



**TRE HOLDINGS**

未来へ、捨てない創造力を。

**TRE HOLDINGS CORPORATION**  
**(Code: 9247, Prime Market, Tokyo Stock Exchange)**

**Supplemental materials**  
**for the first quarter of the Fiscal Year ending March 31, 2023**

August 12, 2022

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## 1Q FY03/23 Results

(millions of yen)

	FY03/22 Full-year Results (Note 1)	FY03/23				
		1Q Results	1H Forecast	Full-year Forecast		
	Progress			Progress		
Net sales	68,234	22,842	45,500	50.2%	94,200	24.2%
Operating profit	7,659	1,204	3,800	31.7%	9,300	12.9%
Ordinary profit	7,547	1,300	3,800	34.2%	9,300	14.0%
Profit attributable to owners of parent	4,742	815	2,400	34.0%	5,900	13.8%

\* FY03/22 is an irregular accounting period resulting from a business integration. As such, the consolidated financial results reflect the consolidated financial results for April 1, 2021 to March 31, 2022 for TAKEEI CORPORATION and the consolidated financial results for October 1, 2021 to March 31, 2022 for REVER HOLDINGS CORPORATION.

\* YoY comparisons are not provided as this is the first 1Q financial results since the establishment of the Company.

Progress in operating profit of 31.7% (vs. 1H forecast) and 12.9% (full year forecast) were both within expectations, taking into account the suspension period of the biomass power plants. **Both sales and operating profit surpassed 1Q plans and are on track to meet the full-year forecast. There is no change to the full-year forecast.**

# 1Q FY03/23 Results

**Market Environment for Construction Waste**

**Market Environment for Resource Recycling**

**1Q FY03/23 Net Sales, Operating Profit, and Operating Profit Margin by Segment**

**Update on Renewable Energy Business**

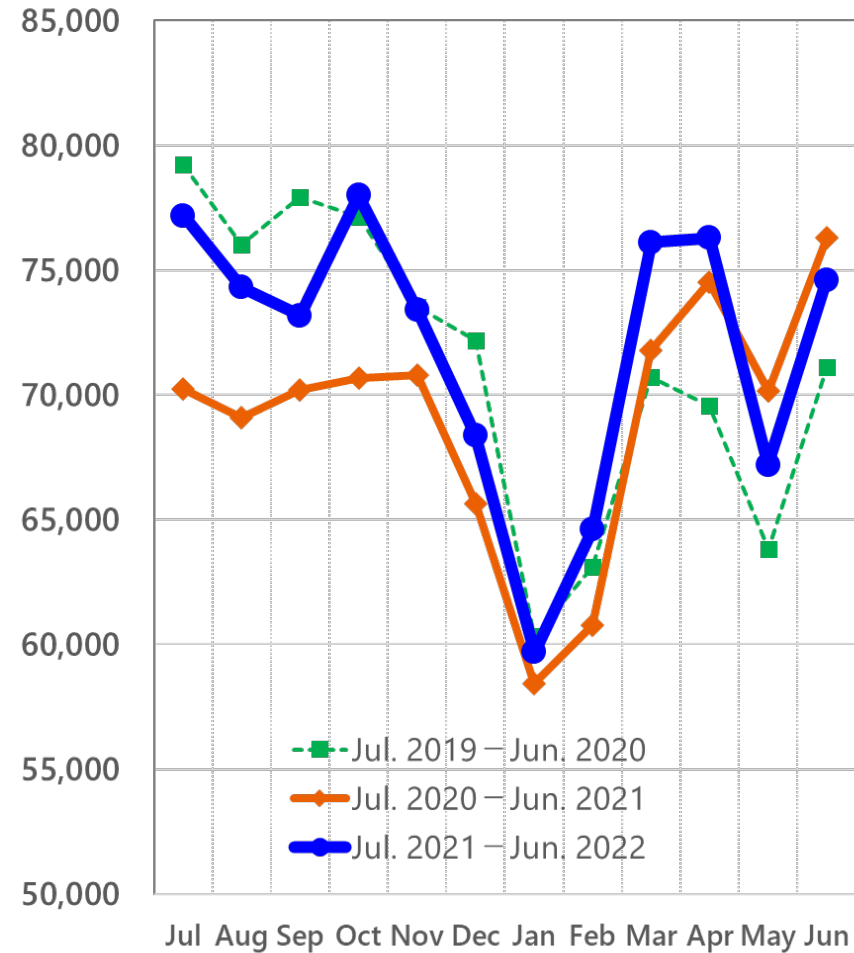
**Capital expenditures, Depreciation and Amortization of goodwill**

**Business Scheme Review and Capital Investment Plan for Resource Recycling of Waste Plastics, etc.**

## Market Environment for Construction Waste

### Number of new housing starts

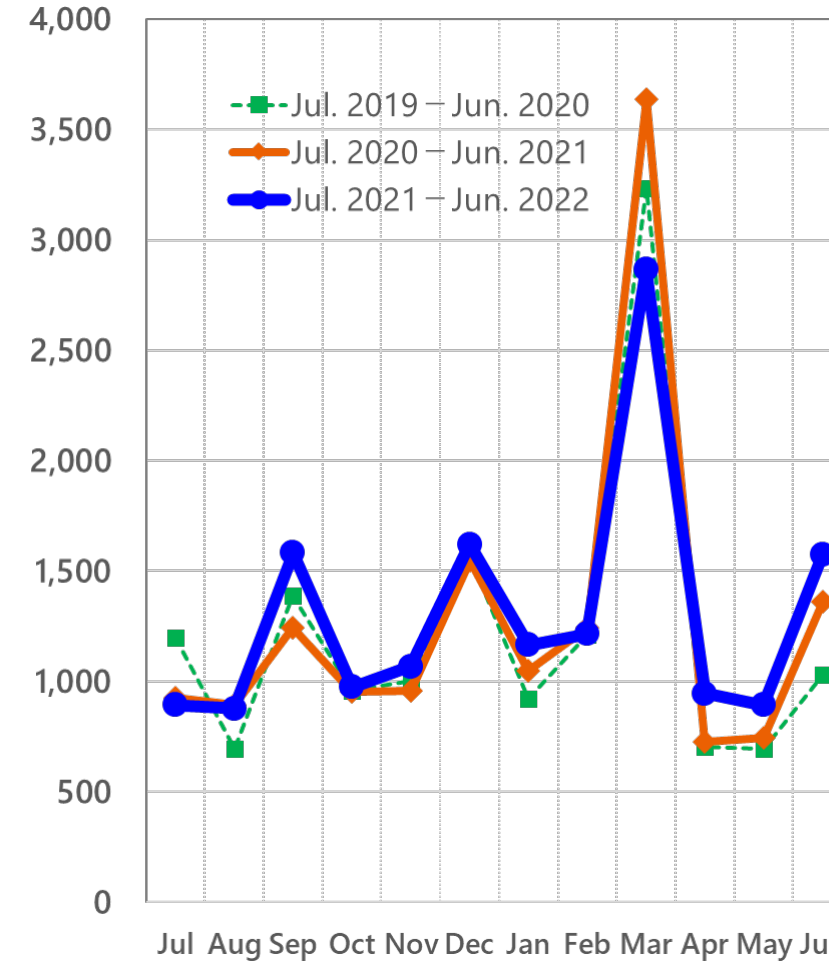
(Number of homes)



Monthly new housing starts remained higher YoY, but dropped YoY from May onward due to rising material prices.

### Construction orders (50 largest companies)

(billions of yen)

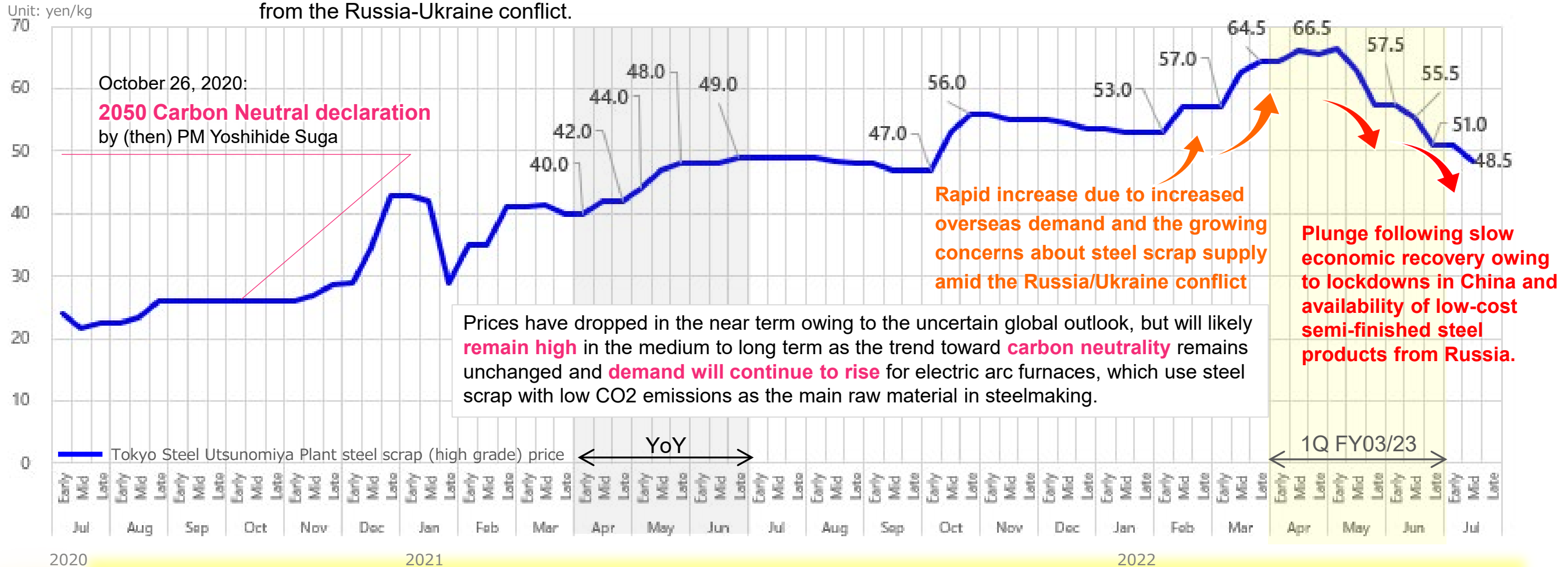


Monthly construction orders rose YoY for the third consecutive month, but rising material prices and a deteriorating order environment, as well as the COVID-19 pandemic, pose concerns going forward. (Source: the Ministry of Land, Infrastructure, Transport and Tourism)

## Market Environment for Resource Recycling

### ■ Steel Scrap Market

Steel scrap prices peaked at JPY66,500/ton in April 2022 (Tokyo Steel Utsunomiya Plant high grade price), but turned around and fell sharply to JPY57,500/ton at the end of May, a one-month drop of JPY9,000/ton. In the following month of June, the price also fell sharply, recording a drop of 6,500 yen/ton. The main reasons for the sharp decline include a delay in economic recovery caused by lockdowns in China, the largest crude steel producer, and the availability of low-cost semi-finished steel products from Russia stemming from the Russia-Ukraine conflict.



2020

2021

2022

Resource Recycling  
Business

**Taking advantage of our presence in the Kanto region, which has many sales channels, we are able to minimize the risk of a market downturn by reducing our inventory holding period.**

## 1Q FY03/23 Net Sales, Operating Profit, and Operating Profit Margin by Segment

(millions of yen)

	1Q FY03/23 Results		
	Net sales	Operating profit	Operating profit margin
<b>Consolidated</b>	22,842	1,204	5.3%
Waste treatment and recycling (Note 2)	5,893	917	15.6%
Collection & Transportation / Waste treatment	4,011	553	13.8%
Recycling	1,241	251	20.2%
Landfill (final disposal)	715	97	13.6%
Resource recycling (Note 3)	13,009	1,163	8.9%
Renewable energy (Note 4)	2,610	-610	—
Other businesses (Note 5)	1,570	-27	—
<b>Adjustments (Note 6)</b>	-241	-238	—

Note 1: YoY comparisons are not provided as this is the first 1Q financial results since the establishment of the Company,

Note 2: No strict segment adjustments have been made for the sub-segments in the waste treatment and recycling businesses.

Note 3: The resource recycling business includes JPY45 million of goodwill related to the business integration.

Note 4: The renewable energy business includes JPY94 million of goodwill associated with the acquisition of Green Power Ichihara Co., Ltd.

Note 5: Other businesses consist of the environmental consulting business and the environmental engineering business included in the reportable segments of TAKEEI CORPORATION.

Note 6: Adjustments to segment income and loss of -JPY238 million include -JPY245 million in companywide expenses and -JPY6 million in intersegment eliminations that are not allocated to any reportable segment. Companywide expenses are general and administrative expenses that do not fall under any reportable segment.

### Waste treatment and recycling

- The collection & transportation and waste treatment business at TAKEEI CORPORATION, which mainly handles construction waste, **secured the same level of profit YoY** thanks to the added value of waste materials. Taking seasonal factors into consideration, we have made no changes to our full-year plan.
- Recycling and landfill businesses **maintained high profit margins** despite lower sales stemming from a drop in large spot projects YoY. The waste gypsum board recycling business in the Tokyo metropolitan area have remained strong.

### Resource recycling

- **Secured spread (profit margin)** through inventory management amid a fall in the steel scrap market. **Benefited from gains on sales of valuable resources** sorted from composite materials and waste, as prices remained higher than planned selling unit prices in April and May. Sales rose and profit fell versus Q1 FY03/22, but both sales and profit came in above plan.

### Renewable energy

- Statutory inspections and repair work with longer downtimes were performed at Green Power Ichihara Co., Ltd. (inspections of turbines, which are conducted once every four years, require five to six times the normal downtime of one week).
- Starting off with a Q1 loss was within our expectations. From July onward, we have been working to improve profitability by **substantially increasing the mix of power sources**.



## Update on Renewable Energy Business

### Regular repairs planned for FY2022

Company name	Description of repairs (E.g., regular repairs, facility enhancements)	Q1	Q2	Q3	Q4
Tsugaru Biomass Power Generation Co., Ltd.	Parts replacement, etc.	○		○	
Hanamaki Biomass Power Generation Co., Ltd.	Boilers	○		◎	
Daisen Biomass Power Generation Co., Ltd.	Boilers, turbines	◎		○	
Takeei Green Recycling Co., Ltd.	Parts replacement, etc.		○		○
Green Power Ichihara Co., Ltd.	Boilers, turbines	◎		○	
Tamura Biomass Power Generation Co., Ltd.	Boilers			◎	○

◎ : Statutory inspections, regular repairs (boilers: every 2 yrs.; turbines: every 4 yrs.) ○ : Regular inspections, regular repairs

### Updates by operating company

- Green Power Ichihara Co., Ltd. : **Resumed stable operation with high load** after scheduled repairs, although there was some planned downtime in Q1 for statutory inspections and regular repairs.
- Takeei Green Recycling Co., Ltd. : Biomass ratio changed as of April. **Gradually establishing stable operations** in FY03/23.
- Tamura Biomass Power Generation Co., Ltd. : **Continuing stable operations** in FY03/23, after undertaking in-house operation and maintenance of power generation facilities in FY03/22.
- Five electric power retailers : In FY03/22, Green Power Ichihara Co., Ltd. sold electric power generated using solid RPF (not subject to FIT) directly to the Japan Electric Power Exchange (JEPX) to **alleviate the impact of rising market prices**. In addition, we will improve efficiency by consolidating the **five electric power retailers** into a **single management structure** following a **merger in September**.



## Capital expenditures, Depreciation and Amortization of goodwill

(millions of yen)

	FY03/22 Full-year Results (Note 1)	FY03/23 1Q Results	FY03/23 Full-year Forecast
Capital expenditures (Note 2)	4,395	1,583	12,547
Depreciation	5,016	1,386	6,189
Amortization of goodwill (Consolidated)	466	141	519

Note 1: Consolidated results of REVER HOLDINGS CORPORATION, which is the acquired company for accounting purposes in the business integration, reflect only the results for the six-month period from October 1, 2021 to March 31, 2022.

Note 2: Capital expenditures are based on property, plant and equipment and intangible assets received.

## Progress of medium-term business plan for capital expenditures

We expect full-year FY03/23 capital expenditures to reach JPY12.5 billion, including renewal of equipment and vehicles. Construction of a new controlled final waste disposal facility at Monzen Clean Park Co., Ltd. and value-added facilities at TAKEEI CORPORATION's Kawasaki Recycling Center are scheduled for completion in December.

From FY03/24 onward, we will promote the development of a stable waste disposal facility at TAKEEI CORPORATION and a dust resource recycling project at REVER HOLDINGS CORPORATION. In addition, we will announce our plans for the waste power generation business and waste plastic recycling plant, which were not included in the investment budget in the medium-term business plan, as soon as we finalize the business concept.

Note 3: The three-year investment budget of approximately JPY25 billion (excluding JPY8 billion already spent) shown in the medium-term business plan includes the cost of renewal of equipment, vehicles, and other items.

### Major Capital Expenditures in FY03/23 (actual and planned)

		Q1 Actual	Plan
Monzen Clean Park Co., Ltd.	Disposal site development work	JPY10 million	JPY3.68 billion
TAKEEI CORPORATION	Renewal of equipment and vehicles, expansion of disposal sites, etc.	JPY380 million	JPY3.50 billion
Shinshu Takeei Co., Ltd.	Renewal of equipment and vehicles	JPY20 million	JPY490 million
REVER CORPORATION	Reinforcement of sorting lines	JPY0	JPY410 million
Green Power Ichihara Co., Ltd.	Replacement of machine parts, etc.	JPY250 million	JPY310 million
Fuji Car Manufacturing Co., Ltd.	Renewal of equipment and software	JPY20 million	JPY300 million

- Steady progress made for development of landfill area at Monzen Clean Park Co., Ltd. **Expecting earnings contribution from FY03/24** following pre-operation administrative inspections.
- Currently working on processing permits to start construction of the Narita Stable Landfill Expansion Project under TAKEEI CORPORATION. **Installation of equipment to improve the quality of transported materials** at the SP building of the Kawasaki Recycling Center is also progressing smoothly, with **completion scheduled for September**. Aiming to complete pre-operation administrative inspections by the end of the year.
- Scheduled to start operation of **resin sorting lines** at REVER CORPORATION's Nasu Plant in **August**. **Renewal of advanced sorting lines for post-shear dust** at REVER CORPORATION's Funabashi Plant is also **scheduled to start operation in August**.

## Business Scheme Review and Capital Investment Plan for Resource Recycling of Waste Plastics, etc.

### Continued studies of tie-up with Sumitomo Chemical **Steady Progress**

To accelerate waste plastic material recycling and create a Circular Economy as early as possible, we had been studying the possibility of a business tie-up with Sumitomo Chemical, and in June 2022, we **signed a memorandum of understanding to extend the study for a future business tie-up.**

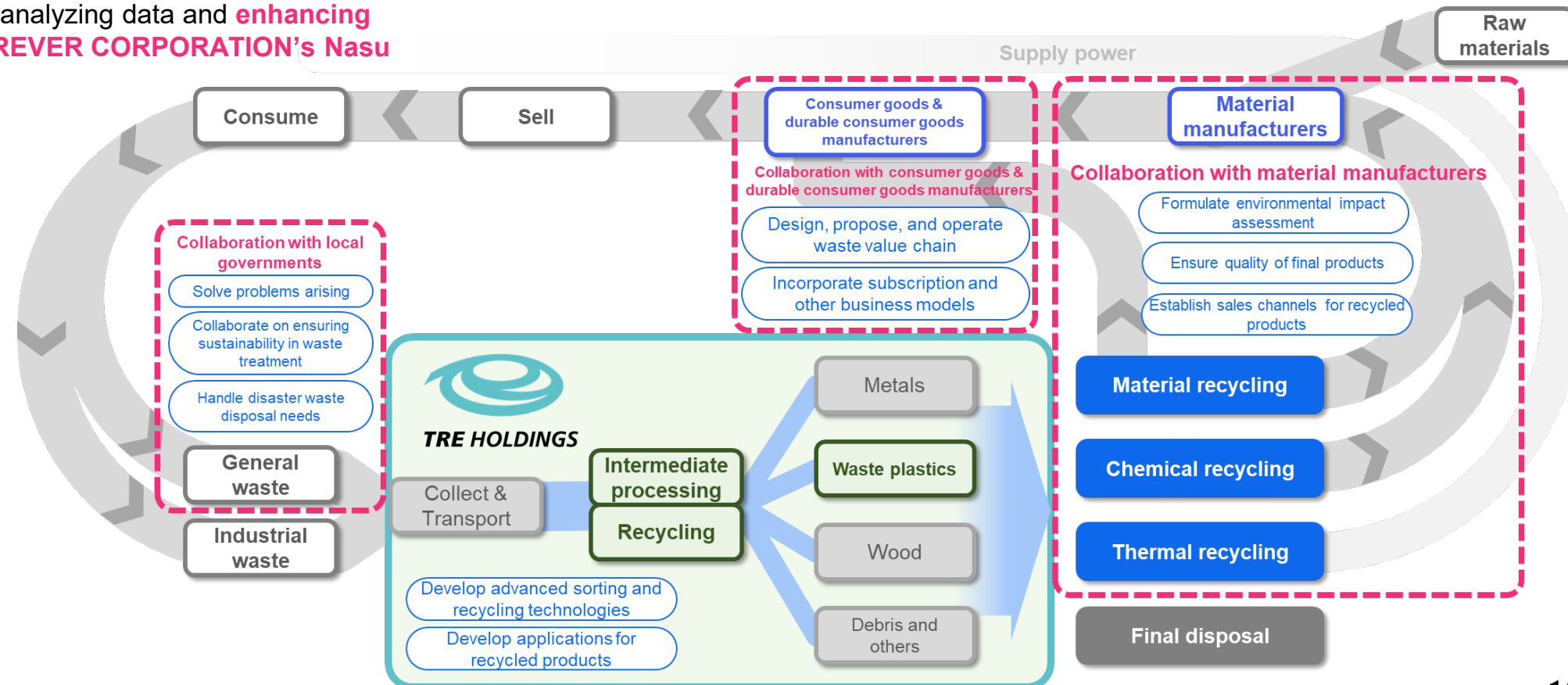
Currently, we are making steady progress in material recycling verifications and GHG (greenhouse gas) reduction calculations using the TRE Group's crushing and sorting plant. Going forward, we will promote waste plastic material recycling to reduce environmental impact by refining and analyzing data and **enhancing sorting using the new resin sorting lines at REVER CORPORATION's Nasu Plant.**

### Introduction of RPF conversion line for urethane dust (residue) **Launching April 2023**

We are planning to **install RPF production lines** for molding and solidifying urethane dust from insulation and other materials at REVER CORPORATION's Ichihara Plant. By substituting fossil fuels for the molded and solidified RPF for thermal recycling, we will **improve recycling rates** and contribute to the achievement of carbon neutrality.

### Sorting Center Concept

We are working on a concept to place a **sorting center** in the **Tokyo metropolitan area** that will make full use of the TRE Group's technology, knowledge, and experience. By centrally collecting waste plastics, thoroughly recycling them using state-of-the-art advanced sorting equipment, and employing recycling methods that meet customer quality requirements, we will ensure the resource recycling and reuse of waste materials.



# Medium-term Business Plan

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**Progress of Medium-term Business Plan**

**Quarterly Results and Three-Year 1Q Comparison by Segment**

**Quarterly Sales Performance and Future Measures**

## Progress of Medium-term Business Plan

(millions of yen)

	First year of Medium-term plan (FY03/22)			Second year of Medium-term plan (FY03/23)			Third year of Medium-term plan (FY03/24)
	(Note 1)						
	Full-year Results (Note 2)	Revised Full-year Plan (Note 2)	Progress	1Q Results (Note 2)	Revised Full-year Plan (Note 2)	Progress	Revised Full-year Plan (Note 2)
Net sales	<b>90,584</b>	<b>89,700</b>	101.0%	<b>22,842</b>	<b>94,200</b>	24.2%	<b>98,000</b>
Operating profit	<b>10,326</b>	<b>10,100</b>	102.2%	<b>1,204</b>	<b>9,300</b>	12.9%	<b>10,150</b>
Operating profit margin	<b>11.4%</b>	<b>11.3%</b>	–	<b>5.3%</b>	<b>9.9%</b>	–	<b>10.4%</b>
Profit attributable to owners of parent	<b>7,248</b>	<b>6,930</b>	104.6%	<b>815</b>	<b>5,900</b>	13.8%	<b>6,440</b>
Earnings per share (Note 3)	JPY141.1	JPY131.7	107.1%	–	JPY114.8	–	JPY125.3

Note 1: For the first year of the medium-term business plan (FY03/22), results for the merged companies, TAKEEI CORPORATION and REVER HOLDINGS CORPORATION, for the period from April to March of the following year, have been combined to make YoY comparisons.

Note 2: Forecasts for operating profit include impact from goodwill related to the business integration (JPY90 million for FY03/22, JPY45 million for 1Q FY03/23, and JPY180 million for full-year FY03/23 onward).

Note 3: Earnings per share is calculated based on 51,362,030 shares, which is the number of issued shares at the end of FY03/22 minus the number of treasury shares at the end of the same year, to facilitate understanding of the actual progress of the medium-term business plan.

Note 4: We have upwardly revised our medium-term business plan, as our business performance substantially surpassed forecasts in our medium-term business plan announced in October 2021.

- 1Q progress against full-year forecasts in the waste treatment and recycling business was weak owing to seasonal factors skewing toward a stronger 2H performance, but sales and operating profit both surpassed plans and started out strong.
- The renewable energy business started off with a loss, but we expect substantial improvement going forward through the stable operation of six power plants and sales of electricity from power sources not subject to the Feed-in Tariff scheme.
- Although steel scrap prices have dropped, the trend toward achieving carbon neutrality remains unchanged, and we will minimize the impact of the price drop by fully leveraging our advantages of operating in the Kanto region, which has the highest demand for steel scrap, and by reducing dust (residual material) by promoting thorough recycling.
- For the reasons noted above, we maintain our full-year earnings forecasts at this time.

## Quarterly Results and Three-Year 1Q Comparison by Segment

		FY03/21				FY03/22				FY03/23		
		1 Q	2 Q	3 Q	4 Q	1 Q	2 Q	3 Q	4 Q	1 Q	YoY	
		Apr. 2020 - Jun. 2020	Jul. 2020 - Sep. 2020	Oct. 2020 - Dec. 2020	Jan. 2021 - Mar. 2021	Apr. 2021 - Jun. 2021	Jul. 2021 - Sep. 2021	Oct. 2021 - Dec. 2021	Jan. 2022 - Mar. 2022	Apr. 2022 - Jun. 2022		
		(millions of yen)										
<b>Consolidated</b>	Net sales	15,532	17,393	18,852	21,691	21,522	21,904	23,961	23,194	22,842	+6.1%	
	Operating profit	723	1,474	2,232	2,297	2,227	2,615	2,968	2,515	1,204	-45.9%	
	Operating profit margin	4.7%	8.5%	11.8%	10.6%	10.3%	11.9%	12.4%	10.8%	5.3%	-	
<b>Waste treatment and recycling</b>	Net sales	5,737	5,941	6,604	6,453	6,012	6,211	6,644	6,277	5,893	-2.0%	
	Operating profit	536	670	1,136	1,125	1,020	1,214	1,596	1,282	917	-10.1%	
	Operating profit margin	9.3%	11.3%	17.2%	17.4%	17.0%	19.5%	24.0%	20.4%	15.6%	-	
	<b>Collection &amp; Transportation / Waste treatment</b> (Note 1)	Net sales	4,190	4,356	4,753	4,683	4,179	4,191	4,588	4,440	4,011	-4.0%
		Operating profit	327	408	777	719	590	550	1,011	927	553	-6.3%
		Operating profit margin	7.8%	9.4%	16.3%	15.4%	14.1%	13.1%	22.0%	20.9%	13.8%	-
	<b>Recycling</b> (Note 1)	Net sales	1,011	1,075	1,127	1,193	1,096	1,301	1,254	1,376	1,241	+13.2%
		Operating profit	106	152	161	241	274	440	332	231	251	-8.4%
		Operating profit margin	10.5%	14.1%	14.3%	20.2%	25.0%	33.8%	26.5%	16.8%	20.2%	-
<b>Landfill (final disposal)</b> (Note 1)	Net sales	688	638	875	744	819	716	876	715	715	-12.7%	
	Operating profit	101	101	222	119	171	194	238	107	97	-43.3%	
	Operating profit margin	14.7%	15.8%	25.4%	16.0%	20.9%	27.1%	27.2%	15.0%	13.6%	-	
<b>Resource recycling</b> (Note 2)	Net sales	6,497	6,750	8,279	9,880	11,293	11,057	12,277	11,789	13,009	+15.2%	
	Operating profit	73	383	1,098	1,105	1,293	1,373	1,452	1,334	1,163	-10.1%	
	Operating profit margin	1.1%	5.7%	13.3%	11.2%	11.4%	12.4%	11.8%	11.3%	8.9%	-	
<b>Renewable energy</b> (Note 3)	Net sales	1,922	3,239	2,859	3,435	3,089	2,976	3,395	3,155	2,610	-15.5%	
	Operating profit	73	332	-39	-31	-83	-61	-8	-152	-610	-	
	Operating profit margin	3.8%	10.3%	-	-	-	-	-	-	-	-	
<b>Other</b>	Net sales	1,494	1,808	1,453	2,070	1,365	1,808	1,814	2,113	1,570	+15.0%	
	Operating profit	68	131	54	94	-10	93	126	232	-27	-	
	Operating profit margin	4.6%	7.2%	3.7%	4.5%	-	5.1%	6.9%	11.0%	-	-	
<b>Adjustments</b>	Net sales	-120	-347	-345	-149	-238	-149	-170	-142	-241	-	
	Operating profit	-28	-43	-17	3	7	-3	-199	-181	-238	-	

Note 1: No segment adjustments have been made for subsegments

Note 2: Operating profit for the resource recycling business includes goodwill (JPY45 million each for 3Q and 4Q FY03/22, and 1Q FY03/23) related to the business integration.

Note 3: Operating profit for the renewable energy business includes goodwill (JPY294 million in FY03/21, JPY376 million in FY03/22, and JPY94 million in 1Q FY03/23) associated with the acquisition of Green Power Ichihara Co., Ltd.

### Three-Year 1Q Comparison

Performance in the waste treatment and recycling business was lower than in 1Q FY03/22, when we landed many large, profitable spot projects, but we are continuing to implement cost reduction measures by commercializing and adding value to waste materials in FY03/23.

Selling prices in the resource recycling business also remained high, despite a recent drop in prices.

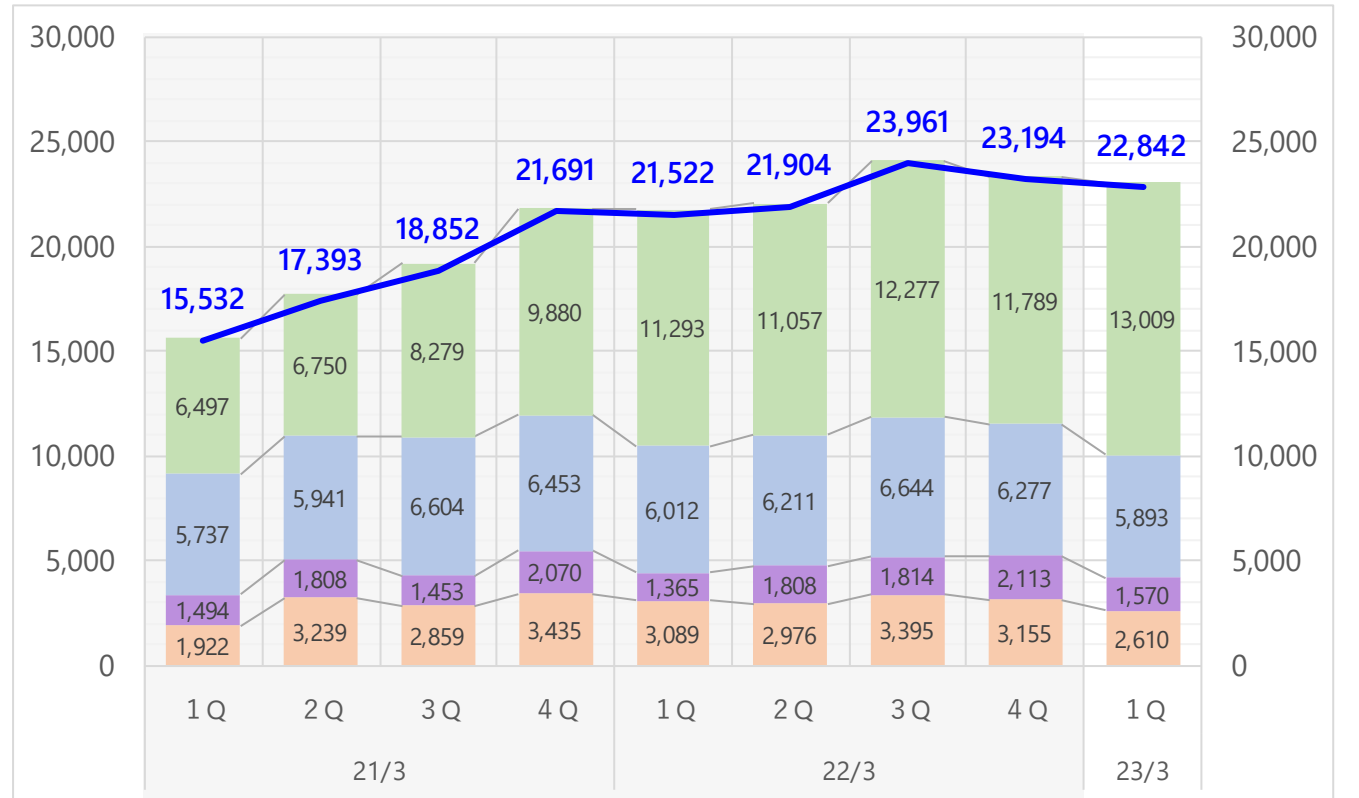
The renewable energy business started the fiscal year with a large loss owing to downtime at four of the six power plants due to regular repairs (two of which were for statutory inspections), but we expect this to improve for full-year FY03/23.

All segments got off to a comparable start versus FY03/21.

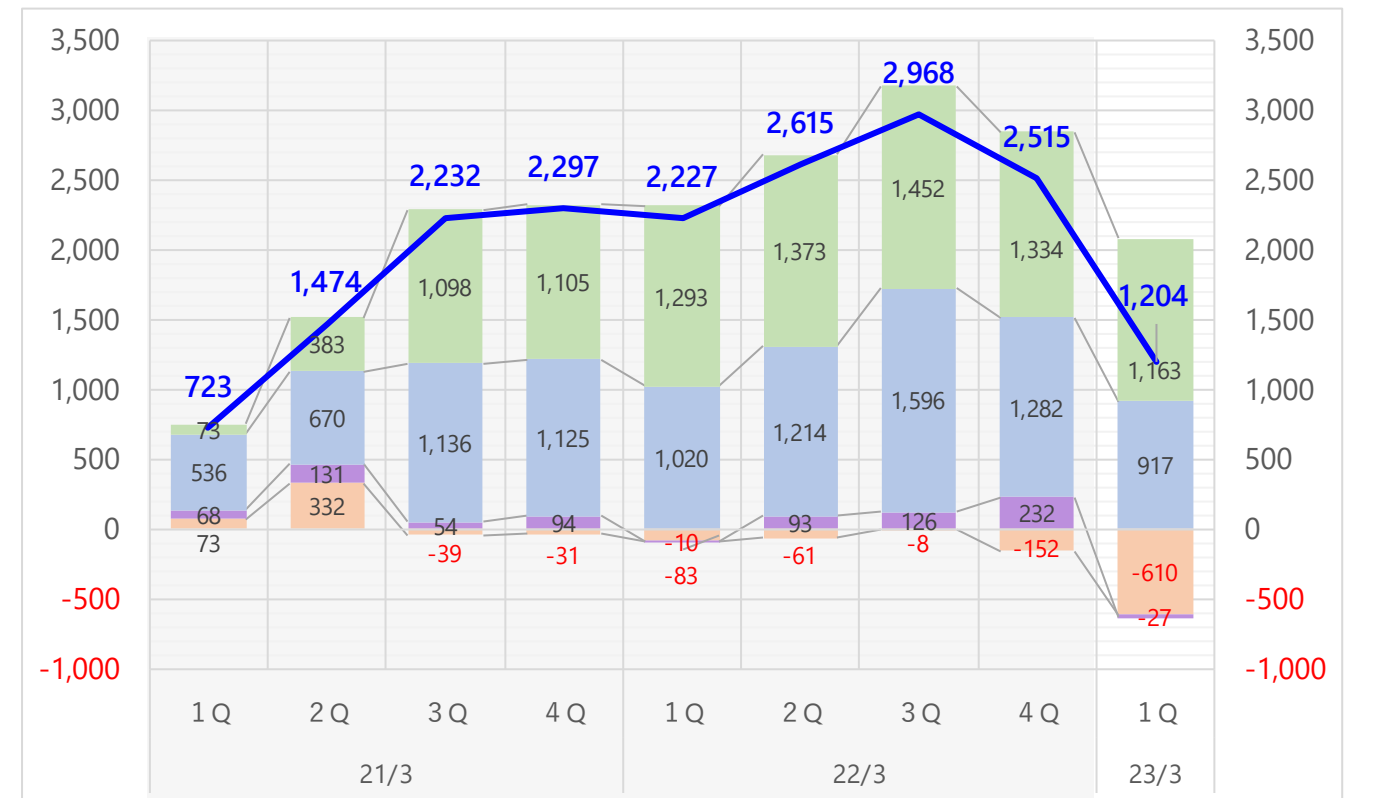


## Quarterly Sales Performance and Future Measures

### Sales



### Operating Profit



### Waste treatment and recycling

- We will continue to manufacture RPF and steelmaking sub-materials and add value to waste materials at TAKEEI CORPORATION. In particular, we will improve the quality of transported materials by upgrading facilities at the Kawasaki Recycling Plant, and reduce external processing costs.

### Resource recycling

- We expect fewer end-of-life vehicles owing to lower automobile production and fewer waste home appliances stemming from accelerated demand following the COVID-19 pandemic (reflected in plan). We will address the growing uncertainty in the material market resulting from the unstable global environment through inventory management and thorough recycling.

### Renewable energy

- We will review the power sources at Green Power Ichihara Co., Ltd. and substantially boost retail sales volume to the Japan Electric Power Exchange (JEPX). In addition, we will improve efficiency by consolidating the five electric power retailers into a single management structure, and promote collection of unused timber such as thinned wood further upstream.

# TOPICS

**Waste Treatment & Recycling** : Glass Recycling / Solar Panel Recycling / Construction Progress at Monzen Clean Park Co., Ltd.

**Resource Recycling** : Group Optimization / Circular Economy Initiatives

**Renewable Energy** : Consolidation of 5 Power Retailers / TAKEEI Forestry Co., Ltd. Begins Thinning Owned Forests

**Business Domain Expansion** : Environmental Engineering / Collaboration with Universities for CCUS

**Companywide** : Support for TCFD Recommendations, Strengthening Systems for Addressing Climate Change

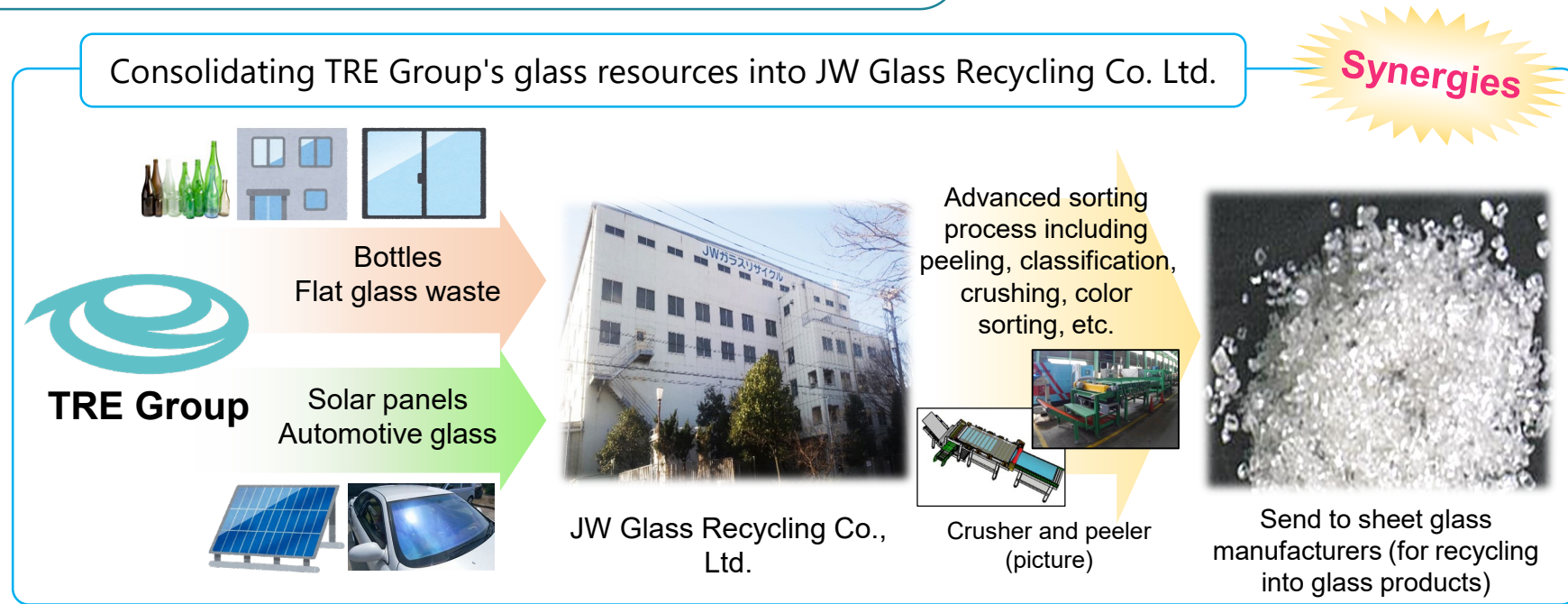


## Waste Treatment & Recycling: Glass Recycling

JW Glass Recycling Co., Ltd. which we acquired from Asahi Pretec Corporation in May 2022, has continued stable operations, including efforts to supply high-quality glass cullet, and will be reflected in the Group's financial results starting from 2Q FY03/23 (July) (Note 1).

We will proactively take on the challenge of recycling difficult-to-recycle items, such as solar panels and automotive glass where future processing needs are expected to rise, moving forward with trials and studies from the M&A phase in order to respond to societal needs while also creating synergies with the TRE Group.

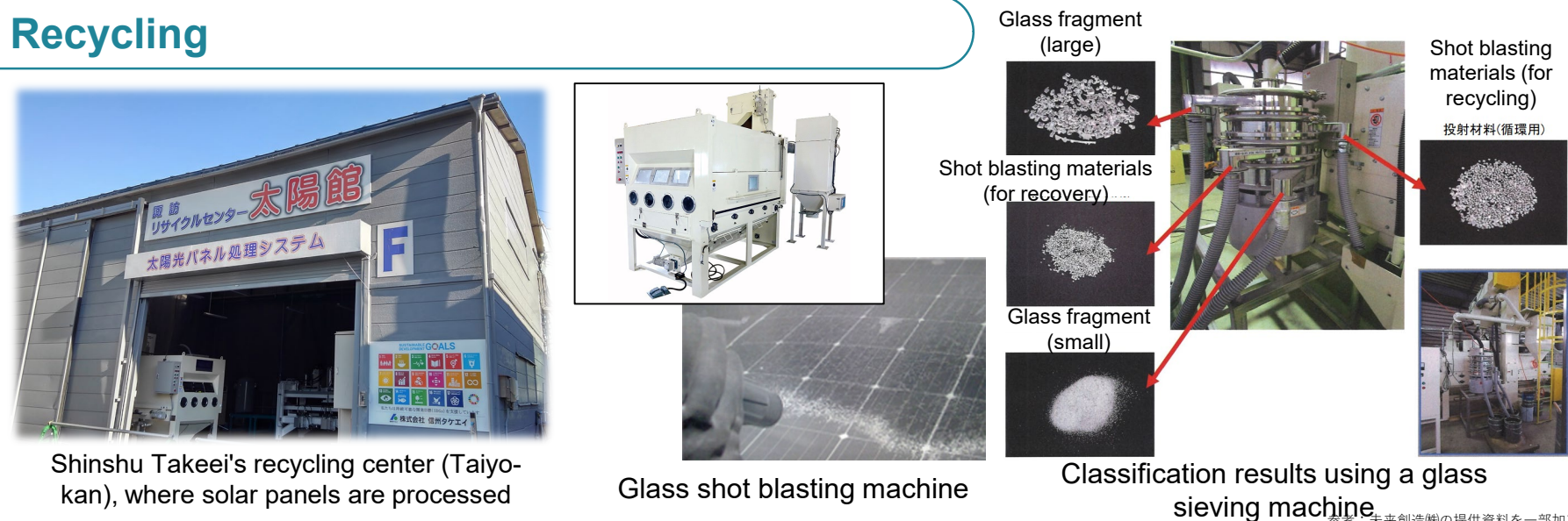
Note1: Performance for JW Glass Recycling Co., Ltd. is not included in the full-year FY03/23 earnings forecast.



## Waste Treatment & Recycling: Solar Panel Recycling

Shinshu Takeei's solar panel recycling business, which launched in January 2022, has been attracting attention from various directions, and we are receiving an increasing number of inquiries about solar panels that have been damaged or broken due to snow and other natural disasters, as well as about solar panels that have been scrapped in due to facility renovations.

In addition, we are continuing to move forward with our plans for the installation of a solar panel recycling facilities at TAKEEI CORPORATION's Soma Plant (Soma City, Fukushima Prefecture).





## Waste Treatment & Recycling: Construction Progress at Monzen Clean Park Co., Ltd.

Photo taken July 2022



	Phase 1	Phase 2	Phase 3	Total
Landfill area	5.16ha	8.46ha	5.75ha	17.26ha
Landfill capacity	836,000 m3	1,731,000 m3	864,000 m3	3,431,000 m3
Landfill period	11 years, 7 months	24 years, 6 months	11 years, 9 months	47 years, 10 months

(Note) The sum of the landfill areas for phase 1 through phase 3 do not match as some areas overlap.

### Future development

Construction is expected to last approximately four years. Current operations mainly consist of the construction of leachate treatment facilities and development of landfill areas.

Construction plan	2018	2019				2020				2021				2022				
	10~12	1~3	4~6	7~9	10~12	1~3	4~6	7~9	10~12	1~3	4~6	7~9	10~12	1~3	4~6	7~9	10~12	
Preparation		■																
Logging		■						■						■				
Turbidity control work		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Landscape construction			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Disaster prevention pond construction				■	■	■	■	■	■									■
Drainage, pipe construction			■	■	■	■	■	■	■									■
Impermeable construction												■	■	■	■	■	■	■
Leachate treatment facility construction																		■
Final cleanup, etc.																		■

Note: The construction plan is tentative and subject to change according to the progress of construction.

We will continue to carry out construction safely with the environment in mind.  
Phase 1 construction is scheduled to be completed in November 2022.



## Resource Recycling: Group Optimization

Consolidated six companies into one, creating one of the leading recycling companies in Japan with **17 locations and six large crushers in the Kanto region**, a major source of scrap.



### REVER CORPORATION

The integration will enable us to have a unified command, speed up information sharing, and make more effective use of management resources such as human resources, facilities, and functions than ever before. We will further strengthen cooperation, optimize operations, and streamline our business.

Reduce transportation costs

Effective staff allocation

Strengthen cooperation in each area

Note: In January 2021, Suzutoku Ltd. was renamed to REVER CORPORATION. In July 2021, three companies (REVER CORPORATION, Metal Recycle Co., Ltd., Shinsei Co., Ltd.) were merged with REVER CORPORATION as the surviving company. In July 2022, four more companies (REVER CORPORATION, Nakadaya Corp., Phoenix Metal Corp. and NNY Corp.) were merged.

## Resource Recycling: Circular Economy Initiatives

### Renewal of sorting lines for post-shear dust (Funabashi Plant, REVER CORPORATION)

REVER CORPORATION's Funabashi Plant **recycles approximately 80% of dust (residue)** generated when processing with a shearing machine (guillotine shear) by sorting out metals (lead, copper, brass, etc.) and concrete fragments. The **new equipment for eddy current sorting** will enhance processing capabilities by streamlining sorting lines, and by centrally collecting post-shear dust from nearby sites, this will ensure thorough recycling.

Rebar and steel frames from demolition sites, etc.

Shearing with a guillotine shear



post-shear dust

Line renewal

Granular, and eddy current sorting



Valuable resources: 11%

Appx. 80% recycled



Concrete fragments: 24%



Reusable residues (sand): 45%



To be launched in August



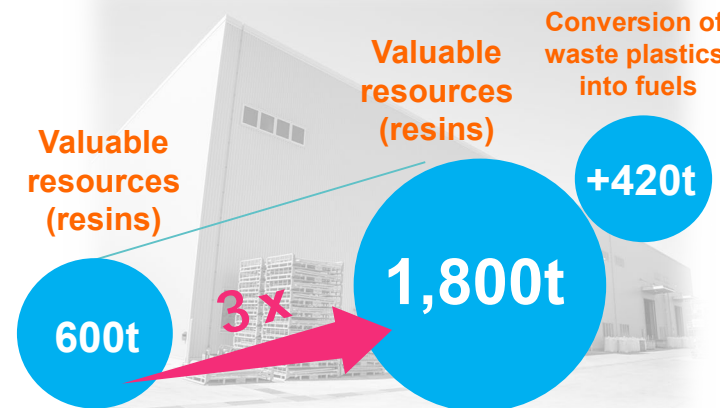
## Resin sorting lines begin operation (Nasu Plant, REVER CORPORATION)

### Newly installed a dedicated sorting line to strengthen resin sorting in an effort to promote plastic recycling

REVER CORPORATION's Nasu Plant (Note 1) serves as a centralized sorting center for the Group, specializing in sorting mixed metals (Note 2) at the shredder plant. The plant further contributes to recycling by sorting out 600 tons per year of resin and other materials from the dust (residue) that remains after sorting the mixed metals.

With the introduction of the new resin sorting lines, we will boost the amount of material recycled to 1,800 tons per year and contribute to resource recycling even further.

In addition, we expect to be able to sort 420 tons per year of dust for use as alternative fuels such as RPF (Note 3).



### Purpose of new resin sorting line

With the enactment of the Plastic Resource Circulation Act and the growing need for plastic recycling to create a Circular Economy (CE), we have been receiving a growing number of inquiries from consumer goods manufacturers and material manufacturers. At the same time, there is a growing need for sorted plastics for various applications such as material recycling, chemical recycling, and alternative fuels.

We will contribute to reducing CO2 emissions and creating a Circular Economy by investing in equipment that will enable us to respond appropriately to various needs, and by establishing a system that can supply large quantities of recycled plastic while maintaining precision.

Note 1: NNY Corp. became REVER CORPORATION's Nasu Plant as a result of the group's business integration.

Note 2. Mixed metals: A mixture of non-ferrous metals such as aluminum, copper, stainless steel, etc., and plastics.

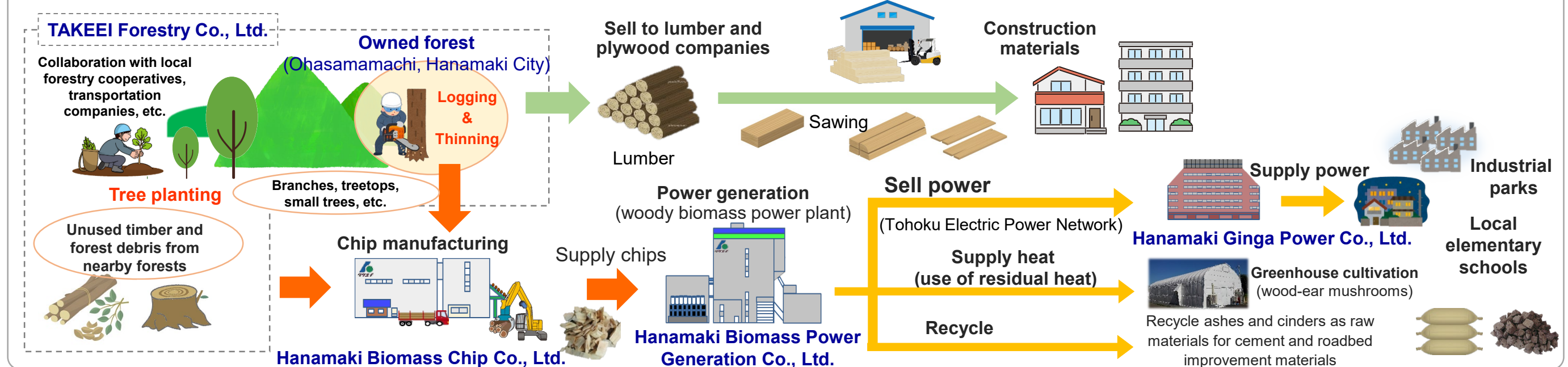
Note 3. RPF: A solid fuel made mainly from waste paper and plastics. It is high in calories and emits less CO2 than fossil fuels.

## Renewable Energy: Consolidation of 5 Power Retailers



## Renewable Energy: TAKEEI Forestry Co., Ltd. Begins Thinning Owned Forests

### Flow chart of woody biomass power generation project through forest development (Hanamaki model)





## Business Domain Expansion: Environmental Engineering/Vehicle business (Ammonia transport lorries)

Ammonia, which is currently used as denitrification and a chemical fertilizer, is attracting attention as an alternative to fossil fuels. Going forward, demand for ammonia is expected to rise substantially in Japan as an essential energy source to achieving carbon neutrality (CN), which will help to decarbonize a wide variety of sectors, such as power generation. Fuji Car Manufacturing Co., Ltd., which has abundant experience and expertise in ammonia transport lorries and various storage tanks and owns manufacturing facilities (annealing furnaces), is considering expanding its business domain by scaling up its production system in response to social needs.



Ammonia transport lorries  
(manufactured by Fuji Car Manufacturing)



Hydrogen gas storage tank  
(manufactured by Fuji Car Manufacturing)

## Business Domain Expansion: Collaboration with Universities for CCUS

One of the most important priorities for our group is to develop technologies that maximize the use of waste to create new products in order to achieve a highly advanced and sound material-cycle society and a carbon-free society.

The TRE Group will develop technologies to make the "biomass incinerated ash" emitted from biomass power plants and the "recycled crushed stone (RC material)" produced from the ash absorb CO2 (CCUS (Note 1)). We will also develop these technologies into unique waste treatment technologies by studying them with experts, in cooperation with Yamagata University and Nihon University, and conducting verification and technical development through various tests under an industry-academia partnership.

- 1) Professor Masatoshi Endo, Faculty of Engineering, Yamagata University  
Mainly in charge of recycling support, separation and removal of heavy metals and other hazardous substances for the TRE Group, joint research related to patented technologies, and technical advisor for all TRE Group companies.
- 2) Professor Sanjay Pareek, College of Engineering, Nihon University  
Leading researcher on the durability performance of reinforced concrete (RC) structures. Professor Pareek is also involved in the commercialization of non-fired bricks made from coal ash (fly ash).

Note 1: CCUS: Abbreviation for Carbon dioxide Capture, Utilization and Storage. It is a technology that offsets carbon emissions by capturing and storing CO2 emissions and converting them into new products and energy, and has recently begun to attract global attention from the viewpoint of achieving carbon neutrality.



Meeting for joint research with Yamagata University and Nihon University  
(July 2022)

## Companywide: Support for TCFD Recommendations, Strengthening Systems for Addressing Climate Change

### Support for TCFD Recommendations and joining the TCFD consortium

We consider the impact of climate change on our business as one of the most important management issues, and we are addressing various issues in our medium-term business plan with the aim of realizing a highly advanced and sound material-cycle society and a carbon-free society. We recognize the risks and opportunities that climate change poses to our Group's business over the medium to long term, and have discussed countermeasures. At the same time, we expressed our support for the TCFD Recommendations (Note 1) and decided to join the TCFD Consortium (Note 2) to provide enhanced disclosure of relevant information to our stakeholders.



Note 1: The TCFD was established in 2015 by the Financial Stability Board (FSB) at the request of the G20 to assess the financial impact of risks and opportunities from climate change on business operations and makes recommendations for corporate disclosure on governance, strategy, risk management, and metrics and targets.  
 Note 2: The TCFD Consortium was established in 2019 as a forum to discuss effective corporate disclosure and efforts to link disclosed information to appropriate investment decisions by financial institutions. Companies and financial institutions that support the TCFD recommendations have joined the TCFD Consortium.

### Establishment of CSR and Sustainability Promotion Committee

We have established a CSR and Sustainability Promotion Committee, chaired by the President and Representative Director, to formulate policies and other initiatives to address the Group's sustainability-related management issues, including climate change, and to report on progress to the Board of Directors. In addition, we established the CSR and Sustainability Promotion Department as the committee's secretariat responsible for promoting sustainability management and preparing integrated reports, including compliance with TCFD recommendations.

Note 3: Scope refers to the range of GHG emissions measured, wherein Scope 1 represents direct GHG emissions from fuel use and industrial processes within a company, and Scope 2 represents indirect GHG emissions from the use of electricity, heat, and steam supplied by other companies. Scope 3 refers to GHG emissions associated with a company's business activities not included in Scope 1 and 2 that are generated by other companies in the value chain, such as raw material procurement, logistics, and sales.

To address societal needs and fulfill our corporate philosophy of contributing to the preservation of the global environment, we have specified the TRE Group's **"Materialities (key subjects)"**.

#### TRE's 5 Materialities

Solving social issues through business

Realization of a highly advanced and sound material-cycle society

Realization of a carbon-free society

Establishing a foundation for business continuity

Creating a comfortable and rewarding work environment

Enhancing corporate governance structure

Sustainably enhancing corporate value

Improve brand recognition as a comprehensive environmental company

TRE integrated report to be **released this fall**  
 Also taking on the challenge of estimating **Scope 3** (Note 3) emissions on top of Scope 1 and Scope 2 emissions to create a carbon-free society!



# APPENDIX

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Establishment of TRE HOLDINGS CORPORATION

Company Profile

Resource Circulation Business Scheme

Business Description

Challenges in the macro environment

<b>Earth</b>	<b>Global warming</b> <b>Resource depletion</b> <b>Plastic pollution</b>	<b>Japan</b>	<b>Population decline</b> <b>Market contraction</b> <b>Aging infrastructure</b>	<b>Industry</b>	<b>Inefficient management</b> <b>Low reliability</b> <b>Succession issues</b>
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Social needs



Our response

**Two companies sharing the same passion for the global environment decided to come together to jointly invest capital and boost efficiency.**

On October 1, 2021, TAKEEI CORPORATION and REVER HOLDINGS CORPORATION established a joint holding company with the aim of leveraging all economic resources to create synergies.



## TREホールディングス株式会社

*Try*

↓

*Technology*  
*Recycling*  
*Renewable Energy*

*Earth Ecology*

*Try*

*Developing new technologies*  
*Enhancing the Recycling business*  
*Promoting the Renewable Energy business*  
*Preserving the Global Environment*

<b>Corporate Philosophy</b>	To contribute to the preservation of the global environment.
<b>Establishment</b>	October 1, 2021
<b>Headquarters</b>	Chiyoda-ku, Tokyo
<b>Representative Directors</b>	Naoto Matsuoka, Chairman and CEO Mitsuo Abe, President and COO
<b>Capital stock</b>	JPY10.0 billion
<b>Number of employees</b>	2,110 employees (on a consolidated basis)
<b>Group Businesses</b>	Waste treatment and recycling, resource recycling, renewable energy, environmental engineering, environmental consulting
<b>Subsidiaries, etc.</b>	37 subsidiaries, 6 equity-method affiliates ※As of July 2022
<b>Number of locations</b>	64 locations in Tokyo metropolitan area as well as Tohoku, Hokuriku, Koshin and Kansai regions, 1 overseas location in Thailand
<b>Key customers</b>	Major construction companies, home builders, major steel companies, trading companies, etc.

As of End-June 2022

# Resource Circulation Business Scheme (1)

## Waste treatment and recycling business

## Resource recycling business

We operate mainly in the Kanto area, which has a large amount of waste and strong demand for recycled products and renewable energy.

With one of the largest processing capacities, numerous locations, and a large fleet of vehicles, we are able to meet the social needs of a circular economy.

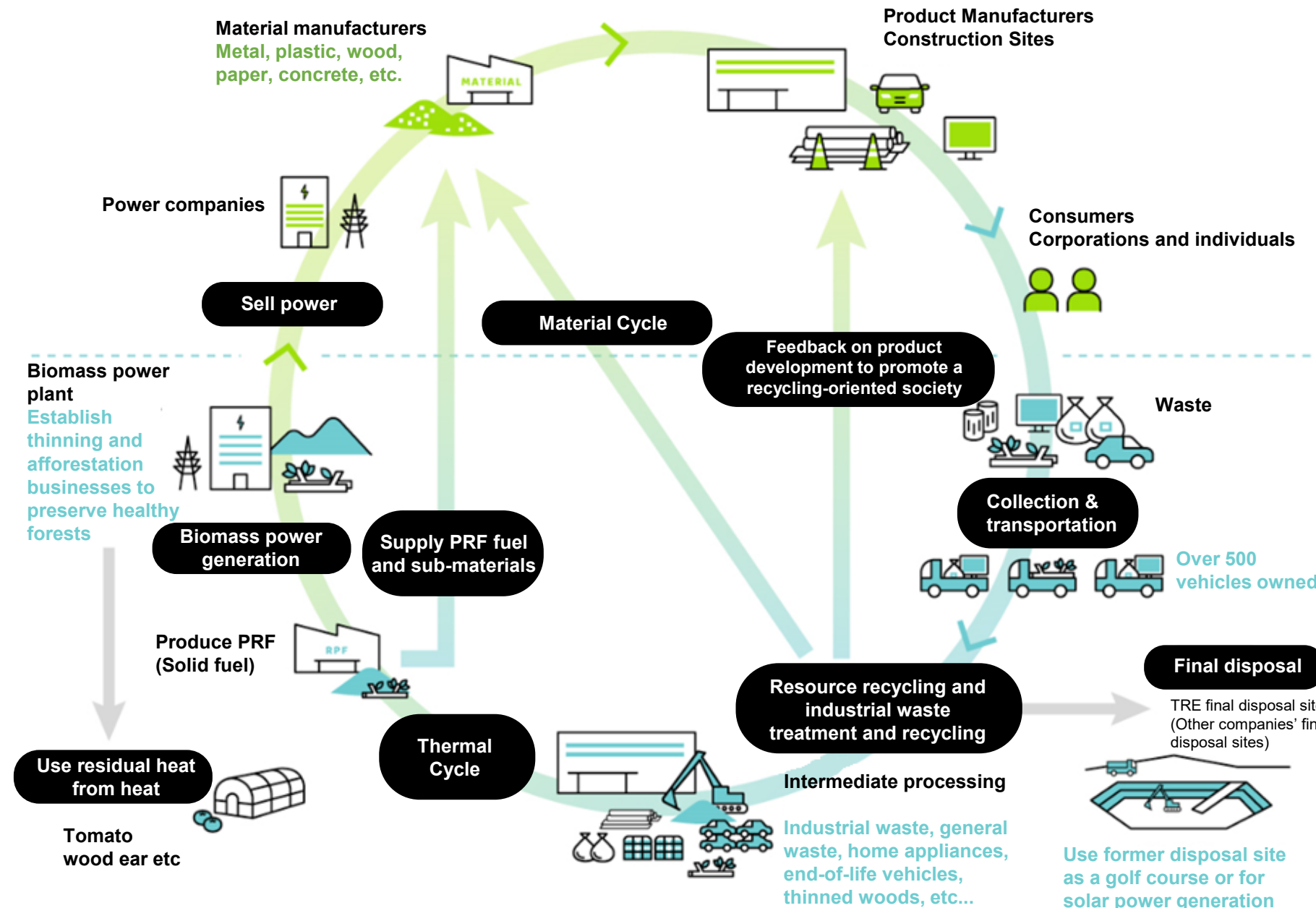
**Group volume** Appx. **2 million tons** per year

**Intermediate processing and recycling facilities, etc.** Appx. **64** locations

**vehicles owned** Appx. **500** vehicles

**Number of large crushers** **6** crushers in Kanto region

Note: Large crushers refer to crushers with a main body horsepower of at least 1,000 horsepower.



# Resource Circulation Business Scheme (2)

Tsugaru Biomass Power Generation Co., Ltd.  
Tsugaru Apple Power Co., Ltd.  
Tsugaru Eneveg

Hirakawa City, Aomori Prefecture

Daisen Biomass Power Generation Co., Ltd.  
Daisen Komachi Power Co., Ltd.

Daisen City, Akita Prefecture

Target area of forest management

TAKEEI Forestry Co., Ltd.

Hanamaki Biomass Power Generation Co., Ltd.  
Hanamaki Biomass Chip Co., Ltd.  
Hanamaki Ginga Power Co., Ltd.

Hanamaki City, Iwate Prefecture

Tamura Biomass Power Generation Co., Ltd.  
Fukushima Mirai Power Co., Ltd.

Tamura City, Fukushima Prefecture

Takeei Green Recycling Co., Ltd.

Fujiyoshida City, Yamanashi Prefecture

Large woody biomass power generation project in the Tokyo metropolitan area

Green Power Ichihara Co., Ltd.

Ichihara City, Chiba Prefecture

Takeei Green Recycling Co., Ltd. Yokosuka Biomass Power Generation facility

Yokosuka Urban Wood Power Co., Ltd.

Yokosuka City, Kanagawa Prefecture

## Environmental Engineering & Environmental Consulting businesses

As for other business segments, we operate an environmental engineering business that plans, manufactures, and sells environmental equipment, and an environmental consulting business that conducts measurement certification operations, environmental protection work and investigates, and analyzes hazardous waste.

## Renewable Energy business

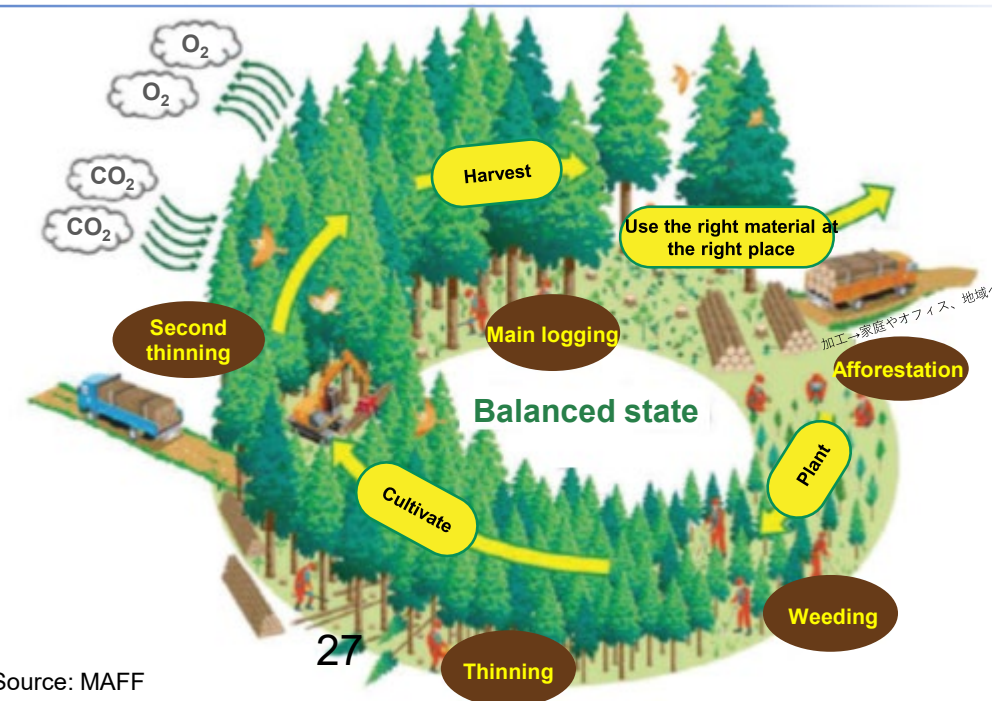
We operate **four** woody biomass power plants centered on eastern Japan, mainly in the Tohoku region using unused forest resources such as thinned wood and logged wood as fuel, and **two** plants in the Kanto region using scrap wood and some RPF as fuel. (The **five electric power retailers** are scheduled to merge into **one company on September 1**)

In addition, we are strengthening our efforts in forest management (planning, staged logging, and afforestation) and promoting the expansion of our renewable energy business where resource circulation is viable.

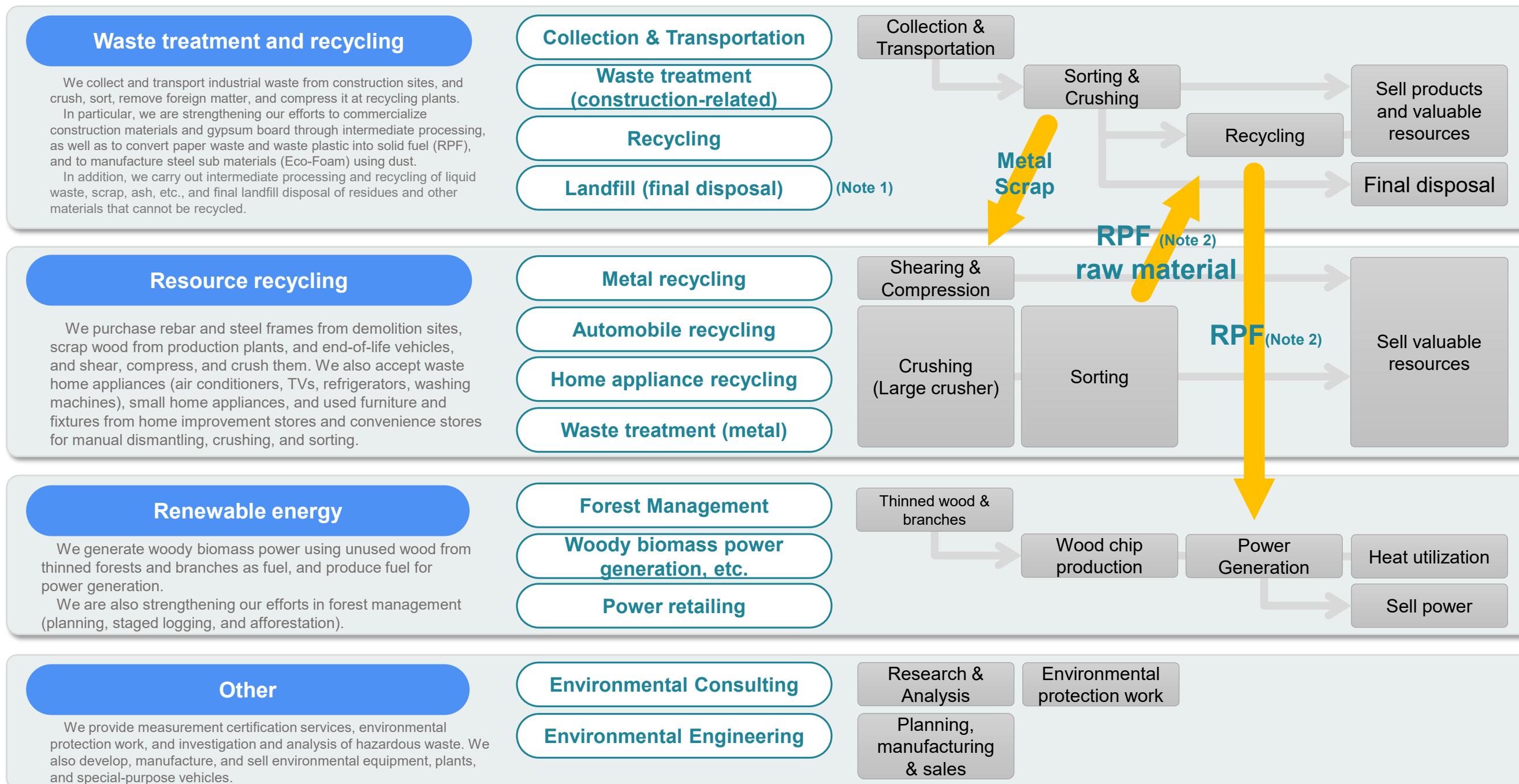
RPF: A solid fuel made mainly from waste paper and plastics. It is high in calories and emits less CO<sub>2</sub> than fossil fuels.

Annual woody biomass volume: **600,000 tons** RPF: **50,000 tons**

Annual power generated: Appx. **663,775 MWh**







Note 1: Use former disposal site as a golf course or for solar power generation

Note 2: RPF is a solid fuel made mainly from recycled paper and waste plastics. It is high in calories and emits less CO2 than fossil fuels.

- The information contained in this document, with the exception of those relating to past and present facts, are based on judgments made by the Company based on certain assumptions and currently available information. These judgments and assumptions contain uncertainties and may be affected by future changes in the economic environment and other factors. As a result, future results of the Company and the Group may differ from projections.
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***TRE HOLDINGS***

未来へ、捨てない創造力を。