



TRE HOLDINGS

未来へ、捨てない創造力を。

Integrated report 2023



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TRE HOLDINGS CORPORATION Integrated report 2023

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Welcome to the integrated report of TRE HOLDINGS CORPORATION, a comprehensive environmental management company.

On October 1, 2021, TAKEEI CORPORATION and REVER HOLDINGS CORPORATION (currently REVER CORPORATION)* established TRE HOLDINGS CORPORATION as a joint holding company and integrated their businesses.

The aim of this business integration is to allow the two companies, who share the same commitment to the conservation of the global environment, to carry out the large-scale investments and technological development needed to address pressing issues such as reducing CO₂ emissions and recycling waste plastic, and also allow them to leverage each other's management resources in order to contribute to the creation of an efficient recycling society and a carbon-neutral society as the leading corporate group in Japan's environmental industry.

Our Integrated Report 2023 aims to communicate the TRE Group's medium- to long-term vision and strategy, as well as the progress we have made in the second year since our integration, from both a financial and non-financial perspective.

* REVER HOLDINGS CORPORATION was integrated by REVER CORPORATION on April 1, 2023.

Scope of report

■ Organizations covered

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

■ Period covered

April 1, 2022 to March 31, 2023 (including some information from outside the coverage period)

■ Guidelines referenced

- 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 Sustainability Reporting 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)"

■ 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.

■ Japanese Publication Date

September 1, 2023

The TRE Group's information disclosure

■ TRE HOLDINGS CORPORATION



Integrated report (FY2023 onwards)



<https://tre-hd.co.jp/en>

■ TAKEEI CORPORATION



<https://www.takeei.co.jp/en>

■ REVER CORPORATION



<https://www.re-ver.co.jp/english>

Introduction

Editorial Policy/Contents	01
TRE's Purpose—Why, What, and How	03
Highlights in 2022	05
Top Message	07
Naoto Matsuoka, Chairman and CEO	
Mitsuo Abe, President and COO	
The TRE Group's New Medium-term Business Plan and Financial Management Policy	14

Part 1

Corporate Profile

TRE HOLDINGS CORPORATION's value creation as a comprehensive environmental management company

The TRE Group Principles and Code of Conduct	16
Value creation model	17
Business model	19
Overview of businesses by segment	21
Material issues	23

Part 2

Vision and Strategy

Helping create an efficient recycling, carbon-neutral society

The Group's long-term vision	26
Status of medium-term business plan	27
■ Feature 1	
Strengthening collaboration with other industries	29
■ Feature 2	
Exploring new potential—TRE Integrated Environmental Business	33
■ Feature 3	
Further enhancing recycling business—strengthening glass recycling capabilities	37
■ Overview of businesses by segment	
(1) Waste Treatment & Recycling Business	39
(2) Resource Recycling Business	41
(3) Renewable Energy Business	43
(4) Other	
Environmental Engineering Business/ Environmental Consulting Business	47
Toward an evolution in our business functions	48

Part 3

ESG

Strengthening ESG to solidify our management foundation

Corporate governance	50
List of executives	53
Environment	55
Response to climate change (information disclosure based on TCFD recommendations)	57
Creating pleasant and fulfilling working environments	59
Occupational health and safety	61
Living and thriving together with the local community	62

Corporate Data

Financial highlights (consolidated)	65
Group profile	67

TRE's Purpose



WHY

Why was TRE HOLDINGS CORPORATION created?

To contribute to the creation of an efficient recycling, carbon-neutral society.

HOW

How will the Company approach the task of solving environmental challenges?

To promote collaboration between the waste management industry and other industries to create a new industrial framework for the circular economy era.

WHAT

What initiatives will the TRE Group undertake to achieve this?

In addition to the Waste Treatment & Recycling Business and Resource Recycling Business, our Renewable Energy Business will also serve as a growth driver.

Highlight in 2022

The TRE Group's FY2022 Activity Highlights

Fiscal 2022 marked the second year since the integration of TAKEEI CORPORATION and REVER HOLDINGS CORPORATION to form TRE HOLDINGS CORPORATION. We implemented a wide range of measures to equip ourselves with the technological capabilities, scale, and social credibility required to play a leading role in a circular economy. With the number of inquiries we receive from other industries growing, the TRE Group is increasing its presence as a comprehensive environmental management company leading efforts to create an efficient recycling society and carbon-neutral society.



Establishing key performance indicators (KPIs) for each of our five material issues

See p. 23



Feature 1
Strengthening collaboration with other industries

See p. 29



Feature 2
Exploring new potential—TRE Integrated Environmental Business

See p. 33



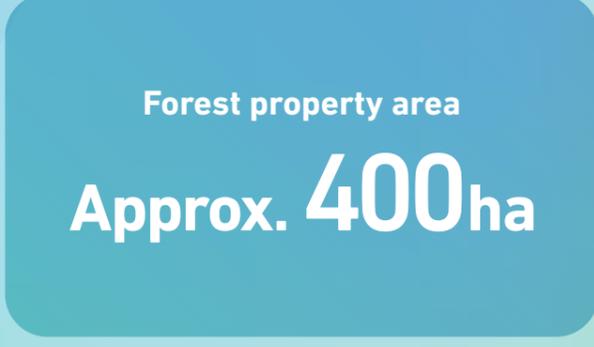
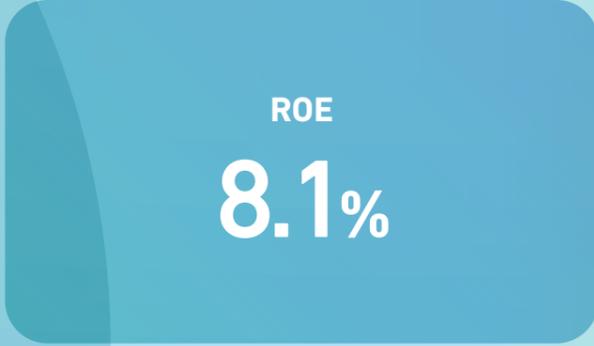
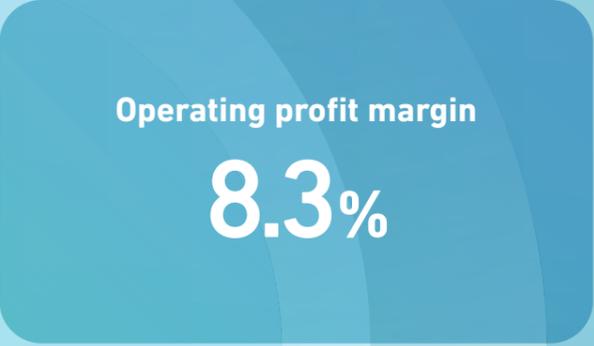
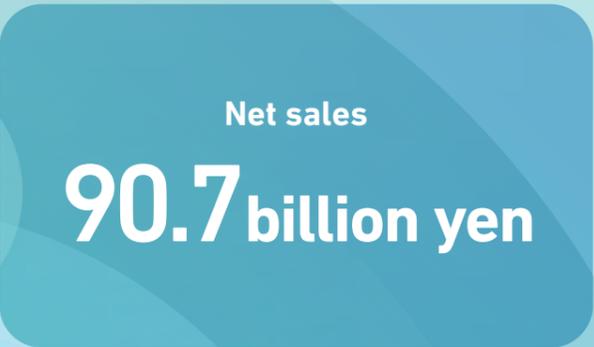
Feature 3
Further enhancing recycling business—strengthening glass recycling capabilities

See p. 37



TAKEEI Forestry Co., Ltd.: Providing fuel for renewable energy generation and helping revitalize Japan's forestry industry

See p. 44



Top Message



Naoto Matsuoka
Chairman and CEO

Mitsuo Abe
President and COO

Accelerating co-creation between industries in order to further evolve as a comprehensive environmental management company

Two years on from our business integration, we have achieved synergies beyond our expectations

—Around two years have passed since the business integration of TAKEEI and REVER Holdings how do you view the results to date?

Matsuoka From a quantitative standpoint, our business performance has fluctuated due in part to changes in the operating environment, including the protracted conflict between Russia and Ukraine, which has sparked concerns over the balance of energy supply and demand as well as economic security. However, from a qualitative perspective, I believe we have achieved even more than we initially envisioned. Although there are still issues that need to be addressed, we are making solid progress.

Abe The integration of TAKEEI, which excels in industrial waste treatment—particularly construction waste—and REVER, which is strong in metal recycling, including automobiles and home appliances, is something that no one in the waste management industry could have envisioned. In this sense, I believe this integration had a major impact inasmuch as it signaled that the industry will undergo major change.

Matsuoka I think the integration had a considerable impact on the industrial community as a whole. In the past, the waste management industry had been largely comprised of small companies, who in many cases have proven insufficient partners for other industries, which tend to be dominated by large companies such as manufacturers, due to the large gap in the scale of their respective operations. I am confident that the larger-than-expected increase in the number of inquiries we have received from other industries over the past two years indicates that the integration has helped us expand our corporate scale and that we are increasingly being recognized as an equal partner to other industries.

Abe We are beginning to see synergies generated by the integration, such as collaboration between businesses, emerging in a variety of areas, and this is a testament to the dedicated efforts of the employees of both companies. Although from an employee perspective, both the scope of work and workload have increased significantly following the integration, I feel that the heightened sense of anticipation for the future has proven a major motivator for our team.

Matsuoka Typically, the integration of two companies is accompanied by tension between the respective sides. However, the employees of both companies have worked tremendously hard to accomplish the integration in just two

short years, which I believe has enabled us to transform and evolve as an organization.

Abe As we have developed capabilities commensurate with our business scale, I believe we are earning greater recognition and attention from society, as well as greater trust. As this trust in the TRE Group grows, we are beginning to see synergies develop not only between the two integrated companies, but also with other companies, and this is beginning to turn into a groundswell affecting the entire waste management industry.

Further strengthening functions and expanding scale as a “comprehensive environmental management company” that plays a central role in realizing an “efficient recycling society” and a “carbon-neutral society”

—Could you explain once again the direction the TRE Group aims to take?

Matsuoka Our biggest achievement over the past two years has been the development of a long-term growth strategy. When we integrated the two companies, we set the key phrase “comprehensive environmental management company,” which reflected our intention to transform from an industry that intakes, treats, and disposes of waste to one that generates resources from waste. In 10 or 20 years, I believe there may no longer be a distinction between the waste management industry and other industries. The TRE Group will likely add business areas similar to those of other industries to its business portfolio, and other industries may incorporate operations similar to waste management companies, such as waste disposal, into their own businesses. Rather than thinking in terms of “waste management company” or “other industry,” our vision and growth strategy for the TRE Group is to transform into environmental company that plays a central role in an efficient recycling society and carbon-neutral society.

Abe An efficient recycling society and carbon-neutral society will contribute not only to efficient use of resources and reduction of final disposal of waste, but also to energy conservation and climate change mitigation. Looking at recent societal trends, Japan has set a goal of reducing greenhouse gas emissions by 46% compared to the fiscal 2013 level, in line with the targets for 2030 set out in the Paris Agreement, and society is working as a whole to achieve this objective. Although momentum has slowed somewhat recently due in part to the conflict between Russia and Ukraine, this trend must not be halted. As the TRE Group’s

Top Message

business is directly linked to reducing the environmental impact of society as a whole, I believe we must commit to becoming a leader in the environmental field in order to help society accomplish this goal ahead of schedule.

Matsuoka Looking at recent initiatives by companies, I feel that companies in other industries have a greater sense of urgency and are moving more quickly than waste management companies such as ourselves. In many cases, other companies have started working on initiatives that should ideally be led by waste management companies. To stay abreast of these developments, we must accelerate our efforts to become a company that is capable of fulfilling the functions and roles expected of us as a key player in developing an efficient recycling society and carbon-neutral society.

Abe This is why co-creation with external partners is becoming increasingly important. Our group management policy for fiscal 2023 is “the challenge of co-creation as one team,” and to this end we are actively exploring partnerships with other companies and research institutions. Among these efforts, we are placing particular focus on collaboration with partners outside the waste management industry. As Mr. Matsuoka mentioned, waste management companies need to be of a certain scale in order to be recognized as viable business partners by companies in other industries. Although the business integration has earned us greater societal credibility, resulting in more inquiries from companies such as automakers and chemical manufacturers, we will not be satisfied with the status quo and will work to achieve our net sales target of 100 billion yen for the fiscal year ending

March 31, 2026, as quickly as possible and strive to further expand in scale.

Matsuoka Previously, the TAKEEI Group and the REVER Group were the only operating companies in the TRE Group. In addition to achieving growth in both of these Groups, in order to achieve further scale expansion, we need to bring more partners on board. There are still areas of the waste management industry in which we are not yet involved, and I believe that proactively expanding the Group through mergers and acquisitions with a focus on these areas will help drive our growth as a comprehensive environmental management company, as well as allow us to expand in size. In addition, we will accelerate our expansion into overseas markets, as well as in Japan. REVER currently operates a joint venture in Thailand, and going forward we intend to expand the business model we have established throughout the world, with a focus on the ASEAN region.

Steadily advancing the four key strategies set out in the medium-term business plan while maintaining a keen focus on changes in the operating environment.

—Please share an overview of the Group’s performance in the fiscal year ended March 31, 2023, the second term of the medium-term business plan, including your evaluation and analysis.

Matsuoka In the first year of the plan, both our core Waste Treatment & Recycling Business and Resource Recycling

Business enjoyed a favorable business environment and performed strongly, achieving all numerical targets. However, in the second year, ended March 31, 2023, the business environment shifted rapidly, and we unfortunately fell short of our targets.

(→ Status of medium-term business plan: p. 27)

Abe From a long-term perspective, the accelerating shift toward an efficient recycling society and a carbon-neutral society due to increasingly serious global environmental problems, and the growing importance of environmental management, will serve as a tailwind for the Group’s business. On the other hand, there were also some negative influences affecting our business, and we were unable to fully absorb this impact during the previous fiscal year. One prominent example is the sharp rise in electricity and fuel costs, factors which were not initially anticipated. In addition, a drop in the number of new vehicles supplied due to the worldwide semiconductor shortage caused by the COVID-19 pandemic resulted in a decline in the number of vehicles scrapped, which negatively impacted the performance of both the Waste Treatment & Recycling Business and the Resource Recycling Business.

As these adverse factors will take some time to abate, we have made a downward revision to the targets for the plan’s third and final year, in light of the impact on each business. Having said that, we anticipate a slight recovery in the number of end-of-life vehicles generated, and we will work to recover both our sales and profits by strengthening sorting and classification at our recycling plants and continuing initiatives to add value to products shipped out. In addition, a managed landfill facility operated by Monzen Clean Park Co., Ltd. in Wajima City, Ishikawa, is scheduled to commence operations in November 2023, which we anticipate will contribute to our business performance in the future. Although we revised our forecasts downward, we still project a 4.9% increase in net sales and a 10.5% increase in operating profit compared to the fiscal year ended March 31, 2023.

Key Strategy 1: Pursuing Growth for Recycling Business

—Next, I’d like you to update us on the progress and any achievements for each of the four key strategies you outlined in your medium-term business plan, as well as your future goals. Let’s start with “pursuing growth for recycling businesses.”

Abe In order to create an efficient recycling society, we aim to increase the overall scale of our recycling business by integrating TAKEEI’s Waste Treatment & Recycling Business

and REVER’s Resource Recycling Business, while pursuing growth across our multifaceted recycling business which encompasses collection and transportation, intermediate processing, and recycling.

Matsuoka In order to pursue growth in the recycling business, collaboration between the waste management industry and other industries will be key, as the products recycled by the waste management industry are utilized by companies in other industries, such as manufacturers.

Over the past two years, we have already made significant progress in this area. For example, in the automotive industry, the EU’s Directive on end-of-life vehicles (ELV Directive) *1, which took effect in 2000, requires that automobiles use a certain percentage of recycled materials as raw materials. To address such changes in the demand environment, we are becoming increasingly involved in the automotive manufacturing value chain, playing a key role in supplying recycled materials. These efforts have produced tangible results, including the announcement in April 2023 of a business partnership with Sumitomo Chemical Co., Ltd. to establish a system for recycling plastic resources from end-of-life vehicles.

Abe To further expand opportunities for this type of inter-industry collaboration, we plan to expand our functions and facility capabilities to include those not currently possessed by TRE, with the objective of making a broad contribution to the creation of an efficient recycling society.

Matsuoka Glass is a typical example of a field in which the Group has lacked expertise thus far. Demand for glass recycling is expected to increase dramatically in the future, particularly for the glass contained in solar panels and automobile windshields. There are actually many products which TRE accepts for disposal that contain glass, including automobiles, home appliances, and construction materials. However, until recently, now the Group has not possessed the capability to treat and recycle glass waste. Accordingly, in April 2022 we conducted an M&A transaction to make JW GLASS RECYCLE Co., Ltd., a glass recycling business, a wholly-owned subsidiary of TAKEEI. This has given us additional expertise in treating and recycling the glass waste that the Group accepts, and we can now put this technology to use for a wider range of wastes. In March 2023, JW GLASS RECYCLE Co., Ltd. will become a subsidiary of TRE HOLDINGS and change its name to TRE GLASS CORPORATION in order to further strengthen the business with the aim of pursuing growth for TRE’s recycling business.

Abe Other areas in which TRE lacked expertise were incineration and biodegradation of waste. To improve Japan’s



Co-creation with a range of stakeholders is essential—both within the waste management industry and with other industries

Top Message

energy self-sufficiency through non-fossil fuels and to extend the life of final disposal facilities, in some cases it is more appropriate to incinerate waste properly using thermal recovery technology. We therefore believe that possessing such technologies as options can contribute to waste treatment and the commercialization of power generation. In addition to possessing the ability to sort and recycle waste, we will work to offer a variety of options for municipalities according to their size and needs, such as decomposing food waste from households into compost using the power of microorganisms, and incinerating the remaining waste in an appropriate manner.

*1 EU Directive on ELVs: A directive on End-of-Life Vehicles (ELVs) enacted by the European Union (EU) in October 2000. This regulation aims to reduce the environmental impact of automotive-related industries by reducing waste from automobiles.

Key Strategy 2: Promoting Eco-friendly Energy Businesses

—Regarding “promoting eco-friendly energy businesses,” you are aiming to create a carbon-neutral society by promoting biomass power generation and thermal recovery from waste materials. What progress have you made so far?

Abe We currently have six woody biomass power generation plants in the Tokyo metropolitan area and the Tohoku region. Although net sales from this business are approximately 13–14 billion yen, operating profit is only 5–6%, and improving the profit margin is a key task. We will therefore work to acquire forests as well as utilize Group-owned forests effectively in order to enhance the stability of operations at our six power plants. We will also strive to expand sales of renewable energy with non-fossil fuel certificates through our power retailing business. In addition, we will pursue synergies with the recycling business by utilizing waste materials that can be used as fuel for power generation, such as interior wallpaper collected from building demolition sites. For example, we are proposing a “sustainable resource recycling” scheme in which we use customer waste to generate electricity, which is then returned to the customer in the form of renewable energy.

Matsuoka In order to advance our power generation business, another important issue is how to secure the fuel required for power generation.

Abe At our woody biomass power generation plants, TAKEEI Forestry Co., Ltd. currently owns and manages its own forests and handles the thinned wood used as biomass fuel. We are also considering the feasibility of using rice husks and a type of corn known as “dent corn” as other fuel sources.

Matsuoka These initiatives link not only to the forestry industry, but also to challenges facing agriculture, such as the abandonment of farmland and food self-sufficiency. Therefore, we are currently working to sow a variety of “seeds” with these types of societal challenges in mind.

Key Strategy 3: Developing New Technologies

—Regarding “developing new technologies,” you have announced a policy of allocating 1% of sales to investment in R&D and related pursuits. In terms of where these investments will be directed, which specific areas are you focusing on?

Abe Our fundamental policy is to create technologies that are required to realize our group’s vision, strategy, and goals, but which we currently lack. One such example is technologies that improve recycling efficiency. Currently, the recycling efficiency across the Group as a whole has risen to 92.5%, and while we have set a KPI (target) to increase this to 93% or higher by 2030, increasing the rate by another percent from the current level will be no easy feat. In addition, as it would be meaningless to increase our CO₂ emissions in order to increase our recycling efficiency, we are studying technologies that will help us achieve our goals while taking into account the total impact on the environment.

Matsuoka One key to achieving this will be technologies that improve collection and classification capabilities. For example, in the area of automobile recycling, initiatives are underway to separate valuable materials from waste that was previously disposed of as dust and recycle them as resources. However, this requires new capital expenditure and technological investment. Enhancing these classification technologies will increase recycling efficiency.

Abe For automobiles, our aim is to recycle not only metals, which we have conventionally recycled, but the entire automobile, including the aforementioned plastics, windshields, and even batteries. If we can deliver on these goals, automakers will feel that they can trust TRE to recycle all their materials, making TRE an essential partner for the continuity of their business.

Matsuoka In particular, automakers are urgently studying ways to recycle batteries—even more so than those of us in the waste management industry—in anticipation of the societal shift to EVs. Therefore, I believe we must move swiftly to establish advanced technologies for disassembling and classifying batteries removed from collected vehicles and recycling the rare metals such as lithium that they contain.

We are adding new functions and processing capabilities to the TRE Group to realize an efficient recycling society



Key Strategy 4: Sustainability Management

—Your final key strategy, “sustainability management” can be considered an imperative for all companies today. What progress have you made in this area?

Matsuoka On the structural side, one major move we made was the establishment of the CSR and Sustainability Committee in June 2022. When we endorsed the TCFD (Task Force on Climate-related Financial Disclosure) recommendations and joined the TCFD consortium, we established a new organization to promote specific initiatives to address management tasks related to climate change, and I feel that led by this committee our sustainability initiatives throughout the Group have been revitalized.

Abe One of the committee’s key responsibilities is to identify the Group’s material issues. We have already established and published non-financial KPIs linked to the material issues we have identified (→ Material Issues: p. 23). However, one area in which the Group is currently lacking is diversity. In particular, we recognize that the promoting women’s career development is a key task.

Matsuoka In recent years, the criteria by which corporate value is measured has shifted from the traditional financial metrics to also encompass non-financial aspects. Companies that fail to properly address these issues may suffer significant damage to their reputation among their business partners, investors, and other stakeholders in society. Our management team has a responsibility to maintain a keen awareness of this perspective and tackle these challenges with a sense of urgency.

Abe In addition to external assessments, we must also pay close attention to how our employees assess the company.

This is closely linked to factors such as employee engagement and motivation. Listening to the feedback from our employees, it is very encouraging to hear that they have a high level of environmental awareness, particularly among the younger generation, and that working for the TRE group, which is committed to contributing to the environment, is a big source of motivation for them. I hope to build an organization where young employees are eager to step up and play an active role when we embark on new initiatives toward carbon neutrality. We have already introduced an internal recruitment system at some Group companies to solicit members for new business projects.

The Vision for TRE Holdings' Next Medium-Term Business Plan

—The fiscal year ending March 31, 2024 will be the final year of your medium-term business plan. Could you tell us about your growth strategy beyond this point and your vision for the next medium-term business plan?

Matsuoka We plan to begin studying our next medium-term business plan from this summer. As I mentioned earlier, our current medium-term business plan is the first such plan that the Group has created, and while it outlines the purpose, objectives, and key strategies for the business integration, our next plan will be even more specific. Currently scheduled to span a five year period, our upcoming plan will be slightly longer in duration. This is because we are currently working on the TRE Integrated Environmental Business (provisional name) a large-scale project in Ichihara City, Chiba (→ p. 33) whose benefits will not be reflected in our business performance until around 2028. We will therefore develop

Top Message

our medium-term business plan to reflect this. I believe that our new medium-term business plan, which will be aligned with this project, will play a very important role in shaping TRE's future.

Abe In addition to serving to reduce environmental impact through proper waste disposal, the project in Ichihara City also focuses on fulfilling a key infrastructure function in the event of a disaster, including the treatment of disaster waste. With large-scale earthquakes expected to hit the Tokyo metropolitan area and the Nankai Trough in the future, the Japanese government has stated its commitment to building a disaster-resilient society (capable of rapid recovery) through disaster prevention and mitigation. However, at present this goal is far from being realized. I see the role of the TRE Group to function as infrastructure for an efficient recycling society during normal times, and as infrastructure to support a resilient society in the event of a disaster.

In addition to the project in Ichihara City, we are also pursuing new initiatives including a solar panel recycling business at TAKEEI's Soma Plant located in Soma City, Fukushima. We also have a vision to tackle next-generation energies such as hydrogen and ammonia, which will contribute to the realization of a carbon-neutral society.

Matsuoka Our principles of "conservation of a global environment" and our vision of being a "comprehensive environmental management company" are clearly articulated in our current plan, and the future direction of the Group is becoming increasingly well understood by our employees. Backcasting from this vision, we will aim to create further synergies across a wider range of areas by outlining specific scenarios detailing what needs to be done right now in our new plan, and communicating this both within the company and externally.

Enhancing dialogue with stakeholders to build stronger relationships

—Finally, do you have a message for the TRE Group's shareholders, investors, and other stakeholders?

Matsuoka The vision that we, as members of the current society, have of an efficient recycling society and a carbon-neutral society cannot be achieved by the TRE Group alone. In addition to stronger collaboration within the waste management industry, partnerships with other industries, co-creation with all stakeholders—including governments, municipalities, research institutions, local communities, as well as shareholders and investors—will be essential to

achieve these goals. This is why we will first work to strengthen dialogue with our stakeholders, including publishing this Integrated Report, which is now in its second year.

Abe In this regard, we recognize that the Group's IR and public relations efforts are still not sufficient. In addition to our quarterly results reports and ongoing individual dialogues with institutional investors, and other stakeholders, we will utilize a wide range of media and opportunities to communicate information and promote strategic initiatives to enhance the TRE brand image by increasing understanding and support for the Group's initiatives.

Matsuoka In doing so, we hope to make a conscious effort to engage the younger generation in particular. Speaking with our younger employees, it is evident that they are much more environmentally conscious in general than our generation. I believe that conducting active dialogue—not only within the company, but also with the younger generation who represent the future of society—will lead to new opportunities for co-creation.

Abe With the expansion of the limit for tax-free NISA investment accounts in Japan, I hope that the younger generation will take an active interest in our initiatives and invest even small amounts in TRE's shares, becoming long-term shareholders who will continue holding our shares as assets. I believe that our management team's most important responsibility is to achieve this type of sustainable corporate management, which will support the growth of the Group and provide a stable source of funds for our shareholders to support their lifestyles following retirement.

The TRE Group's New Medium-term Business Plan and Financial Management Policy

Increasing our operating cash flow to invest in growth, while taking into account capital efficiency and investment efficiency

Studying our medium-term business plan for the fiscal year ending March 31, 2025 and beyond

With regard to construction work, which affects the TRE Group's business, construction orders which were postponed due to the COVID-19 pandemic are gradually beginning to recover as the effect of the pandemic subsides. We are also accelerating our efforts to build a solid profit base through initiatives to accomplish large-scale projects and a variety of activities aimed at realizing a circular economy together with other industries (→ p. 29).

The TRE Integrated Environmental Business (provisional name) concept in Ichihara City, Chiba, which involves a total investment of approximately 30 billion yen (→ p. 33), and the Shredder Dust Processing and Classifying Project announced in June 2023, in which REVER CORPORATION will open its Mibu Plant (provisional name) (→ p. 36), will begin operations in phases from 2025 to 2027. By steadily implementing these projects, we will work to promote profit growth and cost reductions. In addition, business partnerships with other industries are projected to grow into larger inter-industry collaborative efforts to achieve carbon neutrality across the supply chain. We anticipate that M&A opportunities and joint ventures using the TRE Group's resources as a platform, as well as joint research and development of new technologies through partnerships between industry, academia, and government, will serve as a major growth driver for the Group, and will proactively explore such opportunities.

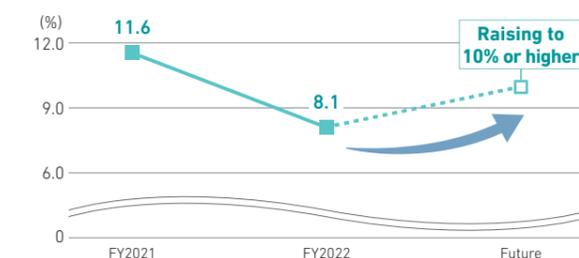
From fall 2023, the TRE Group will begin studying a new medium-term business plan (new MTP), which will start from the fiscal year ending March 31, 2025. In this new MTP, we intend to present a solid growth story and profit plan for the five-year period through to the fiscal year ending March 31, 2029.

Securing funds for investment in growth, and maintaining sound financial discipline

Regarding the funding and fund planning for our investments

Revising our ROE (return on equity) target

We are raising our current ROE target of 8% or higher set in our current MTP to 10% or higher in the future by enhancing profitability through appropriate business portfolio management.



in growth, we aim to firstly improve our profitability in order to increase our operating cash flow. It is imperative that we maintain a sound financial profile that will enable us to respond to future investment and M&A opportunities. The TRE Group's planning and finance divisions work together to study a variety of financing options and their timing based on investment plans, while maintaining an awareness of WACC, ROE, and shareholder return policies. As a contingency against the risk of rising interest rates, we are also extending the maturity period of our financing and diversifying our funding sources, while in fiscal 2023 we plan to issue ESG bonds (sustainability-linked bonds)—a first for the Group—to raise funds in the capital markets.

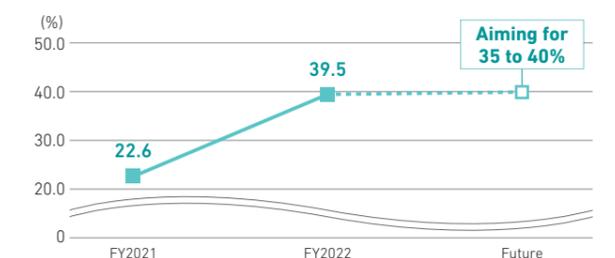
Capital efficiency and investment efficiency policy

The TRE Group aims to maintain a strong focus on PBR—a key stock price metric—aiming to achieve a ratio of 1x or higher, and plans to raise its ROE target from 8% or higher in the current MTP to 10% or higher. In addition, the Group plans to increase the total return ratio from the current dividend payout ratio of 30% or more to 35–40%, including share buybacks.

For new investments and monitoring of existing investments, the Investment and Finance Committee discusses investment benefits, risks, and returns in order to make investment decisions with a firm awareness on cost of capital, and the results of deliberations on projects of a certain scale are reported at the Group Executive Committee and the Board of Directors. This committee is composed of officers and employees with extensive know-how as well as experience and skills in the areas required to assess the specific project under discussion, including fields such as business planning, finance, legal affairs, and technology development. The committee also facilitates the sharing of projects within the TRE Group.

Shareholder returns

In the future we aim to achieve a total return ratio of 35% to 40%, which represents a further increase from the current MTP target of a dividend payout ratio of 30% or more (although returns will be provided in the form of dividends in principle, depending on stock prices we may also consider share buybacks).



Part 1

Corporate Profile

TRE HOLDINGS CORPORATION's value creation as a comprehensive environmental management company

The TRE Group is developing businesses that contribute to the creation of an efficient recycling, carbon-neutral society based on our principles, "We are committed to the conservation of the global environment".

In this section, we introduce our purpose and the initiatives we are undertaking to achieve this, as well as the goals we are aiming for. We also outline the mechanisms and processes by which we are creating corporate value and the key challenges we must tackle in order to grow in the future.

INDEX

- 16 The TRE Group Principles and Code of Conduct
- 17 Value creation model
- 19 Business model
- 21 Overview of businesses by segment
- 23 Material issues



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 (**T**ry) to develop new technologies (**T**echnology), expanding our recycling business (**R**ecycling), and furthering our renewable energy business (**R**enewable **E**nergy) in order to conserve the global environment (**E**arth, **E**cology).



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 CO₂ 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 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

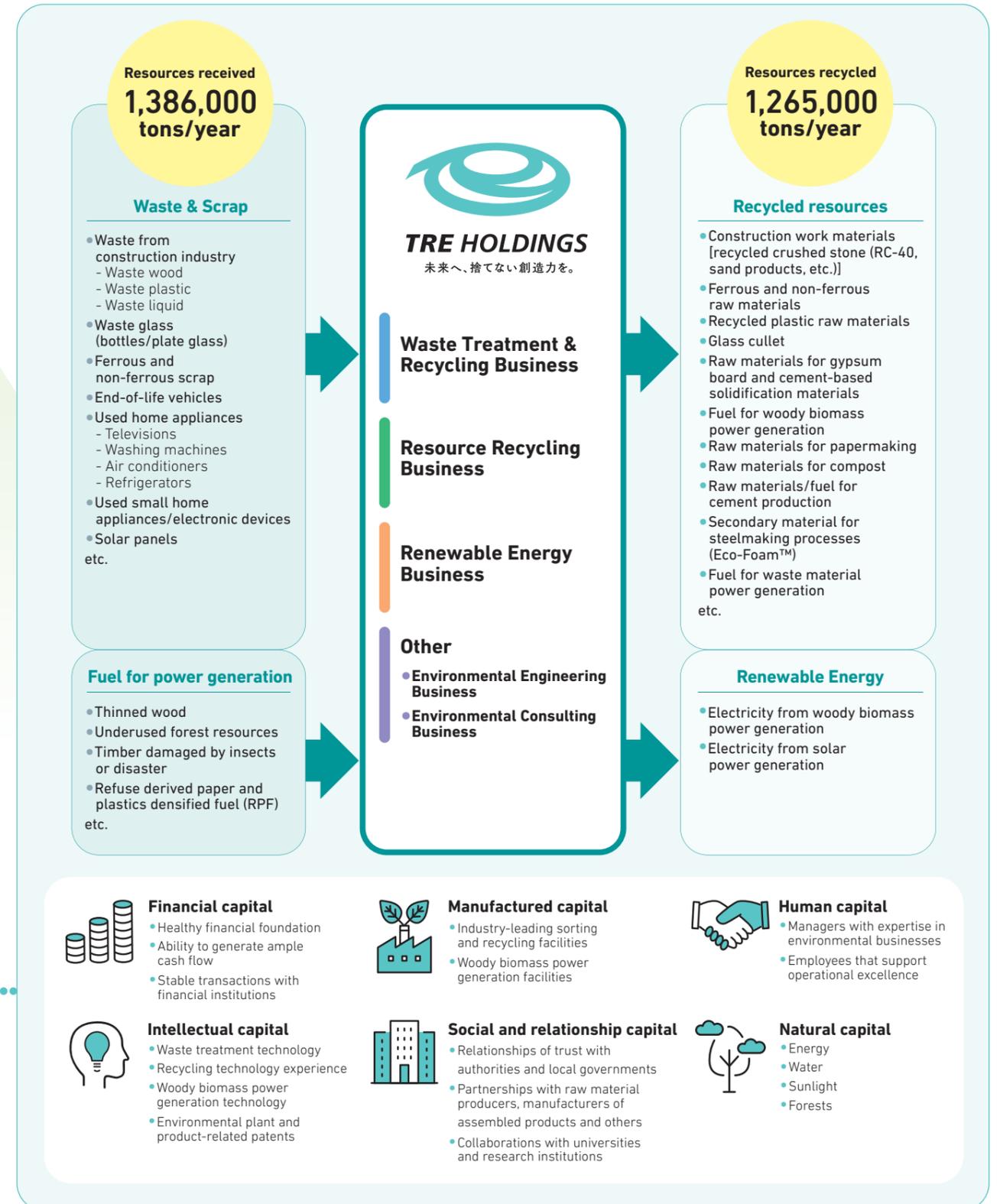
We will not provide economic benefits to antisocial forces that threaten the social order and the sound activities of companies.

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**



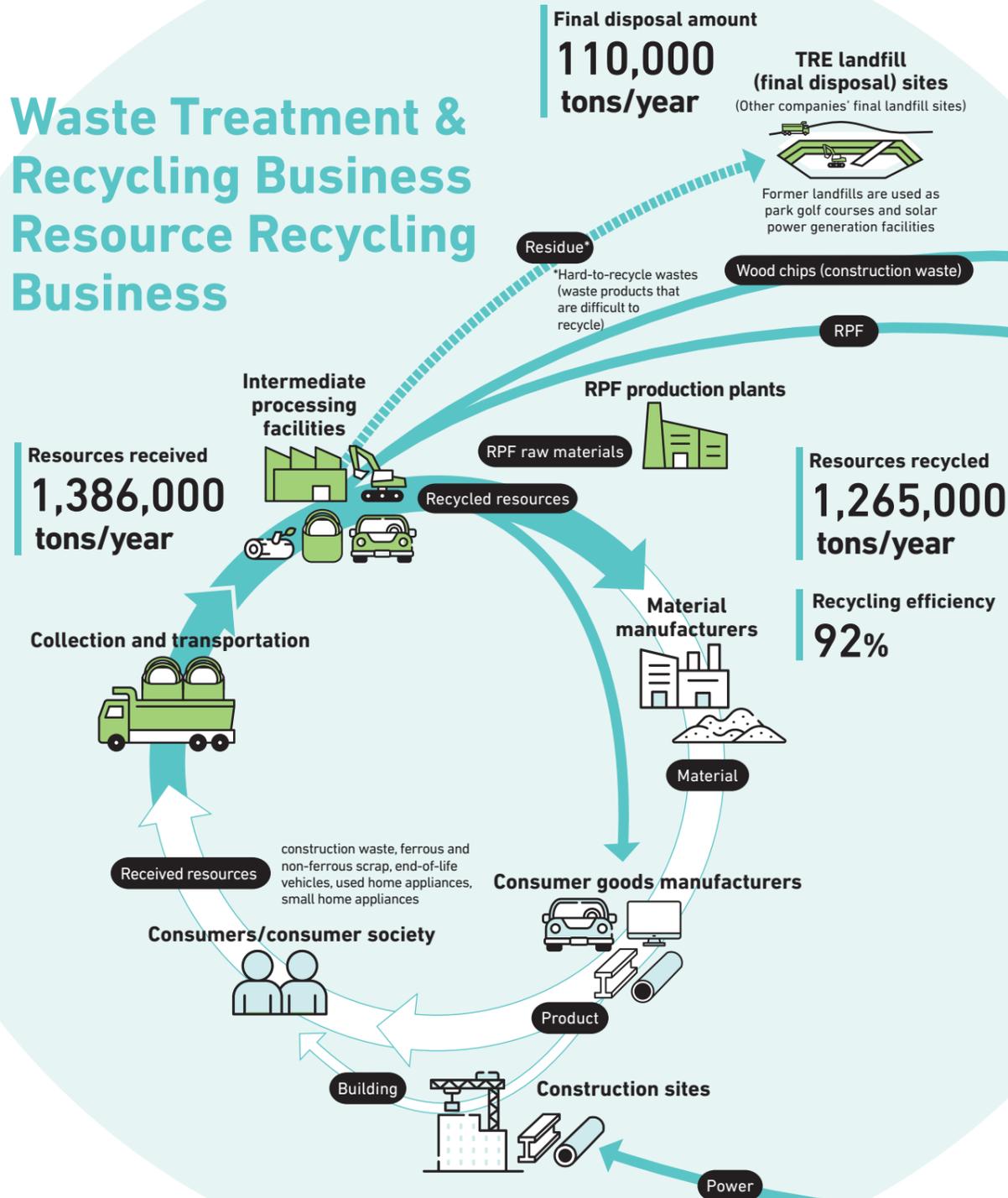
The TRE Group receives waste of products that were originally produced by other industries and used by consumer society, and recycles almost all of these materials. Furthermore, we are expanding our renewable energy business in order to contribute to a sustainable global environment by realizing an efficient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



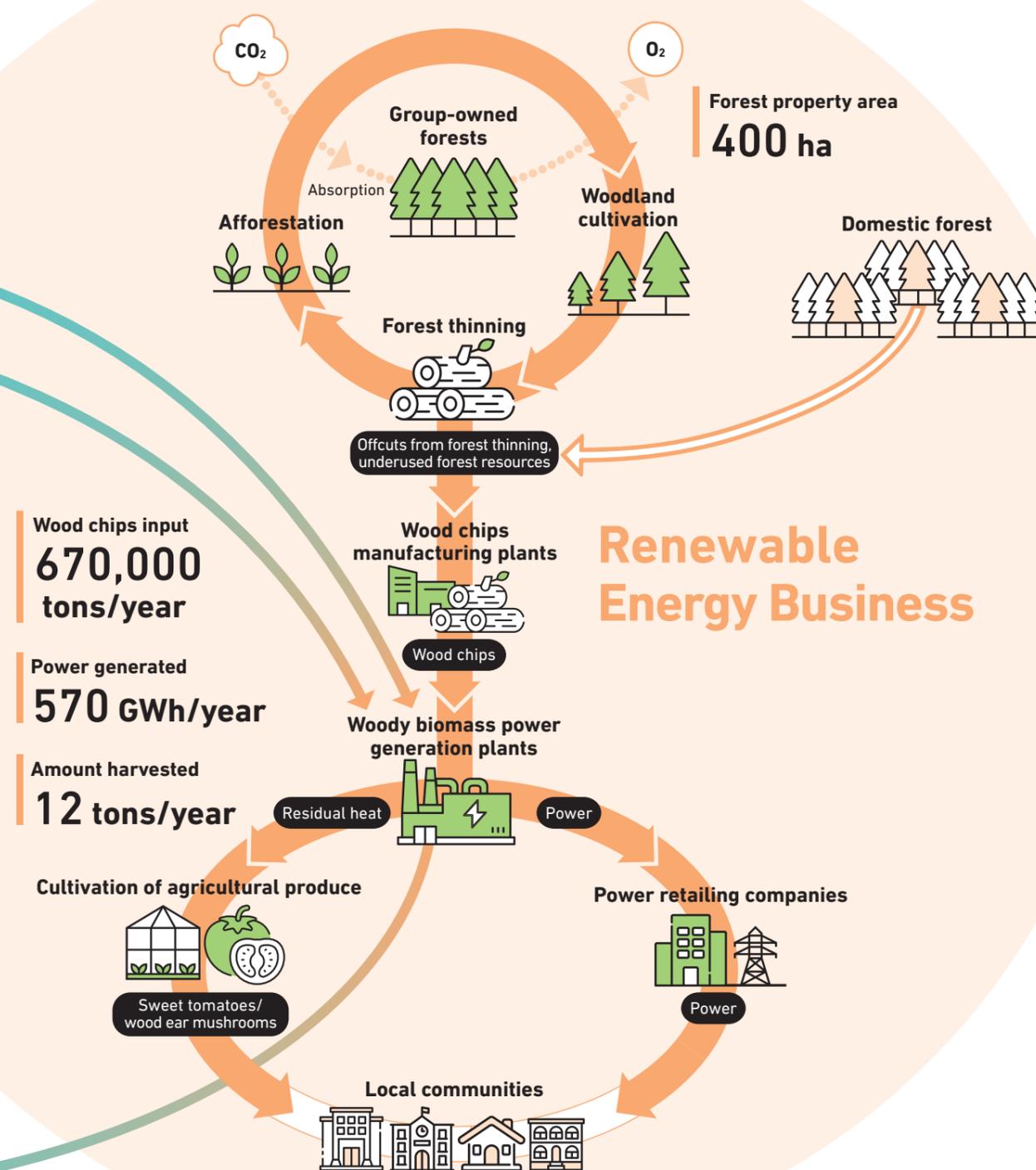
Business model

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

Waste Treatment & Recycling Business



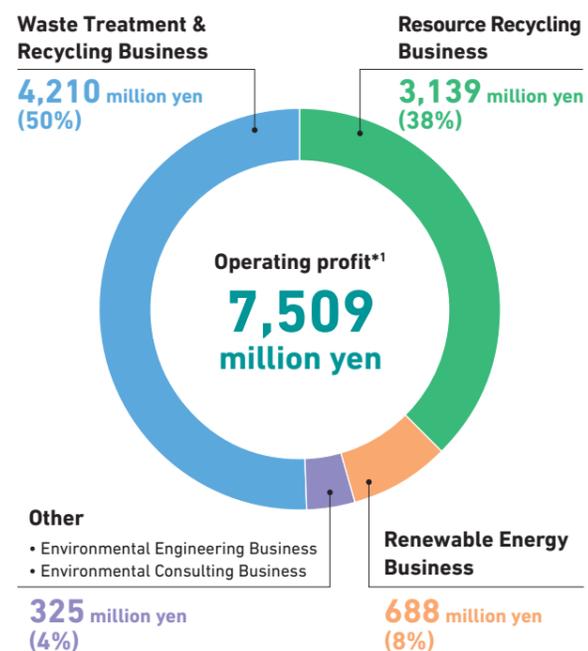
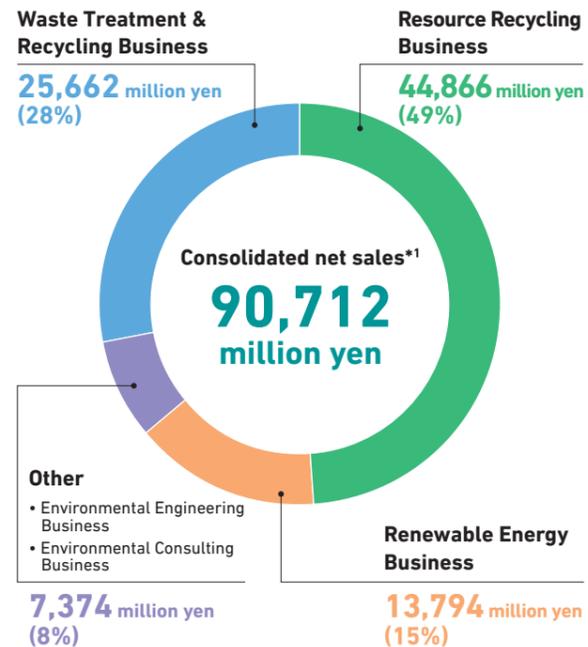
The TRE Group is committed to creating environmental value, focusing on three main businesses: the Waste Treatment & Recycling Business and the Resource Recycling Business, which are founded on its high-level sorting and classifying technologies, and the Renewable Energy Business, which centers on woody biomass power generation.



Overview of businesses by segment

Striving to build a circular economy through our 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.



*1 Net sales and operating profits in each business represent figures before consolidated adjustment.

Business segment	Business function	Business overview*2
Waste Treatment & Recycling Business 	<ul style="list-style-type: none"> Collection and transportation Waste treatment (construction-related) Recycling Landfill (final disposal) 	<p>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.</p> <p>Operating companies TAKEEI CORPORATION and 14 other Group companies</p>
Resource Recycling Business 	<ul style="list-style-type: none"> Metal recycling Automobile recycling Home appliance recycling Waste treatment (metal) 	<p>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, sell the reusable parts and crush and sort after disassembly.</p> <p>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.</p> <p>Operating companies REVER CORPORATION and 3 other Group companies</p>
Renewable Energy Business 	<ul style="list-style-type: none"> Woody biomass power generation Power retailing Forest management Use of residual heat (for agricultural and other purposes) 	<p>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 local and 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.</p> <p>Operating companies Tsugaru Biomass Power Generation Co., Ltd. and 11 other Group companies</p>
Other Environmental Engineering Business Environmental Consulting Business 	<ul style="list-style-type: none"> 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 	<p>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.</p> <p>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.</p> <p>Operating companies Environmental engineering: Fuji Car Manufacturing Co., Ltd. Environmental consulting: Environmental Conservation Co., Ltd., Earth-Appraisal Co., Ltd.</p>

*2 The number of operating companies is current as of April 1, 2023.

Material issues

Establishing 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 this, in 2023 we established concrete goals, including action plans and KPIs. Going forward, we will continue to steadily promote these initiatives by implementing the PDCA cycle.

STEP 1

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.

STEP 2

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 issue/vision	KPI	Action plan	SDGs we can contribute to	Related pages	
Solving social issues through our businesses	Create an efficient recycling society We will respond appropriately and accurately to the increasingly sophisticated recycling needs of waste generators using the strengths and expertise of the Waste Treatment & Recycling Business.	Achieve a recycling efficiency of 93% or higher by 2030.	   	pp. 29-32	
		Achieve a recycling efficiency of 94% or higher by 2040.		<ul style="list-style-type: none"> • Build a resource recycling scheme by linking waste management companies and other industries. • Improve facilities and realize plans for advanced sorting sites. • Add value to unused resources or turn them into products. • Build a business scheme for recycling waste plastic. 	pp. 39-42
The foundation of business continuity	Create a carbon-neutral society We will generate renewable energy, reduce the greenhouse gases (CO ₂) emitted from our businesses, and contribute to carbon neutrality throughout society by providing environmental devices and technologies.	Achieve net zero CO ₂ emissions from purchased electricity (Scope 2) by 2026.	   	pp. 43-44	
		Reduce CO ₂ emissions (Scope 1+2) by 46% or more in real terms by 2030 compared to 2013 (FY ended Mar. 2014).		<ul style="list-style-type: none"> • Introduce a CO₂ calculation system to monitor greenhouse gas (CO₂) emissions from business activities in a timely manner and visualize the effect of measures implemented to reduce emissions. • Provide environmental equipment, technology and services that help stakeholders reduce greenhouse gases (CO₂). 	pp. 55-56
		Achieve net zero CO ₂ emissions (Scope 1+2+3) by 2050.			
The foundation of business continuity	Provide pleasant and fulfilling working environments We will provide working environments where diverse talents can work actively with peace of mind and where all individuals can display their potential to the fullest.	Increase the rate of male employees taking leave for childcare purposes*1 to 100% by 2030. <small>*1 Childcare leave or paid leave</small>	   	pp. 59-61	
		Double*2 the number of women in managerial positions by 2035. <small>*2 From 16 in FY ended Mar. 2023 to 32</small>		<ul style="list-style-type: none"> • Create workplaces where anyone can work in health and safety and with peace of mind. • Promote work-life balance. • 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. • Ensure thorough awareness of safety management and promote accident prevention initiatives at plants and in vehicles. 	
Sustainable growth in corporate value	Strengthen the corporate governance structure We will ensure that we have a sound and highly-transparent governance structure, including compliance, in order to promote sustainability management.	Conduct an annual assessment of the effectiveness of the Board of Directors.		pp.50-54	
		100% participation rate in internal governance-related training.		<ul style="list-style-type: none"> • Maintain the transparency of management by establishing various committees. • Conduct training to ensure thorough compliance and check the state of observance. • Practice appropriate information management and risk management. • Conduct assessment of the effectiveness of the Board of Directors. 	
Sustainable growth in corporate value	Enhance our brand value and increase our recognition as a comprehensive environmental management company We will undertake initiatives and share information that earns us the trust and business of customers, business partners, shareholders and investors.	Improve evaluation by external rating agencies (ESG rating agencies, etc.).		p. 13	
				<ul style="list-style-type: none"> • Disclose information in a timely and suitable fashion. • Practice fair and equitable IR activities. • Engage stakeholders. 	p. 52 pp. 57-58

Part 2

Vision and Strategy

Helping create an efficient recycling, carbon-neutral society

The TRE Group has set a long-term vision for the year 2050 of acquiring enough technological capability, scale, and social credibility to play a leading role in a circular economy. In addition to reporting on the progress of the medium-term business plan that we have set to achieve these goals, this report also includes information on key initiatives that are currently underway, including “Collaboration with Other Industries,” “TRE Integrated Environmental Business (provisional name),” and “Glass Recycling,” as well as insights into the features of each of our business segments.

INDEX

- 26 The Group’s long-term vision
- 27 Status of medium-term business plan
- 29 Feature 1: Strengthening collaboration with other industries
- 33 Feature 2: Exploring new potential—TRE Integrated Environmental Business
- 37 Feature 3: Further enhancing recycling business—strengthening glass recycling capabilities
- 39 Overview of businesses by segment
- 48 Toward an evolution in our business functions

The Group’s long-term vision

A growth strategy that will enhance existing businesses while considering M&A, alliances and expansion overseas

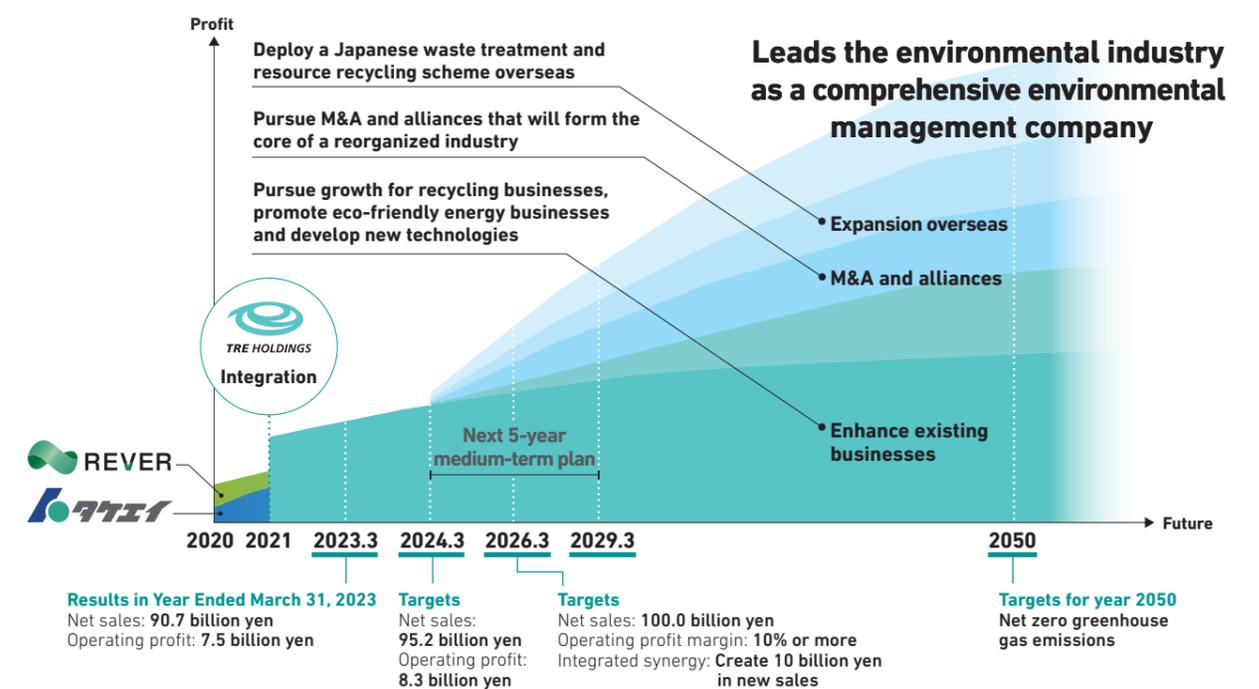
To transition from a linear economy of mass-production/consumption/disposal to a circular economy focused on reducing resource use and recycling, there must be an effective connection between industries that handle manufacturing and the waste management companies that recycle or dispose of waste. The issue in Japan, however, is that waste management companies’ scale of business as those responsible for the circular economy is extremely small compared to other industries.

TRE HOLDINGS has set a long-term vision for the year 2050 of acquiring enough technological capability, scale, and social credibility to play a leading role in the circular economy as a comprehensive environmental management company. To make that vision a reality, we will pursue a growth strategy of enhancing existing businesses while considering various options such as M&A, alliances and expansion overseas. At the same time, as a company that seeks to help achieve a carbon-neutral society, we intend to make all the energy used by our Group carbon-neutral in the five years of the integration of the company, and to make the greenhouse gas emissions from all of our business activities net zero by 2050.

To serve as a milestone on the way to achieving this vision, we have set a target of growing into a company with sales of 100 billion yen with an operating profit margin of 10% or more by FY ending Mar. 2026.



Source: “Report on the Market Size and Employment of the Environmental Industry” released in June 2023 (2021 edition) by the Environmental Industry Market Size Study Group.



Status of medium-term business plan

Steadily implementing our medium-term business plan based on four key strategies

Looking at the Group's business environment, in the fiscal year ended March 31, 2023, the second year of our medium-term business plan, the effect of COVID-19 pandemic subsided, and economic activity, which had been stagnant, began to show signs of a gradual recovery. Although economic conditions are expected to continue to improve, geopolitical risks, such as the protracted conflict between Russia and Ukraine, remain high, and concerns remain over Japan's energy supply and demand balance, as well as its economic security.

Amidst this backdrop, new housing starts and construction orders are showing a general recovery trend, supported by housing and construction demand that had been postponed due to the COVID-19 pandemic.

In addition, after a temporary period of fluctuation, the

market price for ferrous scrap reached 53,000 yen per ton (price of special grade at the Utsunomiya Plant released by Tokyo Steel Co., Ltd.) at the end of March.

The Group's consolidated results for the fiscal year ended March 31, 2023 were net sales of 90,712 million yen, operating profit of 7,509 million yen, ordinary profit of 7,600 million yen, and profit attributable to owners of parent of 5,197 million yen.

In the fiscal year ending March 31, 2024, the final year of our medium-term business plan, we will further strengthen our four key strategies (→ p. 28). We have also begun studying our next medium-term business plan, including the "TRE Integrated Environmental Business (provisional name)" concept, in order to further propel our business growth.

Progress of medium-term business plan (3rd year targets revised)

(Millions of yen)

	Results					Plan								
	FY 03/2021 Full-year results ^{*1}	1st year of medium-term business plan (FY03/2022)		2nd year of medium-term business plan (FY03/2023)		3rd year of medium-term business plan (FY03/2024)			YoY (Compared to actual results)	Change				
	Full-year results ^{*1, *2}	YoY	1st year of medium-term business plan Progress	Full year results ^{*2}	YoY	2nd year of medium-term business plan Progress	Original plan for 3rd year (disclosed in Oct. 2021)	After revision (disclosed in May 2022)			After second revision ^{*2}			
Net sales	73,470	90,584	+23.3%	84,000	107.8%	90,712	+0.1%	94,200	96.3%	92,000	98,000	95,200	+4.9%	-2.9%
Operating profit	6,727	10,326	+53.5%	7,700	134.1%	7,509	-27.3%	9,300	80.7%	9,000	10,150	8,300	+10.5%	-18.2%
Operating profit margin	9.2%	11.4%	+24.5%	9.2%	124.4%	8.3%	-27.4%	9.9%	83.8%	9.8%	10.4%	8.7%	+5.3%	-15.8%
Profit attributable to owners of parent	4,084	7,248	+77.5%	5,050	143.5%	5,197	-28.3%	5,900	88.1%	5,890	6,440	5,400	+3.9%	-16.1%
Earnings per share (yen)	-	141.1 ^{*,3}	-	98.3 ^{*,3}	143.5%	101.2	-	114.8	88.2%	114.6	125.3	105.1	-	-16.1%

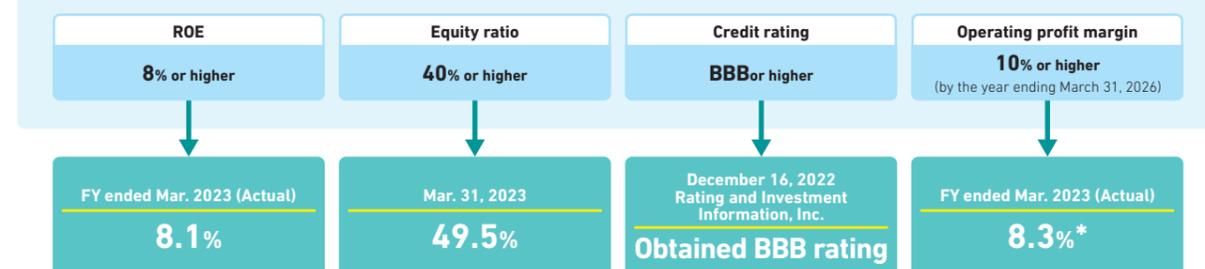
*1 Results for TAKEEI CORPORATION and REVER CORPORATION (formerly REVER HOLDINGS CORPORATION), for the period from April to March of the following year, have been combined to make YoY comparisons.

*2 Operating profit includes impact from goodwill amortization related to the business integration (JPY90 million for FY ended Mar. 2022, and JPY178 million for FY ended Mar. 2023 onward).

*3 In the 1st year of the medium-term business plan, the number of shares is calculated based on the number of outstanding shares as of March 31, 2022 minus the number of treasury shares at the end of the same period, which is 51,362,030 shares.

Progress of financial targets

Financial targets



* Calculated for the 2nd year of the Medium-term business plan (April 1, 2022 to March 31, 2023 for both TAKEEI CORPORATION and REVER HOLDINGS CORPORATION).

Key Strategy 1

Pursuing growth for recycling businesses

- Launched TRE Integrated Environmental Business (provisional name) in Ichihara City, Chiba (→ p. 33)
- Business partnerships and collaborations with other industries (→ p. 29)
- Made JW GLASS RECYCLING CO., LTD. a 100% subsidiary and changed name to TRE GLASS CORPORATION (→ p. 37)
- Established a new resin separation & sorting line (REVER CORPORATION's Nasu Plant)
- Installed a sorting and crushing line for combustible materials, including optical sorters (TAKEEI CORPORATION's Kawasaki Recycling Center)
- Completed a waste wood crushing plant (Shinshu Takeei Co., Ltd.)



Sorting and crushing line for combustible materials, which includes optical sorters at the Kawasaki Recycling Center.

Key Strategy 2

Promoting eco-friendly energy businesses

- Commenced forest thinning based on Forest Management Plan approved by Hanamaki City (TAKEEI Forestry Co., Ltd.) (→ p. 44)
- Acquired approximately 40 ha of protection forest (TAKEEI Forestry Co., Ltd.) (→ p. 44)
- Integrated five power retailing companies to reduce costs through centralized management and utilization of non-FIT fuels (solid fuel RPF, etc.) (Takeei Denki Co., Ltd.) (→ p. 45)
- Acquired a waste disposal business license (Hanamaki Biomass Chip Co., Ltd.)
- Increased generated power output (Tsugaru Biomass Power Generation Co., Ltd., Hanamaki Biomass Power Generation Co., Ltd.)
- Joined the Keikyu Group's Miura no Mori Forest Project (Takeei Green Recycling Co., Ltd.) (→ p. 46)



Forest in Hanamaki City acquired by TAKEEI Forestry Co., Ltd.

Key Strategy 3

Continually striving to develop new technologies (→ p. 48)

- Utilizing rice husks for woody biomass power generation (Tsugaru Biomass Power Generation Co., Ltd.)
- Improved quality of waste tile carpet recycling (patented) (Tokyo Recycling Center of TAKEEI CORPORATION)
- Entered into a joint research agreement for the development of CCUS technology (TRE HOLDINGS CORPORATION)



Recycled polyvinyl chloride (Eco-Flake) manufactured from waste tile carpet

Key Strategy 4

Sustainability management

- Established non-financial KPIs (TRE HOLDINGS CORPORATION) (→ p. 24)
- Entered into an agreement with Yotsukaido City to cooperate in emergency measures in the event of a disaster (TAKEEI CORPORATION) (→ p. 64)
- Certified as an "Ichihara City SDGs Declaration Company" (Green Power Ichihara Co., Ltd., REVER CORPORATION Ichihara Plant) (→ p. 63)



Creating pleasant and fulfilling working environments

Strengthening collaboration with other industries

Approximately two years after our business integration, the TRE Group has begun developing a resource recycling model. This model connects our waste management industry and other industries which manufacture raw materials and products with the TRE Group playing a central role.

Amid a growing focus on a circular economy in order to create an efficient recycling society, economic activity often can be likened to the circulation of blood in the human body. The material and consumer goods manufacturers that use natural resources to produce raw materials and products are sometimes described as “arterial industries,” while businesses that collect and process the waste generated during production and following consumption for recycling are referred to as “venous industries.”

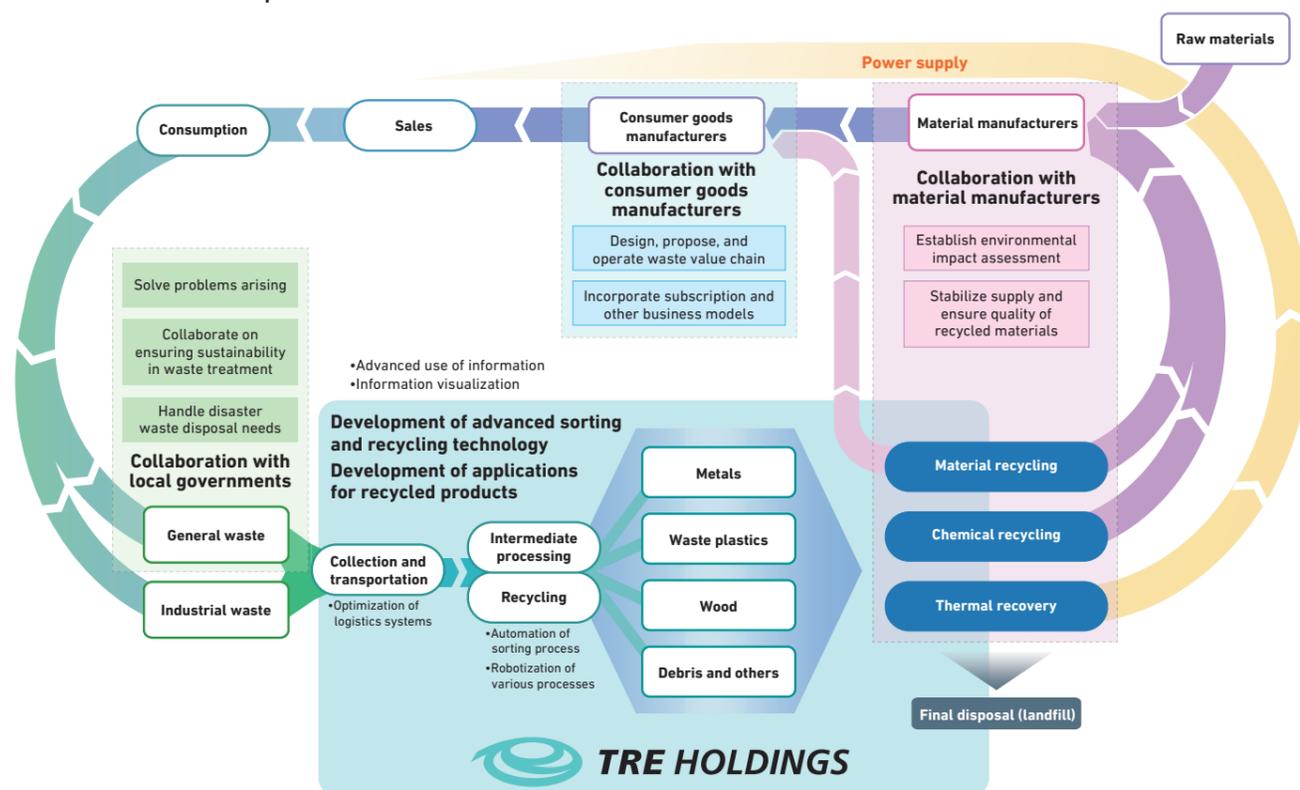
Meanwhile, there is growing anticipation for the establishment of systems to recycle resources via collaboration between these “venous” and “arterial” industries (we generally refer to these as “the waste management industry” and “other industries”, respectively).

In order to recycle the vast amount of waste generated

by major global manufacturers and other large-scale industries, the waste management industry, which serves as a partner, requires an equivalent scale of operations. With large-scale waste management companies already emerging in other countries, there has long been anticipation for the establishment of Japan-based waste management companies of a similar scale and reliability.

To meet these expectations of the industrial community, TRE HOLDINGS CORPORATION was established in 2021 as a pioneering presence in Japan’s waste management industry. In the two years since establishment, we have received an increasing number of inquiries from other industries, and several seeds have been sown toward the creation of a new resource recycling model that is based on cooperation between the waste management industry and other industries.

New initiatives to cooperate with other industries



Plastic recycling partnership with Sumitomo Chemical Co., Ltd.

Plastics pose one of the biggest challenges in materials recycling. Although plastics are indispensable materials used for a wide variety of purposes, they are often discarded or incinerated due to the time and labor involved in sorting and collecting them, making the establishment of an efficient resource recycling system for plastics a key societal challenge.

In the automotive industry, one of Japan’s key industries, although progress has been made on recycling of metal parts such as automobile bodies, the recycling of plastic parts remains a challenge due to the high degree of difficulty involved. Amid the growing importance of resource recycling in recent years, the momentum to recycle plastics obtained from disassembled end-of-life vehicles has increased. The Recycling Incentive Scheme being studied by the Japanese government is also expected to further accelerate this trend in the future.

In order to address these societal challenges and needs, REVER CORPORATION, which has a wealth of experience in the collection and recycling of end-of-life vehicles, has been studying establishing systems for

recycling plastic resources since June 2021 in collaboration with the diversified chemical manufacturer Sumitomo Chemical Co., Ltd.

Having established the foundation for development of a material recycling process through inter-industry collaboration, with REVER CORPORATION utilizing its advanced disassembly and sorting technologies to provide a stable supply of high-quality waste plastic, and Sumitomo Chemical Co., Ltd. producing high-quality recycled plastic to meet the needs of automakers, the two companies entered into a business alliance agreement in April 2023 to further strengthen this partnership.

Through this partnership, the two companies plan to construct a resource recycling model, encompassing resource recovery, sorting, and recycling, and to begin supplying products to automakers as early as fiscal 2025. In the future, the two companies are also exploring the possibility of establishing a joint venture in order to expand the collection and recycling network and achieve rapid commercialization of this venture.

Model for recycling plastics from end-of-life vehicles



Establishing a one-stop waste treatment service encompassing collection and transportation through to disposal in collaboration with Hitachi Zosen Corporation

In the TRE Integrated Environmental Business (provisional name) concept currently underway in Ichihara City, Chiba (→p. 33), Hitachi Zosen Corporation, our partner in the waste incineration and power generation business, who continues to transform its operations to meet current societal needs, is currently focused on pursuing environment-related business. In particular, the company has a world-leading track record in designing and constructing facilities that generate electricity from waste.

The TRE Group, with its integrated industrial waste treatment and resource recycling system, signed a business partnership agreement with Hitachi Zosen Corporation in May 2023 with the aim of helping to create a circular economy by optimizing the processing and recycling of both general and industrial waste. This business partnership, which targets municipalities, aims to promote public-private collaboration in the waste treatment and recycling field.

Many regions have already been required to review their waste treatment systems, including upgrading (expanding/concentrating) their facilities. In addition, there is a pressing need to minimize emissions of plastic-containing product waste, recycle such resources, and reduce CO₂ emissions from their incineration. The two Group companies will work together to promote public-private partnership projects and a shift to facilities generating power from waste and recycling facilities, enabling general and industrial waste from municipalities that was previously collected and processed separately to be treated with high efficiency.

We aim to deploy these systems several areas in the Kanto region and operate the business effectively. In the future, we plan to expand this business to a broader area beyond the Kanto region.

Message from project representative

Contributing to a recycling-oriented society through collaborative projects with municipalities

Hitachi Zosen Corporation aims to be a solution partner that contributes to the realization of a sustainable, safe, and secure society, and operates its business with a focus on the fields of "decarbonization," "resource circulation," and "safe & prosperous community". By partnering with TRE HOLDINGS CORPORATION, we aim to contribute to a recycling-oriented society by optimizing the treatment and recycling of both general and industrial waste.

As the first step in establishing this business partnership, we are steadily making preparations for participation in the TRE Integrated Environmental Business (provisional name) concept in Ichihara City, Chiba, including establishing a joint venture company. This business partnership will drive public-private partnership projects targeting municipal demand, construction of recycling facilities to comply with the recently enacted Act on Promotion of Resource Circulation for Plastics, and recovery of valuable resources from incinerator ash. Through these initiatives, we hope to contribute to the realization of a recycling-oriented society—a goal that both companies share.

Takao Ito
General Manager,
Environmental Solution Sales
Department,
Environment Headquarters,
Hitachi Zosen Corporation



Details of business partnership

- Hitachi Zosen's participation in the TRE Integrated Environmental Business (provisional name) concept in Ichihara City, Chiba**
- Public-private collaborative projects**
 - Mixed treatment of general and industrial waste at facilities generating power from waste and crushing and sorting facilities through privately owned and operated projects and Public Private Partnership projects.
 - Supply of power generated by renewable energy such as thermal recovery power through new regional power companies
 - Treatment of disaster waste and support activities
- Plastic sorting and recycling business**
 - Construction and operation of privately owned and operated sorting centers
 - Material and chemical recycling of sorted plastics
- Ash recycling business**
 - Establishment and commercialization of technology to recover metal resources from incinerator ash
 - Recycling of incinerator ash after recovering metals
 - Landfill disposal of difficult-to-recycle materials
- Collaboration on CO₂ reduction, recovery, and utilization technologies, as well as plant labor-saving and digitalization**

Circular Economy Plan in partnership with Mizuho Leasing Company, Limited

In order to address societal challenges through its business, in recent years Mizuho Leasing Company, Limited has set a vision to "be a creator of a sustainable world," and is pursuing sustainability initiatives that leverage the company's extensive experience as a leasing company.

As these initiatives align with the direction of TRE HOLDINGS CORPORATION, in 2022 we established a basic agreement regarding the development of a business scheme aimed at transitioning to a circular economy, while the TRE Group's REVER CORPORATION also entered into a comprehensive agreement regarding the handling of used items and equipment from properties owned by the Mizuho

Leasing Group.

Going forward, we will work to build a platform for a circular economy and visualize and reduce greenhouse gas (GHG) emissions by combining Mizuho Leasing Company's customer base, data network, and solution delivery capabilities with the TRE Group's expertise in waste disposal and recycling. Through this partnership with Mizuho Leasing Company, Limited we will also strive to establish resource recycling systems across a wide range of fields through collaboration with companies from other industries, such as materials and product manufacturers.

Recycling of vacuum insulated flasks in partnership with THERMOS K.K.

Stainless steel is a metal that possesses superior corrosion resistance, durability, and heat resistance, and is utilized in a wide range of applications including electrical products, medical equipment, and construction materials in addition to household goods such as vacuum insulated flasks. Stainless steel can be readily recycled with virtually no decline in grade after use, and recycling stainless steel, which contains valuable elements such as chromium and nickel, represents a significant step toward preserving natural resources.

However, this recycling potential is not well known to the general public, and many people have tended to dispose of stainless steel as "non-burnable waste" after use. As a measure to address this, THERMOS K.K., a pioneer in vacuum insulated flasks, in partnership with REVER CORPORATION, launched an initiative in April 2023 to collect used stainless steel flasks at three THERMOS-operated Thermos Styling

stores in the Kanto region. After collection, REVER CORPORATION, which operates 18 sites primarily in the Kanto region, receives the collected flasks and processes them into recyclable resources via crushing, sorting, and other processing methods.

Products eligible for collecting service (examples)



Stainless steel vacuum insulated flasks

Stainless steel vacuum insulated tumblers

Stainless steel vacuum insulated soup jars

Recycling Pilot Project in partnership with Nitori Co., Ltd. and Sumitomo Osaka Cement Co., Ltd.

TAKEEI CORPORATION has partnered with Nitori Co., Ltd., a manufacturer, distributor, and online retailer of furniture and interior goods, and Sumitomo Osaka Cement Co., Ltd., and undertaken an initiative to recycle carpets and futon mattresses.

Due to their properties, carpets and futons are difficult products to sort and dispose of. To address this challenge, the three companies trialed a recycling scheme in which carpets and futons no longer needed by customers are collected by Nitori, then TAKEEI, as the intermediate waste processor, performs intermediate processing (shredding) of the collected products at the Kawasaki Recycling Center, after

which Sumitomo Osaka Cement reuses them as raw materials in cement and other products.

In addition to using the shredded carpet and futons to generate heat energy for the calcination process during cement production, the ashes and residues after calcination are also reused as raw materials for cement, thus transforming the material into cement products. The trial demonstrated the effectiveness of the scheme in extending the life of final disposal sites by reducing the amount of ash previously disposed of in landfills, without generating secondary waste.

Feature 2

Exploring new potential—TRE Integrated Environmental Business

The TRE Group is currently developing the TRE Integrated Environmental Business (provisional name) concept in Ichihara City, Chiba.

In this feature, we share an overview of this large-scale project, including the value it will provide to society.

The TRE Integrated Environmental Business (provisional name) 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 industrial 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 m² of land, a portion of its Chiba site. We plan to maximize our use of this extensive site, together with the nearby 37,000 m² in total of land of REVER CORPORATION's Ichihara Plant and Green Power Ichihara Co., Ltd., 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

<p>1 Crushing and sorting, and recycling of industrial waste</p>	<ul style="list-style-type: none"> By installing equipment that exceeds the scale and functionality of TRE Group's existing intermediate processing and recycling facilities, we will achieve a higher quality of crushing and sorting, thereby promoting proper treatment and recycling of waste. Difficult-to-recycle materials will be converted to RPF (solid fuel) and supplied to the nearby Green Power Ichihara Co., Ltd. The business will also supply fuel sources for thermal recovery, serving as a pre-treatment function for waste incineration facilities.
<p>2 Waste incineration and power generation</p>	<ul style="list-style-type: none"> T&H Eco Mirai Co., Ltd., a joint venture with Hitachi Zosen Corporation (investment ratio: TAKEEI CORPORATION 51%, Hitachi Zosen Corporation 49%) will operate the Group's first waste incineration and power generation business. Projected processing capacity of 330 tons per day. High-efficiency power generation using residual heat from incineration process (current projected output: approximately 10 megawatts).
<p>3 Advanced sorting of metal resources</p>	<ul style="list-style-type: none"> We will insource and enhance the collection of useful metal resources, which previously had to be sold externally and outsourced for processing, further improving our recycling efficiency and contributing to higher profitability. Stable operations will be achieved by securing recyclable waste materials for recycling through collaboration in the recycling process with REVER CORPORATION's Ichihara Plant, located nearby.
<p>4 Advanced sorting and recycling of waste plastics</p>	<ul style="list-style-type: none"> We will construct and operate advanced sorting and recycling equipment capable of handling material, chemical, and thermal recovery of waste plastic in accordance with the enforcement of the Act on Promotion of Resource Circulation for Plastics, with a view to future collaboration with municipalities.

Connecting four new and existing businesses

As the name implies, the TRE Integrated Environmental Business (provisional name) concept aims to achieve large-scale, efficient resource recycling and utilization through synergies between several environmental businesses.

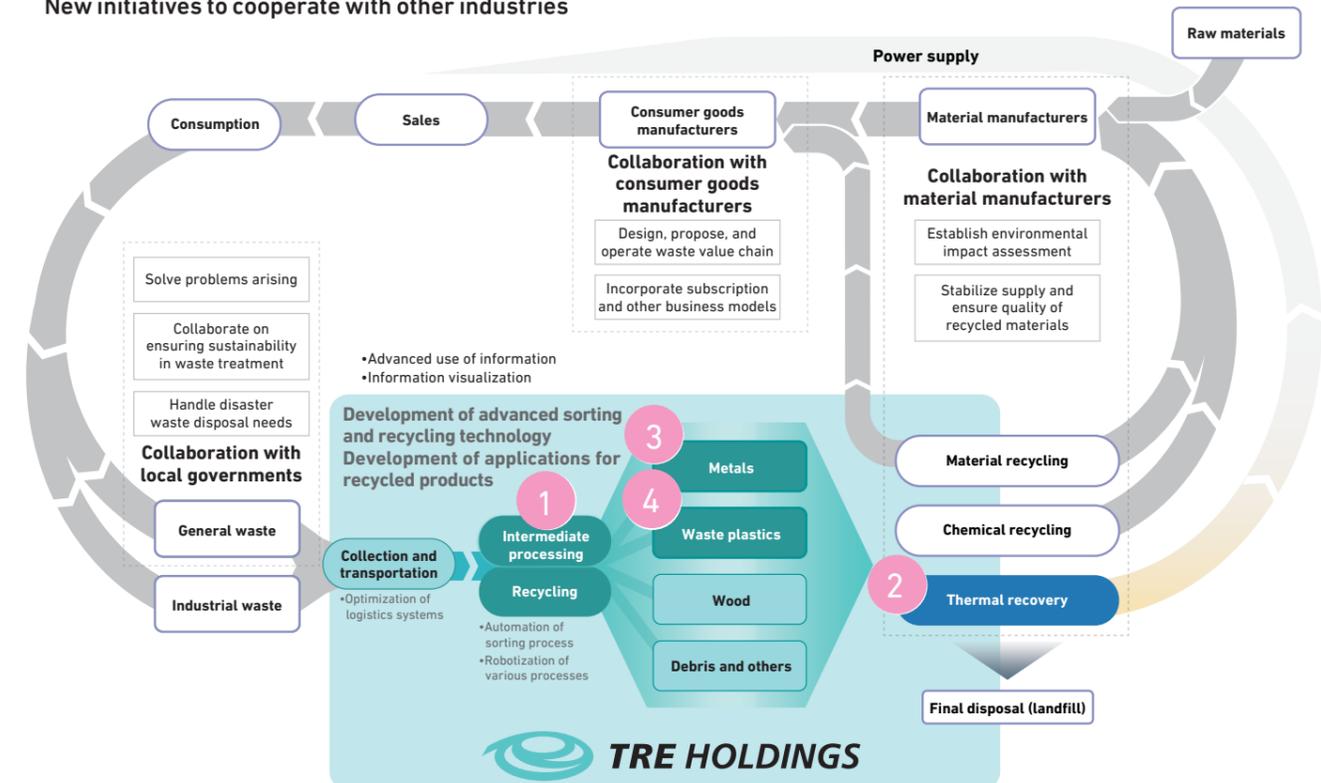
Specifically, the four new businesses to be launched at the new site—(1) crushing and sorting, and recycling of industrial waste, (2) waste incineration and power generation, (3) advanced sorting of metal resources, and (4) advanced sorting and recycling of waste plastics—will be interlinked with the resource recycling business of REVER CORPORATION's Ichihara Plant and the woody biomass power generation business operated by Green Power Ichihara Co., Ltd., in an integrated business framework.

In the crushing and sorting, and recycling of industrial

waste business, we will combine the TRE Group's accumulated technologies and expertise in intermediate waste processing and introduce new equipment that surpasses existing intermediate processing facilities in both scale and functionality. In addition to achieving proper waste processing through crushing and advanced sorting, we will recycle as much of this waste as possible and supply it to other sites in the vicinity.

The waste incineration and power generation business, which represents the first initiative of its kind for the TRE Group, will be developed as a joint venture with Hitachi Zosen Corporation. Business operation will be led by T&H Eco Mirai Co., Ltd., which was established in 2022 as a joint venture between the two companies. (Continued on next page →)

New initiatives to cooperate with other industries



Of the 330 tons per day processing capacity that the company possesses, approximately 200 tons will be used to process combustible materials such as construction waste, which the TRE Group had previously outsourced for incineration, which will also contribute to improved profitability for the Group as a whole. The remaining approximately 130 tons will also be collected, utilizing the site's favorable location in the Tokyo metropolitan area, in order to achieve stable operations. In addition, we will supply the region with a stable power source through high-efficiency power generation using residual heat from the incineration process. We will also study the potential utilization of Hitachi Zosen's CCU and CCUS* technologies, taking into account the medium- to long-term trend toward carbon neutrality.

In the advanced sorting of metal resources business, we aim to improve recycling efficiency and profitability by insourcing and enhancing our ability to recover useful metal resources that are not fully collected by the Group's existing recycling processes and are currently sold externally or outsourced for processing. This will also help ensure stable operations, as recyclable waste materials can be secured in

collaboration with a nearby Group site, REVER CORPORATION's Ichihara Plant.

The advanced sorting and recycling of waste plastics business will operate advanced sorting and recycling equipment capable of handling material recycling, chemical recycling, and thermal recovery of waste plastics, with a view toward collaboration with Ichihara City, the local municipality.

With the enforcement of the Act on Promotion of Resource Circulation for Plastics in 2022 requiring municipalities to sort, collect, and recycle plastic end-of-life product waste, we anticipate steady demand for such services from municipalities in the future. In the medium- to long-term, we will continue working to develop a business framework for resource recycling and utilization by expanding and strengthening collaboration with external partners, including wide-area waste emitters as a collection source and material manufacturers as users.

* CCU: Carbon dioxide Capture and Utilization; CCUS: Carbon dioxide Capture, Utilization and Storage. Both of these technologies offset carbon emissions by capturing and storing emitted CO₂ and converting it into new products or energy.

Collaboration with Ichihara City—a "SDG Future City"

Ichihara City, the local municipality where this business project is located, was selected by the Cabinet Office of Japan in fiscal 2021 as the first "SDGs Future City" in Chiba Prefecture, and is stepping up efforts to become a city that symbolizes the SDGs—a vision which also aligns with that of the TRE Group.

In addition, the two existing sites of the Group have developed environmental businesses with the understanding and cooperation of the local government and community, contributing to community development and establishing an ongoing relationship of trust.

Building on this foundation, we will maintain a strong partnership with local government throughout this business project and fulfill a key role delivering waste collection, treatment, recycling, and power supply services that benefit the local community. In addition, we will also develop disaster resilience functions to prepare for possible disasters such as an earthquake centered directly under Tokyo metropolitan area or in the Nankai Trough region, strengthening our role as a provider of key societal infrastructure that supports the local community and a company that grows together with the region.



Mibu Plant (provisional name), a new shredder dust sorting facility, scheduled to commence operations in August 2025



Perspective drawing of the new Mibu Plant (provisional name)

REVER CORPORATION reduces dust disposal costs by sorting the shredder dust discharged from its large shredders and extracting valuable materials such as metals and plastics, which are then sold. To date, mixed metals (heavy dust)* have been previously sorted and volume reduced at REVER's Nasu Plant, and the post-shear dust sorted and volume reduced at the Funabashi Plant. However, in order to further promote recycling and reduce dust treatment costs, the Company has decided to establish the Mibu Plant (provisional name), a shredder dust sorting facility, on approximately 11,000 m² of land that it owns in the town of Mibu, Tochigi.

In establishing this plant we aim to collect shredder dust, which had been incinerated or landfilled, from the Group's sites located in the northern Kanto region and recycle metals and plastics in an efficient and stable manner. We also aim to reduce CO₂ emissions by equipping the facility with a solar power generation system, recovering approximately 50% of collected shredder dust as resources, and manufacturing and supplying RPF (solid fuel).

Amid accelerating efforts to achieve carbon neutrality and a circular economy, we believe that internalizing shredder dust processing and promoting recycling are key initiatives to ensure the sustainability of our business.

Through this plan, we aim to move preemptively to meet the growing environmental awareness of waste emitters, while ensuring that the TRE Group secures its competitive edge in the shredder business as we work to create an efficient recycling society and carbon-neutral society.

* A mixture of non-ferrous metals such as aluminum, copper, stainless steel, as well as plastics, etc.



Shredder dust

Feature 3

Further enhancing recycling business —strengthening glass recycling capabilities

In this feature, we highlight our efforts to recycle glass—the “missing piece” in our ongoing endeavor to recycle all types of materials as a comprehensive environmental management company.

To achieve a truly efficient recycling society, it is vital to broaden our scope beyond fields where recycling technology has already advanced—such as iron, stainless steel, and other metals, as well as plastics and wood—to enable all resources to be recycled and used effectively. One area that has attracted much focus in recent years is glass recycling.

Glass has a wide range of applications in society, with plate glass used as a building material and bottle glass used for beverages. Although glass manufacturers, municipalities, and beverage manufacturers are working to collect and reuse glass as well as recycle it as a raw material (cullet), in many cases glass is still landfilled at final disposal sites.

Meanwhile, glass manufacturers, who are endeavoring to make their operations carbon neutral, are increasingly seeking high quality glass cullet as using recycled raw materials helps reduce CO₂ emissions in the glass manufacturing process.

In addition, demand for glass recycling is projected to increase significantly in the future in the following two fields.

The first area is glass used in solar panels. The increase in the number of solar panels installed across Japan in recent years presents a future challenge to ensure that these panels are properly disposed of and recycled, as a significant volume of waste will require disposal when they reach end of life.

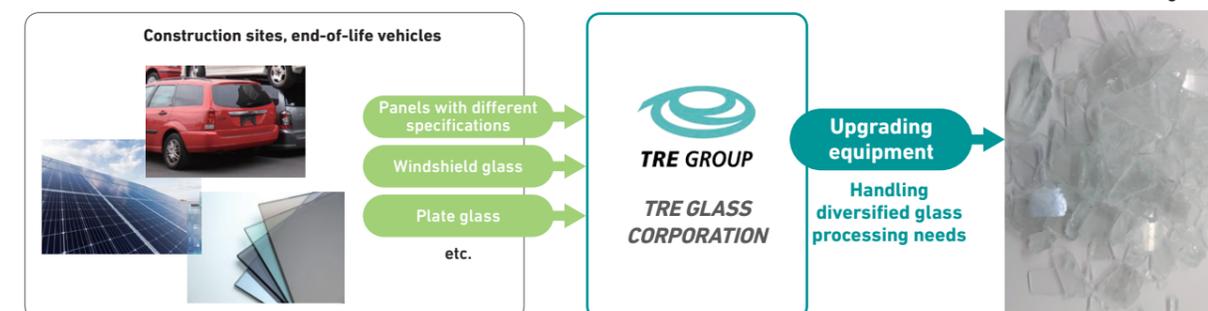
The second area of demand growth is automobile windshields. Although windshields are primarily landfilled as

automobile shredder residue (ASR) at present, a shift from landfilling to recycling is currently underway, including government-led efforts to study the introduction of a “dismantling incentive system (provisional name)”.

For the TRE Group, tackling the challenge of glass recycling not only represents a major business opportunity, but also a way to contribute to solving societal challenges and to strengthen our all-round capabilities as a waste treatment and recycling company. We therefore decided to clearly position JW GLASS RECYCLE CO.LTD, which was integrated as a subsidiary by TAKEEI CORPORATION in our first M&A project following the TRE Group’s establishment in 2022, as a strategic subsidiary tasked with strengthening the Group’s glass recycling business. In March 2023, TRE HOLDINGS CORPORATION acquired all shares in JW GLASS RECYCLE CO.LTD and changed its name to TRE GLASS CORPORATION.

Since its foundation in 1951, the company has expanded its glass recycling business across Japan, including Tokyo, Gunma, Shizuoka, and Hokkaido prefectures, providing a stable supply of high-quality recycled glass cullet through the adoption of advanced technologies, backed by the trust and technical prowess it has cultivated over the years. Going forward, TRE GLASS CORPORATION will play a cross-functional role in the Group’s recycling business, driving the horizontal deployment of technology and knowledge as well as improvement of equipment in order to boost the Group’s overall glass recycling capabilities.

Upgrading equipment to meet diversified and large-scale glass recycling needs



Solar panel recycling business at Shinshu Takeei Co., Ltd.

As part of our efforts to strengthen its glass recycling business, the TRE Group has begun working to develop a solar panel recycling business.

Solar panel installation across Japan has grown following the introduction of the Excess Electricity Purchasing Scheme for Photovoltaic Power in 2009 (replaced by the Feed-in Tariff (FIT) scheme in 2012). As solar panels have a life span of approximately 25 to 30 years, the volume of panels requiring replacement and disposal is expected to rise significantly from around 2030. Proper treatment and recycling of solar panels requires advanced technology and specialized equipment. However, at present there are insufficient processing facilities to handle the expected volume of waste, posing a challenge for society.

To address this challenge, Shinshu Takeei Co., Ltd., located in Suwa City, Nagano, has launched a solar panel recycling business. In December 2021, the company obtained a license from Nagano Prefecture to process end-of-life solar panels, and is conducting research and development to establish processing methods.

In the future, TAKEEI CORPORATION also plans to launch an identical business at its Soma Plant located in Soma City, Fukushima. With a 1 GW mega-solar facility located nearby, the Soma Plant will focus on collecting unneeded or broken solar panels, as well as building a network with solar panel reuse companies.



Crushing and separating an used solar panel glass

The company has already received a permit to install designated processing equipment in accordance with Fukushima Prefecture ordinances, and is currently in the process of renovating existing equipment and installing dust collectors, crushers, and other machinery.

Going forward, the TRE Group will leverage the expertise of Shinshu Takeei Co., Ltd. and TRE GLASS CORPORATION to improve the quality of its glass cullet and promote “glass-to-glass” recycling.

We are also exploring ways to recycle all of the glass separated from solar panels, including leveraging the Group’s patented technology to utilize the glass effectively as a raw material in the manufacture of recycled products.



An aerial view of the Soma Plant

Waste Treatment & Recycling Business

The TRE Group provides one-stop waste management solutions spanning waste collection and transportation to recycling and final disposal, fulfilling an essential societal infrastructure role in the realization of a circular economy where resources are recycled in their entirety.



Overview and Features of the Business

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 are actively working to improve our recycling efficiency. Waste delivered to our facilities is sorted, cleaned of extraneous material, crushed, and compressed to extract reusable metals and other materials. Meanwhile, waste plastic, wood waste, and paper waste is molded into RPF (solid fuel)*1.

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 achieve an efficient recycling society, in addition to proper treatment of waste in compliance with laws and regulations, the development of processing technology

and treatment facilities to recycle unused resources that in the past had been landfilled for being difficult to recycle, by improving sorting accuracy, is an essential task.

To this end we are working to recycle unused resources through initiatives including proactive capital expenditure and improvement of our treatment processes.

This high-level recycling technology will not only enable more efficient use of resources, but will also prolong the life of final landfill sites, improve fuel and energy self-sufficiency, and contribute to increased profits for the Group due to cost reductions.

*1 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).

Business Environment and TRE's Strengths

- Expansion of legal framework for promotion of a circular economy
- Growing demand to reduce environmental impact across the entire product life cycle
- We possess an integrated waste treatment system that spans collection and transportation, intermediate processing and recycling, to final disposal
- We own several of Japan's largest advanced sorting and processing facilities, primarily located in the Tokyo metropolitan area
- Expertise in proper waste treatment and recycling acquired over many years of experience
- Ability to respond to natural disasters, specialized projects, etc.
- Ability to handle a wide range of waste types through our diverse Group companies

Initiatives

- Enhancing waste recycling by installing new equipment and renovation of existing facilities to enable advanced sorting
- Constructing and operating advanced sorting and recycling facilities capable of handling material, chemical, and thermal recovery of waste plastic in accordance with the enforcement of the Act on Promotion of Resource Circulation for Plastics
- Developing the TRE Group's first waste incineration and power generation business through a joint venture with Hitachi Zosen Corporation, including the utilization of Hitachi Zosen's CCU and CCUS technologies
- Expanding in-house managed landfill sites for final disposal of final residual waste

Progress Toward Medium-Term Business Plan

While construction costs in the construction industry, which is closely linked to our business, continue to increase due to higher material prices, new housing starts and construction orders are showing a general recovery trend, supported by pent-up housing and construction demand that was postponed due to the COVID-19 pandemic.

Amid such conditions, during the fiscal year ended March 31, 2023, the second year of the Medium-Term Business Plan, net sales in the Waste Treatment & Recycling Business were 25,662 million yen and segment profit was 4,210 million yen, due to a steady increase in deliveries received from redevelopment projects, etc., an increase in revenue from new construction and demolition projects and an increase in the volume of waste plasterboard received, the recovery of valuable resources through advanced sorting of waste at intermediate processing facilities, production of solid fuel RPF from waste plastic and other materials, and efforts to added

value and reduce costs through commercialization of products such as Eco-Foam™ secondary material for steelmaking processes, which is produced from collected dust.

During the current fiscal year, in addition to winning orders from large-scale public redevelopment projects aimed at building national infrastructure resilience 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 CO₂ emissions.

	FY ended Mar. 2021	FY ended Mar. 2022	FY ended Mar. 2023
Net sales	24,738 million yen	25,146 million yen	25,662 million yen
Operating profit	3,468 million yen	5,113 million yen	4,210 million yen
Operating profit margin	14.0%	20.3%	16.4%

Topics

Ensuring proper treatment of difficult recycle wastes

During intermediate processing and recycling of waste, there will inevitably be some residual waste that is difficult to recycle. Monzen Clean Park Co., Ltd. is currently constructing the Monzen Final Disposal Site (provisional name) in Wajima City, Ishikawa, as a facility designed to ensure safe and proper landfill disposal of such residual waste. When completed, this massive site which is scheduled to start operation in November 2023 will have a landfill capacity approximately 2.8 times the size of Tokyo Dome stadium and a landfill life of approximately 50 years. The TRE Group continues its constant pursuit of new ways to recycle, commercialize, and add value to waste materials, while at the same time working to provide safe and reliable integrated treatment services to ensure that these residual waste materials are properly disposed of at landfill sites.



Monzen Final Disposal Site (provisional name), a managed landfill site currently under construction

Resource Recycling Business

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



Overview and Features of the Business

In the Resource Recycling Business, we are developing exhaustive recycling services 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. Recycled resources that are collected are treated appropriately according to their type and circulated back to other industries via parties such as trading companies and electric furnace 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.

Furthermore, in April 2023 we formed a business partnership with Sumitomo Chemical Co., Ltd. to recycle plastics derived from end-of-life vehicles, and are working to develop a circular economy in the automotive industry and "Car to Car" recycling by collecting waste plastics from end-of-life vehicles and recycle them for use in automotive parts.

In addition to these initiatives, we are also exploring the possibility of building a new glass recycling scheme in cooperation with TRE GLASS CORPORATION using glass derived from end-of-life vehicles.

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 1.3 million waste home appliances per year—approximately 10% of all scrapped home appliances currently generated in Japan.

Business Environment and TRE's Strengths

- Amid accelerating moves toward carbon neutrality, we possess integrated business operations spanning waste collection to recycling
- Full range of waste treatment technologies and facilities to meet needs of other industries aiming to improve their resource efficiency
- Operate six large crushers* in the Kanto region, serving as recycling infrastructure for the Tokyo metropolitan area
- One of Japan's largest automobile, home appliance, and small home appliance recyclers
- We provide total solutions to the waste challenges facing waste generators in order to achieve sustainable resource recycling

* Large crushers are defined as those whose main body has a horsepower of 1,000 hp or greater.

Initiatives

- Strengthening investment in recycling facilities for advanced sorting to improve recycling rate and reduce CO₂ emissions
- In-house dust processing and development of an efficient scheme for recovering valuable resources in order to realize a circular economy
- Establishing partnerships with Sumitomo Chemical and other companies to identify diverse needs of industries and establish new resource recycling models
- Implementing a range of initiatives to reduce GHG emissions in order to achieve carbon neutrality
- Accelerating development of technologies to recover resources more efficiently in anticipation of the mandatory use of recycled plastics, which the EU is taking the lead in implementing

Progress Toward Medium-Term Business Plan

In the fiscal year ended March 31, 2023, the second year of the Group's Medium-Term Business Plan: Toward an Efficient Recycling and Carbon-Neutral Society (hereafter "MTP"), although the Resource Recycling Business experienced a drop in steel scrap prices due to the Russia-Ukraine conflict, the trend toward carbon neutrality remained unchanged, and the impact of the decline in scrap steel prices was minimized by expansion of our sales channels, leveraging our strength of our business sites in the Kanto region.

However, revenue was impacted significantly due to operational restrictions stemming from the rebuilding of

REVER CORPORATION's Fujisawa Plant, higher electricity and fuel costs, and a decrease in the number of end-of-life vehicles generated.

Although operating costs are forecast to remain high in the fiscal year ending March 31, 2024, the final year of the MTP, we expect to achieve the targets set in the original plan by implementing a broad range of recycling initiatives as the number of end-of-life vehicles recovers, and by securing spreads through sound inventory management while responding to market fluctuations.

	FY ended Mar. 2021	FY ended Mar. 2022	FY ended Mar. 2023
Net sales	31,408 million yen	46,418 million yen	44,866 million yen
Operating profit	2,660 million yen	5,454 million yen	3,139 million yen
Operating profit margin	8.5%	11.7%	7.0%

Topics

Pushing forward with dust recycling efforts

In the Resource Recycling Business, in which recovery of valuable resources via advanced sorting and recycling is a key pillar of our growth strategy, we have focused particularly in recent years on reducing the amount of dust generated in the waste treatment process. Although we have already been promoting recycling in this area by leveraging the characteristics of our facilities such as REVER CORPORATION's Nasu Plant for mixed metals and Funabashi Plant for dust from hydraulic shears, we will further strengthen our recycling efforts going forward.

The Funabashi Plant has acquired a new industrial waste disposal license for "classification" in order to accelerate dust recycling efforts, while the Ichihara Plant has installed and begun operating a urethane dust molding and solidification line to convert urethane dust into RPF (solid fuel). In addition, REVER CORPORATION plans to open the Mibu Plant (provisional name) in August 2025, which will be responsible for collecting, sorting, and recycling dust

generated at REVER's Kitakanto Plants, further advancing in-house processing of dust and resource recycling.

Through these initiatives, we will contribute to the reduction of dust and CO₂ emissions, while working toward the TRE Group's vision of an efficient recycling society and a carbon-neutral society.



Mixed metal

Renewable Energy Business

The TRE Group has established business models for “local production for local consumption” of electricity using unused resources from domestic forests as fuel, as well as woody biomass power generation using fuel derived from waste from the construction industry. We have acquired forested land and are working to conduct sound forest management to help create a carbon-neutral society.



Overview and Features of the Business

In the TRE Group’s Renewable Energy Business, we do not, in principle, rely on imported timber or fuelwood, instead working to promote energy recovery by utilizing unused forest resources such as thinned wood, pruned branches, and forest waste as fuel at our six woody biomass power plants in Japan, with the electricity generated returned to local communities.

By working in close partnership with local forestry cooperatives and material producers to maintain and nurture forests and ensure stable procurement of fuelwood, we are involved in the entire forestry process, from the sale of timber to the supply of wood chips and reforestation after logging, making the most of the forest’s diverse functions.

We currently operate in four areas of the Tohoku region, supplying electricity to the region using collected wood as fuel

to achieve “local production for local consumption” of electricity, as well as cultivating sweet tomatoes and wood ear mushrooms in greenhouses using the residual heat from power generation.

We are also combining our woody biomass power generation prowess with our expertise in proper waste treatment and recycling to develop hybrid schemes that utilize waste-derived fuel for power generation in Yokosuka City, Kanagawa, and Ichihara City, Chiba. We procure biomass fuel primarily from the forestry operations of TAKEEI Forestry Co., Ltd., and are working to enhance our power retailing business, which provides a stable supply of electricity generated by the TRE Group to customers via Takeei Denki Co., Ltd.

Business Environment and TRE’s Strengths

- Increasing societal momentum toward carbon neutrality and growing demand for renewable energy
- We have established an integrated system in Japan for procuring unused forest resources as fuel for power generation, manufacturing wood chips, and generating and retailing electric power
- We have established a stable fuel procurement framework through close cooperation with local forestry cooperatives and material producers
- As a forestry company, we work with local forestry cooperatives to conduct sound management of the Group-owned forests from afforestation through to logging, and ensure sustainable forest management that pays due consideration to biodiversity
- We maintain strong trust relationships with local municipalities based on “local production for local consumption” of electricity
- Accumulating and advancing our expertise in woody biomass power generation

Initiatives

- Restoring and revitalizing the domestic forestry industry by expanding the area of forest under management and utilizing resources from the Group-owned forests to ensure a stable procurement of fuel for power generation over the medium- to long-term
- Establishing a stable operating system for woody biomass power generation plants
- Promoting initiatives to return power generated using waste from construction industry to construction sites
- Expanding sales of renewable energy with non-fossil fuel certificates
- Vitalizing regional economies through partnerships with local industry and society (creation of employment opportunities)

Progress Toward Medium-Term Business Plan

In the fiscal year ended March 31, 2023, the Group faced a challenging operating environment, including high wholesale market prices for electricity due to tight supply and demand, as well as equipment malfunctions and a decline in power generation output due to a decline in the quality of woody biomass power generation fuel as a result of unfavorable weather conditions and a difficult procurement environment. Despite these circumstances, however, operating conditions are gradually improving as a result of our efforts to make improvements to ensure safe operation, while in the power retailing business utilization of non-FIT fuel (RPF, etc.) by

Green Power Ichihara Co., Ltd., the review of sales contracts, and expansion of services to construction sites contributed to sales and profits. As a result, segment sales were 13,794 million yen, and segment profit was 688 million yen.

TAKEEI Forestry Co., Ltd. will continue to acquire forests and promote effective use of the Group’s forest resources, while the Group will pursue stable fuel procurement and control fuel moisture levels at its six woody biomass power generation plants, in order to further enhance the stability of its power plant operations. We are also striving to expand sales of renewable energy with non-fossil fuel certificates in our power retailing business.

	FY ended Mar. 2021	FY ended Mar. 2022	FY ended Mar. 2023
Net sales	11,457 million yen	12,617 million yen	13,794 million yen
Operating profit	325 million yen	(305 million yen)	688 million yen
Operating profit margin	2.8%	–	5.0%

Initiatives by TAKEEI Forestry Co., Ltd.

TAKEEI Forestry Co., Ltd. was established in May 2020 with the aim of providing a stable medium- to long-term supply of fuel for power generation and contributing to the regeneration and revitalization of the domestic forestry industry. In April 2021, the company acquired approximately 240 hectares of mountain forest in Hanamaki City, Iwate, and has been making preparations to commence forestry operations, including encouraging employees to obtain Forest Management Planner certification. Recently, in cooperation with the local Hanamaki City Forestry Cooperative, the company has prepared a forest management plan, received accreditation, and begun full-scale forest management operations. Based on this plan, the company will conduct logging*1 and thinning*2 between 2022 and 2027, as well as plant Japanese larch trees, for which Iwate Prefecture is well known. With the implementation of this forest management plan, we have established an integrated scheme that encompasses the procurement of unused forest resources for use as fuel in power generation, their conversion into wood chips for supply, power generation, and power retailing.

In April 2023, the company acquired approximately 40 hectares of protection forest*3 from a local production forestry cooperative.

As with the forests the company has already acquired, the logged sites will be reforested through afforestation, contributing to the regeneration and revitalization of the forestry industry, while also playing an important role in passing on our limited forest resources to the next generation.



Approx. 240 ha of mountain forest acquired in Hanamaki City

*1 Logging: Logging for replacement/preparation for replacement or the complete logging of upper layer trees in forests with more than one canopy layer.
 *2 Forest thinning: The removal of selected trees to reduce competition among growing trees, in line with the degree of crowding.
 *3 Protection forest: Forests designated by the Minister of Agriculture, Forestry and Fisheries or prefectural governors with the objective of achieving a specific public purpose, such as cultivating water sources, protecting against landslides or other disasters, or preserving and fostering habitats. In protection forests, the felling of standing trees and alteration of the topography of the land is regulated in order to ensure that the forest functions in accordance with its designated purpose.

Renewable Energy Business

Takeei Denki Co., Ltd. established through integration of five power retailing companies

The TAKEEI Group's five power retailing companies*1 were integrated effective September 1, 2022 with Yokosuka Urban Wood Power as the surviving company, and the company name changed to Takeei Denki Co., Ltd., in order to further grow the Renewable Energy Business and enhance our ability to respond to customer needs by leveraging the expertise accumulated through our power retailing business, as well as to reduce costs by streamlining and improving operations and bringing previously outsourced processes in-house through integration.

This integration allows Takeei Denki Co., Ltd. to conduct overall management of the annual power generation output of the six power plants operated by the TAKEEI Group, which totals approximately 566 GWh (equivalent to the annual power consumption of approximately 160,000 average households).

Takeei Denki Co., Ltd. has already begun working to conduct efficient sales and marketing activities to meet the needs of customers wishing to use electricity generated by renewable energy. We are also working on the establishment of a "resource and energy recycling scheme" where wood waste from construction sites is used as fuel for woody biomass power generation. The resulting renewable energy is supplied to our partners, who are general contractors and real estate developers, for power at construction sites. Furthermore, in the medium- to long-term, we will pursue a higher level of profitability analysis by centralizing management of the power retailing business, as well as improving the efficiency of supply/demand management and

accumulate expertise to enhance our ability to resolve specialized issues.

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, we 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 will also sell non-fossil fuel certificates*2 that comply with international initiatives such as Science Based Targets (SBT), the Carbon Disclosure Project (CDP), and RE100 to promote initiatives that enable customers to prove they are using electricity derived from renewable sources, thereby further contributing to the realization of a carbon-neutral society.

*1 The TAKEEI Group's five power retailing companies: Tsugaru Apple Power Co., Ltd., Hanamaki Ginga Power Co., Ltd., Daisen Komachi Power Co., Ltd., Yokosuka Urban-Wood Power Co., Ltd., and Fukushima Mirai Power Co., Ltd.

*2 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.

Benefits of integrating the Group's five power retailing companies



Joining the Keikyu Group's "Miura no Mori" Forest Project

Collaborating to create a sustainable society through woody biomass power generation

The TRE Group operates six woody biomass power generation businesses in locations including the Tohoku region, Yokosuka City in Kanagawa, and Ichihara City in Chiba.

Keikyu Corporation (hereafter "Keikyu") approached the TRE Group regarding participation in the Keikyu Group's Miura no Mori forest project, as Keikyu was considering woody biomass power generation as a measure to utilize approximately 100 hectares of its company-owned forests primarily located on the Miura Peninsula.

The project aims to further utilize the CO₂ absorption functions of forests through sound forest management, and to cultivate beautiful and functionally rich forests for the future. The Kanagawa Prefecture Federation of Forest Owners' Co-operative Association, an organization with extensive knowledge of forest management in the prefecture, is cooperating in the project by thinning forests to enable sunlight to reach the ground and new trees to grow, regenerating the woodland. In addition, the trees thinned via this process are used as woody biomass fuel for power generation, firewood for campsites, and material for woodcraft workshops.

The TRE Group helps to recycle resources by converting logged trees into fuel at Takeei Green Recycling Co., Ltd., which are then used to generate electricity at the Yokosuka Biomass Power Generation facility. This electricity is then supplied to Takeei Denki Co., Ltd. for sale to Keikyu Group's facility as electricity with FIT non-fossil fuel certificates with tracking information.

This is one example of the progress we are making in collaborating with other industries on woody biomass power generation. Going forward, we will continue working to contribute to the realization of an efficient recycling society and a carbon-neutral society by proactively exploring proposals from a wide range of companies who share our vision of a sustainable society.

Takeei Green Recycling Co., Ltd.

Trees logged from forests in the Miura no Mori project are used as woody biomass fuel

Takeei Green Recycling Co., Ltd., which operates the Yokosuka Biomass Power Generation facility, uses trees from Keikyu-owned forests that have been logged in an appropriate manner as renewable woody biomass fuel (wood chips) for power generation.

Following the project's launch, the Keikyu Group consulted with us regarding the possibility of utilizing trees near Keikyu railway tracks, which are felled to ensure the safe operation of trains, as woody biomass fuel. We promptly studied conditions along the railroad, and quickly responded to utilize the biomass of this woody material.



Trees near railway tracks felled for safety purposes are also used as fuel for biomass power generation

Takeei Denki Co., Ltd.

Contributing to sustainable resource recycling

The electricity generated by the Yokosuka Biomass Power Generation facility is sold as "electricity with FIT non-fossil fuel certificate with tracking information" by Takeei Denki Co., Ltd., which manages the TRE Group's power retailing business, to Hayama Marina Co., Ltd., a Keikyu Group company. This enables the Keikyu Group's facility to use net 100% renewable energy, achieving carbon neutrality.

* FIT non-fossil fuel certificate with tracking information: A certificate indicating the environmental value of electricity generated from non-fossil fuel power sources (power sources that generate electricity without using fossil fuels).

Message from project representative



Yusuke Ito
Assistant Manager,
Business Management Department,
Development and Administration of
Facilities Headquarters,
Keikyu Corporation

We hope to continue working together with the TRE Group to realize a recycling-oriented society

Keikyu Corporation launched the "Miura no Mori" forest project in February 2023 with the aim of promoting the sound management of company-owned suburban forests on the Miura Peninsula as part of our efforts to create a sustainable society.

As we studied ways to utilize the trees felled in our forests as woody biomass fuel, we learned of the Yokosuka Biomass Power Generation Facility, a TRE Group facility located at Oppama Station on the Keikyu Line, also in Yokosuka City, who kindly agreed to accept our thinned wood and felled trees. TRE was very responsive to our proposal, also agreeing to use trees felled near our railway tracks as woody biomass fuel. This project has also attracted growing interest within Keikyu Corporation. We hope to continue working with the TRE Group to help realize an efficient recycling society.

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 that provides measurement certification services, environmental protection works, hazardous waste surveys and analyses, and environmental assessment-related services.



Progress Toward Medium-Term Business Plan

In the Environmental Engineering business, Fuji Car Manufacturing Co., Ltd., which develops, manufactures, and sells environmental machinery, special vehicles, and other products, maintained a solid order book during the fiscal year under review. However, profits declined despite an increase in revenue due to a longer manufacturing lead time caused by delays in procuring parts and materials from overseas and higher-than-expected procurement costs.

In the Environmental Consulting Business, Environmental Conservation Co., Ltd. and Earth-Appraisal Co.,

Ltd, which provide environmental analysis services, continued to receive steady orders for asbestos analysis-related services and business performance remained strong as 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 during the demolition and renovation of buildings.

As a result, segment sales were 7,374 million yen, and segment profit was 325 million yen.

	FY ended Mar. 2021	FY ended Mar. 2022	FY ended Mar. 2023
Net sales	6,828 million yen	7,102 million yen	7,374 million yen
Operating profit	349 million yen	441 million yen	325 million yen
Operating profit margin	5.1%	6.2%	4.4%

Topics

Development of SHELLANOS fine shredder for precision shredding and separation of miscellaneous scrap

In recent years, metal resources such as ferrous and nonferrous metals have become important strategic resources from an economic security perspective.

Fuji Car Manufacturing Co., Ltd. conducted joint development with customers to develop the SHELLANOS fine shredder, which is capable of shredding and separating miscellaneous scrap with high precision.

SHELLANOS is a revolutionary vertical shredder that combines outstanding separation performance, processing capacity, and ease of maintenance, and can shred and separate products such as used small electronic/electrical equipment, small motors with high precision—a feat that had been difficult to achieve with conventional shredders.

As a result of this improved separation performance, metals which could previously only be shipped in low grades as mixed metals, with ferrous and nonferrous metals unseparated, can now be separated into ferrous and nonferrous metals, enabling shredded waste to be processed into high-value-added products.

Main features

- (1) High-speed rotation type swing hammer system for improved crushing performance
- (2) Easy maintenance by opening and closing casing
- (3) Longer hammer and liner life and reduced wear replacement work due to forward/reverse rotation structure
- (4) Screen opening size can be adjusted as necessary (0 to 9 mm) via motorized opening/closing device



SHELLANOS fine shredder

Toward an evolution in our business functions

Budgeting 1 billion yen per year (1% of net sales) for research and development

The TRE Group's Board of Directors has passed a resolution to budget nearly 1 billion yen per year for investment in research and development (R&D) in order to bolster efforts to generate future business with the aim of adding new value to waste to create an efficient recycling, carbon-neutral society.

Although new technologies require time to develop and commercialize, we are working to pursue R&D through a range of channels, including regional co-creation initiatives, improvement of existing businesses and equipment, and promotion of industry-academia partnerships.

Regional co-creation initiatives

Utilizing rice husks as solid fuel for biomass power generation

With the recent "wood shock" and other factors leading to an ongoing global shortage of woody biomass fuel for power generation, securing a stable and plentiful procurement of inexpensive domestic biomass fuel is a pressing task for the TRE Group. Under these circumstances, Tsugaru Biomass Power Generation Co., Ltd. has focused its attention on rice husks as a source of biomass fuel. Although rice husks have traditionally been used as compost or bedding for livestock, they are increasingly being disposed due to a decline in the number of livestock farmers in Japan. After extensive studies in cooperation

with local farmers and pelletizing equipment manufacturers, we established a scheme for pelletizing rice husks into a solid fuel called "Momigalite" that can be used as fuel for power generation.

This new business model not only transforms material that was previously disposed into a valuable resource, but also reduces CO₂ emissions generated via transportation and other processes. We will continue advocating this technology with the aim of having rice husks certified as a biomass fuel under the feed-in tariff (FIT) system in the future.

Improving existing businesses and equipment

Increasing quality of waste tile carpet recycling

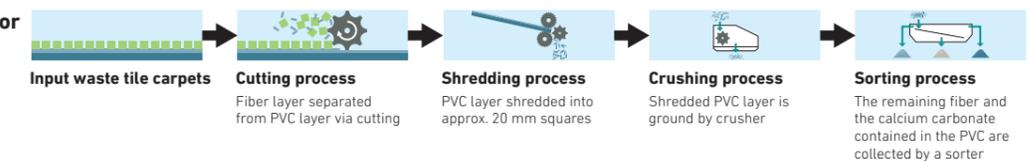
Tile carpets, which are widely used in offices as flooring, consist of a fiber layer on the surface, which is strongly bonded to a PVC (polyvinyl chloride) layer on the underside. Although tile carpets had conventionally been disposed of in landfills due to the difficulty involved in crushing and separating these two materials, in 2016 TAKEEI CORPORATION installed specialized equipment for this purpose at Plant No. 2 of its Tokyo Recycling Center. By shaving off the fiber layer, the PVC layer can be crushed and separated, and the company has established a scheme in which it supplies recycled PVC (Eco-Flakes) to major tile carpet manufacturers as raw materials.

As the adhesive that remained on the underside of tile carpets caused problems in the first installed equipment, we subsequently

developed a new cutting plant with the ability to peel off the adhesive. We have also developed a proprietary crushing process to improve the accuracy of fiber and PVC sorting. After grinding the material to approximately 5 mm size pieces in a crusher, sorting of fibers and PVC, which had been difficult to achieve through cutting alone, is accomplished through specific gravity sorting and static eliminators positioned at key points, enabling us to supply Eco-Flakes of even higher quality.

We patented this separation and collection process in January 2023. Going forward, we will work to further refine our sorting technology in order to achieve stable equipment operation and increase production of Eco-Flakes.

Processing flow for waste tile carpet



Promoting industry-academia collaboration

Industry-academia collaboration on CCUS technology development in the waste business field

The TRE Group is proactively fostering industry-academia collaboration with the objective of furthering research and development and finding new solutions to challenges. As one such initiative, we are studying CCUS technology that captures and uses CO₂ as a resource in order to reduce CO₂ emissions and achieve carbon neutrality. CCUS stands for Carbon dioxide Capture, Utilization or Storage, and refers to technologies that offset carbon

by capturing and storing emitted CO₂ and converting it into new products or energy. Specifically, we have concluded a joint research agreement with Yamagata University and Nihon University for the development of CCUS technology that can be employed in the manufacturing process for recycled products such as recycled concrete aggregate and crushed stone, and are currently progressing with demonstration experiments.

Part 3

ESG

Strengthening ESG to solidify our management foundation

The TRE Group is committed to maximizing its corporate value and enhancing its governance structure in order to earn the trust of its various stakeholders.

As a comprehensive environmental management company, we also strive to address diverse environment-related needs and implement proper measures to address the global challenge of climate change.

Furthermore, we are actively working to create a workplace environment in which our employees can work with fulfillment and peace of mind, and to promote living and thriving together with the local community.

INDEX

- 50 Corporate governance
- 53 List of executives
- 55 Environment
- 57 Response to climate change (information disclosure based on TCFD recommendations)
- 59 Creating pleasant and fulfilling working environments
- 61 Occupational health and safety
- 62 Living and thriving together with the local community



Corporate governance

We will establish a suitable corporate governance structure in order to practice 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 Financial Instruments 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

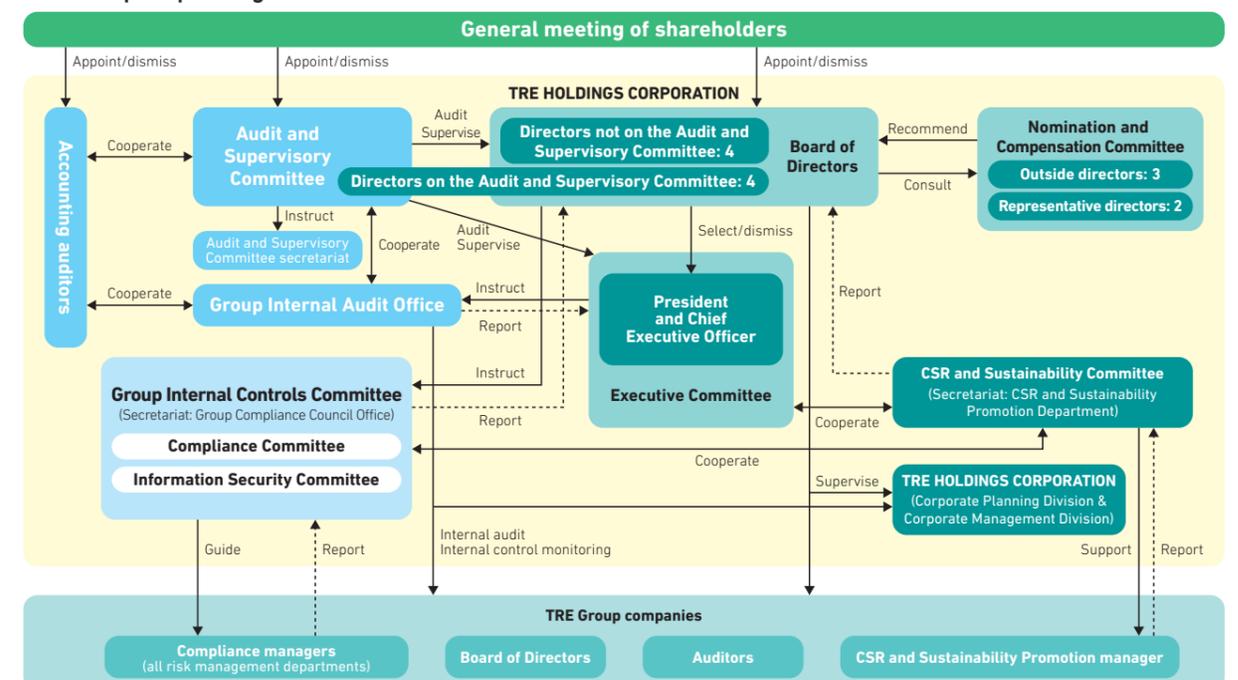
The Board of Directors takes important decisions about management strategies and plans and other matters. It also supervises the execution of business. Three of the eight board members are outside directors (including two female members), and the members possess a wealth of experience and a broad range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

TRE Group corporate governance structure



Corporate governance

Establishment of a 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 selects director candidates, evaluates officer compensation, assigns points for the board benefit trust (BBT), assesses the effectiveness of the board of directors and, when consulted by the Board of Directors, provides suitable reports on important matters that concern management.

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.

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.

Expertise of directors and outside directors

	Corporate management/ management strategy	Internal control/ governance	Sales/ marketing	Environment/ sustainability	Production/ technology	Finance/ accounting	HR/ labor management	Legal/ compliance
Director								
Naoto Matsuoka	●	●	●			●	●	●
Mitsuo Abe	●	●	●			●	●	●
Takao Suzuki	●		●	●	●			●
Mamoru Mitsumoto	●		●	●	●			●
Audit and Supervisory Committee								
Akira Kanai	●	●				●		●
Fumie Omura*	●	●		●			●	●
Hiroyuki Suematsu*	●	●		●			●	●
Tomoko Aramaki*	●	●				●		●

* Outside director, designated as an independent director as stipulated by the Tokyo Stock Exchange and registered with the Exchange.

Training for directors

TRE HOLDINGS provides directors with external training opportunities so that they can gain new knowledge and information about the company's businesses, finances and organization, and fulfill the roles and responsibilities expected of them.

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 business partner.

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.

Policy on constructive dialogue with shareholders

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

Furthermore, at quarterly financial briefings, the president and CEO and the IR Department provide explanations about new businesses, trends in business results and important businesses included in the medium-term 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.

Sustainability management

The Group has set forth sustainability management in its medium-term business plan as a means to achieve an efficient recycling and carbon-neutral society as a comprehensive environmental management company.

As one measure toward this, we established the CSR and Sustainability Committee in June 2022. Through this committee, we will promote Group-wide, cross-functional initiatives to address the global challenges of climate change and carbon neutrality, as well as other sustainability issues via a multifaceted approach.

The committee formulates action plans on climate change and social issues for the Group and monitors their progress. It also deliberates and supervises their contents at the Board of Directors' meeting after discussing and obtaining a consensus on them at Executive committee.

The president and CEO, in addition to chairing the CSR and Sustainability Committee, also chairs the Group Internal Controls Committee and Executive committee and recognizes the many sustainability-related issues as the most important risk to management. Through speedy decision-making, we will continue to discover and handle issues quickly and manage the PDCA cycle so as to strengthen our management foundation.

For society to become sustainable and for the company's continued growth, it is essential for every employee to understand and share our ideas and policies. Through our integrated reports and various kinds of training, we will endeavor to spread and establish the Group's objectives and initiatives about sustainability.

Environment-related risk management

The Group regards environmental risk, including climate change, as a management risk for the Group as a whole. The CSR and Sustainability Committee deliberates plans and measures for combating climate change and reports the progress of plans to the Board of Directors.

For critical environmental issues, the committee works with the Group Internal Controls Committee to share information. The Board of Directors receives regular reports on the progress of management plans about climate change and other issues and monitors the state of their execution.

TRE Group sustainability management (structure)



List of executives (As of July 1, 2023)**Directors****Naoto Matsuoka**
Chairman and CEO

Number of shares of the Company held:
10,400
Attendance at Board of Directors' meetings:
14/14

- 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 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:
16,716
Attendance at Board of Directors' meetings:
14/14

- Mar. 2016 Retired as Managing Executive Officer, Resona Bank, Limited
- Mar. 2017 Retired as 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 and General Manager, Corporate Planning Division
- Jun. 2019 Member of the Board, Chief Operating Officer (current position) Representative Director, T'V Energy Holdings, Inc.
- Apr. 2020 Representative Director, T&H Eco Mirai Co., Ltd.
- Jan. 2021 Representative Director, TEC Takekuma Co., Ltd. (current position)
- Sep. 2021 Director, REVER HOLDINGS CORPORATION (currently REVER CORPORATION) (current position)
- Oct. 2021 President and Executive Officer, the Company (current position)
- Apr. 2023 Director, REVER CORPORATION (current position)
- Jun. 2023 Representative Director, Green Arrows Holdings, Inc. (current position)

**Takao Suzuki**
Director

Number of shares of the Company held:
800,000
Attendance at Board of Directors' meetings:
14/14

- 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 Outside Director, BESTERRA CO., LTD. (current position)
- Oct. 2021 Director, the Company (current position)
- Apr. 2023 Chairman and Representative Director, REVER CORPORATION (current position)

**Mamoru Mitsumoto**
Director

Number of shares of the Company held:
2,046,126
Attendance at Board of Directors' meetings:
14/14

- 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 Director, the Company (current position)

**Akira Kanai**

Number of shares of the Company held:
4,072
Attendance at Board of Directors' meetings:
- (newly appointed in June 2023)

- Apr. 1977 Joined The Kyowa Bank, Ltd. (currently Resona Bank, Limited)
- Dec. 2007 Retired from Resona Bank, Limited
- Oct. 2013 Retired from The Dai-ichi Life Insurance Company, Limited
- Jan. 2014 Joined TAKEEI CORPORATION
- Apr. 2014 General Manager of Audit Department
- Jun. 2017 Corporate Auditor (current position)
- Jun. 2023 Director (Audit and Supervisory Committee member) (current position)

**Fumie Omura**

Number of shares of the Company held:
0
Attendance at Board of Directors' meetings:
14/14

- 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, Cartit Holdings Co., Ltd.
- Sep. 2019 Outside Auditor, REVER HOLDINGS CORPORATION (currently REVER CORPORATION)
- Oct. 2021 Outside Director (Audit and Supervisory Committee member) (current position)

**Hiroyuki Suematsu**

Number of shares of the Company held:
0
Attendance at Board of Directors' meetings:
14/14

- Apr. 1983 Joined Ministry of Agriculture, Forestry and Fisheries
- Mar. 2002 Counsellor, Cabinet Secretariat, Prime Minister's Office of Japan
- Oct. 2006 Director, Environment Policy Division, Minister's Secretariat, Ministry of Agriculture, Forestry and Fisheries
- Jul. 2007 Director, Policy Planning and Evaluation Division, Minister's Secretariat, Ministry of Agriculture, Forestry and Fisheries
- Apr. 2008 Director, Food Security Division, Minister's Secretariat, Ministry of Agriculture, Forestry and Fisheries
- Apr. 2009 Policy Planning Division, Minister's Secretariat, Ministry of Agriculture, Forestry and Fisheries
- Jul. 2010 Director-General, Forest Policy Planning Department, Forestry Agency, Ministry of Agriculture, Forestry and Fisheries
- Apr. 2014 Director-General, Kanto Regional Agricultural Administration Office, Ministry of Agriculture, Forestry and Fisheries
- Jul. 2015 Director-General, Rural Development Bureau, Ministry of Agriculture, Forestry and Fisheries
- 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, Ministry of Agriculture, Forestry and Fisheries
- 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) (current position)
- Dec. 2021 Outside Director, Nexyz.Group Corporation (Audit and Supervisory Committee member) (current position)

**Tomoko Aramaki**

Number of shares of the Company held:
0
Attendance at Board of Directors' meetings:
- (newly appointed in June 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 HOLDINGS Inc.
- Jun. 2015 Director, in charge of Investor Relations
- Dec. 2015 Corporate Auditor, SACOS CORPORATION (current position)
- Jun. 2018 Outside Auditor, EXEO Group, Inc. (current position)
- 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, EXEO Group, Inc. (current position) Outside Director (Audit and Supervisory Committee member) (current position)

Environment

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.

Environmental Certifications

Organization Certified	Date of Certification (Registration)
ISO14001	
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
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.

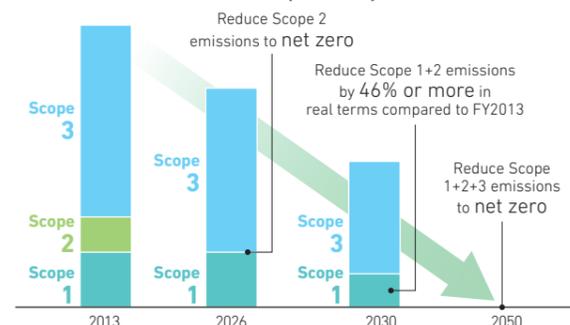
Toward a carbon-neutral society

The TRE Group has positioned the creation of a carbon-neutral society as one of its material issues for the realization of a sustainable society, and has set incremental targets (KPIs) linked to each material issue.

By 2050, we aim to achieve net zero CO₂ emissions across our entire value chain. As milestones toward this goal, we have set targets of net zero CO₂ emissions (Scope 2) from purchased electricity by 2026, and a reduction in CO₂ emissions (Scope 1+2) of 46% or more (base year: 2013) by 2030. As concrete measures to achieve these targets, we are actively utilizing renewable energy sources and implementing various initiatives to conserve energy and reduce CO₂ emissions.

The TRE Group's carbon neutrality targets (KPIs)

- (1) Achieve net zero CO₂ emissions from purchased electricity (Scope 2) by 2026
- (2) Reduce net CO₂ emissions (Scope 1+2) by 46% or more by 2030 compared to FY2013
- (3) Achieve net zero CO₂ emissions (Scope 1+2+3) by 2050



Installing solar panels at intermediate processing facilities and other sites

To promote the use of renewable energy sources for electricity consumption in order to achieve our carbon neutrality goals, the TRE Group has decided to install solar panels on the roofs of TAKEEI CORPORATION's Tokyo Recycling Center, Kawasaki Recycling Center, Shiohama Recycling Center, and distribution vehicle depots in an effort to further energy self-sufficiency.

We estimate that the annual reduction in CO₂ emissions from these four locations will total approximately 721 tons. This installation will be partially subsidized by the Tokyo Metropolitan Government's Local Production and Consumption Renewable Energy Enhancement Project.

Going forward, we will continue working to adopt green power throughout the Group, including installing solar power generation equipment for in-house consumption at other sites, with the aim of achieving carbon neutrality in our power consumption.

Group-wide adoption of CO₂ emissions visualization system

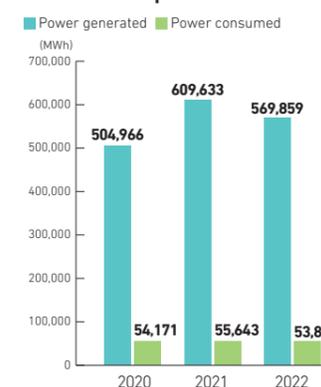
The TRE Group has introduced a CO₂ emissions visualization system to conduct timely monitoring of CO₂ emissions on a monthly basis at each site. This enables us to manage our targets, identify any issues, and effectively implement the necessary measures to achieve carbon neutrality in our operations.

In addition, amid the rapid momentum toward carbon neutrality, manufacturers and service providers face a major challenge in identifying the actual GHG emissions generated during the disposal process. Accordingly, in the future the Group will work to visualize CO₂ emissions generated in the waste treatment and recycling process and develop systems that will enable us to provide actual measured emissions data to our customers.

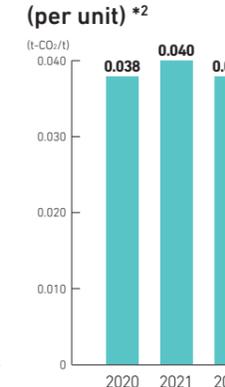
Energy input and CO₂ emissions in the TRE Group's business activities



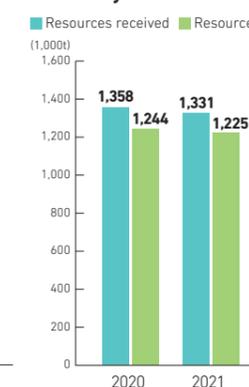
Trends in power generation and consumption *1



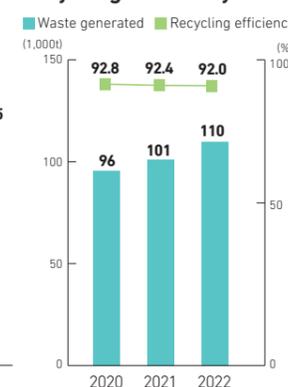
CO₂ emissions per resource received (per unit) *2



Resources received and recycled *3



Waste generation and recycling efficiency *4



*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.

*3 Resources received: Volume of valuables and waste received by the Group. Resources recycled: Volume of resources received that could be used as recycled resources.

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

Response to climate change (information disclosure based on TCFD recommendations)

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

In June 2022, the Group 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 sustainability-related 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

In fiscal 2022, the CSR and Sustainability Committee discussed 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 that we conducted in fiscal 2022 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 FY2023, in accordance with TCFD recommendations, we began conducting 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 CO₂ emissions, based on the assumption that CO₂ 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 category	Intermediate category	Sub category	Risks/ Opportunities	Impact on the TRE Group	Assessment			Time of impact		
					1.5°C	4°C	Qualitative			
Migration risks	Policies and regulations	Stricter regulations such as carbon taxes and greenhouse gas emissions quotas	Risks	• Increased costs due to burden of new taxes (carbon taxes) if we do not conserve energy at our plants/offices and in our logistics	Major	Minor	/	Mid/ Long-term		
			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 CO ₂ from customers as our plants/offices use lower-carbon energy, leading to increased differentiation and competitiveness • Increased demand for renewable energy	-	-			Major	
		Stricter environmental laws and regulations	Risks	• Increased capital investment costs and external (secondary) processing costs in order to comply with laws and regulations	-	-	Minor	/	Short- to long-term	
			Opportunities	• Rapid increase in demand for recycled resources and recycling from local governments and various manufacturers	-	-	Major			
		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-term	
			Opportunities	• Clear display of superiority in the industry through information disclosure	-	-	Minor			
	Market	Sharp increases in resource prices	Risks	• Increased costs as a result of a sharp rise in energy costs and the prices of materials and raw materials	Medium	Minor	/	Short- to mid-term		
			Opportunities	• Greater demand for reclaimed and recycled goods	-	-			Medium	
	Physical risks	Acute	Intensification and frequent occurrence of natural disasters	Risks	• Stoppage of operations due to damage to plants/offices or disruption of supply chain.	-	-	Major	/	Short- to long-term
				Opportunities	• Increased disaster-related waste treatment following a natural disaster such as a major typhoon	-	-	Minor		
Chronic		Rise in average temperature, frequent floods, and storm surges	Risks	• Deterioration of the working environment and reduced labor productivity due to heat stress	-	-	Major	/	Mid/ Long-term	
			Risks	• Storm surge damage to offices and plants located in coastal areas	Medium	Major				
			Opportunities	• 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			

Indicators and targets

From fiscal 2023, we have set targets for CO₂ emission reductions among our KPIs.

- (1) Achieve net zero CO₂ emissions (Scope 2) by 2026
- (2) Reduce net CO₂ emissions (Scope 1+2) by 46% or more by 2030 compared to FY2013

- (3) Achieve net zero CO₂ emissions (Scope 1+2+3) by 2050

We also calculate CO₂ emissions as an assessment metric for evaluating climate change-related risks and opportunities.

In particular, we plan to further refine the calculation of our Scope 3 CO₂ emissions in future.

Creating pleasant and fulfilling working environments

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 approximately 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



An Elder System instructor mentoring a new employee

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 CORPORATION's Kawasaki Recycling Center and other facilities have created multilingual educational 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.

Rank-based training and career training

We provide a range of rank-based training programs according to age and responsibilities, as well as career training. These training sessions incorporate group work and aim to expose employees to a diverse range of values and experiences. The training programs for department managers and career training for employees in their 30s held in fiscal 2022 were conducted jointly with the two recently merged companies TAKEEI CORPORATION and REVER CORPORATION, providing an opportunity for employee interaction.



Employees participate in group work

Training programs tailored to each company's business and unique characteristics

The TRE Group is composed of many different operating companies that are working together to realize an efficient recycling society, and we conduct training programs tailored to the business operations and specific characteristics of each company. REVER CORPORATION runs the REVER Academy Training Program to give employees an understanding of the various businesses and tasks in the company so that they can learn and master skills related to the jobs they are involved in. Additionally, the TRE Group is utilizing the advantages of e-learning, which enables employees to access training regardless of time or location, to conduct Group-wide compliance training, which is particularly important for all employees.

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 (at TAKEEI CORPORATION) 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 5.4%, but have set a target of doubling the number of women in managerial positions, 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, care-giving 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.

Non-Financial Highlight

(As of March 31, 2023)

Breakdown of employees

Number of employees	Male	Female	Waste treatment & recycling business	Resource recycling business	Renewable energy business	Other	All companies(shared)*
2,169	1,748	421	951	702	167	297	52

* 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.

Inclusion initiatives

Employee assignment transfers via Internal Recruitment System (persons)	7
Training and education expenses (million yen)	75.9

Ratio of female workers by job classification

	(%)
Officer	14.2
Manager	5.4
General employee	21.6

Employment status

Average age (years)	45.7
Average length of employment (years)	11.1
New graduates hired (persons)	33 (Male 19, Female 14)
New female graduates hired (%)	42.4
Mid-career hires (persons)	135 (Male 94, Female 41)
Persons with disabilities employed (persons)	19

Childcare leave

Leave taken before and after childbirth			Number of employees taking childcare leave/childcare leave rate		
Male	Female	Total	Male	Female	Total
0	16	16	8 (44.4%)	22(100%)	30(75%)

Health and safety (frequency and severity)

	Frequency rate	Severity rate
TRE Group	2.77	1.48
Average for the general and industrial waste treatment industry*	6.52	0.51
All industries	2.06	0.09

* 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 2023).

Occupational health and safety

We are dedicated to creating work environments and introducing and improving systems 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 corporate stance that safety is our top priority, and strive to ensure safety is maintained in all of our business activities.

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, who are responsible for practical safety management at each work site, work together to improve the effectiveness of safety management, and identify and address any problems or issues. In addition, the Group has a framework for sharing important information regarding incidents such as serious accidents or disasters, in order to promote safety enhancement activities across the entire Group.

Fire prevention measures

The Group takes the following hard (engineering) and soft (management) measures to prevent fires, mainly at REVER CORPORATION's shredder plants.

1. Install and increase number of fire detectors.
2. Install and increase number of fire hydrants and water cannons.
3. Install mist sprayers inside the shredders themselves.
4. Patrol with portable thermo-sensors.

At night and on holidays when employees are absent, the fire detectors are linked to a security company to minimize the risk of a fire outbreak. The mist sprayers spray a fine mist inside the shredders and create a moist environment that prevents fires and explosions in the machines. Portable thermo-sensors allow us to sense a wide range of temperature increases from the color displayed on the screen, preventing ignition fires. In addition to these steps, we also take management measures to prevent fires such as spreading information about preventing contamination by hazardous materials, strengthening inspections, sprinkling water on base metals and dust yards, and strengthening the system through initial firefighting drills.

Establishing a robust safety management system

Updating accident reporting systems to eliminate recurrence

In April 2023, REVER CORPORATION updated its accident reporting system. Under the new system, more detailed information on the circumstances in which the accident occurred are recorded, and data on causes and types of accidents are instantly graphed to help prevent the recurrence of similar accidents. Regarding safety education, in addition to in-house training at regularly-held health and safety meetings, we also emphasize external training in cooperation with manufacturers of safety equipment and heavy machinery. By focusing on both internal and external safety training, we are striving to raise the level of safety awareness among our employees in addition to imparting essential safety knowledge. By fostering a safety-first culture through such initiatives, we are working to ensure the safety of our employees at all work sites, which in turn helps us to earn the trust and confidence of our stakeholders.

Commendation as an excellent safe driving workplace

Shinshu Takeei Co., Ltd. was commended with a Gold Award by the Japan Safe Driving Center in its second round of excellent safe driving workplace awards for 2022.

This award system, which utilizes driving record certificates, recognizes business establishments for their efforts to drive safely, prevent traffic accidents, and have recorded no accidents or violations. Shinshu Takeei Co., Ltd. has obtained driving record certificates for its employees for some time in order to raise awareness of safe driving practices. Through such activities, we will continue working to ensure safe driving and prevent traffic accidents, not only during work hours, but also in day-to-day life, with a goal of zero accidents and violations.



The award presentation ceremony

Living and thriving together with the local community

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

In May 2020, we established the Takeei Foundation for SDGs Promotion with the aim of contributing to the 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. In June 2022, we changed the foundation's name to TRE Foundation for SDGs Promotion.

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 2022, the Group's expenditures related to social contribution activities totaled 11 million yen. 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 2022, a total of 978 employees of the Group (equivalent to approximately 45% of total employees) 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.



Employees participate in a tree-planting program

Number of participants in social contribution activities organized by the Foundation

978 employees in total

Expenditure on social contribution activities

11 million yen

Main initiatives to date

Supporting society via donations

- Humanitarian aid to Ukraine: Donated 2 million yen to the Japanese Red Cross Society
- Turkey-Syria earthquake relief: Donated 5 million yen to the Japanese Red Cross Society, etc.

Cleanup initiatives

- 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 668 employees participated.
- Conducted cleanup exercises four times during the year in support of the Minato Cleanup Campaign 2022 organized by Tokyo's Minato City. A total of 82 employees participated.

Environmental education (site tours)

- Number of site tours at TRE Group facilities: 1,359 (4,138 participants)

Living and thriving together with the local community

SDGs contribution activities

Initiatives by the TRE Foundation for SDGs Promotion

The TRE Foundation for SDGs Promotion (hereafter “the Foundation”) supported and participated in community-level environmental conservation initiatives throughout the year, including the Zero Marine Litter Week campaign promoted by the Ministry of the Environment and the Nippon Foundation, as well as the Minato Cleanup Campaign 2022 organized by Minato City, Tokyo. Employees of both TAKEEI CORPORATION and REVER CORPORATION participated in cleanup exercises near each others’ respective headquarters, deepening exchanges among between the two companies.



Employees performed a cleanup exercise near the REVER CORPORATION headquarters

Afforestation initiatives in collaboration with welfare-related companies

In May 2023, the first lacquer tree planting festival was held in Hirakawa City, Aomori, with support from the TRE Group’s 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. Lacquer tree seedlings were planted during the festival. This joint “forest welfare” project between the forestry and welfare industries aims to solve challenges in the both industries and contribute to the achievement of the SDGs in the local community by planting approximately 350 lacquer trees per year in forests owned by Tsugaru Biomass Power Generation Co., Ltd. After extracting lacquer, the trees will be used as fuel for biomass



Tree-planting initiative with Kirin Corporation

power generation, and replanted with new seedlings—thus ensuring the healthy growth and management of the forest.

Working together with local communities

Certification as an Ichihara City SDGs Declaration Company

The TRE Group’s Green Power Ichihara Co., Ltd. and REVER CORPORATION’s Ichihara Plant were certified as “Ichihara City SDGs Declaration Companies” on December 20, 2022. This certification is awarded under the Ichihara City SDGs Declaration System operated by Ichihara City, Chiba Prefecture, which aims to expand awareness of the SDGs and address local challenges by visualizing the efforts of certified companies and organizations in order to realize a city that symbolizes the SDGs.

Using this certification as encouragement to push forward with initiatives, the TRE Group will continue working together with the local community to help create an efficient recycling, carbon-neutral society.



Ichihara City SDGs Declaration Company certificate

Sponsorship of Ichihara City junior golfer Yuma Nemoto

In December 2022, the Group concluded a sponsorship agreement with junior golfer Yuma Nemoto. Yuma’s hometown of Ichihara City, Chiba, is the site of the “TRE Integrated Environmental Business (provisional name)” concept announced by TRE HOLDINGS CORPORATION in September of the same year, and has also been certified as a Municipal SDGs Model Project by the Cabinet Office of Japan, demonstrating the city’s commitment to building a society where young people can realize their dreams. Accordingly, we aim to express our support for Ichihara City’s efforts by sponsoring Mr. Nemoto,



The 1st Ichihara City Junior Golf Open press conference at Ichihara City Hall

who has achieved remarkable success from a young age and is anticipated to reach even greater heights in the future, while also raising the profile of the Group.

Promoting environmental education for future generations

Tour of REVER CORPORATION’s Ichihara Plant

In August 2022, REVER CORPORATION’s Ichihara Plant held a tour of its facilities. Participants included four children, their parents, and one teacher, who watched the disassembly of scrapped home appliances and the shredding process for end-of-life vehicles, as well as participated in a scientific experiment to learn how the sorting process works. The event proved a hit with participants as it not only provided a firsthand view of the waste disposal process, but also provided a deeper insight into the mechanisms involved. We will continue to raise awareness about recycling through such initiatives.



An experiment to understand how the sorting process works

Hanamaki Biomass Power Generation Co., Ltd. hosts a social studies field trip

In September 2022, 28 fifth grade students from Hanamaki Municipal Yuguchi Elementary School, located near the power generation plant operated by Hanamaki Biomass Power Generation Co., Ltd. visited the facility as part of a social studies field trip. The children were fascinated to learn that electricity generated using thinned wood from local forests 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. Some children even mentioned that they would like to work at the power plant in the future.

Through such initiatives, we will continue working to



Students from Yuguchi Elementary School tour the plant

encourage children, who will be next generation of leaders, to develop an interest in and appreciation for the environment.

Support for disaster recovery

Disaster waste agreement with Yotsukaido City

In 1992, TAKEEI CORPORATION opened the Yotsukaido Recycling Center, an intermediate processing facility in Yotsukaido City, Chiba. The center remains in operation today and is commissioned to process general non-burnable waste generated in the city. Due in part to this long-term relationship, we concluded an “Agreement for Cooperation in Disaster Response Measures” with Yotsukaido City, with a signing ceremony held in February 2023 at Yotsukaido City Hall. The agreement states that TAKEEI will promptly dispatch necessary personnel, equipment, and materials to the city and cooperate in swift recovery efforts when requested in the event of a disaster such as an earthquake, wind damage, or flooding. The TRE Group has handled disaster waste throughout Japan, such as areas in which our Group companies are located, including involvement in earthquake recovery projects in the Tohoku region. We will strive to help disaster-affected areas achieve a rapid recovery and enable local communities to return to normal life as quickly as possible by leveraging our wealth of accumulated expertise in industrial waste treatment to address disaster waste treatment needs through our experienced personnel, facilities, and equipment.



Agreement signing ceremony with Yotsukaido City

Joining Japan Disaster Treatment Systems

TAKEEI CORPORATION is a member of Japan Disaster Treatment Systems (JDTS), an association jointly established by waste treatment companies across the country to build a network that allows for fast and efficient waste treatment in the event of a disaster. JDTS is a member of the Ministry of the Environment’s D. Waste-Net (Disaster Waste Treatment Support Network), and it provides support during disasters based on requests for cooperation from the ministry. As waste treatment professionals, we will use our accumulated knowledge and experience to support the recovery of the areas affected in order to contribute to recovery and restoration as quickly as possible when an emergency occurs.

Financial highlights (consolidated)

	Unit	Company name	FY03/2019	FY03/2020	FY03/2021	FY03/2022 TRE HD	FY03/2023 TRE HD
Net sales	(Millions of yen)	REVER HD	36,681	28,375	36,203	68,234	90,712
		TAKEEI	32,271	37,713	42,062		
Ordinary profit	(Millions of yen)	REVER HD	1,645	1,281	4,131	7,547	7,600
		TAKEEI	1,814	3,025	3,893		
Profit attributable to owners of parent	(Millions of yen)	REVER HD	1,268	1,217	3,135	4,742	5,197
		TAKEEI	275	1,765	2,272		
Comprehensive income	(Millions of yen)	REVER HD	1,241	1,245	3,121	4,833	5,348
		TAKEEI	318	1,813	2,438		
Net assets	(Millions of yen)	REVER HD	15,474	16,209	18,731	64,173	67,137
		TAKEEI	26,960	28,270	34,505		
Total assets	(Millions of yen)	REVER HD	27,746	28,244	30,561	129,524	132,290
		TAKEEI	71,047	80,257	87,806		
Net assets per share	(yen)	REVER HD	903.52	946.46	1,093.74	1,218.70	1,275.04
		TAKEEI	1,131.93	1,186.86	1,196.98		
Earnings per share	(yen)	REVER HD	74.07	81.12	183.06	110.79	101.20
		TAKEEI	11.92	76.65	89.07		
Equity ratio	(%)	REVER HD	55.8	57.4	61.3	48.3	49.5
		TAKEEI	36.7	34.1	37.6		
Return on equity	(%)	REVER HD	8.5	7.7	17.9	9.9	8.1
		TAKEEI	1.0	6.6	7.5		
Price-earnings ratio	(times)	REVER HD	-	7.96	7.07	17.9	14.1
		TAKEEI	61.5	10.2	14.5		
Cash flows from operating activities	(Millions of yen)	REVER HD	1,369	1,973	5,249	11,017	9,184
		TAKEEI	2,916	5,354	7,401		
Cash flows from investing activities	(Millions of yen)	REVER HD	(1,713)	(2,112)	(65)	(2,149)	(6,693)
		TAKEEI	(7,899)	(7,963)	(13,607)		
Cash flows from financing activities	(Millions of yen)	REVER HD	(769)	(558)	(3,107)	(3,700)	(2,827)
		TAKEEI	1,243	4,714	5,458		
Cash and cash equivalents at end of period	(Millions of yen)	REVER HD	6,936	6,238	8,315	24,014	23,678
		TAKEEI	8,922	11,028	10,282		

Notes:

1. Fiscal year-end REVER HD: June, TAKEEI: March

2. Price-earnings ratio for REVER HD in FY03/2019 is not shown as the company was not publicly listed at the time.

Net sales and operating profit by segment

	Year ended March 31, 2023 Full-year results		
	Net sales	Operating profit	Operating profit margin
Consolidated	90,712	7,509	8.3%
Waste Treatment & Recycling	25,662	4,210	16.4%
Resource Recycling *1	44,866	3,139	7.0%
Renewable Energy *2	13,794	688	5.0%
Other Environmental Engineering Environmental Consulting	7,374	325	4.4%
Adjustments	(986)	(852)	-

*1 The Resource Recycling business includes 178 million yen of goodwill amortization related to business integration.

*2 The Renewable Energy business includes goodwill amortization of 378 million yen associated with the acquisition of Green Power Ichihara Co., Ltd.

Movement in results and plans by segment

		(Millions of yen)						
		FY03/2021 (Actual)*3	FY03/2022 (Actual)		FY03/2023 (Actual)		FY03/2024 (third year of medium-term plan)	
		Apr. 2020– Mar. 2021	Apr. 2021– Mar. 2022	YoY	Apr. 2022– Mar. 2023	YoY	Apr. 2023– Mar. 2024	YoY
Consolidated	Net sales	73,470	90,584	+23.3%	90,712	+0.1%	95,200	+4.9%
	Operating profit	6,727	10,326	+53.5%	7,509	-27.3%	8,300	+10.5%
	Operating profit margin	9.2%	11.4%	-	8.3%	-	8.7%	-
Waste Treatment & Recycling	Net sales	24,738	25,146	+1.6%	25,662	+2.1%	27,757	+8.2%
	Operating profit	3,468	5,113	+47.4%	4,210	-17.7%	4,346	+3.2%
	Operating profit margin	14.0%	20.3%	-	16.4%	-	15.7%	-
Resource Recycling *4	Net sales	31,408	46,418	+47.8%	44,866	-3.3%	45,550	+1.5%
	Operating profit	2,660	5,454	+105.0%	3,139	-42.4%	3,796	+20.9%
	Operating profit margin	8.5%	11.7%	-	7.0%	-	8.3%	-
Renewable Energy *5	Net sales	11,457	12,617	+10.1%	13,794	+9.3%	13,891	+0.7%
	Operating profit	325	-305	-193.8%	688	-	771	+12.1%
	Operating profit margin	2.8%	-	-	5.0%	-	5.6%	-
Other Environmental Engineering Environmental Consulting	Net sales	6,828	7,102	+4.0%	7,374	+3.8%	8,710	+18.1%
	Operating profit	349	441	+26.4%	325	-26.3%	483	+48.6%
	Operating profit margin	5.1%	6.2%	-	4.4%	-	5.5%	-
Adjustments	Net sales	(962)	(700)	-	(986)	-	(708)	-
	Operating profit	(76)	(376)	-	(852)	-	(1,096)	-

*3 Although REVER HD's fiscal year ends in June, since it is necessary to compare it to other businesses across the same period of time to make it possible to understand the actual state of progress of the medium-term business plan, REVER HD's results data from April to March the following year is displayed under results for Resource Recycling businesses.

*4 Operating profit in the Resource Recycling business includes goodwill amortization (90 million yen in FY03/2022, 178 million yen/year from FY03/2023 onwards) related to business integration.

*5 Operating profit in the Renewable Energy business includes goodwill amortization associated with Green Power Ichihara Co., Ltd. (294 million yen in FY03/2021, 376 million yen in FY03/2022, 378 million yen/year from FY03/2023 onwards).

Group profile

Company information (as of March 31, 2023)

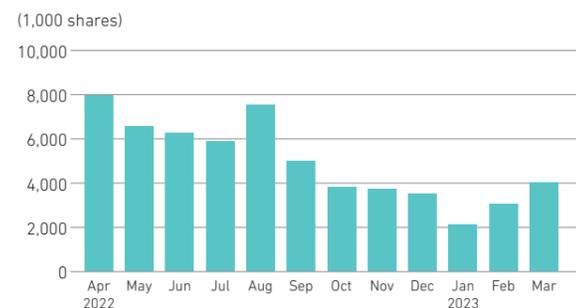
Company name: TRE HOLDINGS CORPORATION
Date of establishment: October 1, 2021
Address: 15th floor of Tokyo Sankei Bldg., 1-7-2 Otemachi, Chiyoda-ku, Tokyo, 100-0004
Contact information: Tel: +81-3-6327-2620 (main)
 Fax: +81-3-3277-3273
Capital: 10 billion yen
Group businesses:
 Waste treatment and recycling, resource recycling, renewable energy, environmental engineering, environmental consulting
Number of employees:
 2,169 employees (on a consolidated basis)

Major shareholders (as of March 31, 2023)*

Name or title	Shares held (1,000 shares)	Percentage of shares owned (%)
The Master Trust Bank of Japan, Ltd. (trust account)	9,932	19.04
Custody Bank of Japan, Ltd. (trust account)	6,192	11.87
Besterra Co., Ltd.	2,570	4.93
Mamoru Mitsumoto	2,046	3.92
Government of Norway (standing proxy: Citibank, N.A. Tokyo branch)	1,838	3.52
TREHD Employee Shareholding Association	1,130	2.17
Toru Suzuki	1,050	2.01
Custody Bank of Japan, Ltd. (trust account E)	822	1.58
Takao Suzuki	800	1.53
KIA Fund 136 (standing proxy: Citibank, N.A. Tokyo branch)	632	1.21

* The company owns 430,549 shares as treasury stock, but it is excluded from the list of major shareholders above.

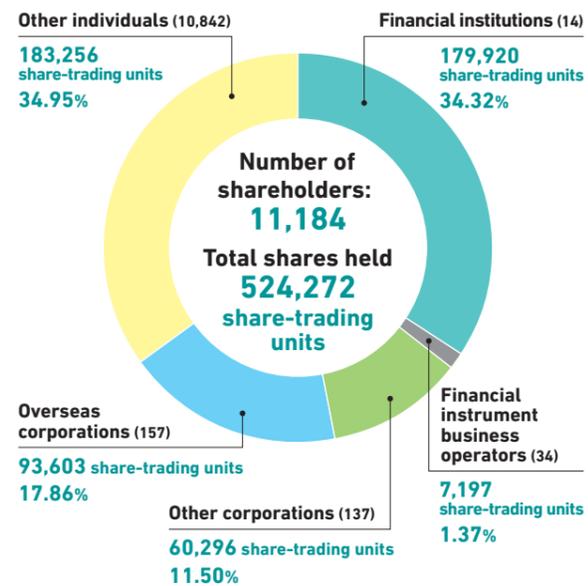
Trading volume



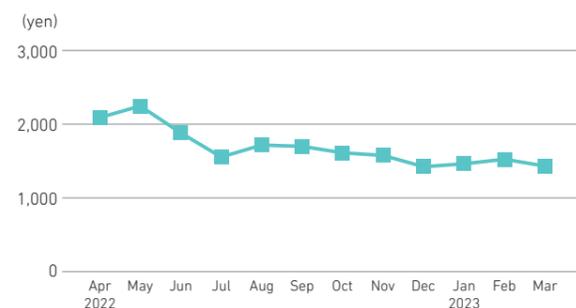
Share information (as of March 31, 2023)

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 430,549 shares in treasury stock)
Number of shareholders: 11,184
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, 2023)



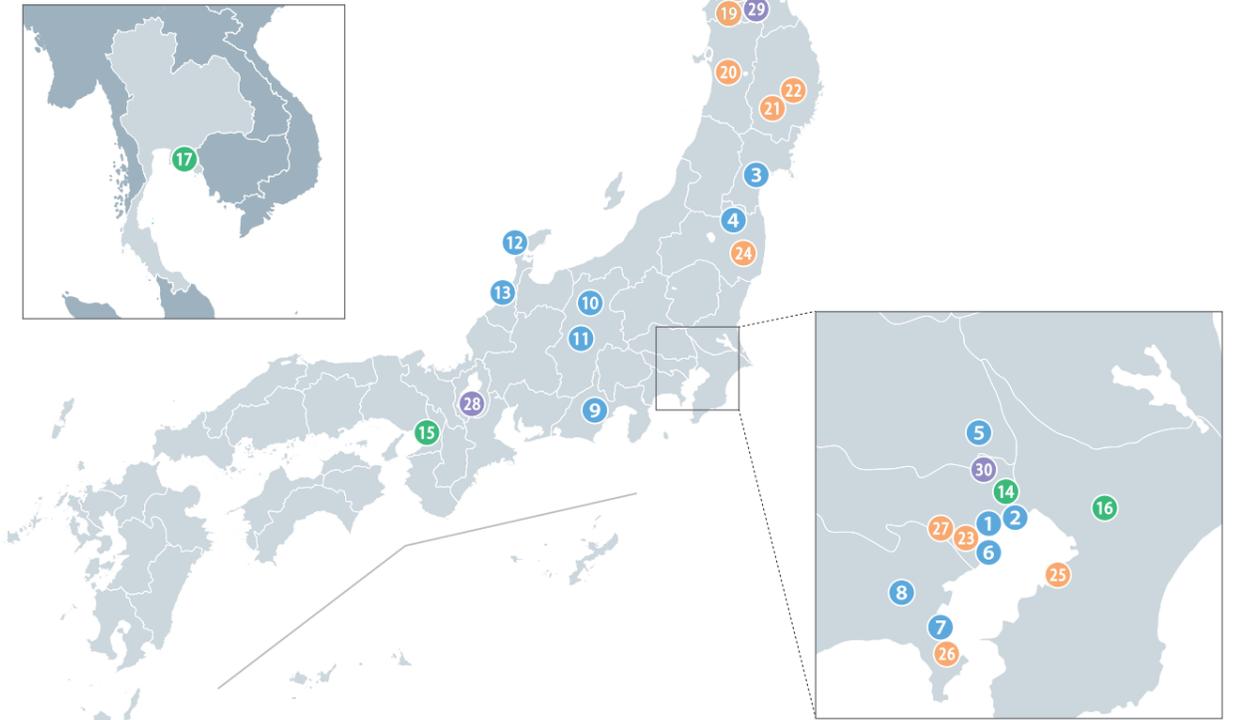
Share price



TRE Group locations (as of April 1, 2023)

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



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.
- 9 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.

Resource Recycling Business

- 14 REVER CORPORATION
- 15 Sunny Metal Corp.
- 16 ITSUMO Corp.
- 17 HIDAKA SUZUTOKU (Thailand) Co., Ltd.

Renewable Energy Business

- 18 Tsugaru Biomass Power Generation Co., Ltd.
- 19 Tsugaru Eneveg Co., Ltd.
- 20 Daisen Biomass Power Generation Co., Ltd.
- 21 Hanamaki Biomass Power Generation Co., Ltd.

- 22 Hanamaki Biomass Chip Co., Ltd.
- 23 TAKEEI Forestry Co., Ltd.
- 24 Tamura Biomass Power Generation Co., Ltd.
- 25 Green Power Ichihara Co., Ltd.
- 26 Takeei Green Recycling Co., Ltd.
- 27 Takeei Denki Co., Ltd.

Environmental Engineering Business / Environmental Consulting Business

- 28 Fuji Car Manufacturing Co., Ltd.
- 29 Environmental Conservation Co., Ltd.
- 30 Earth-Appraisal Co., Ltd.