. Recruiting female talent and developing their careers is also a management priority. In addition to developing a workplace environment that values diversity and is accommodating to all employees, and establishing related systems and programs, we will strive to create a corporate culture that is accepting of diverse work styles with the aim to becoming a company in which diverse human resources can realize their full potential.

It is also important that our shareholders, investors, and numerous other stakeholders understand and identify with our growth strategy and value creation narrative to accelerate the shift to a circular economy. One of our material issues is to "enhance our brand value and increase our recognition as a comprehensive environmental management company," and we are therefore focusing on strengthening our disclosure and communication efforts. In April 2024, we established a new Investor and Public Relations Department to strengthen dialogue with both domestic and overseas investors, as well as to ensure appropriate information disclosure and improve communication with a wide range of stakeholders.

Now that we have developed our Second Medium-Term Business Plan, we have entered a new phase of growth. Our challenge has only just begun. Going forward, we will strive to achieve a further evolution as a WX environmental company with the goal of creating an efficient recycling and carbon-neural society.

## Review of First of Medium-Term Business Plan

# TRE has achieved tangible results in building a management foundation for future growth.

# The next Medium-Term Business Plan will focus on improving earning power.

We positioned the First Medium-Term Business Plan (FY03/2022–FY03/2024) as a phase for laying the foundations required to realize Group synergies through the management integration, and implemented strategies to achieve this goal. In the fiscal year ended March 31, 2022, the initial year of the plan, we made a strong start, significantly exceeding the financial targets initially set in the plan, due to the implementation of cross-selling and other measures that leveraged synergies from the management integration, as well as high market prices for resources. However, growth slowed from the second year onward due to rising energy costs stemming from the prolonged conflict between Russia and Ukraine, as well as disruptions in the supply-demand balance for components and materials. Furthermore, due to delays in achieving returns on large-scale growth investments, for two consecutive fiscal years we fell short of the operating profit margin target we had

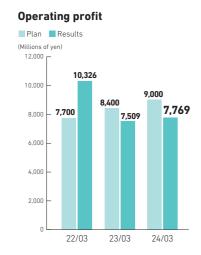
set as a financial KPI\*1. Accordingly, improving the TRE Group's earning power remains a key management task.

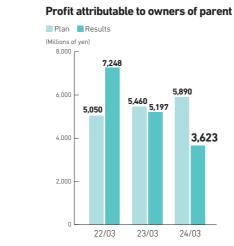
Nevertheless, we made steady progress in establishing the infrastructure necessary for future growth. In the First Medium-Term Business Plan, we set four qualitative goals: pursuing growth for recycling businesses, promoting ecofriendly energy businesses, development of new technologies, and sustainability management, and pursued measures to achieve them.

As a result, toward the objective of pursuing growth for recycling businesses, we began working to establish a plastics recycling scheme based on collaboration with other industries and expanded the TRE Group's business functions in anticipation of increasingly sophisticated recycling needs, including establishing advanced resin sorting capability and a new shredding line dedicated to electronic waste.

# Targets and actual earnings

# Net sales Plan Results 92,860 92.000 90.000 90.712 90.584 84.000





	FY03/2022				FY03/2023		FY03/2024		
	Plan		ults*	Plan	Res	ults	Plan	Results	
(Units: Millions of yen)	rtaii		Progress	rtaii	, tan		rtaii		Progress
Netsales	84,000	90,584	107.8%	90,000	90,712	100.8%	92,000	92,860	100.9%
Operating profit	7,700	10,326	134.1%	8,400	7,509	89.4%	9,000	7,769	86.3%
Operating profit margin	9.2%	11.4%	124.4%	9.3%	8.3%	88.7%	9.8%	8.4%	85.5%
Profit attributable to owners of parent	5,050	7,248	143.5%	5,460	5,197	95.2%	5,890	3,623	61.5%

<sup>\*</sup> The combined consolidated financial results of TAKEEI CORPORATION and then REVER HOLDINGS CORPORATION (currently REVER CORPORATION) for FY03/2022 (April 1, 2021 to March 31, 2022)

In addition, during 2023, the second year of the Plan, we announced the TRE Integrated Environmental Business concept in Ichihara City, Chiba. We also made significant progress in building cross-industry collaboration, including entering into a business alliance with Sumitomo Chemical Co., Ltd. for Car-to-Car recycling, concluding a basic agreement with Mizuho Leasing Company, Limited to build a circular economy scheme, and participating in Keikyu Corporation's "Miura no Mori" Forest Project. In other efforts, we promoted the development of internal and external resource recycling schemes, including establishing a glass recycling scheme between TRE GLASS CORPORATION, TAKEEI CORPORATION (Circular Economy Promotion Division), and Shinshu Takeei Co., Ltd.

In the Plan's final year, we succeeded in accelerating cross-industry collaboration and growth for the recycling business, as illustrated by the equity investment made by Mizuho Leasing Company, Limited, and the start of a project "Demonstration of Manufacturing-and-Recycling Integrated Process for Horizontal Cycle Enabled by Automated Sophisticated Dismantling of ELVs,"\*2 led jointly by REVER CORPORATION and DENSO CORPORATION.

For our goal of promoting eco-friendly energy business, in the Renewable Energy Business, we expanded woody biomass power generation using RPF\*3, a solid fuel derived from offcuts from forest thinning and other forest waste, at six power plants in the Tohoku and Tokyo metropolitan areas, as

well as enhancing our forest management capabilities.

Furthermore, toward our objective of developing new technologies, we made progress in establishing industryacademia partnerships, including establishing the Cocreation Research Center for WX with Tohoku University, which aims to develop CCU technology and implement it on a societal level. In addition, in order to strengthen the functions of our existing businesses we proactively pursued mergers and acquisitions, including acquiring waste plastic recycling company TAG Co., Ltd., and logging service provider Izumiyama Forestry Co., Ltd. In this manner, we ensured that the knowledge and achievements we accumulated during the First Medium-Term Business Plan were leveraged in our Second Medium-Term Business Plan.

Meanwhile, toward our objective of promoting sustainability management, we developed a foundation that enables us to conduct more advanced sustainability management, including establishing a variety of new policies as well as quantitative targets (KPIs) and action plans for each of our material issues.

- \*1 Upwardly revised in FY03/2022 financial results announcement.
- \*2 Selected as an industry-government-academia collaborative project aiming to expand the recycle content for automobile in the fiscal year 2023  $\,$ supported by Ministry of the Environment, Japan.
- \*3 RPF: an abbreviation of "Refuse-derived paper and plastics densified fuel" A high-grade solid fuel composed mainly of waste paper and plastics. which are difficult to recycle as materials. RPF emits approximately 33% less CO2 than coal when the same amount of heat is recovered (Source: Japan RPF Industry Association).

# Financial KPI trends and issues to be addressed

Financial KPI trends and issues to be addressed										
	Target	FY03/2022*1	FY03/2023	FY03/2024	Ongoing issues in the Second MTBP period					
ROE	<b>8</b> % or higher	9.9%	8.1%	5.5%	We raise the target ROE to 10% or higher as we implement management conscious of the cost of capital.					
Operating profit margin	10% or higher	11.2%	8.3%	8.4%	Achieved for the initial year only. As profitability is trending downward, the issue is raising Group earnings power amid ongoing large-scale investment plans.					
Equity ratio	<b>40</b> % or higher	48.3%	49.5%	47.2%	The equity ratio remains stable at near 50%. Financial balance is an issue as we plan for future large-scale investment projects.					
Dividend payout ratio	<b>30%</b> or higher	33.5%*2	39.5%	56.7%	Providing stable dividends balanced with consideration for investments. Total return ratio target set at a range of 35% to 40%.					
Credit rating	<b>BBB</b> or above	_	BBB	BBB*3	New credit rating acquired from Rating and Investment Information, Inc. in December 2022. We aim to improve investment grade ratings going forward.					

<sup>\*1</sup> The combined consolidated financial results of TAKEFI CORPORATION and then REVER HOLDINGS CORPORATION (currently REVER CORPORATION) for FY03/2022 (April 1, 2021 to March 31, 2022)

<sup>\*2</sup> The dividend payout ratio factored in the dividends paid by TAKEEI CORPORATION to its shareholders as of September 30, 2021.

 $<sup>^{*}3</sup>$  The rating outlook was changed to positive from stable in January 2024.

# Expanding our business domain as a WX (Waste Transformation) environmental company and contributing to the realization of a circular economy

# Established long-term vision of becoming the leading circular-economy company

International society is taking urgent measures to address environmental problems that are becoming increasingly serious on a global scale, including climate change, resource and energy issues, and biodiversity concerns. In Europe, the European Green Deal, the European Union's (EU) growth strategy released in 2019, identified the transition to a circular economy as a core policy objective.

In response to this trend in Europe, in 2020 Japan's Ministry of Economy, Trade and Industry (METI) released its Circular Economy Vison for 2020, which set a clear path for Japan's transition to a circular economy. Following this, in October that year the government declared that Japan would achieve carbon neutrality by 2050, and the Act on Promotion of Resource Circulation for Plastics came into effect. In addition, METI released the Growth-Oriented, Resource-Autonomous Circular Economy Strategy, which incorporates the perspectives of resource security and sustainable growth.

With the implementation of these domestic and international policies, the shift to a circular economy is also gathering pace in the industrial sector. Ever since the company's establishment in 2021, TRE HOLDINGS has worked to create an efficient recycling and carbon-neutral society by recycling waste and end-of-life products and establishing resource recycling systems. Now, in fiscal 2024, we have set ourselves the challenge of transforming TRE into a WX environmental company as a step toward our new long-term vision of becoming a leading company in the circular economy. Waste Transformation refers to the process of revolutionizing the resource cycle by overcoming the technological and economic challenges associated with waste materials that have conventionally been difficult to recycle into resources.

Through this challenge, we aim to unlock the potential of resource recycling through co-creation initiatives that go beyond conventional frameworks, in order to create a society with a circular economy in which "waste" is synonymous with "resources." By taking on the challenge of evolving the TRE

Group into a WX environmental company, we will work to achieve growth as a true leading company in the circular economy. We will do this by further refining our waste treatment technologies and steadily expanding our business domain by developing new businesses that leverage these new technologies, both in Japan and overseas.

# Backcasting from our 2050 vision and defining our initiatives in each phase

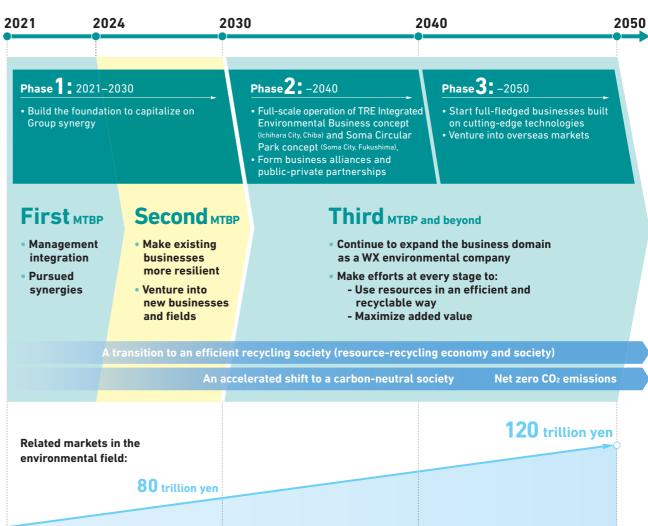
In order to achieve this long-term vision, the TRE Group has separated the period up through to 2050 into three phases and drawn up a roadmap for creating an efficient recycling and carbon-neutral society. We have designated the period from 2021, the year of TRE's foundation, through to 2030 as Phase 1, a period during which we will strengthen our management foundation in order to achieve Group-wide synergies from the business integration. This will serve as the basis for our future value creation. In the following Phase 2,

which spans the period from 2030 to 2040, we plan to begin full-scale operation of the integrated environmental business concepts we are currently developing in Ichihara City, Chiba, and Soma City, Fukushima. Furthermore, in addition to forging business alliances with external partners, we will also focus on furthering and developing meaningful output from public-private partnerships that extend beyond our expansion into the general waste disposal business, while leveraging the TRE Group's management foundation to expand our business domain as a WX environmental company. Then, in Phase 3, the final phase which leads to our end goals in 2050, we will build on the business growth and expansion we achieved in Phases 1 and 2 to commercialize the new recycling technologies we have developed over the course of our evolution into a WX environmental company.

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In parallel with these efforts, we will work to expand the TRE Group's advanced recycling technologies and businesses outside Japan.

# Positioning of the Second Medium-Term Business Plan (MTBP)



# **Long-Term Vision**

We will expand our business domain as a

# WX environmental company to become the leading circular-economy company

### **WX: Waste Transformation**

Waste transformation, or "WX," refers to overcoming the technological and economic challenges that have made the recycling of certain waste and end-of-life products difficult, thereby transforming them into recyclable resources

Capture business opportunities to grow into

a recycling business group with net sales of 300.0 billion yen

TRE HOLDINGS CORPORATION Integrated report 2024

## Establishment of Second Medium-Term Business Plan

# Expanding our business domain and improving earning power by making existing businesses more resilient and venturing into new businesses

Our Second Medium-Term Business Plan, which begins in the fiscal year ending March 31, 2025, is a five-year plan that extends through to the fiscal year ending March 31, 2029. The length of the plan was set at five years as it will take several years to complete the permit approval procedures and environmental assessments required for the strategic projects included in the plan.

The Second Mid-Term Business Plan will focus on the dual pillars of making existing businesses more resilient and venturing into new businesses and fields in order to expand our business domain, as we take on the challenge of evolving TRE into a WX (Waste Transformation) environmental company. Our basic strategy is to enhance our existing businesses of the waste and resource recycling businesses as well as the renewable energy business, while venturing into new businesses and fields that will accelerate the shift to a circular economy. We will also focus on sustainability management with the aim of creating a sustainable global environment together with sustainable growth for the

In addition to helping to solve societal challenges through our business activities, we will work to strengthen our governance structure, ensure a thorough commitment to compliance, and strengthen our management foundation to enhance our corporate value over the medium to long term.

At the same time, there is a limit to what one company alone can do to create an efficient recycling and carbonneutral society. Accordingly, we will work together with a variety of partners, including flagship Japanese manufacturers, local companies, authorities, and trading companies on co-creation projects to establish new businesses and joint ventures.

As examples, we are working to establish new recycling schemes together with major companies in other industries as well as others in the waste management industry, such as commencing project "Demonstration of Manufacturing-and-Recycling Integrated Process for Horizontal Cycle Enabled by Automated Sophisticated Dismantling of ELVs,"\*1 with the aim of achieving a circular economy in the automotive industry, and a partnership concept\*2 under the resource recovery incentive system.

Furthermore, bringing the TRE integrated environmental business concept, which is currently underway in Ichihara City, Chiba, to fruition is another key strategic measure of the Second Medium-Term Business Plan. This project, which integrates waste treatment facilities with advanced recycling technology across a site of approximately 84,000 m<sup>2</sup>, will strengthen partnerships with local municipalities and companies from other industries. In addition to establishing a cutting-edge plant to treat waste plastics and scrap metal, we also plan to install a largecapacity intermediate processing facility to ensure proper treatment of received waste, and an incineration facility with high-efficiency power generation capability.

As national resilience requires preparedness in normal times as well as an immediate response during emergencies, we will work to contribute further to this important goal by leveraging our recycling technologies and disaster relief experience. In particular, we will continue working to strengthen public-private partnerships in order to implement swift recovery and restoration support projects in the event of a large-scale disaster.

In addition, we will further reinforce our stable supply framework for renewable energy centered on our core of six woody biomass power generation plants, and continue to focus on forest management and reforestation initiatives.

Through these measures, we aim to achieve sales of 120 billion yen, operating profit of 12 billion yen, and EBITDA of 22 billion yen by the Plan's final year (the fiscal year ending March 31, 2029).

- \*1 Selected as an industry-government-academia collaborative project aiming to expand the recycle content for automobile in the fiscal year 2023 supported by Ministry of the Environment, Japan.
- \*2 Refers to a plan designed to facilitate the collection and recycling of FLV materials by forming a consortium with the relevant entities and thereby securing necessary quantity on a consistent basis

# Key strategies and medium- to long-term priority initiatives

## Key strategies

### **Growth strategies**

Widen operations by leveraging our strengths as an enterprise specializing in the environmental business

- Enhance the waste and resource recycling businesses that help realize an efficient recycling society
- Promote the renewable energy business that helps create a carbon-neutral society
- 3 Venture into new businesses and fields that contribute to the building of a circular economy society

## **Business infrastructure strategy**

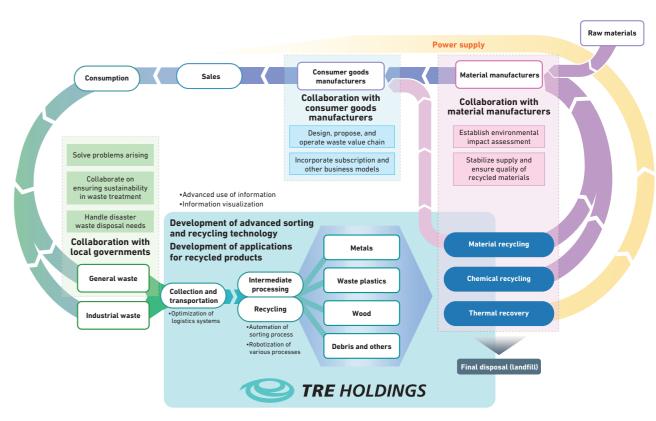
Solidify the Group's management foundation that underpins the three growth strategies

- Craft and execute DX strategy
- Reinforce internal control
- Improve safety management and working environments
- Invest in human capital and solidify the financial foundation

## Priority initiatives

- Advance our integrated environmental business concept in Ichihara City, Chiba, and in Soma City, Fukushima
  - Develop new businesses through concrete cross-industrial collaboration
- Handle general waste through public-private partnership
- Contribute to building national resilience (enhancing functional resilience)
- Generate competitive advantage by implementing in society new recycling technologies
- Capitalize on Group synergy and widen operations through M&As and overseas business development
- Enhance medium- to long-term initiatives for a carbon-neutral society (reforestation and forest management)

# New initiatives to cooperate with other industries



TRE HOLDINGS CORPORATION Integrated report 2024 TRE HOLDINGS CORPORATION Integrated report 2024

# A thorough focus on cost of capital, ROE-based management, and strategic capital investments Increase TRE's corporate value by improving ROE, promoting sustainability management, etc.

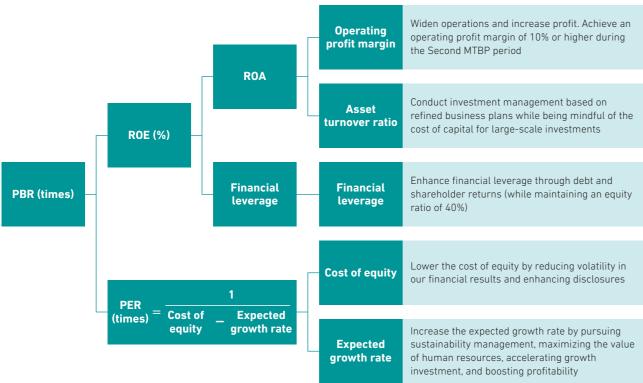
Our financial goals in the Second Mid-Term Management Plan include increasing our ROE target to 10% or higher by the fiscal year ending March 31, 2029 by making our existing businesses more resilient and venturing into new businesses to improve profitability (ROE target in the First Medium-Term Business Plan was 8% or higher). Our Second Medium-Term Business Plan calls for proactive large-scale capital investments aimed at creating an efficient recycling society and meeting the growing needs of environment-related markets. We will fund these large-scale investments through debt, while maintaining our financial stability by ensuring that our equity ratio does not fall below 40%. We plan to construct major new facilities, the centerpiece of which is the TRE Integrated Environmental Business concept that we are planning in Ichihara City, Chiba. We will invest in facilities that will strengthen our WX (Waste Transformation) strategy, including advanced sorting and recycling facilities for industrial waste, waste plastic, and metal resources, as well as industrial waste incineration and power generation facilities. We will also upgrade existing facilities to maximize their processing capabilities, and install new equipment.

Concurrently, we will work to improve both the qualitative and quantitative performance and efficiency of our intermediate treatment and recycling operations by transforming the Group's business structure, including optimizing duplicated functions and processing capabilities in each area.

In parallel with these growth investments, we will also enhance the Group's ability to generate operating cash returns by building on our strengths to further expand our business activities. Although these large-scale investments will incur increased depreciation costs, we project a 7.8 billion yen increase in EBITDA, from 14.2 billion yen in the fiscal year ended March 31, 2024 to 22.0 billion yen in the Plan's final year.

With regard to shareholder returns, we will increase the dividend payout ratio from 30% in the First Medium-Term Business Plan to a total return ratio set at a range of 35% to 40%, while considering share buybacks as appropriate. In addition to providing stable dividends, we established the Investor and Public Relations Department in April 2024 to strengthen our relationship with shareholders over the medium to long term, and going forward we will strive to proactively disclose information and ensure smooth communication with our stakeholders.

# Management Initiatives focused on cost of capital



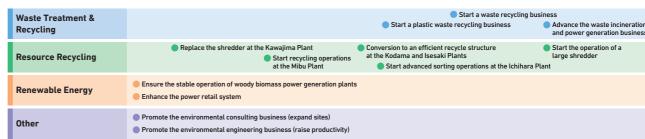




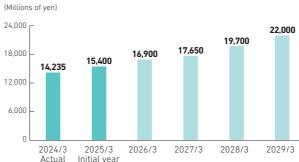
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# Operating profit

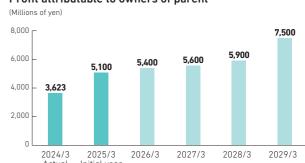


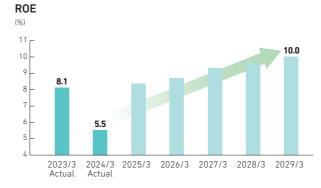


# **EBITDA**

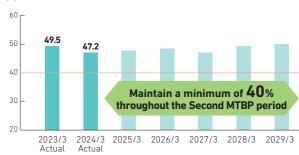


# Profit attributable to owners of parent









# Key performance indicators (KPIs) for each of our five material issues

# Basic approach

In recent years, there has been an accelerating movement globally to resolve social problems, represented by initiatives such as the goals of the Paris agreement and the UN's Sustainable Development Goals (SDGs). To respond to this societal demand while also putting TRE HOLDINGS' principles that state "We are committed to the conservation of the global environment" into practice, we have identified material (key) issues that we will prioritize.

To identify these issues, we held multiple discussions and debates from views such as which social issues we could help resolve through our strengths and expertise as a comprehensive environmental management company, which matters we should use as a foundation for the continued business of TRE HOLDINGS, and which matters would be necessary for sustained growth in corporate value. At the end of this repeated processes, we identified five material issues.

# The process of identifying material issues

We collected and organized a wide range of social issues, analyzed the material issues from two viewpoints—their importance to TRE HOLDINGS and their importance to stakeholders—and broadly selected the issues. The five issues were identified after an employee workshop had been held and the CSR and Sustainability Promotion Committee deliberated the issue.

Based on these material issues, we set KPIs for fiscal 2024 in line with the Second Medium-Term Business Plan. Going forward, we will continue to steadily promote these initiatives by implementing the PDCA cycle.

# Considering candidates for material issues

We began by compiling an extensive list of issues taking into account recent societal demands and trends, and ultimately identified 53 items as candidates for material issues.

# Scoring material issue candidates

We performed a four-stage evaluation (scoring) of material issue candidates from two viewpoints: their importance to TRE HOLDINGS and their importance to stakeholders.

### STEP 3

# Narrowing down candidates for material issues

We gathered employees from a range of departments to debate the appropriateness of our rankings.
Finally, we narrowed the material issues down to five based on our future vision.

### STEP 4

# Approval from management

The CSR and Sustainability Promotion Committee exchanged opinions on the organized material issues and judged them to be appropriate, and they were settled upon after the approval of the Board of Directors.

### STEP 5

# Setting KPIs

We then established quantitative key performance indicators (KPIs) for each of our five material issues. Implementing initiatives to solve issues.

Material issues	Key performance indicators (KPIs)	Results for FY03/2024	Action plan		FY03/2029 targets	Related SD
Create an efficient recycling society	<ul> <li>Enhancing recycling efficiency</li> <li>Achieve a recycling efficiency of 93% or higher by 2030.</li> <li>Achieve a recycling efficiency of 94% or higher by 2040.</li> </ul>	Recycling efficiency*1 91.82%	<ul> <li>Build a resource recycling scheme by linking waste management companies and other industries.</li> <li>Improve facilities and realize plans for advanced sorting sites.</li> <li>Add value to unused resources or turn them into products.</li> <li>Build a business scheme for recycling waste plastic.</li> </ul>	•	Recycling efficiency 92.86% vs. FY2023 0.88% increase	9 NOCHO PROCESSOR  112 NOCHO PROCESSOR  12 NOCHO PROCESSOR  13 NOCHO PROCESSOR  14
Create a carbon-neutral society	Reducing CO <sub>2</sub> emissions  • Achieve net zero CO <sub>2</sub> emissions from purchased electricity (Scope 2) by 2026.  • Reduce CO <sub>2</sub> emissions (Scope 1+2) by 46% or more in real terms by 2030 (compared to FY2013).  • Achieve net zero CO <sub>2</sub> emissions (Scope 1+2+3) by 2050.	CO <sub>2</sub> emissions (Scope 1+2)*1 47,343t-CO <sub>2</sub> Scope 1: 26,491 t-CO <sub>2</sub> Scope 2: 20,852 t-CO <sub>2</sub>	<ul> <li>Establish/operate sustainable woody biomass power generation plants integrated with forest management.</li> <li>Introduce a CO<sub>2</sub> calculation system to monitor greenhouse gas (CO<sub>2</sub>) emissions from business activities in a timely manner and visualize the effect of measures implemented to reduce emissions.</li> <li>Provide environmental equipment, technology and services that help stakeholders reduce greenhouse gases (CO<sub>2</sub>).</li> </ul>	•	Reduction in CO <sub>2</sub> emissions vs. FY2013 -21,228t-CO <sub>2</sub>	7 AUTOMOBILE NO 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Creating pleasant and fulfilling working environments	Rate of male employees taking childcare leave (HR)  Increase the rate of male employees taking leave for childcare purposes* to 100% by 2030. Childcare leave or paid leave  Increasing number of women in managerial positions (HR)  Double the number of women in managerial positions by 2035.	Rate of male employees taking childcare leave*2 69.0%  Number of women in managerial positions	<ul> <li>Create workplaces where anyone can work in health and safety and with peace of mind.</li> <li>Promote work-life balance.</li> <li>Develop the human resources that will support the company's sustained growth by carrying out all kinds of training and providing a system to support obtaining qualifications.</li> <li>Ensure thorough awareness of safety</li> </ul>	<b>)</b>	Rate of male employees taking childcare leave*2 100%  Number of women in managerial positions 25 or more	3 code seaths  And will steps  5 streets  10 streets
	Striving to achieve a lower workplace accident frequency rate (Safety)  Reduce workplace accident frequency to average of all industries by 2030.	Frequency rate 3.32	management and promote accident prevention initiatives at plants and in vehicles.	•	Frequency rate Equivalent to average across all industries	
Strengthen he corporate Jovernance Structure	Conduct assessment of the effectiveness of the Board of Directors.  • Conduct an annual assessment of the effectiveness of the Board of Directors.  Participation in internal governance-related training  • Achieve a 100% participation rate	Effectiveness assessment: Conducted once Training participation rate 98.1%	<ul> <li>Maintain the transparency of management by establishing various committees.</li> <li>Conduct training to ensure thorough compliance and check the state of observance.</li> <li>Practice appropriate information management and risk management.</li> <li>Conduct assessment of the effectiveness of the Board of Directors.</li> </ul>	•	Internal training partic	ipation rate
Enhance our brand value and increase our recognition as a comprehensive environmental management company	Higher evaluations from external rating agencies (ESG rating agencies, etc.).	<ul> <li>Engaged an external consulting firm to identify the status quo</li> <li>Disclosed basic policy</li> </ul>	<ul> <li>Disclose information in a timely and suitable fashion.</li> <li>Practice fair and equitable IR activities.</li> <li>Engage stakeholders.</li> </ul>	<b>)</b>	Enhance disclosure to Disclose evaluation it appropriate manner (Created an Investor an Relations Department in	tems in an

<sup>\*1</sup> Guaranteed by SOCOTEC Certification Japan, a third-party organization.

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<sup>\*2</sup> Rate of male employees taking childcare leave refers to the rate of male employees taking leave for childcare purposes.

# Focusing on reducing environmental impact as a material issue, while working to solidify our management foundation to support sustainable growth

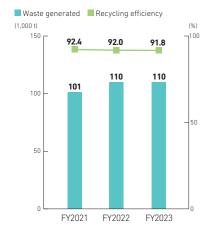
# **Enhancing recycling efficiency**

In order to contribute to the creation of an efficient recycling society, the TRE Group has set goals of (1) achieving a recycling efficiency of 93% or higher by 2030, and (2) achieving a recycling efficiency of 94% or higher by 2040.

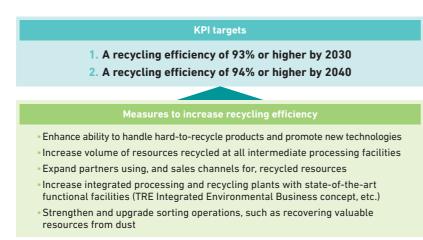
In recent years, the TRE Group has been handling an increasing volume of waste that is received with a variety of different waste items in a mixed and composite state, which presents a challenge in terms of recycling.

In order to solve this issue, we plan to increase the number of recycling sites equipped with advanced sorting and recycling technologies, as well as to reduce the amount of waste generated by enhancing the sorting process at existing plants. Combined, these measures will lead to an increase in the TRE Group's recycling efficiency. We are also working to strengthen partnerships between companies that manufacture and sell products, and the waste industry, which collects, treats, and recycles used products. By working together to establish a range of recycling systems spanning resource recovery to recycling, the waste industry and other industries will help realize a circular economy.

# Waste generation and recycling efficiency



# Measures to increase recycling efficiency



# Reducing CO<sub>2</sub> emissions

The TRE Group aims to create a carbon-neutral society by reducing CO<sub>2</sub> emissions from its business activities as well as by generating its own renewable energy.

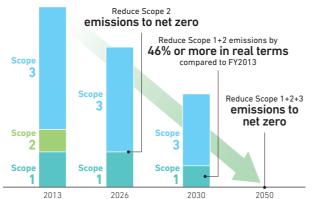
We have set incremental targets for reducing CO<sub>2</sub> emissions: (1) achieve net zero CO<sub>2</sub> emissions from purchased electricity (Scope 2) by 2026, (2) reduce CO2 emissions (Scope 1+2) by 46% or more in real terms by 2030 compared to FY2013, and (3) achieve net zero CO<sub>2</sub> emissions (Scope 1+2+3) by 2050.

In order to reduce CO<sub>2</sub> emissions, we are working to reduce energy consumption by switching to LED lighting and promoting fuel-efficient driving, generate renewable energy by installing solar panels at our business sites, and replace our vehicles and heavy machinery, which currently use fossil fuels, with electric models.

We are also exploring CO<sub>2</sub> recovery initiatives, such as generating forest carbon credits through our forest

management operations and developing carbon dioxide capture and utilization (CCU) technologies

# CO<sub>2</sub> emission reduction targets



# Solidifying our management foundation

In order expand the business domain under the dual pillars set out in our Medium-Term Business Plan of striving to make the existing businesses more resilient and to venture into new businesses and fields, strengthening our business infrastructure is a key task.

Specifically, we will work to enhance internal controls, ensure thorough safety and improve the workplace environment, recruit and develop human resources, streamline and optimize our operations, and strengthen our financial foundation. As these objectives cannot be achieved by reviewing existing business processes and systems alone, we will focus on the following two priority measures.

# Formulating and promoting digital transformation (DX) strategies

In our Medium-Term Business Plan, we project that launching several new projects and strengthening our existing businesses will lead to an increase in the amount of waste handled by the Group, an expansion of our workforce, and an increase in new clients and collaborative partners. It is also essential that we obtain numerical data in an efficient and timely manner and to utilize this data over the medium to long term in order to achieve the KPIs, such as reducing CO2

emissions and increasing our recycling efficiency.

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To achieve steady progress toward these goals, we will review the TRE Group's IT architecture from a medium- to long-term perspective, establish a digital transformation (DX) strategy for the Group, and proactively implement operational improvements.

### Maximizing the value of human resources

As we work to solidify our management foundation, the driving force behind these efforts will be our diverse human resources with specialized skills and expertise. In today's Japan, where it is difficult to secure talent due to a decline in the working population and the increasing mobility of human resources, one of our key tasks is to secure and develop a diverse workforce and to provide a pleasant and fulfilling work environment in which each and every employee can achieve their fullest potential.

To this end, as illustrated in our KPIs we are promoting women's career development and encouraging men to take childcare-related leave, in order to provide a work environment that enables employees to balance their work and personal lives. By recruiting a diverse workforce and helping our employees grow, our aim is to make the TRE Group a place where each and every employee can fulfill their potential to the fullest.

Initiatives to strengthen our management foundation

# Toward a WX (Waste Transformation) environmental company

Boost earning power and increase resources received Raise the quality of recycled materials

collaboration

Advance cross-industrial

Seek M&As, public-private partnership, etc.

# Solidify the Group's management foundation that underpins the Group's growth strategies

Reinforce internal control Ensure safety and improve working environments

Hire and develop talent

Streamline and optimize operations

Solidify the financial foundation

# Devise and implement DX strategy

- Transform manual operations into digital and paperless ones
- · Digitalize stand-alone business processes
- Digitalize interorganizational or Group-wide operations to create value from a customer perspective
- Develop and upskill IT personnel
- Provide pleasant and fulfilling working environments for diverse human resources
- Enhance the soundness and transparency of governance structure
- Build a corporate brand that is trusted by all stakeholders
- Become the company of choice by maximizing customer satisfaction
- Grow into a strong corporate group where all individuals can display their potential to the fullest

# Maximize the value of human resources and ensure compliance

- Redouble the effort to hire women. and develop and promote them to managerial positions
- Take actions to lower the frequency rate of workplace accidents
- Provide thorough education on safety and compliance Help employees obtain qualifications
- or otherwise upskill Ensure proactive disclosure and



Making Existing Businesses More Resilient | Overview of Businesses by Segment (1)

# Waste Treatment & Recycling Business

The TRE Group provides one-stop waste management solutions spanning construction waste collection and transportation to intermediate treatment, recycling, and final disposal, fulfilling an essential societal infrastructure role required to create a circular economy.

# Business overview and review of fiscal year ended March 31, 2024

The Waste Treatment & Recycling Business collects and transports waste generated primarily at construction and demolition sites and receives it at large-scale intermediate processing facilities. We strive to recycle as much as possible. Waste delivered to our facilities undergoes intermediate processing such as sorting, removal of extraneous material, crushing, and compression to extract recyclable waste plastics, wood waste, paper waste, and metals, as well as to produce solid fuel RPF.

Although intermediate treatment processes generate residues that are difficult to recycle, these are properly disposed of by incineration or landfill at a final disposal site. In order to create an efficient recycling society, we recognize that it is necessary to not only processing of waste properly in compliance with laws and regulations, but also to recycle waste that was previously disposed of in landfills. To this end, we are actively investing in sorting equipment and improvement of our waste treatment processes with the aim of further advancing our recycling technologies.

During the fiscal year under review, orders from redevelopment projects in the Tokyo metropolitan area remained strong as Japan invested in enhancing its national infrastructure resilience, resulting in an increase in the volume of waste handled. However, higher costs such as external processing costs, labor costs, other SG&A expenses, and fuel costs impacted our financial results. Despite this, we continued our efforts to reduce costs by recovering valuable resources through rigorous waste sorting at intermediate processing facilities, adding value to and commercializing products shipped from our facilities by producing solid fuel RPF from waste plastic and other materials and manufacturing Eco Foam™. a secondary material used in steelmaking, as well as in-house electricity generation by installing solar panels. In addition, TRE GLASS CORPORATION and TAG Co., Ltd., which we acquired through strategic M&A activity between the previous fiscal year through to the fiscal year under review, also contributed to sales and earnings, resulting in segment net sales of 26,916 million yen and segment profit of 4,068 million yen.

	FY03/2022	FY03/2023	FY03/2024
Net sales	25,146 million yen	25,662 million yen	26,916 million yen
Operating profit	5,113 million yen	4,210 million yen	4,068 million yen
Operating profit margin	20.3%	16.4%	15.1%

# -Topics

# Strengthening the waste plastic recycling business

In October 2023, TAKEEI CORPORATION incorporated TAG Co., Ltd., which operates a plastic recycling business primarily in Hokkaido and the six prefectures in the Tohoku region, as a consolidated subsidiary. TAG has one of the largest PET bottle

recycling facilities in the Tohoku region, and recycles plastic waste in accordance with the Act on the Promotion of Sorted Collection and Recycling of Containers and Packaging.

As recycled resins obtained from waste plastics are transformed into a variety of products, their quality is very important. TAG has the facilities and technology required to manufacture high-quality Class A PET flakes, enabling us to provide high-quality recycled products.

By leveraging TAG's technology and expertise, the TRE Group will further enhance its recycling technologies with a view to recycling waste plastics in the medium to long term.



The plastic bottle sorting process

# Focus areas in new Medium-Term Business Plan

# Strengthen intermediate processing functions such as waste glass recycling

During the current fiscal year, in addition to winning orders from large-scale development projects in the Tokyo metropolitan area, and measures to improve profitability by enhancing sorting and classifying of valuable materials at intermediate processing facilities, we will continue to invest proactively in facilities to add value to and commercialize waste materials. In particular, the TRE Group as a whole will endeavor to recycle waste glass by handling solar panels, which are expected to generate a large volume of waste in the 2030s and an area where recycling needs are expected to grow, in addition to construction glass and used automobile glass. In conjunction with this, we will systematically push forward with initiatives to reduce our CO<sub>2</sub> emissions.

In addition, to ensure business continuity and further diversify the products we can recycle, we plan to commence operations at two new plants in Ichihara City, Chiba: the Ichihara Recycling Center (provisional name) and the Plastic Waste Sorting Center (provisional name). Expanding the number of intermediate processing facilities in the Tokyo metropolitan area and moving into the recycling business for general waste and plastic containers will enable us to strengthen our processing efficiency and build a stable system for receiving waste, as well as help improve our recycling efficiency by reducing the amount of waste for final disposal (landfill).

Fifth year targets for Waste Treatment & Recycling Business

Operating profit

Approx.

Approx. Approx. 5.2 billion yen

# Monzen Clean Park Controlled Landfill Site, the Group's largest final disposal facility

During the recycling process, there will inevitably be some material that cannot be recycled (residue). In order to ensure safe and appropriate landfill disposal of this residue, TRE has established the Monzen Clean Park controlled landfill site in Wajima City, Ishikawa, as part of the Group's integrated waste treatment system. The site can also serve as a temporary storage place for large quantities of disaster waste caused by typhoons, torrential rain, earthquakes, or other natural disasters.

The site will feature a water sealing structure that exceeds government structural standards, and state-of-the-art water treatment facilities to ensure thorough management of water quality. Working together with the local community and in harmony with the rich natural environment of the surrounding area, this site will serve as a landfill site for stable, long-term final disposal of waste.

Although the landfill site was damaged by the Noto Peninsula Earthquake of January 1, 2024, it opened in August 2024 following repair and reinforcement work on the main facilities in cooperation with related parties.

Contribution of new plants to profits in Plan's fifth year

Net sales (Ichihara RC)

Net sales (waste plastic SC)

Approx.

3.2 billion yen

Approx.

1.3 billion yen

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Making Existing Businesses More Resilient | Overview of Businesses by Segment (2)

# Resource Recycling Business

Building on our waste treatment technologies that we have refined over more than a century, we contribute to an efficient recycling and carbon-neutral society by thoroughly recycling scrap metal, end-of-life vehicles, and scrapped home appliances.

# Business overview and review of fiscal year ended March 31, 2024

In the Resource Recycling Business, we are developing exhaustive recycling capabilities in four main resource categories: scrap metal from manufacturing plants and building demolition sites, end-of-life vehicles, used home appliances as designated under Japan's Act on Recycling of Specified Kinds of Home Appliances, and metal waste such as office appliances and fixtures. Collected recycled resources are treated appropriately according to their type and circulated back to other industries via parties such as trading companies and steel manufacturers.

In the automotive recycling field, we have established a circulation system for collecting tires, batteries, and engines, and redistributing reusable parts to maintenance facilities in Japan as well as overseas markets. The bodies of disassembled automobiles are also crushed and sorted for recycling into construction steel, secondary alloy ingots, and other resources.

In the home appliance recycling field, we not only contributed to the establishment of the Act on Recycling of Specified Kinds of Home Appliances as a result of our joint research with a major home appliance manufacturer, but also

contribute to the recycling of 1.2 million waste home appliances per year—approximately 8% of all scrapped home appliances currently generated in Japan.

During the fiscal year under review, the spread business, which purchases, processes, and sells ferrous and nonferrous scrap, handled a higher volume of end-of-life vehicles. However, the volume of steel scrap in the market, such as scrap metal from building demolitions, stagnated, and increased competition for purchase of this material led to an overall decline in the volume of scrap handled. Meanwhile, the volume of waste materials and used home appliances handled in the non-spread business, which provides intermediate processing and recycling of waste materials and used home appliances, declined as consumers refrained from replacing home appliances due to higher prices, among other factors. Operating profit also decreased due to one-time costs associated with replacing a large shredder, despite efforts to promote recycling and generate added value. As a result, segment sales were 43,419 million yen, and segment profit was 2,761 million yen.

	FY03/2022	FY03/2023	FY03/2024
Net sales	46,418 million yen	44,866 million yen	43,419 million yen
Operating profit	5,454 million yen	3,139 million yen	2,761 million yen
Operating profit margin	11.7%	7.0%	6.4%

# -Topics

# Installation of a dedicated plastic shredder to promote recycling of plastics from end-of-life vehicles

With Japan set to commence an incentive scheme for recovery of recyclable resources from end-of-life vehicles in 2026, plastic recycling needs from end-of-life vehicles are expected to increase.

Challenges involved in plastic recycling include removing extraneous materials such as metals, and the low transportation efficiency of plastic due to its light weight. To solve these challenges, we installed a dedicated plastic shredder at REVER CORPORATION's ELV Kawajima Plant. This shredder is capable of shredding vehicle bumpers and interior materials with metal parts attached to them, and when combined with a magnetic sorting machine can also separate steel scrap. We are also working together with the Nasu Plant, which has a resin separation and sorting line, to recycle high-grade plastics.



Shredding and magnetic sorting line (REVER CORPORATION's ELV Kawaiima Plant)

# Focus areas in new Medium-Term Business Plan

# • Strengthen recycling of end-of-life vehicles

In recent years, the automotive industry has faced growing demand to shift to a circular economy and to reduce its consumption of new natural resources by significantly expanding the use of recycled materials. To promote the recycling of plastic from end-of-life vehicles, the TRE Group has installed a dedicated plastic shredder at REVER CORPORATION'S ELV\*¹ Kawajima Plant (→ see Topics section).

In addition, the "Demonstration of Manufacturing-and-Recycling Integrated Process for Horizontal Cycle\*2 Enabled by Automated Sophisticated Dismantling of ELVs," a joint project undertaken by several corporations and jointly led by DENSO Corporation and REVER CORPORATION, was selected as an industry-government-academia collaborative project aiming to expand the recycle content for automobile in the fiscal year 2023 supported by Ministry of the Environment, Japan. This demonstration project was launched at REVER CORPORATION's ELV Kawajima Plant.

This pilot project will include a technological demonstration of a new ELV processing method known as the automated sophisticated dismantling process, as well as a technological demonstration of a high-purification and recycling process for the various materials extracted through the dismantling process. This processing method will also be assessed from a sustainability perspective by measuring its effectiveness in reducing environmental impact in terms of  $\rm CO_2$  emissions. Through this pilot project, we aim to expand the use of recycled materials derived from automotive components and contribute to the realization of a circular economy in the automotive industry through collaboration between the waste industry and other industries.

# Fifth year targets in the Resource Recycling Business Net sales Operating profit Approx. Approx. 5.6 billion yen

# • Enhancing facilities to promote dust recycling

With the Resource Recycling Business incurring an annual dust disposal cost of approximately 2 billion yen, reducing this cost through recycling and improving recycling efficiency by decreasing the amount of waste disposal for final landfill represents a key challenge. In addition, on a societal level, efforts to utilize recycled materials in plastic products are accelerating, and there is also growing demand for solid fuel RPF, a coal alternative with a low environmental impact.

Accordingly, the TRE Group plans to commence operations at the new REVER Mibu Plant (provisional name) in the town of Mibu, Tochigi and the REVER Ichihara Sorting Center (provisional name) in Ichihara City, Chiba, in order to further promote the recovery and recycling of valuable materials through advanced sorting.

Once operation commences, these plants will collect shredder dust, which had previously been incinerated or landfilled, from nearby Group sites, and through advanced sorting recycle resources that were previously unused, such as metals and plastics, in an efficient and stable manner. This will result in lower dust disposal costs, which will contribute significantly to profitability while also reducing  $\text{CO}_2$  emissions.

Promoting in-house processing and recycling of shredder dust are therefore key initiatives. Through this plan, we aim to move preemptively to meet the growing environmental awareness of waste emitters, while working across the TRE Group to create an efficient recycling society and carbon-neutral society.

<sup>\*2</sup> Horizontal Cycle: A recycling system that utilizes used products as resources to produce the same product

Contribution of new plants	Contribution of new plants to profits in Plan's fifth year						
Net sales	Operating profit						
Approx.	Approx.						
2.2 billion yen	0.6 billion yen						

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<sup>\*1</sup> ELV: End-of-Life Vehicle



Making Existing Businesses More Resilient | Overview of Businesses by Segment (3)

# Renewable Energy Business

# Business overview and review of fiscal year ended March 31, 2024

The TRE Group's Renewable Energy Business utilizes unused forest resources such as thinned wood, pruned branches from roadside trees, and waste wood from construction sites as fuel at our six woody biomass power plants in Japan, allowing us generate power without relying on imported timber. The electricity generated is supplied to local communities, such as local elementary and junior high schools, thus promoting "local production for local consumption" of electricity.

In addition to working in close partnership with local forestry cooperatives and material producers to ensure stable procurement of fuelwood, we work to preserve forests by establishing forest management plans to make the most of the forest's diverse functions, and are involved in the entire forestry process, from the sale of timber to the supply of wood chips and reforestation after logging for preservation of forest. We also use the residual heat from power generation in greenhouse cultivation of sweet tomatoes and wood ear mushrooms

We are also combining our woody biomass power generation prowess with our expertise in proper waste treatment and recycling to develop urban biomass power generation systems that utilize wood waste from construction sites as fuel for power generation. TAKEEI Forestry Co., Ltd.,

which handles procurement of fuelwood as well as afforestation and reforestation activities, supplies fuel chips to the TRE Group's electric power generation plants. The renewable energy generated is sold by Takeei Denki Co., Ltd., which operates a retail electricity business, completing a comprehensive "upstream to downstream" business framework.

In the fiscal year ended March 31, 2024, although Green Power Ichihara Co., Ltd. suspended operations for nearly two months in order to conduct periodic maintenance and repair, it continued high-load generation after resuming operation, while other power plants also continued to operate stably in general, contributing to sales and profit. In the electric power retailing business, both sales and profits increased due to lower procurement costs on retail sales as a result of lower wholesale electricity market prices, a focus on sales of electricity with non-fossil fuel certificates\*, and continued expansion of wholesale channels. As a result, segment sales were 14,429 million yen, and segment profit was 1,201 million yen.

\* Non-fossil fuel certificate:

A system in which companies can prove that they have used renewable energy and reduced their GHG emissions by purchasing certificates from companies that generate electricity from renewable energy sources. Non-fossil certificates are issued in proportion to the amount of electricity that a company generates by using renewable energy.

	FY03/2022	FY03/2023	FY03/2024
Net sales	12,617 million yen	13,794 million yen	14,429 million yen
Operating profit	(305 million yen)	688 million yen	1,201 million yen
Operating profit margin	-	5.0%	8.3%

# Topics

# TRE Group Companies receive "New Energy Foundation Chairman's Award" of the "2023 New Energy Award".

Hanamaki Biomass Power Generation Co., Ltd., Hanamaki Biomass Chip Co., Ltd., and TAKEEI Forestry Co., Ltd. have established an integrated system that encompasses all stages of biomass power generation from afforestation, forest thinning and clear-cutting of Group-owned forests, procurement of unused forest resources, and production and supply of wood chips for biomass power generation, through to the generation of electricity.

The electricity generated is supplied facilities such as elementary and junior high schools and nearby manufacturing plants in Hanamaki City,



facilitating local production for local consumption of energy. The sites where logging is conducted are reforested to contribute to a sustainable and vibrant forestry industry. These efforts have won acclaim, with the initiative receiving the New Energy Foundation Chairman's Award in the Regional Symbiosis category of the New Energy Awards 2023 presented by the New Energy Foundation.

# Focus areas in new Medium-Term Business Plan

# Strengthening electric power retailing system to ensure a stable supply

Takeei Denki Co., Ltd. is stepping up its efforts to meet the needs of customers wishing to consume renewable energy. Specifically, the company has established and is working to further expand its resource and energy recycling scheme, in which wood waste from construction sites is used as fuel, with renewable energy generated from this material supplied to construction sites as electric power. The company will also work to further refine its profit management to improve efficiency and reduce costs by developing operational expertise in supply-demand management.

To mitigate the risk of market price fluctuations, Green Power Ichihara Co., Ltd. sells non-FIT power generated using renewable sources such as solid fuel RPF directly to the Japan Electric Power Exchange (JEPX). In the future we will secure a larger supply of non-FIT power sources by increasing production and securing a stable supply of RPF within the Group, which will further enhance our ability to respond to potential fluctuations in market prices.

In addition, TRE will strive to achieve a stable power supply by actively expanding renewable energy power sources and developing our own power sources, including non-FIT sources. We are also working to sell non-fossil fuel certificates that comply with international initiatives such as Science Based Targets (SBT), the Carbon Disclosure Project (CDP), and RE100 to promote initiatives that enable

Vs. first year MTBP target

Net sales

Operating profit

Approx.

Approx. 2.15 billion yen 0.94 billion yen customers to prove they are using electricity derived from renewable sources.

# Contributing to the domestic forestry industry through our power generation business

In TRE Group's woody biomass power generation business, one of our key challenges is achieving stable procurement of the wood chips used as fuel over the medium to long term. To this end, we have established a system for collecting wood chips with the cooperation of local municipalities and forestry companies while studying systems that enable the Group to own and manage forests effectively. As part of our efforts to procure a stable fuel supply, we established TAKEEI Forestry Co., Ltd. in May 2020 as we believe that being directly involved in the key processes including wood transportation, seedling cultivation, afforestation, and reforestation, will not only enable stable fuel procurement within the Group, but also contribute to the regeneration and revitalization of the forestry industry. Furthermore, with the implementation of our forest management plans, which are developed in cooperation with local forestry cooperatives, we have established an integrated system that encompasses afforestation of forests owned by the Group, procurement of unused forest resources, chipping and supply of woody biomass, electric power generation, and power retailing.

Going forward, we will continue working to acquire forest land and establish a biomass collection system

Operating profit margin following establishment of stable operational framework

Operating profit

Approx. 10 % or higher 0.35 billion yen

TRE HOLDINGS CORPORATION Integrated report 2024 40 TRE HOLDINGS CORPORATION Integrated report 2024

together with local forestry cooperatives and other stakeholders to expand our forestry and forest management operations as well as generate employment opportunities.

We will also strive to achieve stable operation by controlling the moisture content at nearby storage facilities for fresh wood and other materials, conducting quality control at wood-chipping facilities, and performing systematic preventive maintenance at our power generation plants, and to enhance operational efficiency through facility improvements and accumulation of expertise.

# Strengthening integrated business framework through incorporation of Izumiyama Forestry Co., Ltd. as a subsidiary

Izumiyama Forestry Co., Ltd., established in 1993 and located in Hachimantai City, Iwate, is a producer of wood materials that harvests and processes standing trees into materials (logs) and also sells lumber and wood chips. The company has high-performance machinery for manufacturing wood chips in-house, and can alter the shape of chips according to the customer's order. Izumiyama Forestry also has several forest managers and forest leaders on its staff, who possess specialized knowledge in the forestry field and have obtained certification after gaining a certain level of experience and completing training conducted by the Ministry of Agriculture, Forestry and Fisheries (MAFF).

The TRE Group has developed forest management plans in cooperation with local forestry cooperatives, and have established an integrated system that encompasses afforestation, procurement of unused forest resources, chipping and supply of woody biomass for, power generation, and power retailing. Welcoming Izumiyama Forestry to the TRE Group will allow us to further stabilize our fuelwood procurement framework by utilize the company's supplier network (forest owners, including individuals) and skilled human resources in the forestry field, as well as to further expand our operating area and regional network. From a

medium- to long-term perspective, we aim to further solidify the foundation of the TRE Group's renewable energy business by working with TAKEEI Forestry to bring all operations in-house, from logging to procurement of fuelwood and sale of lumber.

# Helping regenerate and revitalize the forestry industry through reforestation initiatives

In order to preserve forest resources and utilize them in a sustainable manner, planting trees on logged sites and properly managing these sites is essential. However, reforestation efforts have thus far been slow due to factors such as low timber prices, the costs involved in afforestation, and the aging of the forestry workforce.

The TRE Group develops forest management plans for the forests it has acquired, in conjunction with local forestry cooperatives, and has begun full-scale forestry operations such as forest thinning\*1. By fiscal 2028, we plan to plant more than 300,000 trees across approximately 160 hectares of forest on former logging sites, and we plan to gradually expand this initiative further in the future. The seedlings that are planted absorb an increasing amount CO2 as they grow over a period of approximately 30 years. Then, after about 40 years, when their CO<sub>2</sub> absorption declines, they reach the optimum age for logging. In addition, planting trees at appropriate intervals, performing underbrush clearing\*2, and thinning the forest allows healthy trees to grow and establish firm root systems, creating a solid soil base that will not slip even in the event of torrential rains.

Going forward, we will continue working to regenerate and revitalize the forestry industry and contribute to an efficient recycling and carbon-neutral society by establishing a cycle that encompasses logging, conversion of underused forest resources into fuel, and reforestation in accordance with our forest management plans.

- \*1 Forest thinning: The removal of selected trees to reduce competition among growing trees, in line with the degree of crowding.
- \*2 Underbrush clearing: Mowing weeds and brush to allow sunlight to reach

# Reforestation plan for forests owned by the TRE Group

			Area	Planned reforestation area (ha)						Approximate number of
		acquired	(ha)	FY2023	FY2024	FY2025	FY2026	FY2027	FY2028	trees planted
	Ohasama	May 2021	240		2	2	2	2	2	2000 trees/ha
TAKEEI Forestry	Osawakawa-yama	Apr 2023	40		8	5	5	5	5	2000 trees/ha
Iwate Sales Office	Daizan	Sep 2023	270			13	13	13	13	2000 trees/ha
	Tono	Feb 2024	50							2000 trees/ha
	Oguni-yama, Hirakawa City (Lacquer trees)	Dec 2016	107	0.30	0.70					1000 trees/ha
Tsugaru Biomass Power Generation Co., Ltd.	Karatake, Hirakawa City			13	13	14		15	15	2000 trees/ha
	Oguni-fukasawa, Hirakawa City	Apr 2024	155							2000 trees/ha
Izumiyama Forestry Co., Ltd.	Plans to be created			Currently planning						

(As of May 2024)



Making Existing Businesses More Resilient | Overview of Businesses by Segment (4)

# **Other**

# **Environmental Engineering Business, Environmental Consulting Business**

The TRE Group also operates an Environmental Engineering Business in which we develop, manufacture, and sell environment-related equipment, plants, and special purpose vehicles, and an Environmental Consulting Business analyses, and environmental assessment-related services.

# Business overview and review of fiscal year ended March 31, 2024

In the Environmental Engineering business, Fuji Car Manufacturing Co., Ltd., which develops, manufactures, and sells environmental machinery, plants, and special purpose vehicles, including waste treatment facilities, achieved increases in both sales and profits due to continued strong orders for large-scale projects, and steady orders for manufacturing and installation work.

In the Environmental Consulting Business, Environmental Conservation Co., Ltd. and Earth-Appraisal Co., Ltd., which provide measurement certification services and

hazardous waste surveys and analyses, continued to receive steady orders for asbestos analysis-related services connected to the demolition and renovation of buildings as the revisions to the Air Pollution Control Act—the main law in Japan governing asbestos—came into effect in three annual phases starting in 2021, tightening regulations on preliminary surveys on asbestos use, and overall business performance remained strong.

As a result, segment sales were 8,477 million yen, and segment profit was 587 million yen.

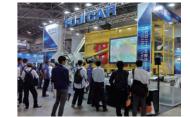
	FY03/2022	FY03/2023	FY03/2024
Net sales	7,102 million yen	7,374 million yen	8,477 million yen
Operating profit	441 million yen	325 million yen	587 million yen
Operating profit margin	6.2%	4.4%	6.9%

# -Topics-

# Fuji Car Manufacturing exhibits at N-EXPO 2024

Fuji Car Manufacturing Co., Ltd. once again exhibited at the New Environmental Exhibition 2024(N-EXPO 2024) held at Tokyo Big Sight. At the event, the company showcased its "Ballistic Separator," which separates mixed waste with high precision, including a live demonstration using samples that simulated actual waste.

Also on display was a model of the SHELLANOS fine shredder, which separates and shreds miscellaneous scrap with high precision. Visitors commented that SHELLANOS was exactly the kind of product they had been hoping for, and that they



Exhibition at N-EXPO 2024

were amazed at its ability to separate and shred difficult-to-process materials with such a high degree of accuracy.

# Exploring New Potential—TRE Group's Integrated Environmental Business Concept

-Our new challenge in Chiba's Ichihara City and Fukushima's Soma City-

The TRE Group's Integrated Environmental Business concept is a business planning approach that aims to achieve large-scale, efficient resource recycling and utilization through synergies between several environmental businesses. Following on from the first phase of the project, the TRE Integrated Environmental Business concept (Ichihara City, Chiba), announced in September 2022, the TRE Group announced the Soma Circular Park concept (Soma City, Fukushima), the project's second phase, in April 2024.

In this section, we introduce the concept and vision behind this initiative.

# Project 1

# The TRE Integrated Environmental Business concept in Ichihara City, Chiba

Since the establishment of the TRE HOLDINGS CORPORATION in October 2021, we have been studying the development of a new business framework to drive resource recycling amid the global trend toward an efficient recycling, carbon-neutral society. As the need for treatment and recycling of waste such as waste plastics grows, in addition to diversified and more advanced collection and recycling technologies, larger-scale treatment facilities are required in order to meet the demands of local communities and various industries. With this objective in mind, we focused our attention on Ichihara City, Chiba, an area where the TRE Group already has multiple sites and which is conveniently located in the Tokyo metropolitan area

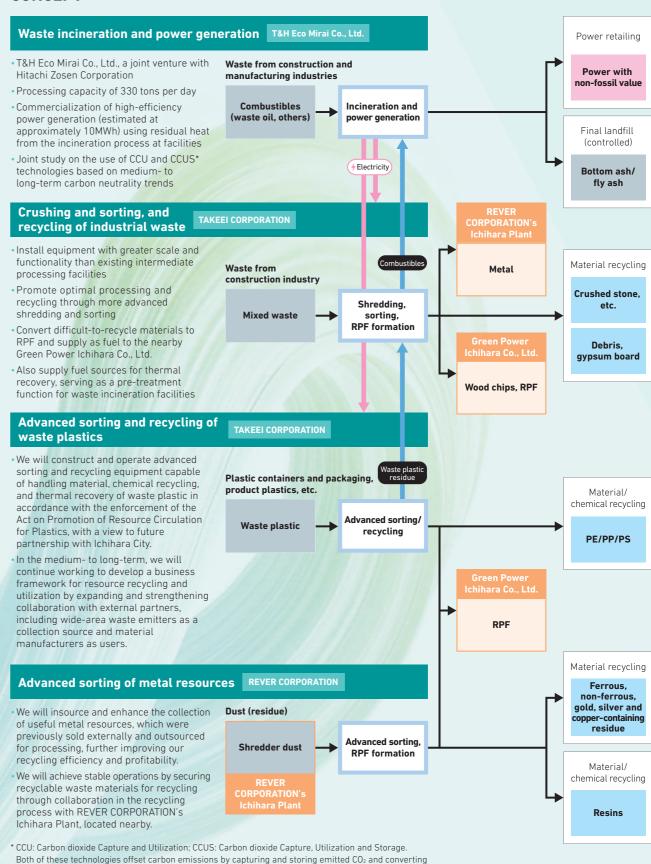
In September 2022, the TRE Group, which had been exploring the possibility of acquiring a business site in Chiba, reached an agreement with Mitsui E&S Holdings Co., Ltd.

(currently MITSUI E&S Co., Ltd.) to lease approximately 80,000 m<sup>2</sup> of land, a portion of its Chiba site. We plan to maximize our use of this extensive site, together with the nearby REVER CORPORATION Ichihara Plant and Green Power Ichihara Co., Ltd. (37,000 m² total land area), to create a comprehensive waste treatment and recycling business, which we have provisionally named the TRE Integrated Environmental Business.

We project that the investment for this concept will total 30 billion yen, and aim to begin operation of the facilities and plants that will play a central role in the business in phases from 2025 to 2027. This large-scale project, whose annual sales are expected to reach 12 billion yen and which will create 150 new jobs once full-scale operations are underway, is attracting significant attention from the industrial community.



# CONCEPT



it into new products or energy.

# Project 2

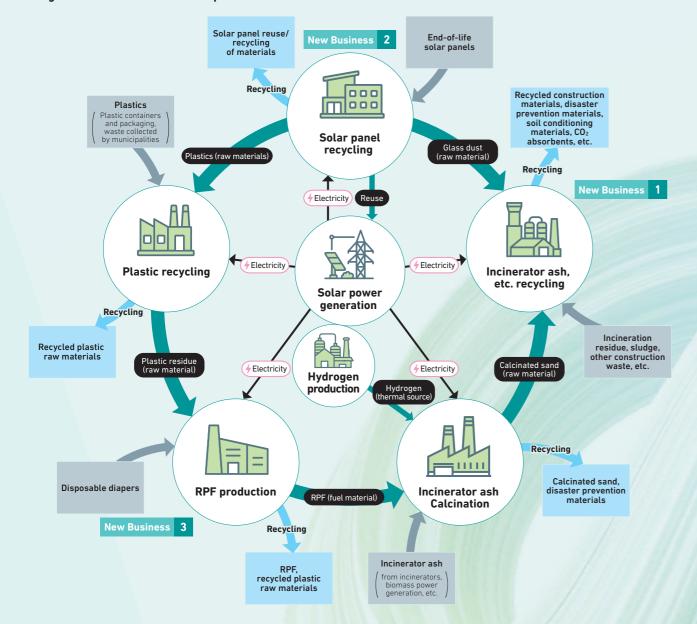
# TRE's Soma Circular Park concept in Soma City, Fukushima

Ever since acquiring a 280,000 m<sup>2</sup> site of land in Soma Central Industrial Park, Fukushima Prefecture in 2017, the TRE Group has been working to develop a concept for a comprehensive recycling plant that further advances and evolves the recycling technologies it has cultivated to date. After extensive study and discussion, we have completed the outline of our Soma Circular Park concept, which consists of eight business plans. This concept aims to build a model for local production and local consumption of energy and

industrial resources through collaboration between industry, government, and academia (other industries, universities, and local municipalities—primarily Soma City).

Through this project, we will tackle the challenge of developing technologies and businesses that will help address the issues facing local communities, including enhancing our ability to recycle societal waste products whose volume is projected to increase, such as plastics and solar panels, as well as responding to natural disasters.

# Image of Soma Circular Park concept



# New Business 1 Incinerator ash recycling business

TRE Group company Tohoku Koueki Recycling Technology Co., Ltd. operates a recycling business for incinerator ash and other resources. As part of the Soma Circular Park concept, the company is currently involved in a joint industry-academia research project with Yamagata University aimed at insolubilizing hazardous substances. Based on the achievements of this research project, we are currently constructing a new plant on our Soma site, which will significantly expand our waste treatment canabilities.

This will allow us to increase production of recycled crushed stone by expanding contract processing of incinerator ash discharged at woody biomass power plants in the Tohoku region, primarily in Fukushima Prefecture.

In the waste treatment and manufacturing process, we will implement the technology for insolubilizing heavy metals that we developed through joint research with Yamagata University, which will enable us to produce insolubilizing agents in-house rather than purchasing them externally, contributing to higher product quality and lower costs.



New plant with increased processing capability

# New Business 2 Solar panel recycling business

In the TRE Group, Shinshu Takeei Co., Ltd. (based in Suwa City, Nagano) has already started a solar panel recycling and reuse business in anticipation of the large quantity of waste solar panels that will be generated from the mid-2030s onward. In addition, with TRE GLASS CORPORATION joining the Group, we are also studying ways to utilize the large amount of glass contained in solar panels.

As part of the Soma Circular Park concept, in order to further expand our solar panel recycling business we plan to obtain an industrial waste disposal permit from the Fukushima prefectural government and commence operations in the autumn of 2024. In addition to recycling solar panels, we determine whether used panels are suitable for reuse using a specialized measuring device. Panels that pass this inspection are then sold as reused products. Meanwhile, panels that are no longer usable are separated into their component materials such as aluminum, cell sheets, and glass, and either shipped as raw materials for recycling or discarded of appropriately.

Going forward, the TRE Group will continue working to create an even more efficient recycling society by leveraging the technology and expertise of Shinshu Takeei and TRE GLASS to further enhance its processing technology, and by focusing on the recycling and reuse of discarded solar panels.



Machine for removing aluminum frames from solar panels

# New Business 3 Developing technology to recycle disposable diapers

As Japan's population ages, an increasing number of used disposable diapers are being discarded. As disposable diapers are comprised of human waste, pulp, SAP (super absorbent polymer), and other plastics, they are difficult to recycle, and thus far municipalities have disposed of them by incineration. However, in recent years the increasing load on municipal incineration facilities and insufficient capacity at final disposal sites has become a problem.

TAKEEI CORPORATION, Soma City, ZUIKO Corporation (a manufacturer of production equipment for disposable diapers and other sanitary products), and Yamagata University have formed a partnership agreement to establish a comprehensive system for converting used disposable diapers into fuel and recycling them.

This initiative involves conducting pilot experiments to collect data on the volume of incineration, reduction in CO<sub>2</sub> emissions, costs, and other factors, and identifying issues that must be addressed in order to commercialize the system.

In addition, Yamagata University, ZUIKO, and TAKEEI have concluded a joint research agreement toward the establishment and operation of methods for recycling waste plastics and combustible waste.



The signing ceremony for the four-party partnership agreement (May 2024)

# Feature

Dialogue

# Mizuho Leasing TRE HOLDINGS

# Creating a new business framework for a circular economy

TRE HOLDINGS is pursuing cross-industry collaborations with partners from a range of industries to promote a shift toward a circular economy.

As part of these efforts, we have strengthened our alliance partnership by forming a capital tie-up with Mizuho Leasing Company, Limited. In this section, key members from each company discuss the future of the circular economy, which is being driven forward by this pioneering partnership between the leasing and waste management industries.

# A shared vision of a circular economy

How did the partnership between Mizuho Leasing and TRE HOLDINGS came about?

**Sato** Leasing companies support their clients' capital investments by supplying a variety of products in the form of lease contracts.

Once these contracts expire, the products are collected, and after checking their condition, items that can be reused are re-leased, while those that cannot are disposed of. As part of this process, we engaged the TRE Group's REVER CORPORATION to dispose of and recycle products that had finished their role in our business.

**Inohana** Our business relationship began around 1997. REVER's original area of strength lies in intermediate processing and recycling of scrap steel, and we also handle a large volume of used home appliances, end-of-life vehicles, and other waste materials. I believe it was these wide-ranging capabilities that met Mizuho Leasing's needs. Over the course of our relationship, we have received a variety of inquiries from Mizuho Leasing, and these inquiries led to our current partnership.

Sato As the leasing business is intrinsically linked to the product lifecycle, the concept began when we consulted with REVER to discuss the possibility of leveraging this attribute to generate some form of new value

One of the key aspects of this discussion was the shift to a circular economy. In our Medium-Term Business Plan 2025 (2023–2025), one of the future goals we have set is to become a "circular society platform company that addresses social challenges." Our aim is to create a platform for product recycling that leverages our business model (the product life cycle spanning contracting, delivery, and collection). However, we were decidedly lacking in the key functions of waste collection, treatment, and recycling, which are critical to this effort.

Faced with this challenge, we sought to establish a partnership with TRE, a leader in the Japanese waste management industry, in order to create a circular flow.

Inohana At REVER, we have long believed that to help Japan shift to a circular economy, the nation's waste treatment and recycling functions must be further improved and a waste management platform established to serve as a partner to other industries and fulfill a key role as societal infrastructure. This concept was part of our rationale for establishing TRE HOLDINGS.

I believe that this sense of purpose led to the basic agreement with Mizuho Leasing to establish a business scheme aimed at promoting the circular economy. The declaration by Mizuho Leasing, which has extensive connections with a wide range of companies, that the company will promote the creation of such a platform gives me great confidence that as a partner Mizuho Leasing will be a major driving force in accelerating the shift to a circular economy.

By the way, how have customers responded to this announcement?

**Sato** In recent years, an increasing number of companies are basing their management stance around sustainability, and many of our customers have expressed support for our vision, with some companies from other industries keen to participate. I believe that our customers had also realized the need for such a platform in their day-to-day operations, as ensuring traceability and Scope 3 management of their products is essential in order to achieve carbon neutrality.

Another factor that has served as a tailwind is the shift from one-time transaction based business models that prevailed in the mass-production, mass-consumption, mass-disposal society to business models in which fees are charged for product services, such as subscription or recurring sales models.

Inohana Previously, the relationship between waste management companies such as REVER and leasing companies was one in which we simply purchased products whose leases had expired as scrap, then processed and recycled them. Thinking back to that time, today's situation, where we have received an investment from Mizuho Leasing—a group company of one of Japan's leading financial conglomerates—and are co-creating a platform to realize a circular economy, feels quite otherworldly.

**Sato** When considering waste management companies to form a partnership with, one of our key considerations was whether the company in question shared our ambition to build a platform that could facilitate the shift to a circular economy. In this regard, the shared sense of purpose that Mr. Inohana mentioned earlier has served as a great source of strength for the partnership. Both the basic agreement that we signed in 2022 and the capital and business partnership that we formed in 2023 were made possible by TRE HOLDINGS vision of establishing a waste management platform that will serve as key societal infrastructure. By partnering with TRE, we saw a clear path toward the realization of our vision.

**Inohana** The capital and business partnership has opened up new potential for us as well. For example, working with Mizuho Group's suppliers and customers. If we can provide advanced waste treatment and recycling solutions via our broad network of business partners, or build new business frameworks through collaboration between the waste management and other industries, we can help Mizuho Leasing Group's business partners enhance their corporate value. Sato Just as you stated, I believe that TRE HOLDINGS' all-round ability to address any issue—from discussing customers' challenges to proposing concrete solutions—is a major strength. In recent years the push to promote the recycling of plastics has gained momentum throughout the world. In Europe, products that do not use recycled plastic are increasingly avoided by consumers and even removed from distribution. Sooner or later, this will likely be the case in Japan as well, and our customers are concerned about how

They know that they must shift their manufacturing and business models to meet the requirements of a circular economy. However, they do not know the specific approach required to achieve this. TRE was one of the first companies to pursue a strategy of investing in facilities for plastic recycling, and continues to supply high-purity recycled plastic raw



Executive Officer General Manager of Business Division 1 REVER CORPORATION



# Kensuke Sato

Managing Executive Officer Deputy Chief of Business Promotion Headquarters Mizuho Leasing Company, Limited materials through its advanced intermediate treatment and recycling processes. I fully believe that TRE's proven capability in waste treatment and recycling will enable the company to address the specific challenges facing our corporate clients.

**Inohana** Thank you for the kind assessment. To further hone these strengths, we have established a new long-term vision, starting in April 2024, of expanding our business domain as a WX (Waste Transformation) environmental company to become a leading company in the circular economy. We aim to recycle waste and end-of-life products that have conventionally been difficult to convert into resources by working to overcome the related technological and economic challenges. The biggest obstacle in realizing a circular economy is the presence of waste and end-of-life products that are difficult to convert into resources, and we hope to achieve innovation in this area. With regard to the recycling and reuse of plastics mentioned earlier, we are also taking on the challenge of achieving advanced sorting and recycling of waste plastics as part of the TRE Integrated Environmental Business concept.

By working together on these initiatives, we will create a platform for the circular economy that encompasses stable procurement of high-quality recycled materials, manufacturing of products using recycled materials, longer life and long-term use of products, product reuse and refurbishing, and product recycling. That is the transformation that the TRE Group is striving to achieve. Sato The "Xaas (X as a Service: selling products as a service)" subscription-based business model that we are currently pursuing is also a service that we are creating with a view to utilizing such a platform.

**Inohana** In order to support these types of services, the value that we in the waste management industry provide is also beginning to shift from a waste treatment and recycling business to a solution-based business that includes services such as consulting. It is fair to say that this transformation is already underway.

# Offering the best one-stop solution for solving environmental challenges

# In 2024, Mizuho Leasing and TRE HOLDINGS established a new joint venture, METREC Co., Ltd. What are the aims of this venture?

**Inohana** METREC was jointly established by TAKEEI and REVER under TRE HOLDINGS, and ML Shoji under Mizuho Leasing. The company will provide a range of services, from environmental assessments and hazardous material countermeasures for customers during the integration or closing of facilities through to installation and removal of equipment, sale of used equipment, building demolition, sale of valuable metals, waste disposal, and other services.

The venture aims to utilize these functions to provide optimal services to customers as a one-stop solution for their environmental needs. We want to help solve customers' challenges such as increasingly complex resource recycling, complicated environmental laws and regulations, and proper

Tackling these challenges will enable us to identify waste treatment and recycling needs further upstream in the value chain, helping us to secure a stable supply of materials for waste treatment and recycling, and ultimately contributing

to the realization of a circular economy

**Sato** We believe that the one-stop solutions offered by METREC will provide benefits to real estate-related businesses seeking to increase the value of their clients' real estate holdings.

For example, some real estate facilities, such as plants built in the 1990s, are aging, and we are receiving an increasing number of consultations regarding CRE (Corporate Real Estate) strategies aimed at utilizing real estate more effectively. An increasing number of companies are restructuring their businesses in line with these changes in the business environment, and our customers are increasingly looking for ways to consolidate their real estate holdings such as plants, and replace them with other types of facilities. Partnering with TRE will enable us to offer comprehensive support during the consolidation and closure

Inohana In recent years, companies have placed an increasing emphasis on sustainability in their management approach, and are required to consider carbon neutrality and the circular economy when creating their CRE strategies and other business plans. With this in mind, going forward METREC will expand its services to include integrated waste management solutions, waste reduction proposals, carbon credit solutions, and support for improving ESG evaluations, in order to help its corporate clients meet their carbon neutrality and resource recycling needs.

**Sato** One can easily imagine how when visiting client companies with METREC, a one-stop solution provider, the discussion rapidly expands and generates ideas for creating

For example, when companies with operations throughout Japan consolidate their sites, the task of waste disposal is often left to each local site. This means that the people responsible at the local sites must handle the situation on an individual basis, which not only incurs additional costs and labor, but also introduces a variety of risks and costs, including inadequate legal compliance, obstacles to traceability, and insufficient collection of environmental impact data. METREC can provide the optimal solution to these troublesome procedures, which are complicated and

involve risks. As each client company has diverse resource recycling needs, we will continue working on co-creation initiatives to further expand the range of solutions we provide. **Inohana** I believe that many companies are facing environmental challenges such as removing unneeded equipment and disposing of waste when relocating or upgrading their plant facilities. At METREC, it is our hope that we can contribute to an efficient recycling society by capturing this type of demand and providing solutions that both satisfy our client companies and enhance their corporate value.

# Pursuing further co-creation to build a platform for the circular economy

# What are the current challenges in realizing the shift to a circular economy, and how do you see the future outlook?

**Inohana** The waste management industry is playing an increasingly important role in the industrial sector. However, to fulfill this responsibility and these expectations, we must not only strengthen our relationships with our customers, but also enhance the TRE Group's own sustainability by strengthening our management capital.

There is also a limit to the challenges that the TRE Group can solve on its own. I therefore believe we must strengthen our partnerships with an even greater number of companies across Japan to establish a waste management platform that enables a domestic material-cycle society that is not reliant on other countries.

**Sato** Environmental and energy-related societal challenges cannot be overcome through the efforts of a single person or company alone. Given these limitations, we are serious about creating a platform for the circular economy by promoting co-creation between a wide variety of players. Although this is not something that will happen overnight, I believe a time will come when we will look back and say, "I'm glad we started when we did!". The challenge we are embarking on is a business that is vital for creating a sustainable society, and I am certain that the significance and value of this endeavor will continue to grow in the future.



# Building a platform for a circular economy

Increased transparency in processes throughout the product life cycle

Building a platform to promote optimal resource reuse

Providing renewable energy across all stages of the product life cycle



# TRE's goal Building a platform for the circular economy Procurement of recycled materials → Manufacture of products → Appropriate usage (long-term/reuse) → Create a resource cycle culminating in product recycling Collaboration with alliance partners to deliver required functions Basic agreement Advanced recycling technology TRE HOLDINGS Services provided through the collaboration Traceability Stable supply of recycled materials Product usage models (subscriptions, etc.)



# Industry-Academia Collaboration on Waste Transformation (WX) Research

-investing 1% of sales in R&D-

The TRE Group has been working for many years to enhance its recycling technology with the goal of increasing the recycling efficiency of waste materials and end-of-life products. In order to achieve a Waste Transformation (WX) by overcoming the technological and economic challenges involved in converting waste and end-of-life products into resources, we are pursuing industry-government-academia partnerships and cross-industry collaborations that transcend conventional frameworks.

# Establishment of the Co-creation Research Center for WX with Tohoku University Aiming to develop innovative waste treatment processes and implement CCU technology on a societal level

Research and development on the capture, concentration, and utilization (CCU) of CO2 is being pursued on a global scale with the aim of achieving carbon neutrality. The CCU process, a technology that has attracted particular attention, consumes a large amount of energy during operation, posing a challenge to its practical application.

On December 1, 2023, TRE and Tohoku University launched the TRE HOLDINGS x Tohoku University Co-creation Research Center for WX at Tohoku University with the goal of achieving a Waste Transformation (WX) by developing innovative processes that combine waste incineration treatment with CO<sub>2</sub> capture using heat and implementing this CCU technology on a societal level.

The energy-efficient CCU process proposed by Tohoku University has been selected by the New Energy and

Industrial Technology Development Organization (NEDO) as one of the R&D projects of its Moonshot Research and Development Program aimed at achieving its Moonshot Goal 4: The realization of sustainable resource circulation to recover the global environment by 2050.

At the Co-creation Research Center for WX, we will utilize Tohoku University's facilities, knowledge, and other resources to the fullest extent to firstly develop technologies to verify established theories. We will also generate innovation to achieve WX and contribute to the creation of a circular economy by exploring new research topics that contribute to resource recycling and societal benefit, as well as promoting the formation of projects, and developing young talent capable of leading future WX efforts.



Left: Mitsuo Abe, President and COO of TRE HOLDINGS Right: Hideo Ohno, President of Tohoku University

### Targeting societal implementation of CCU technology Embarking on a new challenge together with TRE HOLDINGS

In order to achieve a carbon neutral society, in addition to technologies that reduce CO2 emissions, we also require technologies to capture and store CO<sub>2</sub> emissions (CCS) and then convert these emissions into useful substances (CCU). The idea of treating CO<sub>2</sub>, which causes global warming, as a new raw material from which to produce useful substances is a very enticing proposition. However, converting CO<sub>2</sub>, a highly stable substance, into other materials requires a large amount of energy and generates more  $\text{CO}_2$  than  $\text{CO}_2$ consumed as a raw material. To address this challenge, we have

teamed up with TRE to establish the Co-creation Research Center for WX and are tackling the challenge of implementing CCU technology on a societal level. Naomi Kitakawa

# Professor, Tohoku University Graduate School of Engineering TO. Phytochem Products Inc

# Collaboration with Yamagata University and Nihon University Conducting joint research on development of CCUS technology in the manufacturing process for recycled products such as recycled aggregate and crushed stone

The TRE Group is actively pursuing the development of new technologies for commercializing waste materials as a resource as one of its priority tasks toward the creation of an advanced recycling and carbon-neutral society.

Tohoku Koueki Recycling Technology Co., Ltd. has been conducting research and development to reduce heavy metal elution and minimize the amount of heavy metals contained in recycled products during the treatment and recycling processes for incinerator ash, soot and dust, sludge, and mineral dust generated at biomass power plants. In September 2022, the company concluded a joint research agreement with Yamagata University and Nihon University with the goal of further advancing this research, and in particular commercializing new recycled products that will contribute to a carbon neutral society, based on CCUS technology. The main research topics

being pursued under this partnership include: (1) research and feasibility studies toward the commercialization of carbon dioxide capture, utilization, and storage (CCUS) technology, (2) research and technical support for carbon dioxide fixation technology for recycled crushed stone, (3) development of civil engineering materials and environmental materials for reducing environmental impact, and (4) development of heavy metal elution inhibitors and technology for removing heavy metals from incinerator ash, soot, sludge, and mineral dust.

Findings from this research are being actively protected as intellectual property, including acquisition of patents. Going forward, we will continue pursuing the aforementioned research and development in order to help solve societal challenges and contribute to the realization of a carbon neutral society.

# **Topics**

# Obtained patent for "method for manufacturing insoluble agents from recycled inorganic industrial waste" developed through joint research with Yamagata University

In July 2023, Tohoku Koueki Recycling Technology developed and patented a "method for manufacturing insoluble agents from recycled inorganic industrial waste" (patent No. 7306658) in a joint research project with Yamagata University. Although insolubilizers are generally manufactured using chemicals as raw materials, the research team successfully developed a process that uses difficult-to-treat wastes (ALC, dehydrated sludge cakes, gypsum dihydrate powder, gypsum dihydrate powders, etc.) as raw materials. Mixing the insolubilizing agent produced by this method with inorganic industrial wastes such as cinder, soot, and sludge has made it possible to insolubilize hexavalent chromium, arsenic, fluorine, and boron, thereby enabling stable production of recycled

The difficult-to-treat waste that serves as the raw material for these insolubilizers is generated during business activities in the manufacturing and construction industries, and disposing of this waste has presented a challenge. By receiving this difficult-to-treat waste as a raw material and recycling it into insolubilizer, we will further promote the efficient recycling of waste. This represents a significant achievement, as the TRE Group's technology has also given birth to a chemical manufacturing and sales business (materials manufacturing business). The TRE Group will continue strengthening its research and development to

東北交易株式会社 tackle the challenge of creating value that transcends the conventional boundaries of the waste management industry.

### Working to tackle environmental challenges facing the concrete industry

Nihon University has devoted many years of research to studying the fixation of CO<sub>2</sub> in concrete. The concrete industry currently faces several environmental challenges. One is reducing the large amount of CO<sub>2</sub> emitted during the manufacturing process. Another is the proper disposal of waste concrete. In this research project, which we are conducting jointly with TRE, we are studying the conditions required to achieve rapid fixation of a larger volume of CO2, using equipment such as accelerated neutralization testers and high pressure injection testers. We feel that we are making solid

progress toward the implementation of this technology on a societal level.



# Sanjay PAREEK

Professor, Department of Architecture. llege of Engineering, Nihon University

## Leveraging the respective strengths of industry and academia to solve societal challenges

When embarking on industry-academia collaboration projects, I believe it is important for companies and universities to utilize their respective strengths and attributes. In this research project, TRE is working to fix CO<sub>2</sub> in recycled products by utilizing its proprietary recycling technologies for incinerator ash, soot and dust, and other materials. Meanwhile, Yamagata University is participating in this challenge from a chemical reactivity perspective, while Nihon University is studying the problem from a physical chemistry viewpoint by considering aspects such as

> strength. It is my hope that this co-creation between the three parties will lead to the realization of a carbon neutral society and an efficient recycling society.

# Masatoshi Endo

Professor, Applied Chemistry, Chemical Engineering, and Biochemical Engineering ction, Yamagata University

# Enhancing Japan's National Infrastructure Resilience

# -partnering with municipalities to handle disaster waste-

In recent years, Japan has faced an increasing risk of suspension of urban functions due to natural disasters, such as large-scale earthquakes and wind and flood damage caused by powerful typhoons.

In addition, the massive volume of waste generated by natural disasters can hinder the restoration of these functions. Given these circumstances, the resilience of national infrastructure for the next generation is an area of growing focus. The TRE Group's business activities play an inherent role in supporting our societal infrastructure, contributing not only to rapid recovery and reconstruction, primarily through treatment of disaster waste, but also by playing a leading role in community disaster prevention efforts

# Handling disaster waste

# -helping municipalities improve their disaster resilience-

In recent years, Japan has faced increasingly frequent natural disasters, including the Great East Japan Earthquake of 2011, which brought unprecedented damage from the massive earthquake and ensuing tsunami, typhoons Faxai and Hagibis in 2019, which flooded numerous rivers and caused extensive flood damage, and the Noto Peninsula Earthquake of January 1, 2024.

These natural disasters destroy urban infrastructure and buildings, and generate vast quantities of disaster waste. This disaster waste hampers reconstruction efforts in the afflicted areas and compromises hygiene and sanitation, making prompt and appropriate first response measures critical.

In the midst of concerns about the potential occurrence of increasingly severe disasters such as the Nankai Trough earthquake, earthquakes directly under the Tokyo metropolitan area, and massive typhoons due to climate

change, local municipalities are seeking to strengthen cooperation with waste management companies to ensure disaster resilience by achieving swift treatment of disaster waste and rapid recovery and reconstruction of urban functions in the event of a disaster.

At the TRE Group, we have utilized our wealth of experience and expertise in disaster recovery and reconstruction support projects to provide swift initial response and disaster waste treatment in times of disaster. We have concluded agreements with local municipalities for handling disaster waste treatment, and have established systems to ensure that in the event of a disaster, we are able to devote our full efforts to achieve a swift recovery to the afflicted area and help restore everyday life to the local community as quickly as possible.

# Agreement signing ceremony with local municipalities:







# Disaster recovery and reconstruction initiatives



Disaster recovery and reconstruction support project following the 2024 Noto

# Peninsula Earthquake

We extend our heartfelt sympathies to all those who were affected by the 2024 Noto Peninsula Earthquake, which occurred on January 1, 2024.

# Impact on the TRE Group

The TRE Group maintains business sites in the Hokuriku region, and Monzen Clean Park Co., Ltd. (Wajima City, Ishikawa Prefecture) was preparing for opening at the time of the earthquake. Although the site sustained damage from the earthquake, we completed repair and reinforcement work on the main facilities and the site opened for business in August 2024. Working together with local authorities, relevant ministries and agencies, and related organizations, we will strive to ensure safe and secure operation of the facility.

Hokuriku Environmental Services Co., Ltd. suffered minimal impact to its corporate headquarters and landfill site and commenced normal operations from January 5, 2024. The company is also handling some disaster waste to support recovery and reconstruction efforts in the region.

# Supporting disaster recovery and reconstruction efforts in the Noto Peninsula

As a WX (Waste Ttransformation) environmental company. one of the TRE Group's key strategic initiatives in our new Medium-Term Business Plan, which began in fiscal 2024, is to contribute to building national infrastructure resilience (enhancing functional resilience).

Following the 2024 Noto Peninsula Earthquake, TRE Group companies deployed staff to support swift recovery and reconstruction efforts, including the operation of eight\*1 temporary waste storage sites in Wajima and Suzu Cities. We also installed sorters, shredders, and other equipment at temporary waste storage sites in Wajima and Suzu cities, and have commenced full-scale treatment of disaster waste as part of publicly-funded dismantling operations.

\*1 As of August 2024.



The Monzen Clean Park controlled final landfill site



The temporary waste storage site

# **Corporate Governance**

# Establishing an appropriate corporate governance structure to ensure sound, efficient, and highly transparent management

# **Basic approach**

The TRE Group is aware that its businesses are built on the healthy relationships of trust it has developed with shareholders, employees, business partners, the residents of the areas around its business locations and various other stakeholders. Based on that mindset, we have positioned the strengthening and enhancement of corporate governance as a key management task in order to pursue sound management and live up to the trust that society has in us.

To practice highly sound, efficient and transparent management, we are preparing and establishing appropriate structures and implementing the necessary measures for management decision-making, the execution of duties, supervision and internal controls. We also ensure that business is carried out according to laws, regulations and internal rules throughout the organization, and since we are a company with an Audit and Supervisory Committee, our management decision-making and execution are supervised from an independent standpoint.

The Group endorses the Corporate Governance Code stipulated by the Tokyo Stock Exchange, and as a basic policy, we strive to strengthen corporate governance by implementing an array of measures based on the spirit and intent of our principles and beliefs.

# **Corporate governance structure**

# Board of Directors

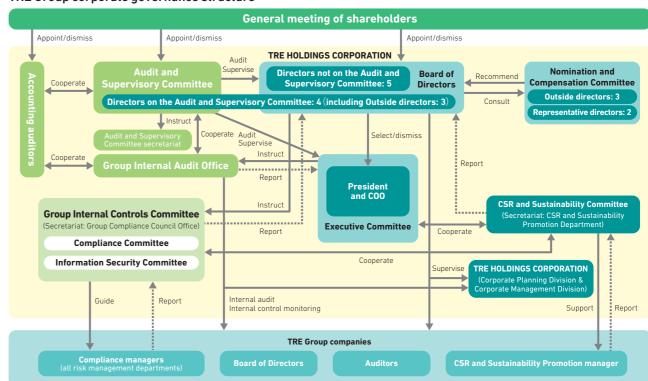
The Board of Directors takes important decisions about management strategies and plans and other matters. It also supervisions the execution of business. Three of the nine board members (including three female members) are outside directors (including two female members), and the members possess a wealth of experience and a broad range of knowledge as they include a lawyer, a certified public accountant,

FY ended Mar. 2024 (Actual)

Name	No. of meetings	Meetings attended
Naoto Matsuoka	14	14
Mitsuo Abe	14	14
Takao Suzuki	14	14
Mamoru Mitsumoto	14	14
Akira Kanai*	10	10
Fumie Omura	14	14
Hiroyuki Suematsu	14	14
Tomoko Aramaki*	10	10
Naoto Yokoi*	4	4

<sup>\*</sup> Attendance for Naoto Yokoi is listed up to the time of his retirement in June 2023, while attendance for Akira Kanai and Tomoko Aramaki is listed from the time of their appointment in June 2023 onward.

# TRE Group corporate governance structure



Part 3 ESG

# Enhancing corporate governance and sustainability management

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# **Corporate Governance**

and a former Vice-Minister of Agriculture, Forestry and Fisheries.

When selecting company directors, the Nomination and Compensation committee deliberates on whether they have the foresight needed for future business expansion as well as on their expertise regarding corporate management and management strategy, internal controls and governance, sales and marketing, environmental issues and sustainability, manufacturing and technology, finance and accounting, human resources and labor, and legal issues and compliance.

# Audit and Supervisory Committee

We are a company with an Audit and Supervisory Committee, and have appointed four Audit and Supervisory Committee members. Regarding the committee's structure, three of the members (including two female members) are outside directors so that they can supervise the directors' execution of business from an independent standpoint.

### Nomination and Compensation committee

To improve the efficiency of the board of directors and further enhance the corporate governance structure, we have established a Nomination and Compensation Committee as a discretionary advisory body for the Board of Directors. It consists of representative directors and outside directors, with outside directors forming the majority.

The Committee aims to enhance the effectiveness of the Board of Directors by facilitating the expression of independent opinions by outside directors who are also Audit and Supervisory Committee members by providing them with advance explanations of the Company's approach and policies when considering key management issues in order to enhance the Company's corporate governance framework.

The Committee consults with the Board of Directors and provides opinions primarily regarding the selection of director candidates, the formulation of policies on compensation and other benefits for directors, opinions on compensation and other benefits for directors (excluding directors who are members of the Audit and Supervisory Committee), including points under the Board Benefit Trust system, and opinions on the assessment of the effectiveness of the Board of Directors.

## Group Internal Controls Committee

The Group Internal Controls Committee meets on a regular basis (quarterly and as needed) to study, discuss, and approve the overall policy and direction of risk management initiatives.

Centered around this committee, the Company discusses internal control measures based on its basic policy on internal control systems and conducts ongoing checks and reinforcements in response to changes in the business and environment to ensure that the Group's internal control systems continue to function effectively.

### Compliance Committee

The Compliance Committee, established as a subordinate organization of the Group Internal Controls Committee, convenes on a regular basis (quarterly and as needed) to examine whether any violations or potential violations of laws or regulations have occurred, and immediately reports to the Group Internal Controls Committee if any such violations are identified.

## Information Security Committee

The Information Security Committee, established as a subordinate organization of the Group Internal Controls Committee, convenes on a regular basis (quarterly and as needed) to examine the status of information security maintenance and management and the occurrence of incidents or problems related to information security in cooperation with the Group's subsidiaries, and reports findings to Group Internal Controls Committee as appropriate.

# CSR and Sustainability Committee

Chaired by the President and COO, the committee formulates policies to address the Group's sustainability-related management tasks, including climate change, and reports on the progress of initiatives to the Board of Directors. The CSR and Sustainability Promotion Department has been established as the Committee's secretariat, and is tasked with identifying material issues for promoting sustainable management and contributing to the achievement of the SDGs, examining mid-to long-term risks and opportunities, preparing data, including non-financial information, and preparing integrated reports in line with the recommendations of the Task Force on Climaterelated Financial Disclosures (TCFD).

# TRE Group sustainability management structure

TRE HOLDINGS CORPORATION Integrated report 2024



# Members of each governance body

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Title	Name	Board of Directors	Audit and Supervisory Committee	Nomination and Compensation Committee	Group Internal Controls Committee	Compliance Committee	Information Security Committee	CSR and Sustainability Committee
Chairman and CEO Executive Officer	Naoto Matsuoka	0		0	0			
President and COO Executive Officer	Mitsuo Abe	0		0	0			0
Director	Takao Suzuki	0						
Director	Mamoru Mitsumoto	0						
Director	Miwa Aoyama	0						
Director, Audit and Supervisory Committee member	Takeshi Uekawa	0	0					
Outside Director, Audit and Supervisory Committee Member	Fumie Omura	0	0	0				
Outside Director, Audit and Supervisory Committee Member	Hiroyuki Suematsu	0	0	0				
Outside Director, Audit and Supervisory Committee Member	Tomoko Aramaki	0	0	0				
Executive Officer	Yoshimitsu Oshima				0		0	0
Executive Officer	Hidetoshi Inoue				0	0	0	0
Executive Officer	Yuichiro Yamashita				0		0	0
Executive Officer	Rei Nishihara				0	0	0	0
Executive Officer	Hideyuki Fujimoto				0		0	
Other	Other members					0	0	0

# Expertise of directors and outside directors

Name	Corporate management/ management strategy	Internal control/ governance	Sales/ marketing	Environment/ sustainability	Finance/ accounting	HR/ labor management	Legal/ compliance
Director							
Naoto Matsuoka							
Mitsuo Abe	•						
Takao Suzuki							
Mamoru Mitsumoto							
Miwa Aoyama	•			•			
Audit and Supervisory	Committee mem	ber					
Takeshi Uekawa							
Fumie Omura*	•						
Hiroyuki Suematsu*	•	•		•			
Tomoko Aramaki*	•	•			•		•

<sup>\*</sup>Outside director, designated as an independent director as stipulated by the Tokyo Stock Exchange and registered with the Exchange.

# **Effectiveness of the Board of Directors**

# Assessment of the effectiveness of the Board of Directors

We conduct a third-party survey of all members of the Board of Directors to increase the effectiveness of the Board. The survey asks respondents to answer questions regarding the composition and operation of the Board of Directors, with results reported to the Executive Committee and the Board of Directors.

The third party to which the survey was commissioned also performed a comparison with other companies, with average or above average scores for all major survey items indicating that the Board of Directors is functioning effectively.

Based on the results of the assessment of effectiveness, "digital transformation (DX)," which received a relatively low rating as in the previous year, has been positioned as a priority item in the 2nd medium-term business plan in order to strengthen the Company's business

# **Corporate Governance**

infrastructure, and a new department will be established in April 2024 in order to plan DX strategies and promote operational improvements throughout the Group.

Regarding "dialogue with shareholders," which received the second-lowest rating, we are working to ensure prompt and appropriate feedback on the opinions and evaluations of investors and the market to the Board of Directors, in order to improve our corporate value.

In addition, with regard to "group governance," an area in which the evaluation score improved from the previous fiscal year, we strengthened the Audit and Supervisory Committee by increasing the number of members by one, as well as enhancing and improving the reporting system, including regular audit reports by the Group Internal Audit Office, reports by the Group Internal Controls Committee, and reports on important matters related to the management of Group companies.

Furthermore, we plan to analyze items that had low scores or for which there was a difference in the scores given by internal directors and external Audit and Supervisory Committee members, and make appropriate improvements to ensure a higher level of effectiveness.

### **Main Findings of Assessment**

- The assessment confirmed that the Board was generally perceived to be functioning effectively.
- The highest-rated item was "composition and operation of the Board of Directors," followed by "management and business strategies."
- The rating for "group governance" improved from the previous fiscal year.
- The lowest-rated item was "digital transformation (DX)" followed by "dialogue with shareholders, etc."

# Officer compensation

Compensation for directors consists of a fixed basic compensation, a performance-based compensation that is determined every year based on the company's results, and a medium-term performance-based compensation in the form of a board benefit trust (BBT) provided from the company's own shares, given upon retirement. Outside directors are paid a fixed basic compensation that takes their responsibilities into account.

Furthermore, to ensure the objectivity and transparency of director compensation, the company has established a Nomination and Compensation Committee as a discretionary advisory body made up of a majority of outside directors, and the committee chairman is selected from the

outside directors.

Additionally, according to the officer compensation regulations set in June 2022, when a director's compensation is being determined, the amount of their management responsibility as a director or executive officer will be taken into account. The Audit and Supervisory Committee will take decisions on directors who are Audit and Supervisory Committee members after deliberations.

# **Cross-shareholdings policy**

To expand the Group's business areas, apart from capital and business alliances, we may also possess shares if we deem them necessary for maintaining and strengthening positive business ties. We scrutinize the shares held for their purpose, business status and dividend yield to verify the rationality of holding them.

Furthermore, when exercising voting rights for shares held, we closely examine the contents of the agenda and determine whether it is a proposal that will increase the corporate value of the issuing company in the medium to long term. We make this decision comprehensively for each

We cast an opposing vote for proposals that would seriously damage the shareholder's value or cases that cause major concern from a corporate governance point of view such as a social scandal.

# Communication with shareholders and investors

TRE HOLDINGS has established a department in charge of investor relations (IR), and the president and COO and IR Department handle communications with shareholders and investors

Furthermore, at quarterly financial briefings, the president and COO and the IR Department provide explanations about new businesses, trends in business results and important businesses included in the mediumterm business plan, and they also endeavor to increase understanding through a question-and-answer session.

In addition to the above, to facilitate sustainable growth and increase medium- to long-term corporate value, we have a policy of responding positively as far as reasonably possible to interview and reporting requests from shareholders and investors who wish to communicate constructively with us while ensuring that important non-public information is not disclosed to one section of investors only.

As a future initiative, we plan to conduct plant tours for our shareholders as an opportunity for them to gain a deeper understanding of TRE's business and endeavours.

# Message from Outside Directors

# **Toward a Future Waste Management Industry**

# Looking ahead to the next 100 years: TRE's challenge and responsibility

I have served as an outside director since the establishment of TRE HOLDINGS, which is now in its third year of operation. I had great expectations for the synergy that would result from bringing two publicly listed companies together under a holding company. TRE has announced its mediumterm business plan, and although it is titled as a "medium-term" plan, it also looks ahead to the next 100 years. With the role of the waste management industry gaining increasing societal recognition and companies in other industries beginning to expand into the waste management industry, it is clear that TRE's responsibility to society is becoming ever more important. I am committed to supporting TRE's efforts to address society's key challenges, including developing new waste treatment methods that go beyond decarbonization.



Fumie Omura **Outside director** Audit and Supervisory Committee member

# **Innovation in Resource Recycling**

# Tackling big, future-driven projects as a Waste Transformation (WX) environmental company

In today's era where promoting resource recycling and tackling issues such as global warming are critical, two companies with proven track records in the waste management field have come together to embark on a new step forward. However, I believe that the key challenge lies in achieving an effect that goes beyond simply joining forces.

While there have been efforts to date to link the two companies businesses with each other to achieve greater effectiveness, the current medium-term business plan outlines a bold new approach as a Waste Transformation (WX) company that will pursue large-scale projects. It is extremely important that TRE makes solid progress toward this ambitious plan, and as an outside director I will be keeping a keen eye on the company's progress from a variety of perspectives.

In today's changing times, I also hope that the TRE will focus on building an environment that enables its employees to work with energy and passion.



Hiroyuki Suematsu Outside director **Audit and Supervisory** Committee member

# A Responsibility to Build the Future

# TRE HOLDINGS' sincere efforts to protect the environment

In recent years, hardly a day goes by without hearing keywords such as "decarbonization" and "sustainable growth". Both companies and individuals are becoming increasingly aware of the importance of protecting the global environment.

However, how many companies are truly committed to making a real contribution to these challenges, rather than simply reciting these words as superficial rhetoric?

Over the past year or so since I assumed the role of outside director, I have been deeply impressed by just how seriously TRE HOLDINGS, as a "comprehensive environmental management company," takes environmental issues and how it manages its operations with a strong sense of responsibility. The medium-term business plan that was recently announced is only a small glimpse of TRE's vision and passion. I hope that a greater number of people will appreciate not only the metrics that TRE discloses to the capital markets but also the Group's potential to contribute to our planet over the medium to long term.

As an outside director, in addition to fulfilling my responsibilities under the Companies Act, I also aim to convey the virtues of TRE to the wider society.



Tomoko Aramaki **Outside director Audit and Supervisory** Committee member

# List of Executives (As of July 1, 2024)

# **Directors**



Naoto Matsuoka Chairman and CEO

Number of shares of the Company held: 10.900

Attendance at Board of Directors' meetings:

Apr. 1972	Joined Mitsubishi Corporation
Apr. 1999	President and Representative Director, Ueno Tekko Co., Ltd.
Apr. 2004	President, Metal One Structural Steel & Resource Corporation (currently MM&KENZAI Corporation)
Apr. 2009	President & CEO, Director, Metal One Corporation
Sep. 2015	President and Representative Director, SUZUTOKU Holdings Co., Ltd. (currently REVER CORPORATION)
Sep. 2016	Director, HIDAKA SUZUTOKU (Thailand) CO., LTD.
May 2018	President, Representative Director and Executive Officer, REVER HOLDINGS CORPORATION (currently REVER CORPORATION)
Oct. 2021	Member of the Board, TAKEEI CORPORATION (current position)
Oct. 2021	Chairman and Chief Executive Officer, the Company (current position)
Jun. 2022	Representative Director, TRE Foundation for SDGs Promotion (current position)
Jul. 2022	President and chief executive officer, REVER CORPORATION (current position)



Mitsuo Abe President and COO

Number of shares of the Company held: 16.816

Attendance at Board of Directors'	meetings:
14/14	_

Apr. 1983 Apr. 2013	Joined The Kyowa Bank, Ltd. (currently Resona Bank, Limited) Managing Executive Officer, Resona Bank, Limited
Oct. 2015	Representative Director and President, Resona Kessai Service Co., Ltd.
Apr. 2017	Joined TAKEEI CORPORATION Executive Officer, Deputy General Manager, Corporate Planning Division
Jan. 2018	Executive Officer, Deputy General Manager, Sales Division and General Manager, Related Business Department
Jun. 2018	Member of the Board, Managing Executive Officer, General Manager, Corporate Planning Division
Jun. 2019	Member of the Board, Chief Operating Officer (current position)
Jan. 2021	Representative Director, TEC Takekuma Co., Ltd. (current position)
Sep. 2021	Director, REVER HOLDINGS CORPORATION (currently REVER CORPORATION) (current position)
	Representative Director and President, Platech Soma Co., Ltd.
Oct. 2021	President and Chief Operating Officer, the Company (current position)
Apr. 2023	Director, REVER CORPORATION (current position)
Jun. 2023	Representative Director, Green Arrows Holdings, Inc. (current position)
Sep. 2023	Secretary, Glass Recycling Committee of Japan (current position)
Dec. 2023	Director, Solar Panel Reuse and Recycling Association



Takao Suzuki Director

Number of shares of the Company held: 600,000 shares

Attendance at Board of Directors' meetings:

Apr. 1968	Joined Suzuki Tokugoro Shoten Co., Ltd. (currently REVER CORPORATION)
Apr. 1973	Director
Jul. 1978	Managing Director
Apr. 1985	President and Representative Director
Jun. 1996	Chairman, Japan Iron and Steel Recycling Institute
Jan. 2002	Chairman of the Board, Metal Recycling Co., Ltd. (currently REVER CORPORATION)
Dec. 2003	Chairman and Representative Director, NAKADAYA CORPORATION (currently REVER CORPORATION)
Apr. 2006	Chairman and Representative Director, Suzutoku LTD. (currently REVER CORPORATION)
Jul. 2007	President and Representative Director, SUZUTOKU Holdings Co., Ltd. (currently REVER CORPORATION)
Sep. 2013	Chairman and Representative Director
Dec. 2015	Chairman and Representative Director, Major Venous Japan Co., Ltd.
Apr. 2021 Oct. 2021	Outside Director, BESTERRA CO., LTD. (current position) Director, the Company (current position)
Apr. 2023 Jun. 2024	Chairman and Representative Director, REVER CORPORATION Chairman and Director, REVER CORPORATION (current position



**Mamoru Mitsumoto** Director

Number of shares of the Company held: 1,975,326 Attendance at Board of Directors' meetings:

Mar. 1977	Member of the Board, Takeei Construction Co., Ltd. (currently TAKEEI CORPORATION)
Jun. 1983	President and Representative Director
Aug. 2006	Representative Director, Monzen Clean Park Co., Ltd (current position)
Sep. 2007	Representative Director, Green Arrows Holdings, Inc.
Jun. 2010	Chairman of the Board of Directors, TAKEEI CORPORATION (current position)
May 2020	Representative Director, TAKEEI Foundation for SDGs Promotion (currently TRE Foundation for SDGs Promotion)
Oct. 2021 Jun. 2024	Director, the Company (current position) Chairman and Director, TAKEEI CORPORATION (current position)



Miwa Aoyama Director

Number of shares of the Company held:

Attendance at Board of Directors' meetings:

Apr. 1985	Joined The 77 bank, Ltd.
May 2000	Joined TAG Co., Ltd.
Jul. 2001	General Affairs Division Head
Jul. 2013	General Manager
Jul. 2019	Managing Director
Jul. 2022	Senior Managing Director
Jun. 2024	Representative Director and President (current position)
Jun. 2024	Director, the Company (current position)

# **Audit and Supervisory Committee member**



Takeshi Uekawa

Number of shares of the Company held: 3,976

Attendance at Board of Directors' meetings - (newly appointed in June 2024)

	7 11
Apr. 1982	Joined The Nippon Credit Bank, Ltd. (currently Aozora Bank, Ltd.)
Mar. 2012	Joined Citibank Japan Ltd.
Oct. 2012	Joined TAKEEI CORPORATION,
	Manager in charge of President's Office
Nov. 2012	General Manager, President's Office
Jun. 2014	Representative Director and President, Fuji Car Manufacturing Co., Ltd.
Jun. 2018	Executive Officer, Deputy General Manager, Sales Division, in charge of Affiliate Business Department, TAKEEI CORPORATION
Aug. 2018	Executive Officer in charge of Business Audit Department
Jun. 2019	Member of the Board, Managing Executive Officer and General Manager, Corporate Planning Division
Jan. 2021	Corporate Auditor, TEC Takekuma Co., Ltd. (current position)
Oct. 2021	Executive Officer, General Manager, Corporate Planning Division, the Company
Jun. 2022	Executive Officer, General Manager, Corporate Management Division, the Company Member of the Board, Managing Executive Officer and General Manager, Administration Division, TAKEEI CORPORATION

Jun. 2023 Member of the Board, Senior Managing Executive Officer and General Manager, Administration Division

Jun. 2024 Corporate Auditor (current position)

Director (Audit and Supervisory Committee member),

the Company (current position)



Fumie Omura

Number of shares of the Company held:

Attendance at Board of Directors' meetings:

Apr. 1994	Joined BLAKEMORE & MITSUKI
Oct. 1996	Joined Hideyuki Sakai Law Firm
Jun. 2006	Established Ichigaya International Law Firm (currently SHINDO & MATSUMURA LAW OFFICE) (current position)
Jun. 2015	Outside Director, Carlit Holdings Co., Ltd.
Sep. 2019	Outside Auditor, REVER HOLDINGS CORPORATION (currently REVER CORPORATION)
Oct. 2021	Outside Director (Audit and Supervisory Committee member), the Company (current position)



# Hiroyuki Suematsu

Number of shares of the Company held: Attendance at Board of Directors' meetings:

Apr. 1983 Mar. 2002	Joined Ministry of Agriculture, Forestry and Fisheries Counsellor, Cabinet Secretariat, Prime Minister's Office of Japan
Oct. 2006	Director, Environment Policy Division, Minister's Secretariat, Ministry of Agriculture, Forestry and Fisheries(MAFF)
Jul. 2007	Director, Policy Planning and Evaluation Division, Minister's Secretariat, MAFF
Apr. 2008 Apr. 2009	Director, Food Security Division, Minister's Secretariat, MAFF Policy Planning Division, Minister's Secretariat, MAFF
Jul. 2010	Director-General, Forest Policy Planning Department, Forestry Agency, MAFF
Apr. 2014	Director-General, Kanto Regional Agricultural Administration Office, MAFF
Jul. 2015	Director-General, Rural Development Bureau, MAFF
Jun. 2016	Director-General, Industrial Science and Technology Policy and Environment Bureau, Ministry of Economy, Trade and Industry
Jul. 2018	Vice-Minister of Agriculture, Forestry and Fisheries, MAFF
Oct. 2020	President and Representative Director, Next Generation Industry Research Institute Co., Ltd. (current position)
Jan. 2021	Specially Appointed Professor, Research Institute for Agricultural and Life Sciences, Tokyo University of Agriculture (currently Tokyo NODAI Research Institute) (current position)
Jun. 2021	Outside Director, SBI Holdings (current position)
Oct. 2021	Outside Director (Audit and Supervisory Committee member), the Company (current position)



# Tomoko Aramaki

Number of shares of the Company held:

Attendance at Board of Directors' meetings: 10/10 (appointed in Jun. 2023)

Oct. 1991	Joined Century Audit Corporation
Mar. 1995	Registered as a Certified Public Accountant
Jul. 1999	Seconded to Regional Financial Cooperation Division, Trade Policy Bureau, Ministry of International Trade and Industry
May 2002	Joined IBM Japan, Ltd.
Feb. 2006	Director, Aramaki CPA Office (current position)
Apr. 2006	Registered as a Certified Tax Accountant
Jun. 2008	Audit & Supervisory Board Member, PARIS MIKI Inc. (currently PARIS MIKI HOLDINGS Inc.)
Jun. 2015	Director, in charge of Investor Relations
Dec. 2015	Corporate Auditor, SACOS CORPORATION
Jun. 2018	Outside Director, EXEO Group, Inc.
Mar. 2022	Outside Director, FUJI SOFT CORPORATION (current position)
Jan. 2023	Information and Communications Council member, Ministry of Internal Affairs and Communications (current position) Telecommunications Business Policy Committee member, Information and Communications Council (current position) Postal Services Policy Committee member, Information and Communications Council (current position)
Jun. 2023	Outside Director (Audit and Supervisory Committee member), the Company (current position)
Jun. 2024	Outside Director(Audit and Supervisory Committee member), Astellas Pharma Inc. (current position)

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# Working to reduce the environmental impact of our business activities in order to conserve the global environment

# Basic approach

As stated in the TRE Group's principles, "We are committed to the conservation of the global environment," and are striving to contribute to the creation of an efficient recycling society and a carbon-neutral society through our business activities. In addition, under our Basic Policy on the Environment, we are working to conserve the global environment and reduce our environmental footprint by reducing our CO2 emissions, among other measures.

# **Basic Policy on the Environment**

TRE HOLDINGS CORPORATION and its affiliated companies ("the TRE Group"), which operate a Waste Treatment & Recycling Business a Resource Recycling Business, a Renewable Energy Business, and other environment-related businesses, are committed to proactively working toward conservation of the global environment and reduction of environmental impact in order to realize a future in which both companies and society can achieve sustainable growth.

1. Contributing the creation of an efficient recycling society We will strive to contribute to the creation of an efficient recycling society through our business activities by further enhancing the TRE Group's technologies and combining the strengths of our respective Group companies to provide environmentally friendly products and services.

### 2. Striving to create a carbon-neutral society

In addition to ensuring thorough energy conservation throughout our business activities, we aim to reduce greenhouse gas emissions and contribute to climate change mitigation by creating renewable energy sources using natural and biomass resources in order to help create a carbon-neutral society.

### 3. Promoting environmental initiatives that are rooted in local communities and society

As a comprehensive environmental management company, we are dedicated not only to preventing environmental pollution in our business activities, but also to proactively protecting and preserving the natural environment in order to coexist in harmony with nature and the ecosystems of the regions in which we operate.

### 4. Enhancing framework for advancing environmental initiatives

In addition to complying with all environment-related laws and regulations, our officers and employees will practice Sustainability Management by pursuing continuous improvement based on careful consideration of environmental issues.

As of October 19, 2021

# Operation of environmental management system

The TRE Group has obtained ISO 14001 certification, the international standard for environmental management, as well as Eco-Action 21 certification, an environmental management system established by Japan's Ministry of the Environment, and operates the PDCA cycle to make continuous improvements to its management processes. As of the end of fiscal 2023, 82.6%\* of TRE Group companies had obtained environmental management certifications.

\* Number of employees at sites that have obtained management system certifications/number of employees in the entire TRE Group

### **Environmental certifications**

Organization certified	Date of certification (Registration)
IS014001	
REVER CORPORATION	June 1999
TAKEEI CORPORATION *1	February 2001
Fuji Car Manufacturing Co., Ltd.	March 2001
EQUAL ZERO Inc.	March 2001
Shinshu Takeei Co., Ltd.	December 2001
Hokuriku Environmental Services Co., Ltd. *2	July 2004
Takeei Green Recycling Co., Ltd. *3	June 2007
Eco-Action 21	
Ikeda Construction Materials Co., Ltd.	August 2007
Takeei Metal Co., Ltd.	April 2017
Gypro Co., Ltd.	October 2017
TRE GLASS CORPORATION	August 2019
Tohoku Koueki Recycling Technology Co., Ltd.	February 2022

- \*1 Divisions in the industrial waste treatment business responsible for sales, collection and transportation, final disposal, administrative tasks, and intermediate processing
- \*2 Headquarters and Hiraguri Plant
- \*3 Fujiyoshida Plant, Fujigane Plant

# Trial operation of new electric excavator

In November 2023, TAKEEI's Kawasaki Recycling Center began trial operation of a new Komatsu 20-ton class electric excavator equipped with a lithium-ion battery.

Compared to electric vehicles, the electrification of construction machinery is considered more difficult as a greater amount of power is required, and development has faced many challenges in terms of operating time and charging performance. The excavator developed by Komatsu is powered by a high-capacity, high-output lithium-ion battery that can operate for approximately eight hours on a full charge, and features a rapid recharging system that enables continuous operation through additional charging of the battery.

Furthermore, it operates quietly and helps ensure a clean work environment as it does not emit any exhaust fumes. This trial was performed at the recycling center in order to obtain continuous data on the excavator's durability, safety, and environmental performance under the work environment of a waste treatment facility.



The excavator trialed at TAKEEI's Kawasaki Recycling Center

used to charge the excavator is partially generated in-house by solar panels installed at the center, further contributing to the reduction of CO<sub>2</sub> emissions.

The electricity

# Installing solar panels at intermediate processing facilities and other sites

The TRE Group is working to install solar panels on the roofs of its offices and intermediate processing facilities as a measure toward its carbon neutrality goals and to promote the use of renewable energy sources for the electricity it consumes. In fiscal 2023, solar power generation systems were installed at five TAKEEI Group sites. Shinshu Takeei Co., Ltd.'s new office building that was completed in June 2024 is also outfitted with solar panels, and when combined with the two REVER CORPORATION sites that have already introduced this technology, this brings the number of sites that have installed solar power generation systems for in-house consumption to eight. In addition to installing solar panels for in-house consumption at new plants that will be built in the future, we are working to install solar panels at our existing sites, and REVER's Ichihara Plant plans to begin operation of a new power generation system in fiscal year 2024.

# Participation in GX League

Introduction | Part 1 Value Creation Model | Part 2 Vision and Strategy | Part 3 ESG | Corporate Data

With the establishment of Japan's Green Transformation (GX) Promotion Act, which aims to fulfill international commitments such as carbon neutrality by 2050 while strengthening the competitiveness of the nation's industry and achieving economic growth, momentum is building for a green transformation.

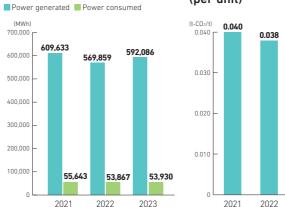
The GX League is a platform for companies taking up the challenge of transitioning to carbon neutrality, and serves as a forum for companies to promote collaboration with government and academia toward this goal.

The TRE Group became a member of the GX League in February 2024. By participating in this platform, we will keep up to date with the latest developments related to carbon neutrality and work to advance GX initiatives within the company and in our business operations, in order to fulfill one of the Group's missions of creating a carbon-neutral society.

# Energy input and CO2 emissions in the TRE Group's business activities

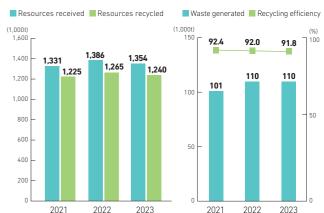


### Trends in power generation CO<sub>2</sub> emissions per and consumption \* resource received (per unit) \*2



# Resources received and recycled \*4

# Waste generation and recycling efficiency \*5



- \*1 The TRE Group generates more renewable energy than the amount of electricity used by each Group company.
- \*2 CO2 emissions associated with energy use ÷ resources received. Resources received: Volume of valuables and waste received by the Group.

0.038

- \*3 From fiscal 2023, we have adopted the market-based method for measuring Scope 2 CO<sub>2</sub> emissions
- \*4 Resources received: Volume of valuables and waste received by the Group. Resources recycled: Volume of resources received that could be used as recycled resources.

\*5 Recycling efficiency: Resources recycled ÷ (Resources recycled + Waste generated) × 100. Waste generated: Volume of resources received that could not be recycled and was disposed of.

# We regard climate change as an important management issue and understand and analyze the medium- to long-term risks and opportunities

# Basic approach

TRE HOLDINGS is fully aware of the impact of climate change, including associated environmental destruction and the need for countermeasures. Accordingly, we have set the realization of "an efficient recycling society" and "a carbon-neutral society" as material issues. In fiscal 2022, we expressed our support for the Task Force on Climate-Related Financial Disclosures (TCFD). Although society and markets are increasingly acting to achieve carbon neutrality, abnormal weather events and flood damage are already growing more severe. We will continue our efforts to help resolve societal challenges related to climate change via our business, including contributing to disaster recovery efforts.

### Governance

The TRE Group has established the CSR and Sustainability Committee as an organization to set targets and plan, announce, execute and evaluate strategies concerning the Group's climate change countermeasures and other initiatives aimed at solving social issues.

The CSR and Sustainability Committee is chaired by the President and COO. As the body for deliberating sustainabilityrelated initiatives, its functions include determining relevant policies and managing the progress of targets. It meets at least twice a year, in principle, and reports to the Board of Directors after holding discussions and obtaining a consensus at Group management meetings. The Board of Directors supervises the progress of targets and policies.

# Risk management

The CSR and Sustainability Committee discusses the impact of the risks and opportunities of climate change on the Group's business and how to manage those risks going forward, and the results are disclosed in this integrated report.

# Strategy

The Group seeks to understand the risks and opportunities posed to business by the migration risks and physical risks of climate change, and to reflect that understanding in business strategies and in the planning of climate change countermeasures. The results of the climate change risk impact analysis indicate that for the Group, which is engaged in waste treatment, recycling and renewable energy businesses, the risks posed by climate change to business continuity are significantly outweighed by the business opportunities, which are linked to future growth opportunities.

In accordance with TCFD recommendations, we also conduct scenario analysis to identify climate change-related risks and opportunities. During this scenario analysis, we defined a 1.5°C scenario and a 4°C scenario based on scientific evidence from the International Energy Agency (IEA) and other sources, and estimated the following three items to evaluate the magnitude of climate-related risks and opportunities that may affect our business in 2030.

### Migration risks

# 1. Financial impact of the introduction of carbon pricing

We estimated the impact of the introduction of a carbon tax on CO<sub>2</sub> emissions, based on the assumption that CO<sub>2</sub> emissions in 2030 will remain at the same level as in 2013.

### 2. Financial impact of changes in electricity prices

We estimated the impact of reducing our total electricity consumption in 2030 compared to 2021 levels through energy saving initiatives and the introduction of solar power generation systems for on-site consumption, as well as the effect of adopting 100% renewable energy for the remainder of our electricity consumption.

# Physical risks

# 3. Impact of business suspension due to flooding and storm surge damage

We used hazard maps to determine information such as the depth of inundation due to storm surges and flooding as well as river class based on the address of each of our business sites, and estimated the amount of damage due to business suspension at each location based on the number of days of full or partial business suspension in accordance with the depth of inundation, then multiplied this by the annual probability that levels will be exceeded in accordance with the relevant river class to estimate the average annual amount of damage due to business suspension.

The results of the assessment are summarized in table form on the following page. Under the 1.5°C scenario, we anticipate a significant cost increase due to carbon taxes. At the same time, our qualitative assessment also indicates an increase in business opportunities.

With regard to physical risks, we also anticipate an increase in such risks due to climate change. In light of the fact that the Group's businesses contribute to conserving the global environment, including climate change countermeasures, we have established the creation of an efficient recycling, carbon-neutral society as material issues to address, and we will focus on reducing the risks of climate change while seizing business opportunities.

# Scenario analysis on TRE HOLDINGS' business (risks and opportunities)

Broad	Intermediate	Sub category	Risks/	Impact on the TRE Group		Assessment		Time of
category	category	Sub category	Opportunities	impact on the TRE Group	1.5°C	4°C	Qualitative	
			Risks	<ul> <li>Increased costs due to burden of new taxes (carbon taxes) if we do not conserve energy at our plants/offices and in our logistics</li> </ul>	Major	Minor		
	Policies and	Stricter regulations such as carbon taxes and greenhouse gas emissions quotas	Opportunities	Expansion in the steel recycling business due to a global increase in demand for electric furnace steel     A rise in the needs of customers and social demands for lower carbon throughout the supply chain, contributing to reduced Scope 3 CO₂ from customers as our plants/offices use lower-carbon energy, leading to increased differentiation and competitiveness ∗ Increased demand for renewable energy	-	ı	Major	Mid/ Long- term
Migration	regulations	Stricter environmental	Risks	<ul> <li>Increased capital investment costs and external (secondary) processing costs in order to comply with laws and regulations</li> </ul>	-	-	Minor	Short-
risks	Market	laws and regulations	Opportunities	<ul> <li>Rapid increase in demand for recycled resources and recycling from local governments and various manufacturers</li> </ul>	-	-	Major	long- term
		Stricter information disclosure obligations	Risks	Decline in the Group's credibility if it does not comply appropriately with requests for disclosure     Increased costs due to an increase in indirect operations	_	-	Minor	Short- to long-
			Opportunities	Clear display of superiority in the industry through information disclosure	-	_	Minor	term
		Sharp increases in resource prices	Risks	<ul> <li>Increased costs as a result of a sharp rise in energy costs and the prices of materials and raw materials</li> </ul>	Medium	Minor		Short- to mid-
			Opportunities	Greater demand for reclaimed and recycled goods	_	-	Medium	term
	Acute	Intensification and frequent	Risks	<ul> <li>Stoppage of operations due to damage to plants/offices or disruption of supply chain.</li> </ul>	_	-	Major	Short-
			Opportunities	<ul> <li>Increased disaster-related waste treatment following a natural disaster such as a major typhoon</li> </ul>	-	-	Minor	long- term
		Risks  Rise in average temperature, frequent floods, and storm surges  Risks  Opportunities	Risks	Deterioration of the working environment and reduced labor productivity due to heat stress	-	-	Major	
Physical risks	Chronic tem freq floor		Risks	Storm surge damage to offices and plants located in coastal areas	Medium	Major		
			Increased opportunities for worn out infrastructure repair work and waste treatment businesses as a result of disaster prevention, disaster mitigation, and initiatives for building national infrastructure resilience Increased opportunities for waste treatment businesses accompanying the movement of workplaces away from regions expected to face disasters	_	-	Minor	Mid/ Long- term	

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# Indicators and targets

We have set targets for CO<sub>2</sub> emission reductions among our KPIs. (1) Achieve net zero CO<sub>2</sub> emissions (Scope 2) by 2026.

- (2) Reduce net CO<sub>2</sub> emissions (Scope 1+2) by 46% or more by
- 2030 compared to FY2013.
- (3) Achieve net zero CO<sub>2</sub> emissions (Scope 1+2+3) by 2050.

We also calculate CO<sub>2</sub> emissions as an assessment metric for evaluating climate change-related risks and opportunities. The data on Scope 1, 2, and 3 CO<sub>2</sub> emissions and recycling efficiency is assured by SOCOTEC Certification Japan, an independent third-party organization, in order to ensure the

reliability of calculations.

Scope of assurance: Calculation of  $CO_2$  emissions (Scope 1, 2, and 3) and recycling efficiency for TRE HOLDINGS and its 28 consolidated subsidiaries in FY2023

Assurance level: Limited assurance



Assurance mark by SOCOTEC Certification Japan, a third-party organization.

**Creating Pleasant and Fulfilling Working Environments** 

### Introduction | Part 1 Value Creation Model | Part 2 Vision and Strategy | Part 3 ESG | Corporat

# Promoting diversity and inclusion to allow each and every employee to achieve their full potential

# **Basic approach**

The TRE Group believes that human resources are the foundation for sustainable business continuity and considers the creation of pleasant and fulfilling work environments a priority task.

Our employees are the driving force behind all of our corporate activities. The TRE Group clearly declares its commitment to prohibiting gender discrimination and child labor in its Code of Conduct, and is striving to promote diversity and inclusion to provide all employees an equal opportunity to utilize their unique talents. Additionally, in order to enhance our corporate value while adapting to changes in the external environment, it is essential that we work to attract and retain personnel with diverse values and provide them with opportunities to foster their growth. By creating a work environment where a diverse workforce can exhibit their abilities to the fullest and work with enthusiasm and peace of mind, we aim to build an organization where both the Group and its employees can continue to grow sustainably.

# Initiatives to enhance our organizational strength

### Attracting and retaining talent

With Japan's birthrate declining and its population aging rapidly, the country's working population ratio is projected to decline from 63.8% in 2010 to 58.1% in 2030. Accordingly, we are stepping up our efforts to recruit young talent. The ability to secure a stable source of talent is also a pressing issue for the TRE Group. As part of our recruiting efforts, we are working to share our hiring know-how across the Group in order to enhance new graduate hiring at our Group companies, as well as broadening our recruiting scope, such as hiring mid-career talent.

One initiative TAKEEI CORPORATION implements as part of its talent retention efforts is the "Elder System," in which young employees serve as trainers tasked with supporting new junior employees and providing practical guidance and advice on workplace life over the course of their first year. This also helps the young employees serving as instructors to improve their communication skills and practical leadership abilities. In addition TAKEEI's Kawasaki Recycling Center and other facilities have created multilingual educational



An Elder System instructor mentoring a new employee

materials and notices in their workplaces, which incorporate a variety of illustrations and photographs, in order to ensure safe working conditions and increase retention of the foreign workers employed by the company.

# Promoting diverse work styles and supporting career development

# Expanding efforts to promote women's career development

The Group does not discriminate based on gender, and we have female employees succeeding in a variety of areas including factory work, sales, planning and management. In addition, in view of changing career preferences and working environments, we are working to make a variety of career paths available to our employees, prevent the loss of talent through resignation, help recruit of talented personnel locally, and promote women's career development by creating an environment that allows women to continue working after childbirth and while raising children. Programs in this area include the Limited Area Career-track System that makes it possible for employees to advance their career without relocating, and the introduction of the Job Group Change System that allows flexibility for employees wishing to change job groups in line with their career aspirations.

At present the ratio of female managers in the Group is 5.2%, but have set a target of doubling the number of female, and are actively working to improve the business and work environment and promote employees to management positions based on their abilities, regardless of gender.

# Support for balancing work with childcare and care-giving

The Group has introduced a Reduced Working Hours for Childcare System to support employees caring for children. It allows them to choose to work six or seven hours in a day until their children graduate from elementary school. To support care-giving, we have made care-giving leave, caregiving absences and reduced working hours available so that employees can focus on caring for their families without worry. Going a step further, the REVER Group has introduced an Accumulated Paid Leave System for employees with family members who need care, allowing them to accumulate paid leave that would otherwise expire.

TAKEEI CORPORATION also has a Comeback System that provides recruitment information to former employees who left because of childcare, care-giving, a spouse's transfer or another reason but wish to rejoin the company. We are also working to enhance systems that make it possible for individual employees to adopt their preferred working styles depending on their circumstances.

# · Supporting self-directed career development

To respect the wishes of the individual when it comes to personnel placement, the Group provides opportunities for employees to convey their ideal career plans to their supervisors and the human resources department so that, by increasing mutual understanding between the company and the individual, we can create an organization where individuals can exhibit their abilities to the fullest.

TAKEEI CORPORATION also distributes a Job Card annually where employees can enter the future tasks and

transfer locations they are interested in, providing an opportunity for them to challenge themselves in the jobs they are aiming for of their own accord. The company has also introduced an Internal Recruitment System designed for the optimal placement of motivated personnel in departments that need them. Going forward, we will promote initiatives to encourage self-directed career development by expanding opportunities for career choice within the company, including expanding the operation of the Internal Recruitment System.

### Roadmap for women's career development

Key task	Aim of initiative	Phase 1 (~FY2028) Building foundations and fostering awareness  Phase 2 (~FY2035) Ingraining awareness as culture
Promoting career development	Each and every employee fully utilizes their individuality and abilities to generate new value	Develop women for managerial positions     Create role models     Review and revise personnel system     Create opportunities for young talent and develop next-generation leaders
Supporting work-life balance	Employees are able to balance their work and personal lives, allowing them to fulfill their potential and deliver results in their work	<ul> <li>Foster understanding of laws and regulations related to childcare and nursing care</li> <li>Strengthen line between employees and the company during childcare leave, and support smooth return to work</li> <li>Reduce overtime work</li> <li>Enhance employee benefits</li> <li>Establish external consultation service</li> </ul>
Fostering a D&I mindset	A work environment and corporate culture where diversity is mutually respected and employees can work and grow together	Promote awareness of Human Rights Policy Unconscious bias, harassment, women's career development training for male managers, etc.

# Non-Financial Highlight

(As of March 31, 2024)

(nersons)

# Breakdown of employees

Number of employees				
Male	Female	Total		
1,838	462	2,300		

Waste treatment & recycling business		Renewable energy business	Other	All companies (shared)*
1,057	688	189	302	64

(%)

# Inclusion initiatives

Employee assignment transfers via Internal Recruitment System (persons)	3
Training and education expenses (million yen)	78.9

# Ratio of female workers by job classification

Officer*	25
Manager	5.2
General employee	22.4

<sup>\*</sup> Percentage following June 25, 2024 general meeting of shareholders: 33%.

# Childcare leave

Leave taken before and after childbirth					
Male	Female	Total			
-	16	16			

(persons)

Number of employees taking childcare leave (childcare leave rate)

Male Female Total
20(69%) 16(100%) 36(80%)

# **Employment status**

46
11
35
37
241
19

\*As of April 1, 2024

Health and safety (frequency and severity)	Frequency rate	Severity rate
TRE Group	3.32	0.30
Average for the general and industrial waste treatment industry*	6.42	0.18
Average of all industries*	2.14	0.09

<sup>\*</sup> Source: Health and Safety Committee, Japan Federation of Industrial Waste Management and Recycling Associations, "Occurrence of Occupational Accidents in the Industrial Waste Treatment Industry" (June 2024).

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<sup>\*</sup> All companies (shared) refer to employees in the company's management departments such as the general affairs department and accounting and finance department, and in planning departments such as the corporate planning department.

# Based on our guiding principle that "The TRE Group places top priority on safety," we are dedicated to creating work environments where all employees can work in safety and with peace of mind

# Basic approach to workplace health and safety

The TRE Group considers the health and safety of its employees to be a fundamental element of its business continuity and is committed to creating workplaces where all employees can work in a healthy, safe, and secure environment.

We are fully committed to our guiding principle that "The TRE Group places top priority on safety," and strive to ensure safety is maintained in all of our business activities.

## Basic Policy on Health and Safety

### Principle

The TRE Group places top priority on safety.

All directors, officers, employees, temporary agency workers and any other such persons engaged by the TRE Group shall place the highest priority on mitigating risk in order to ensure occupational and operational safety.

## **Basic Policy**

We define our basic policy on mitigating risk with the aim of ensuring an accident-free and disaster-free workplace as follows:

- We will create a safe and hygienic working environment by observing laws, regulations, internal rules, and other such provisions.
- We will learn safe procedures and techniques by striving to improve our expertise and to ensure that it is passed on.
- We will take health and safety measures before the fact by ascertaining the dangers or hazards that the work may entail before commencing.

February 14, 2024

# Promoting workplace health and safety management

Each of the Group's operating companies has established their own safety management systems. Under the leadership of top management, health and safety managers and the safety management division at each work site work together to improve the effectiveness of safety management, and identify and address any problems or issues.

In the event of an accident, we promptly investigate the cause and study and implement measures to prevent recurrence. We have established a system for sharing information on serious accidents or disasters across the Group, and promote a range of safety management initiatives to prevent similar accidents or disasters from recurring.

In addition, to maintain and improve the physical and mental health of our employees we conduct regular stress checks and strive to ensure appropriate management of working hours.

# Awards for sites that achieved accident-free records

In order to further strengthen safety management initiatives, REVER Group launched an internal awards system in fiscal year 2023 for sites achieving zero accidents and disasters. This program consists of two award categories: one for sites that have achieved an accident-free record over the full fiscal year, with no injuries (both no-lost-time injuries and lost time injuries) and no damage to physical property (moderate or greater), and the other for sites that have achieved a consecutive accident-free record for lost-time injuries. In fiscal 2023, six sites achieved accident-free records for the year: REVER Chiba plant, Fujisawa plant, Fuji Non-Ferrous plant, Urawa plant, Isesaki plant, and Kumagaya plant, while one site, REVER Ichihara plant received an award for consecutive record without a lost-time injury.

The TAKEEI Group has also established an award system for sites that have achieved zero accidents or disasters



The award ceremony at REVER CORPORATION headquarters

TAKEEI aims to use this system works to further raise awareness of safety, and the Group is working as one to achieve zero accidents and disasters.

# Implementation of safety initiatives

The TRE Group conducts a variety of safety-related education and training programs for its employees in order to prevent workplace accidents.

Ikeda Construction Materials Co., Ltd. held a health and safety conference in November 2023, inviting a heavy machinery manufacturer to give a workshop on blind spots when operating heavy machinery as well as on risk management awareness. The workshop included use of actual heavy machinery, which helped deepen understanding



Employees participate in a heavy machinery safety workshop

even among
employees who do not
use heavy machinery
on a regular basis.
Going forward, we
will continue working
to raise awareness
of safety through
such initiatives.

# Valuing communication with local residents and society, and actively participating in social contribution activities as a member of the community

# Basic approach to social contribution

The TRE Group regards its social contribution activities as key initiatives that contribute to the sustainable growth of both society and its business, in order to continue coexisting with society as a member of the local community. As a company that aims to solve societal challenges through our environmental businesses, we also believe that communicating the Group's initiatives to local residents and other stakeholders an important part of our mission, and are focusing on initiatives related to environmental education.

Furthermore, we believe that active participation in volunteer and charitable programs that address local challenges and needs is essential in order to establish a relationship of trust with the local community and to grow together.

We contribute to the development of local communities and the environment through our activities, as well as provide donations and other forms of societal support, taking into account the social and public benefit of each program.

The CSR and Sustainability Promotion Department leads social contribution initiatives in collaboration with the TRE Foundation for SDGs Promotion, Group companies, and related divisions.

# Initiatives by the TRE Foundation for SDGs Promotion

The TRE Foundation for SDGs Promotion promotes a range of initiatives aimed at achievement of the SDGs in order to protect our precious earth with its bountiful land, forests, and oceans (Only One Earth®), and pass it on to the next generation.

We will continue to actively pursue social contribution activities related to the SDGs as well as environmental preservation programs in and around the municipalities and local communities in which we operate.

# Social contribution activity-related expenditure and number of participants

The TRE Group provides assistance to regions impacted by natural disasters, including via donations. In fiscal 2023, the Group's expenditures related to social contribution activities totaled 18 million yen.

| Part 1 Value Creation Model | Part 2 Vision and Strategy | Part 3 ESG



Employees participate in cleanup event

As a comprehensive environmental management company, we also believe it is important for our employees to be involved in environmental conservation initiatives. The TRE Foundation for SDGs Promotion creates opportunities for employees to participate in such activities by planning and implementing tree-planting and cleanup events. In fiscal 2023, a total of 732 employees of the Group participated in activities organized by the Foundation. In addition to the Foundation's initiatives, our respective Group companies participate actively in environmental conservation initiatives conducted in the local communities near our business sites.

Number of participants in social contribution activities organized by the Foundation

732 employees in total

Expenditure on social contribution activities

18 million yen

Main initiatives in FY2023	
Supporting society via donations	<ul> <li>Donation to 2024 Noto Peninsula Earthquake relief efforts         Ishikawa Prefectural Government: 3 million yen         Suzu City: 3 million yen         Wajima City: 5 million yen         Shika Town: 2 million yen         The Nippon Foundation Kids Support Fund: 131,120 yen</li> </ul>
Cleanup initiatives	<ul> <li>Conducted cleanup exercises near business sites in spring and autumn in support of Zero Marine Litter Week promoted by the Ministry of the Environment and the Nippon Foundation. A total of 608 employees participated.</li> <li>Conducted cleanup exercises three times during the year in support of the Minato Cleanup Campaign 2023 organized by Tokyo's Minato City. A total of 50 employees participated.</li> </ul>
Environmental education (site tours)	Number of site tours at TRE Group facilities: 1,424 (4,371 participants)

# Living and Thriving Together with the Local Community

# FY2023 Initiatives by the TRE Foundation for SDGs Promotion

# My SDGs Declaration project

The TRE Foundation for SDGs Promotion conducts the My SDGs Declaration project with the aim of providing opportunities for each and every employee of the TRE Group to think about and develop a deeper awareness of the SDGs. This initiative begins with participating employees thinking about how they can contribute to the achievement of the 17 SDGs in their own workplaces and homes, and making a personal declaration of the actions they will take on a day-today basis (My SDGs Declaration). The TRE Foundation for SDGs Promotion then awards points for these actions and donates the accumulated points to groups such as environmental conservation organizations. Candidate recipient organizations are selected by the TRE Foundation for SDGs Promotion, and the organizations that receive the most votes in a survey of participants are designated as donation recipients.

The first program held in 2022 was participated in by 226 employees, including both individuals and groups. Among the attendees, the Sendai Branch of Environmental Conservation Co., Ltd. committed to actions such as programs to combat poverty in developing countries (Goal 1), and subsequently participated in the Ecocap Movement. In this initiative, plastic bottle caps were collected and sold to a plastic molding company which uses the caps as raw materials, with a portion of the proceeds donated to the NPO Japan Committee, Vaccines for the World's Children.

The first donation from the My SDGs Declaration project was made to the Nippon Foundation Kids Support

## Overview of the My SDGs Declaration project

Step 1: Submit an action declaration

Participants decide the actions they will take and submit an action declaration via the application form

Declarations can be made either by individuals or by groups such as departments

- Step 2: Put the declaration into action
- Participation in volunteer efforts or fundraising activities
- Going "paperless"
- Energy/power saving efforts, etc.

Step 3: Report results

Participants self-assess their actions and complete

- Frequency of efforts
- Change in awareness of SDGs, etc.

# The TRE Foundation for SDGs Promotion

- Points awarded for actions based on questionnaire results Donations made toward environmental efforts, disaster relief, etc.
- Note: Organizations that receive the most votes among selected recipient candidates in a survey of participants are chosen to receive donations

Fund in September 2023, based on the results of a survey completed by the program participants.

# Initiatives to conserve the local environment

# · Afforestation initiatives in collaboration with welfare-related companies

In May 2024, the second lacquer tree planting festival was held in Hirakawa City, Aomori, with support from Tsugaru Biomass Power Generation Co., Ltd., Tsugaru Biomass Chip Co., Ltd., and Kirin Corporation, which operates a Type B support for continuous employment facility in Hirakawa City. The majority of the lacquer currently used in Tsugaru Nuri, a traditional handicraft of Aomori Prefecture, is thought to be produced overseas, and this initiative aims to produce domestically-produced lacquer from locally-grown lacquer sap. Following 7 to 10 years of cultivation, we plan to extract the sap and sell it to the local lacquerware organizations such as the Tsugaru Nuri Craftsmen's Association. After sap extraction the lacquer trees will be logged for use as fuel for biomass power generation.

By repeating this process, we will work to ensure sound forest growth and management. This year—the program's second year, 700 trees were planted—bringing the total number of trees planted to approximately 1,000. A user of Kirin Corporation's facilities who participated in the event commented, "It was hard work planting the trees, but I had fun." Going forward, we will continue working to achieve the SDGs through partnerships between forestry and welfare organizations.



Planting lacquer trees ogether with users of Kirin Cornoration's

# Supporting cleanup efforts at Lake Suwa Fireworks Festival

Shinshu Takeei Co., Ltd., based in Suwa City, Nagano, has been an ongoing co-sponsor of the Lake Suwa Fireworks Festival one of Japan's largest fireworks displays. The 75th annual display, held in August 2023 on the usual scale for the first time in four years following the COVID-19 pandemic, proved a huge success, attracting many visitors from throughout the country. Shinshu Takeei strove to conserve the local environment as a regional company by working together with local residents to install garbage stations at the event site and to clean up after the display.



nployees of Shinshu eei Co., Ltd. with local sidents following ean-up efforts

# Helping build a better society for future generations

• Co-sponsoring the 2nd Ichihara Junior Golf Open Following on from last year's inaugural event, TRE HOLDINGS was again a special co-sponsor of the 2nd Ichihara Junior Golf Open, organized by Ichihara City. Ichihara City has been designated as an "SDG Future City," and TRE HOLDINGS shares Ichihara's vision of building a society where children and young people can fulfill their hopes and aspirations. A total of 112 golfers from elementary, junior high, and high schools across Japan competed in the hotly-contested tournament. TRE provided all entrants with participation prizes including "Ginga kikurage (wood ear mushroom) pickles" produced by Group company Hanamaki Biomass Power Generation Co., Ltd., and stationery embossed with TRE's logo. In addition, our sponsorship of Yuma Nemoto, an upcoming junior golfer from Ichihara City, is now in its third year. Yuma will graduate from middle school at IMG Academy (Florida, U.S.A.), where he is currently studying abroad, and will begin high school from autumn. We will continue supporting Yuma as he works tirelessly toward his ambitious dream of winning an international major and achieving a Grand Slam.



At the 2nd Ichihara Junior Golf Open

# Promoting environmental education among local residents

# · REVER's Ichihara Plant hosts plant tours as part of Ichihara Environment Festival

On June 8, 2024, REVER CORPORATION's Ichihara Plant supported the 9th Ichihara Environment Festival organized by Ichihara City by hosting a plant tour for 30 interested participants who gathered at the site on the day. The visitors enjoyed seeing how used home appliances are dismantled and end-of-life vehicles are shredded. When a vehicle was put into the pre-shredder and crushed, the participants let out a cheer of excitement at the sheer power of the machinery.



Tour participants observe the pre-shredder from above

The tour also featured a section in which the participants discussed recycling together, including what would happen if recycling was not carried out. We received many questions and comments from the participants during the tour, and the day proved an excellent opportunity for them to deepen their understanding of the environment.

# · Hanamaki Biomass Power Generation Co., Ltd. and Hanamaki Biomass Chip Co., Ltd. host a social studies field trip

Following on from 2022, in September 2023 Hanamaki Biomass Power Generation Co., Ltd. and Hanamaki Biomass Chip Co., Ltd. hosted 36 fifth grade students from nearby Hanamaki Municipal Yuguchi Elementary School as part of a social studies field trip.

The tour proved an informative opportunity to learn about local production for local consumption of electricity. with the children fascinated to discover that the fuel used to generate electricity is thinned wood from local forests, that this electricity is supplied to their school, and that the wood ear mushrooms they eat in their school lunches are grown using the residual heat generated during power generation. Comments from the children included, "I thought that recycling the ashes from burning wood into cement was very environmentally-friendly," and "The wood ear mushrooms that we ate in our school lunch were really delicious." Going forward, we will continue to provide opportunities for children in the local community to learn about the SDGs.



The children tour the greenhouse where wood ear mushrooms are grown



After the visit, the students wrote about their experience

# Financial Highlights (consolidated)

	Company name	FY03/2020*1	FY03/2021*1	FY03/2022*2 TRE HD	FY03/2023 TRE HD	FY03/2024 TRE HD	Unit	
N	REVER HD	28,375	36,203	68.234	90,712	00.040	Millions	
Net sales	TAKEEI	37,713	42,062	68,234		92,860	of yen	
0.11	REVER HD	1,281	4,131	7,547	7,600	7,787	Millions	
Ordinary profit	TAKEEI	3,025	3,893				of yen	
	REVER HD	1,217	3,135	4,742	5.405		Millions	
Profit attributable to owners of parent	TAKEEI	1,765	2,272		5,197	3,623	of yen	
Community	REVER HD	1,245	3,121	/ 022	E 2/0	/ 071	Millions	
Comprehensive income	TAKEEI	1,813	2,438	4,833	5,348	4,071	of yen	
Net assets	REVER HD	16,209	18,731	47.172	47 127	69,083	Millions	
Net assets	TAKEEI	28,270	34,505	64,173	67,137	67,063	of yen	
Total assets	REVER HD	28,244	30,561	129,524	132,290	142.159	Millions	
Total assets	TAKEEI	80,257	87,806		132,290	142,137	of yen	
Not accete per chare	REVER HD	946.46	1,093.74	1,218.70	1,275.04	1,306.98	, von	
Net assets per share	TAKEEI	1,186.86	1,196.98				yen	
Earnings per share	REVER HD	81.12	183.06	110.79	101.20	70.54	, on	
Earnings per snare	TAKEEI	76.65	89.07				yen	
Equity ratio	REVER HD	57.4	61.3	48.3	3.3 49.5	47. 2	%	
Equity ratio	TAKEEI	34.1	37.6	40.3			/0	
Return on equity	REVER HD	7.7	17.9	9.9	8.1	5.5	%	
Return on equity	TAKEEI	6.6	7.5				/0	
Price-earnings ratio	REVER HD	7.96	7.07	17.9	9 14.1	16.9	timos	
riice-eai iiiigs ratio	TAKEEI	10.2	14.5	17.7	17.7	14.1	10.7	times
Cash flows from operating activities	REVER HD	1,973	5,249	11,017	,017 9,184	12,194	Millions	
cash nows from operating activities	TAKEEI	5,354	7,401			12,174	of yen	
Cash flows from investing activities	REVER HD	(2,112)	(65)	(2,149)	(6,693)	(16,819)	Millions	
Submitted it will investing detivities	TAKEEI	(7,963)	(13,607)	(2,14/)			of yen	
Cash flows from financing activities	REVER HD	(558)	(3,107)	(3,700)	(2,827)	1,609	Millions	
oush nows it on mancing activities	TAKEEI	4,714	5,458		(2,027)		of yen	
Cash and cash equivalents at end of period	REVER HD	6,238	8,315	24,014	22 479	8 <b>20,663</b>	Millions	
ousin and cash equivalents at end of period	TAKEEI	11,028	10,282		23,678		of yen	

<sup>\*1</sup> Fiscal year-end REVER HD(currently REVER CORPORATION): June, TAKEEI: March

(Millions of ven)

	FY ended March 31, 2024 Full-year results	
Net sales	Operating profit	Operating profit margin
92,860	7,769	8.4%
26,916	4,068	15.1%
43,419	2,761	6.4%
14,429	1,201	8.3%
8,477	587	6.9%
(383)	(849)	_
	92,860 26,916 43,419 14,429 8,477	Full-year results           Net sales         Operating profit           92,860         7,769           26,916         4,068           43,419         2,761           14,429         1,201           8,477         587

<sup>\*1</sup> Includes goodwill amortization of 13 million yen.

Production in the state of the					(1)	fillions of yen)	
Results by business segment		FY03/2022 (Actual) *4		FY03/2023 (Actual)		FY03/2024 (Actual)	
		Apr. 2021– Mar. 2022	YoY	Apr. 2022– Mar. 2023	YoY	Apr. 2023– Mar. 2024	YoY
	Net sales	90,584	+23.3%	90,712	+0.1%	92,860	+2.4%
Consolidated	Operating profit	10,326	+53.5%	7,509	-27.3%	7,769	+3.5%
	Operating profit margin	11.4%	-	8.3%	-	8.4%	_
	Net sales	25,146	+1.6%	25,662	+2.1%	26,916	+4.9%
Waste Treatment & Recycling *5	Operating profit	5,113	+47.4%	4,210	-17.7%	4,068	-3.4%
	Operating profit margin	20.3%	-	16.4%	-	15.1%	_
	Net sales	46,418	+47.8%	44,866	-3.3%	43,419	-3.2%
Resource Recycling *6	Operating profit	5,454	+105.0%	3,139	-42.4%	2,761	-12.0%
	Operating profit margin	11.7%	-	7.0%	-	6.4%	_
	Net sales	12,617	+10.1%	13,794	+9.3%	14,429	+4.6%
Renewable Energy *7	Operating profit	-305	-193.8%	688	-	1,201	+74.6%
	Operating profit margin	-	_	5.0%	-	8.3%	-
Other	Net sales	7,102	+4.0%	7,374	+3.8%	8,477	+15.0%
Environmental Engineering Environmental Consulting	Operating profit	441	+26.4%	325	-26.3%	587	+80.6%
	Operating profit margin	6.2%	_	4.4%	-	6.9%	_
Adjustments	Net sales	(700)	_	(986)	-	(383)	-
	Operating profit	(376)	-	(852)	-	(849)	-

<sup>\*4</sup> TRE HOLDINGS CORPORATION was established on October 1, 2021 as a joint holding company of TAKEEI CORPORATION and REVER HOLDINGS CORPORATION through the business integration of the two companies. In order to enable YoY comparison, the collation period for the two companies' operating results has been aligned (April 1, 2021 to March 31, 2022), and combined results for this period presented.

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<sup>\*2</sup> TRE HOLDINGS CORPORATION was established on October 1, 2021 as a joint holding company of TAKEEI CORPORATION and REVER HOLDINGS CORPORATION through the business integration of the two companies. As TAKEEI CORPORATION was the acquiring company at the time of establishment, consolidated operating results are based on the 12-month consolidated operating results of TAKEEI CORPORATION, the acquiring company, and REVER HOLDINGS CORPORATION'S consolidated operating results for the corresponding six-month period.

<sup>\*2</sup> Includes goodwill amortization of 178 million yen incurred at the time of business integration.

<sup>\*3</sup> Includes goodwill amortization of 378 million yen incurred from the acquisition of Green Power Ichihara Co., Ltd.

<sup>\*5</sup> Includes goodwill amortization (9 million yen in FY03/2022, 13 million yen in FY03/2023, and 14 million yen in FY03/2024).

\*6 Includes goodwill amortization (90 million yen in FY03/2022, 178 million yen in FY03/2023, and 178 million yen in FY03/2024).

<sup>\*7</sup> Includes goodwill amortization associated with acquisition of Green Power Ichihara Co., Ltd. (376 million yen in FY03/2022, 378 million yen in FY03/2023, and 378 million yen in FY03/2024).

# **Group Profile**

# Company information (as of March 31, 2024)

Company name: TRE HOLDINGS CORPORATION

Date of establishment: October 1, 2021

Address: 15th floor of Tokyo Sankei Bldg., 1-7-2 Otemachi, Chiyoda-ku,

Tokyo, 100-0004

Contact information: Tel: +81-3-6327-2620 (main)

Fax: +81-3-3277-3273

Capital: 10 billion yen

**Group businesses** 

Waste treatment and recycling, resource recycling, renewable energy, environmental engineering,

environmental consulting

Number of employees:

2,300employees (on a consolidated basis)

# Major shareholders (as of March 31, 2024)

Name or title	Shares held (1,000 shares)	Percentage of shares owned (%)
The Master Trust Bank of Japan, Ltd. (trust account)	6,792	13.02
Custody Bank of Japan, Ltd. (trust account)	4,064	7.79
Besterra Co., Ltd.	2,570	4.93
Government of Norway (standing proxy: Citibank, N.A. Tokyo branch)	2,036	3.90
Mamoru Mitsumoto	1,975	3.79
Mizuho Leasing Company, Limited	1,578	3.03
TREHD Employee Shareholding Association	1,099	2.11
Toru Suzuki	1,050	2.01
Custody Bank of Japan, Ltd. (trust account E)	808	1.55
KIA Fund 136 (standing proxy: Citibank, N.A. Tokyo branch)	664	1.27

### Notes

1 Number of shares held is rounded down to the nearest thousand shares, and percentage of shares owned is rounded to two decimal places.

2 The Company owns 432,900 shares as treasury stock, but percentage of shares owned is calculated excluding treasury stock.

Treasury stock does not include 808,100 shares of the Company's stock.

Treasury stock does not include 808,100 shares of the Company's stock held by Custody Bank of Japan, Ltd. (trust account E) related to the Board Benefit Trust (BBT).

### Trading volume



# Share information (as of March 31, 2024)

Stock exchange listing: Tokyo Stock Exchange Prime Market

Securities code: 9247

1 share-trading unit of stock: 100 shares

Total authorized shares: 200,000,000 shares

Total shares issued: 52,610,712 shares

(including 432,901 shares in treasury stock)

Number of shareholders: 12,507

Settlement date: March 31

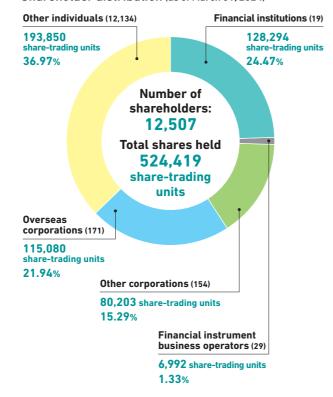
Interim dividend record date: September 30

Year-end dividend from surplus (dividends) record date: March 31

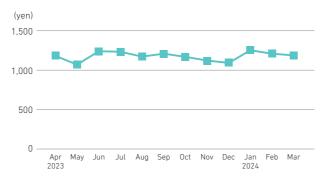
Ordinary general meeting of shareholders: June

Administrator of Shareholders' Register: Mitsubishi UFJ Trust and Banking Corporation

### Shareholder distribution (as of March 31, 2024)



# Share price



# TRE Group locations (as of September 1, 2024)

We have approximately 60 locations, mainly centered on the Kanto region in Japan where there are many manufacturing sites. We are building a more solid platform by setting up locations near regions where industrial waste generated.

### Overseas location: Thailand



# 30 234





# **Waste Treatment & Recycling Business**

- 1 TAKEEI CORPORATION
- 2 TRE GLASS CORPORATION
- 3 Green Arrows Tohoku Co., Ltd.
- 4 Tohoku Koueki Recycling Technology Co., Ltd.
- 5 Gypro Co., Ltd.
- 6 Takeei Energy & Park Co., Ltd.
- 7 Green Arrows Kantou Co., Ltd.
- 8 Ikeda Construction Materials Co., Ltd.
- Takeei Metal Co., Ltd.
- 10 EQUAL ZERO Inc.
- 11 Shinshu Takeei Co., Ltd.
- 12 Monzen Clean Park Co., Ltd.
- 13 Hokuriku Environmental Services Co., Ltd.
- 14 TAG Co., Ltd.
- 15 METREC Co., Ltd.

# Resource Recycling Business

- **16** REVER CORPORATION
- Sunny Metal Corp.
- 18 ITSUMO Corp.
- 19 HIDAKA SUZUTOKU (Thailand) Co., Ltd.

# Renewable Energy Business

- Tsugaru Biomass Power Generation Co., Ltd.
- 21 Tsugaru Eneveg Co., Ltd.
- Daisen Biomass Power Generation Co., Ltd.
- 3 Hanamaki Biomass Power Generation Co., Ltd.
- 4 Hanamaki Biomass Chip Co., Ltd.
- 3 TAKEEI Forestry Co., Ltd.

- Tamura Biomass Power Generation Co., Ltd.
- @ Green Power Ichihara Co., Ltd.
- 🙉 Takeei Green Recycling Co., Ltd.
- 29 Takeei Denki Co., Ltd.
- 30 Izumiyama Forestry Co., Ltd.

# Environmental Engineering Business / Environmental Consulting Business

- 31 Fuji Car Manufacturing Co., Ltd.
- 22 Environmental Conservation Co., Ltd.
- 33 Earth-Appraisal Co., Ltd.

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