



TRE HOLDINGS

未来へ、捨てない創造力を。

Committed to the conservation of the global environment

TRE HOLDINGS CORPORATION

(Code: 9247, Prime Market, Tokyo Stock Exchange)

Supplemental materials

for the third quarter of the Fiscal Year ending March 31, 2023

February 14, 2023

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Summary of Consolidated Results

(millions of yen)

	FY03/22 Full-year Results (Note 1)	FY03/23					
		Q1 Results (Quarterly)	Q2 Results (Quarterly)	Q3 Results		Full-year Forecast	
				Quarterly	Cumulative		Progress
Net sales	68,234	22,842	21,367	23,471	67,682	94,200	71.8%
Operating profit	7,659	1,204	1,890	2,437	5,531	9,300	59.5%
Ordinary profit	7,547	1,300	1,837	2,430	5,567	9,300	59.9%
Profit attributable to owners of parent	4,742	815	1,435	1,642	3,892	5,900	66.0%

* 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.

** Because FY03/22 was an irregular accounting period due to business integration, no YoY comparative is available for cumulative Q3 results.

- **Cum. Q3 operating profit reached only 59.5% of the full-year target, but both net sales and operating profit grew QoQ in Q3, with the latter up 28% QoQ (+JPY546 million)**
- **In particular, the renewable energy business, which posted a substantial operating loss (-JPY601 million) in Q1, generated profit, thanks to the consolidation of electric power retailers into Takeei Denki Co., Ltd.**
- **No change was made to the full-year forecast** in light of the Q4 outlook, which accounted for current orders.

Q3 FY03/23 Results

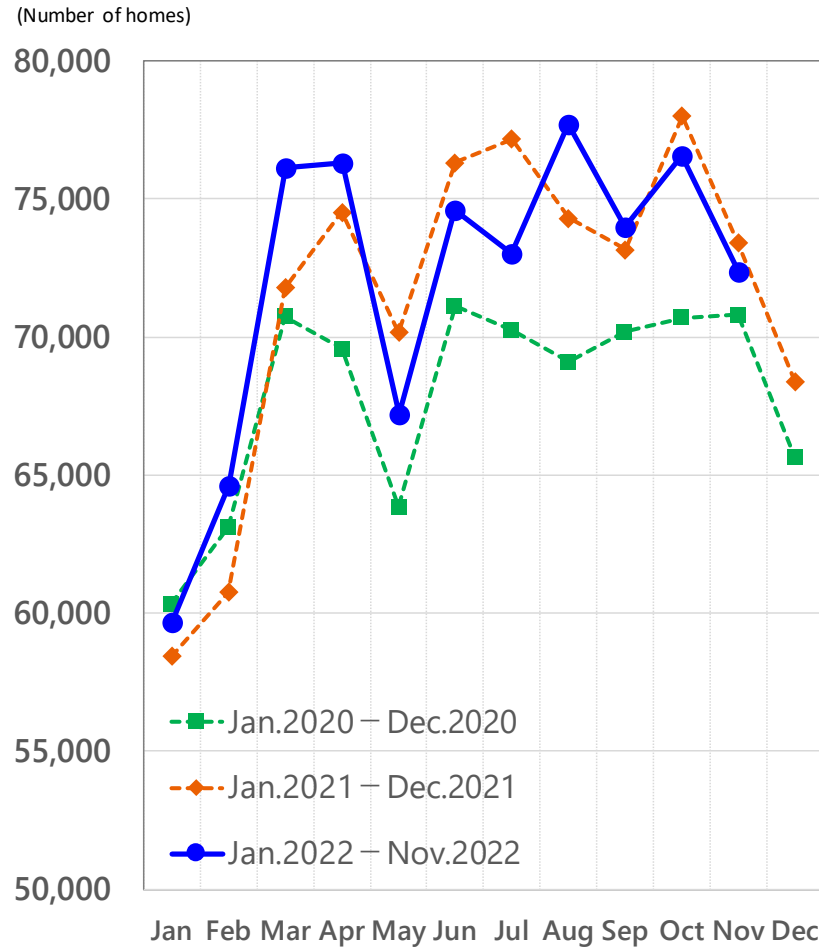
Market Environment for Construction Waste

Market Environment for Resource Recycling

Q3 FY03/23 Net Sales, Operating Profit, and Operating Profit Margin by Segment (Cumulative)

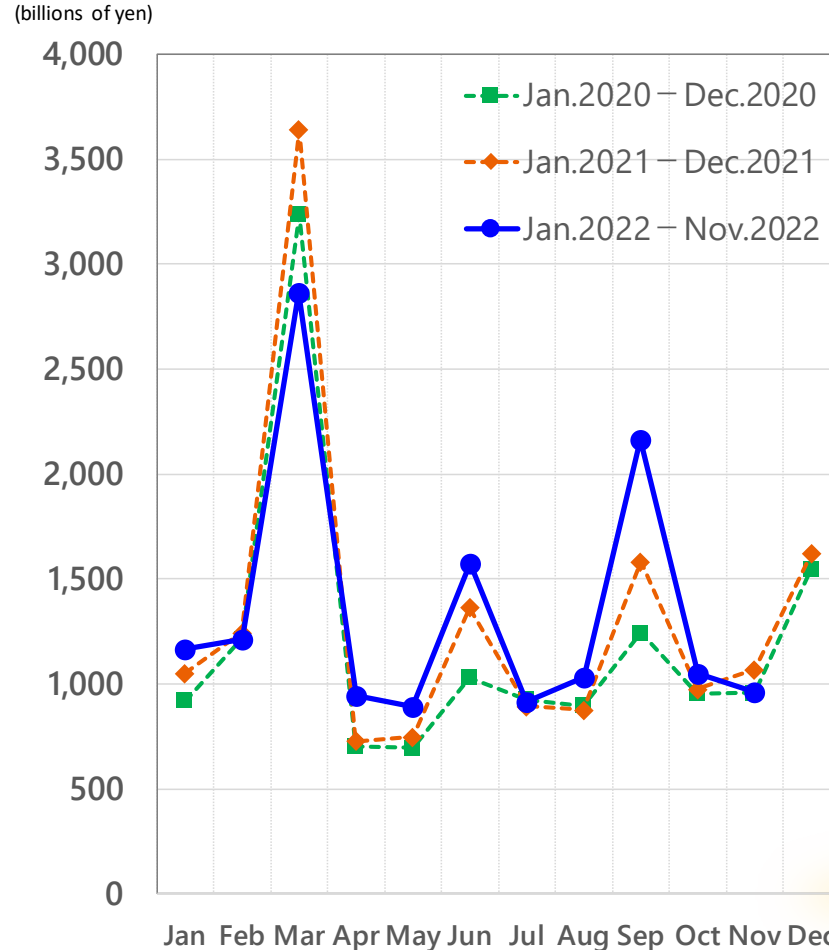
Capital Expenditures, Depreciation and Amortization of Goodwill

■ Number of new housing starts



- ◆ New housing starts in October and November 2022 fell 1.8% and 1.4% YoY, respectively, although August and September figures were up YoY. Conditions remained uncertain toward the year-end, when housing starts tend to increase sharply.

■ Construction orders (50 largest companies) ■ Long-term trends in construction waste



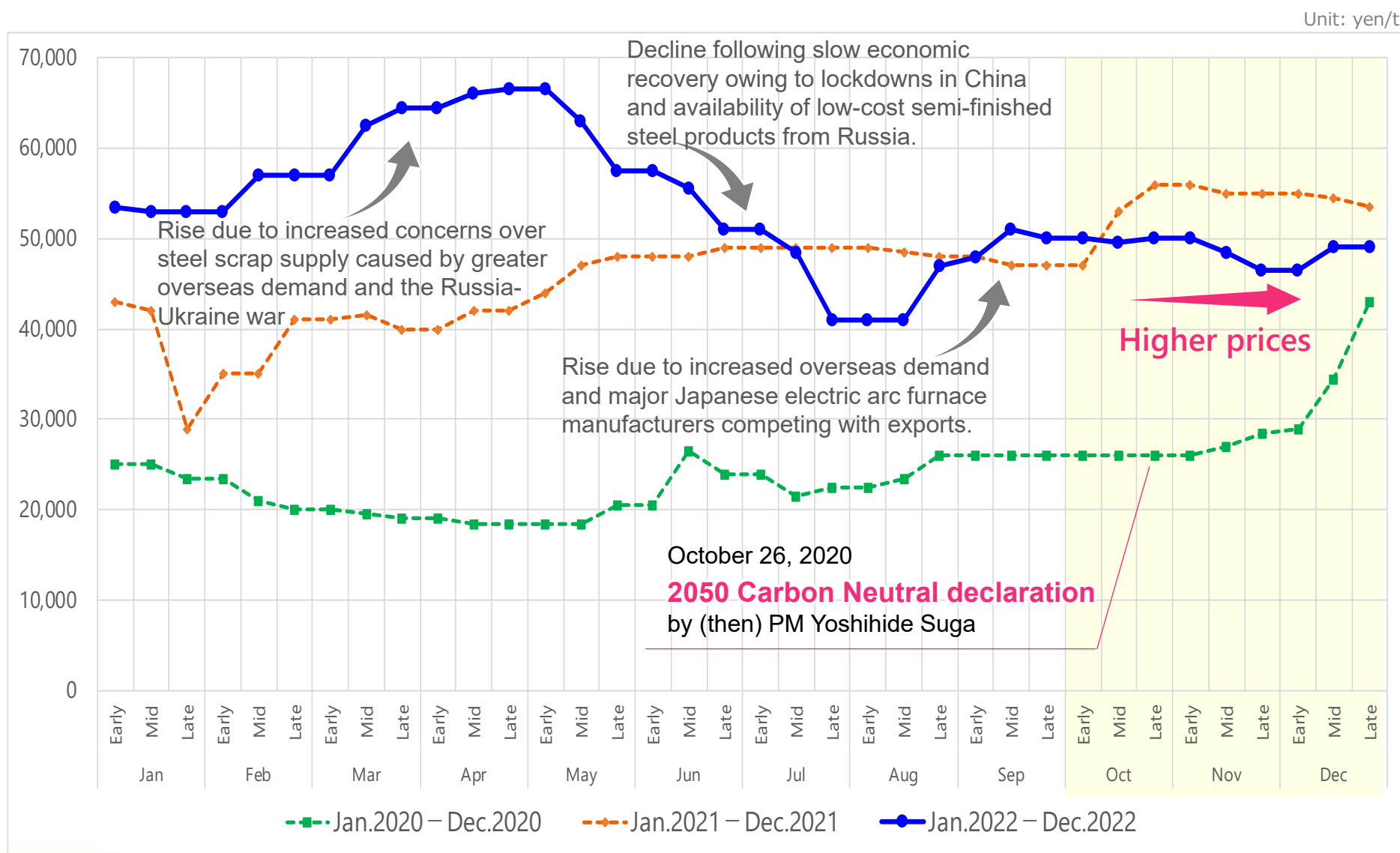
- ◆ Construction orders grew YoY for seven consecutive months since April 2022, but fell in November. The outlook going forward warrants caution.

- ◆ Construction waste accounts for approximately 20% of all industrial waste (approximately 400 million tons), both in terms of volume generated and final disposal.
- ◆ Appropriate sorting and treatment procedures are necessary for building materials containing harmful substances such as asbestos.
- ◆ The social infrastructure developed during Japan's period of rapid economic growth is aging, and maintenance and management costs are expected to increase 1.2-fold in 10 years.
- ◆ In recent years, earthquakes, typhoons, torrential rains, and other disasters have become more frequent and more severe, and a large amount of disaster-related waste is generated, which affects the construction recycling field.

Waste Treatment and Recycling Business

We provide reliable and secure processing services and leverage our differentiation through our own biomass power plants and recycling plants to achieve stable supply and secure profits.

■ Steel Scrap Market



- ◆ Market prices dropped to JPY41,000/ton in July 2022, but rebounded to JPY50,000/ton by end-September due to increased overseas demand and price hikes by major Japanese electric furnace manufacturers in efforts to prevent exports.
- ◆ In Q3, domestic market prices were underpinned by a decline in the volume of steel scraps in distribution and the impact of a weak yen, with prices remaining low overseas and high in Japan. Market prices plunged temporarily due to a deterioration in overseas demand, but recovered to JPY49,000/ton in mid-December on the back of rising overseas demand and finished 2022 in the high range.
- ◆ **Demand will continue to rise** for electric arc furnaces, which use steel scrap with low CO2 emissions as the main raw material in steelmaking, as the trend toward **carbon neutrality** remains unchanged. Further, some believe that the price range for steel scrap has risen as steel scrap's bottom price in July 2022 was JPY41,000/ton. Steel scrap prices are thus **expected to remain high**.

Resource Recycling Business

Tokyo Steel Utsunomiya Plant steel scrap (high grade) price

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.

Q3 FY03/23 Net Sales, Operating Profit, and Operating Profit Margin by Segment

(millions of yen)

	Q3 FY03/23 Results		
	Net sales	Operating profit	Operating profit margin
Consolidated	67,682	5,531	8.2%
Waste treatment and recycling	19,159	3,264	17.0%
Collection & Transportation / Waste treatment (Note 2)	12,900	2,206	17.1%
Recycling (Note 2)	4,264	687	16.1%
Landfill (final disposal) (Note 2)	2,220	325	14.6%
Resource recycling (Note 3)	33,712	2,384	7.1%
Renewable energy (Note 4)	10,110	321	3.2%
Other businesses (Note 5)	5,408	196	3.6%
Adjustments (Note 6)	-708	-636	—

Note 1: Because FY03/22 was an irregular accounting period due to business integration, no YoY comparative is available for cumulative Q3 results.

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 JPY135 million of goodwill related to the business integration.

Note 4: The renewable energy business includes JPY283 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 -JPY636 million include -JPY655 million in companywide expenses and JPY19 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

- Despite higher costs caused by soaring electricity and fuel prices, the collection & transportation and waste treatment business continued to promote **thorough collection of valuable resources, as well as value-adding and productization of delivered materials**.
- Despite a YoY decrease in the number of large one-time projects, the recycling and landfill business was supported by contributions from newly consolidated JW GLASS RECYCLE CO., LTD., and recycling business operators Gypro Co., Ltd. and Shinshu Takeei Co., Ltd.

Resource recycling

- The business was affected by restricted operations due to the rebuilding of REVER CORPORATION's Fujisawa Plant, increases in depreciation (declining balance method) for new facilities and electricity and fuel costs, and a decline in the supply of end-of-life vehicles, which remained low despite being on a recovery track. We strove to **secure a spread** by managing inventories in accordance with fluctuations in market price and **thoroughly recycle resources** with the addition of new facilities.

Renewable energy

- In power generation, we struggled to secure wood chips in some areas and manage the moisture content of biomass fuel. That being said, we were able to **improve capacity utilization through stable operations** and secured profit after completing a regular maintenance checkup in 2H.
- In power retailing, we promoted **centralized management by Takeei Denki Co., Ltd.** and continued utilizing non-FIT power sources such as RPF (solid fuel), contributing to segment operating profit moving into the black.

(millions of yen)

	FY03/22 Full-year Results (Note 1)	FY03/23 Cum. Q3	FY03/23 Full-year Forecast
Capital expenditures (Note 2)	4,395	4,389	12,547
Depreciation	5,016	4,177	6,189
Amortization of goodwill (Consolidated)	466	427	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 replacement of vehicles.

From FY03/24 onward, we will promote the development of a stable waste disposal facility for TAKEEI CORPORATION and a dust resource recycling project at REVER HOLDINGS CORPORATION. We will also examine the details of business plans relating to the **TRE integrated environmental business (provisional name)** concept announced in a press release on September 15, 2022 (planned for Ichihara, Chiba Prefecture). Income and expenditure forecasts for this project are not reflected in the current medium-term management plan.

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.

■ Main capital expenditure for FY03/23 (actual and plan)

		Q3 Actual (Cum.)	Plan
Monzen Clean Park Co., Ltd.	Disposal site development work, etc.	JPY160 million	JPY3.68 billion
TAKEEI CORPORATION	Renewal of equipment and vehicles, expansion of disposal sites, etc.	JPY1460 million	JPY3.50 billion
Shinshu Takeei Co., Ltd.	Renewal of equipment and vehicles	JPY260 million	JPY490 million
REVER CORPORATION	Reinforcement of sorting lines	JPY80 million	JPY410 million
Green Power Ichihara Co., Ltd.	Replacement of equipment and machine parts, etc.	JPY310 million	JPY310 million
Fuji Car Manufacturing Co., Ltd.	Renewal of equipment and software	JPY60 million	JPY300 million

- Scheduled completion date of Monzen Clean Park's new controlled final waste disposal facility has been moved back from November 2022 to end-March 2023.
- In December 2022, TAKEEI CORPORATION obtained a facility installation permit from Chiba Prefecture for its Narita Stable Landfill Expansion Project, and construction is proceeding as planned. **Equipment to improve the quality of delivered materials** was installed in the SP building of Kawasaki Recycling Center in December 2022, and is scheduled to begin operations in February 2023.
- The **resin sorting lines** at REVER CORPORATION's Nasu Plant and the **sorting lines for post-shear dust** at Funabashi Plant began operations, are on their way to operating at full-capacity.

Medium-Term Business Plan

Progress Versus Medium-Term Business Plan and Trends in the Plan's Second Year

Quarterly Results and Three-Year Q3 Comparison by Segment

Quarterly Sales and Operating Profit and Future Measures

Progress Versus Medium-Term Management Plan and Trends in the Plan's Second Year

(millions of yen)

	First year of Medium-term plan (FY03/22)			Second year of Medium-term plan (FY03/23)		
	(Note 1)					
	Cum. Q3 Results (Note 2)	Revised Full- year Plan (Note 2)	Progress	Cum. Q3 Results (Note 2)	Revised Full- year Plan (Note 2)	Progress
Net sales	68,234	89,700	76.1%	67,682	94,200	71.8%
Operating profit	7,659	10,100	75.8%	5,531	9,300	59.5%
Operating profit margin	11.2%	11.3%	—	8.2%	9.9%	—
Profit attributable to owners of parent	4,742	6,930	68.4%	3,892	5,900	66.0%
Earnings per share (Note 3)	JPY 92.3	JPY 131.7	-	JPY 75.7	JPY 114.8	-

Note 1: For the first year of the medium-term business plan (FY03/22), results for the merged companies, TAKEEII 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, JPY135 million for Q3 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 are currently calculating the targets for the third year of the plan in light of changes in the external environment.

Waste treatment and recycling

- Although progress versus full-year forecast was weak in 1H due in part to seasonal bias toward 2H, we have left full-year sales and operating profit targets unchanged considering high demand relating to urban redevelopment and other projects to update social infrastructure.

Resource recycling

- Unit prices continued to trend below plan. Performance lagged the plan due to a decline in the supply of end-of-life vehicles, but the market price of steel scraps continued to remain high. We aim for a recovery in Q4, driven by an increase in the volume of valuable resources recovered through thorough recycling enabled by the addition of new facilities, and measures to reduce dust (residue).

Renewable energy

- We will not only strive to establish a stable operating system for woody biomass power plants, but also increase efficiency through centralized management of the electric power retail division by Takeei Denki Co., Ltd. and generate profit. In doing so, we intend to raise earnings targets for the segment.

Quarterly Results and Three-Year Q3 Comparison by Segment

(millions of yen)

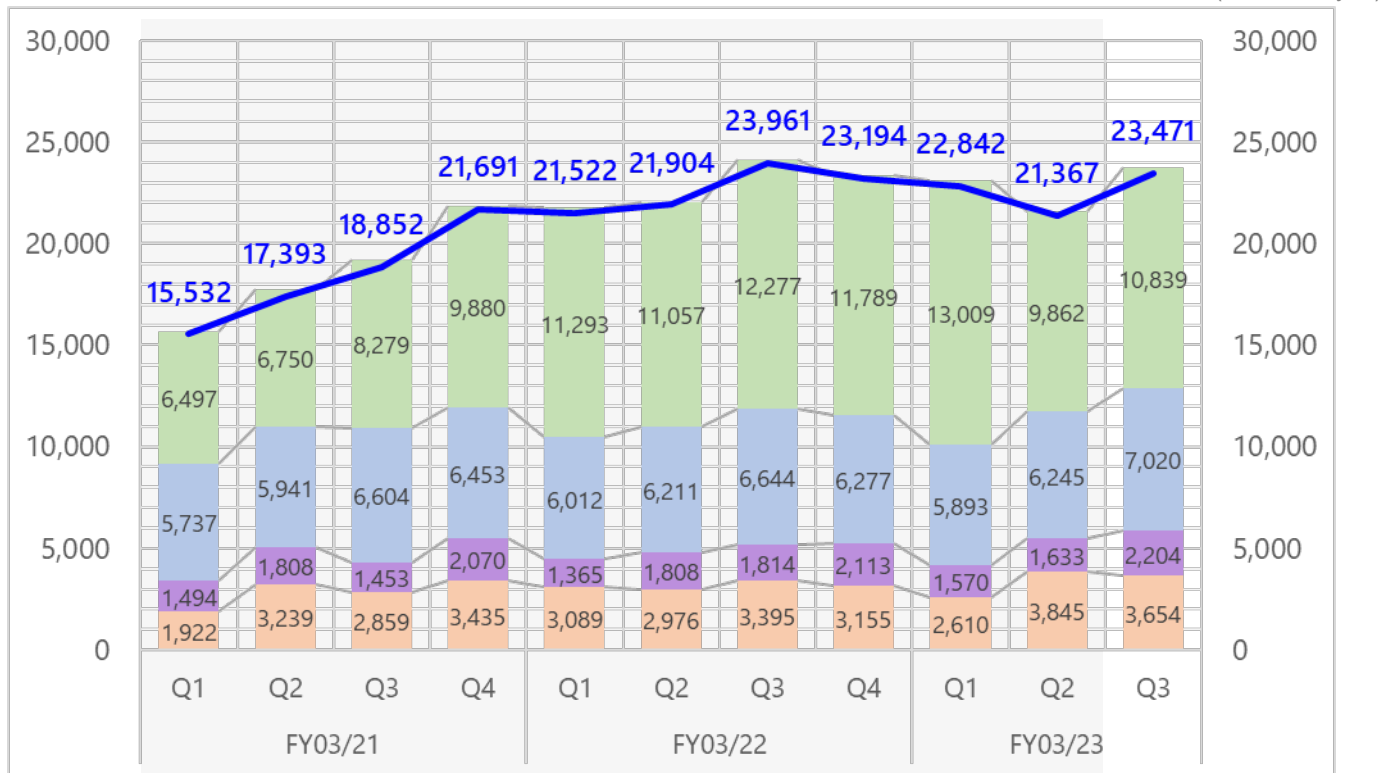
		FY03/21			FY03/22			FY03/23							
		1H	Cum. Q3	Full-year	1H	Cum. Q3	Full-year	1H		Cum. Q3		FY Forecast			
		Apr. 2020 - Sep.2020	Apr. 2020 - Dec.2020	Apr. 2020 - Mar.2021	Apr. 2021 - Sep.2021	Apr. 2021 - Dec.2021	Apr. 2021 - Mar.2022	Apr. 2022 - Sep. 2022	YoY	Apr. 2022 - Dec.2022	YoY	Apr. 2022 - Mar.2023	YoY (Note 3)	Progress	
Consolidated	Net sales	32,926	51,778	73,470	43,426	67,388	90,584	44,210	+1.8%	67,682	+0.4%	94,200	+4.0%	71.8%	
	Operating profit	2,197	4,430	6,727	4,842	7,811	10,326	3,094	-36.1%	5,531	-29.2%	9,300	-9.9%	59.5%	
	Operating profit margin	6.7%	8.6%	9.2%	11.2%	11.6%	11.4%	7.0%	-	8.2%	-	9.9%	-	-	
Waste treatment and recycling	Net sales	11,679	18,284	24,738	12,224	18,868	25,146	12,138	-0.7%	19,159	+1.5%	25,829	+2.7%	74.2%	
	Operating profit	1,206	2,343	3,468	2,234	3,830	5,113	1,884	-15.7%	3,264	-14.8%	4,786	-6.4%	68.2%	
	Operating profit margin	10.3%	12.8%	14.0%	18.3%	20.3%	20.3%	15.5%	-	17.0%	-	18.5%	-	-	
	Collection & Transportation / Waste treatment (Note 1)	Net sales	8,546	13,300	17,983	8,370	12,959	17,399	8,158	-2.5%	12,856	-0.8%	17,807	+2.3%	72.2%
		Operating profit	736	1,513	2,233	1,141	2,152	3,080	1,228	+7.6%	2,206	+2.5%	3,343	+8.5%	66.0%
		Operating profit margin	8.6%	11.4%	12.4%	13.6%	16.6%	17.7%	15.1%	-	17.2%	-	18.8%	-	-
	Recycling (Note 1)	Net sales	2,087	3,214	4,408	2,398	3,652	5,029	2,696	+12.4%	4,264	+16.8%	5,016	-0.3%	85.0%
		Operating profit	258	420	662	715	1,047	1,279	451	-36.9%	687	-34.4%	910	-28.9%	75.5%
		Operating profit margin	12.4%	13.1%	15.0%	29.8%	28.7%	25.4%	16.7%	-	16.1%	-	18.1%	-	-
	Landfill (final disposal) (Note 1)	Net sales	1,326	2,201	2,946	1,535	2,411	3,127	1,411	-8.1%	2,220	-7.9%	3,006	-3.9%	73.9%
		Operating profit	203	425	544	365	604	711	174	-52.3%	325	-46.2%	533	-25.0%	61.0%
		Operating profit margin	15.3%	19.3%	18.5%	23.8%	25.1%	22.7%	12.3%	-	14.6%	-	17.7%	-	-
Resource recycling (Note 2)	Net sales	13,248	21,527	31,408	22,350	34,628	46,418	22,872	+2.3%	33,712	-2.6%	47,100	+1.5%	71.6%	
	Operating profit	456	1,555	2,660	2,667	4,120	5,454	1,634	-38.7%	2,384	-42.1%	4,361	-20.0%	54.7%	
	Operating profit margin	3.4%	7.2%	8.5%	11.9%	11.9%	11.7%	7.1%	-	7.1%	-	9.3%	-	-	
Renewable energy (Note 3)	Net sales	5,162	8,022	11,457	6,065	9,461	12,617	6,455	+6.4%	10,110	+6.9%	14,088	+11.7%	71.8%	
	Operating profit	396	357	325	-145	-153	-305	-11	-	321	-	388	-	82.7%	
	Operating profit margin	7.7%	4.5%	2.8%	-	-	-	-	-	3.2%	-	2.8%	-	-	
Other businesses	Net sales	3,303	4,757	6,828	3,174	4,988	7,102	3,204	+0.9%	5,408	+8.4%	7,893	+11.1%	68.5%	
	Operating profit	199	254	349	82	209	441	21	-74.4%	196	-6.2%	420	-4.8%	46.7%	
	Operating profit margin	6.0%	5.3%	5.1%	2.6%	4.2%	6.2%	0.7%	-	3.6%	-	5.3%	-	-	
Adjustments	Net sales	-467	-812	-962	-388	-558	-700	-461	-	-708	-	-710	-	-	
	Operating profit	-62	-80	-76	4	-195	-376	-435	-	-636	-	-655	-	-	

Note 1: No segment adjustments have been made for subsegments.

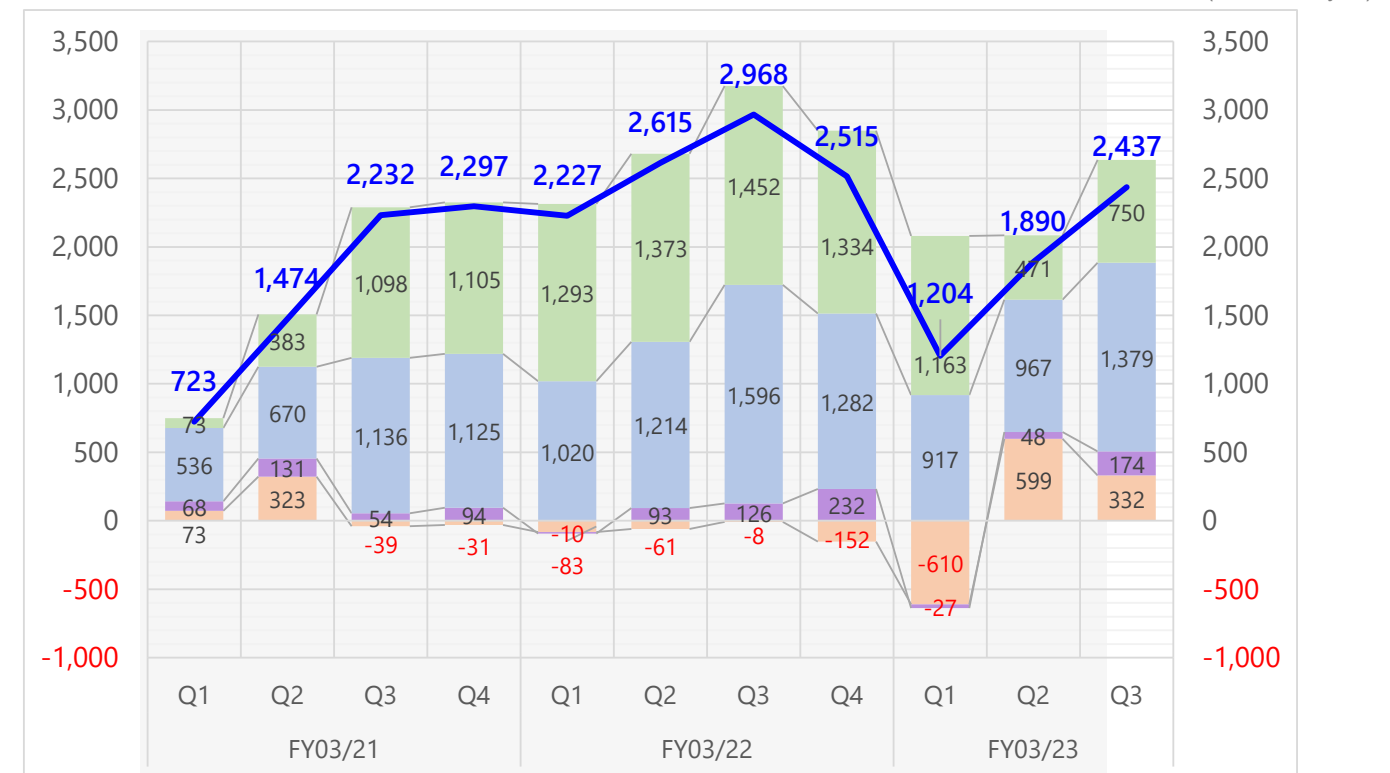
Note 2: Operating profit for the resource recycling business includes goodwill (JPY90 million for 2H FY03/22 and JPY135 million for Q3 FY03/23) related to business integration.

Note 3: Operating profit for the renewable energy business includes goodwill (JPY294 million in FY03/21, JPY376 million in FY03/22, and JPY283 million in Q3 FY03/23) associated with the acquisition of Green Power Ichihara Co., Ltd.

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 addition, each group company will provide recycling and safe and secure treatment services that take advantage of the characteristics of each recycling plant and final disposal facility to secure profits.

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. 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 work to establish a stable operating system for our six power plants, curtail costs through the merger of five electric power retailers, and continue utilizing non-FIT power sources, such as RPF. Further, through TAKEEI Forestry Co., Ltd. and others, we plan to collect materials (thinned wood, etc.) that can be used as fuel.

TOPICS

Concrete Visions for TRE Integrated Environmental Business (Provisional Name)

Waste Treatment & Recycling : Glass Recycling / Acquisition of Patent for Carpet Tile Recycling Business /
Progress on Construction of Monzen Waste Disposal Facility (Provisional Name)

Resource Recycling : Group Optimization / Circular Economy Initiatives

Renewable Energy : Effects of Merging Five Electric Power Retailers and Future Strategies /
With an Eye to Introducing Emissions Trading / Thinning of Company-Owned Forests

: Integrated Business Flow of Woody Biomass Power Generation Business, Starting with TAKEEI
Forestry Co., Ltd.



Promoting the creation of four innovative new businesses in Ichihara, Chiba Prefecture

We view the growing societal need for waste plastic and other resources recycling as a business opportunity. Accordingly, we intend to put into operation facilities and plants for the following four new businesses **between 2025 and 2027** with the aim of generating annual sales of **JPY12 billion** once they begin full-scale operations. Further, we expect to hire **150** new employees and **invest a total of JPY30 billion**.

We aim to generate synergies through collaboration with **Green Power Ichihara Co., Ltd.**, which generates electricity using woody biomass in the vicinity (in Ichihara) and REVER CORPORATION's Ichihara Plant, which recycles end-of-life vehicles and waste home appliances (**both facilities were certified as Ichihara SDGs Declaration Company on December 20, 2022**).

We will also cooperate with the city of Ichihara, which has been certified as an SDGs Future City by the Cabinet Office.

(1) Crushing, sorting, and recycling of industrial waste

Significantly expanded facility capacity. Promoting recycling of difficult-to-process materials and RPF production

(2) Waste incineration and power generation business

Develop an efficient and stable power generation business in a favorable location in Greater Tokyo

(3) Advanced sorting of metal resources

Internalize/upgrade the recovery of useful metal resources

4) Advanced sorting and recycling of waste plastics

Collaborate with local governments and other emission sources, and develop advanced technologies with users

Progress of new business plans

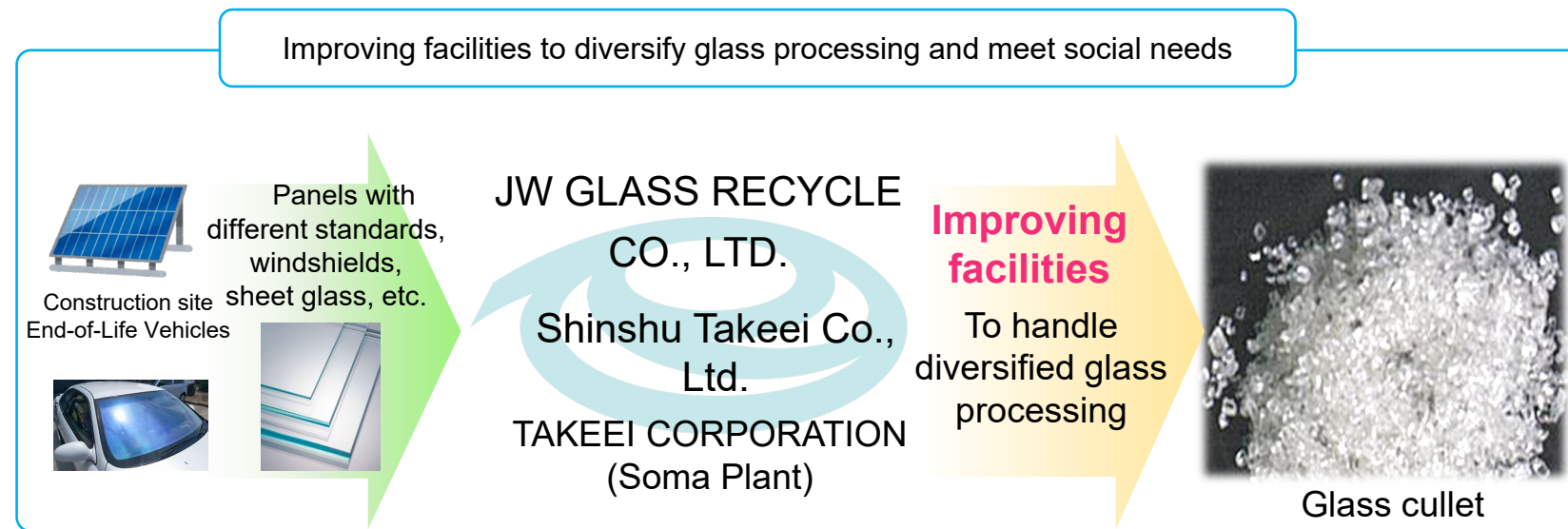
- Assessing individual business plans (capex, development schedule, budget, etc.) for new businesses.
- Working to devise concrete maintenance plans (preparation for the demolition of existing buildings, etc.) for planned project sites.
- Consulting with regulatory authorities to obtain permits necessary to operate new businesses.

Future development (more new businesses)

- In efforts to further develop the integrated business, we are considering to expand the carpet tile recycling business and glass recycling business TRE group has already undertaken.
- We are also considering to cooperate with Soma, Fukushima Prefecture on the city's recycling business concept.

Recent Situation in the Glass Recycling Business / JW GLASS RECYCLE CO., LTD., Shinshu Takeei Co., Ltd., TAKEEI CORPORATION's Soma Plant

- JW GLASS RECYCLE recycles sheet glass discarded from large demolition sites in collaboration with glass manufacturers and construction companies. It is also actively involved in verifying and testing advanced recycling processes for difficult-to-process auto glass, glass panels (composite or laminated) used in building construction, and solar panels.
- Shinshu Takeei, a company engaged in the recycling and reuse/sale of solar panels, is seeing a sharp increase in inquiries regarding its acceptance of end-of-life, used solar panels.
- TAKEEI CORPORATION's Soma Plant, which is planning an end-of-life solar panel recycling business, obtained regulatory approval to build a treatment facility from Fukushima Prefecture in January 2023.



Acquisition of Patent for Carpet Tile Recycling Business / TAKEEI CORPORATION Tokyo Recycling Center

In January 2023, we obtained a patent for the “System and method for separation and recovery of waste carpet tile components.” Carpet tiles consist of the fiber layer on the surface and the PVC (polyvinyl chloride) layer on the base. Recycling carpet tiles is considered difficult, but this system/method separates component materials by crushing carpet tiles, sorts the component materials using wind power and vibration with high accuracy, and recovers high-purity PVC.

Treatment process at Tokyo Recycling Center

Step	Equipment	Treatment and effects
1	Uniaxial shredder	Shreds carpet tiles
2	Metal detector	Removes metal contaminants
3	Crusher	Crushes shredded carpet tiles down to 3mm granules
4	Vibrating sieve	Sorts crushed granules into 0–1mm fine particles (three types) and 1–3mm fiber and PVC
5	Gravity sorter	Separates and sorts fiber and PVC

For the patent acquired in October 2022, cutting machines were used instead of uniaxial shredder.



Shredded in step 1



PVC (3mm) obtained after step 5



PVC (1mm) obtained after step 5

Progress in Construction of Monzen Waste Disposal Facility (Provisional Name)

Construction of multiple sites, including the leachate treatment facility and management roads, are currently ongoing. Phase 1 of the construction was scheduled for completion by end-March 2023, but due to inclement weather, progress has been delayed. We will assess the situation, taking into consideration various factors including the weather, and promptly disclose any matters that require public disclosure.

Construction progress can be viewed on Monzen Clean Park's website.
<https://www.takeei.co.jp/mzcp/index.html>

Photo taken January 2023
(construction 88% complete)



Construction plan	2018	2019				2020				2021				2022			2023		
	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	1~3	
Preparation		■																	
Logging		■						■	■										
Turbidity control work		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Landscape construction			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Disaster prevention pond construction					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Drainage, pipe construction					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Impermeable construction													■	■	■	■	■	■	■
Leachate treatment facility construction													■	■	■	■	■	■	■
Final cleanup, etc.																			■

Total landfill capacity is equivalent to approx. 2.8x that of Tokyo Dome (capacity of Tokyo Dome = 1.24mn m3)

	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.

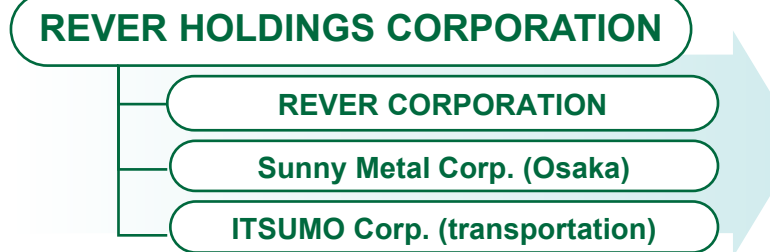


Group Optimization

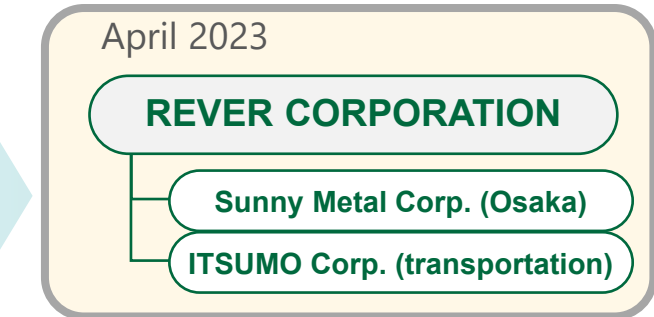
Merger of REVER CORPORATION and REVER HOLDINGS CORPORATION (scheduled)

In July 2022, REVER CORPORATION took a new step forward as one of the leading recyclers in Japan with **17 locations and six large crushers in the Kanto area**, a major source of scrap. REVER CORPORATION and REVER HOLDINGS CORPORATION are scheduled to merge in April 2023 to further **streamline their operations**.

Current



April 2023



Circular Economy Initiatives

Continued studies of tie-up with Sumitomo Chemical Co., Ltd.

Using waste plastic from end-of-life vehicles, we conducted sorting tests on the resin sorting line of REVER CORPORATION's Nasu Plant and other various analyses. We were able to obtain results we had anticipated, making steady progress.

Sumitomo Chemical announced its plan to install a pilot facility to establish a new process for manufacturing polypropylene compounds using waste plastic from end-of-life vehicles. Through this initiative, we intend to promote recycling of waste plastic with the aim of reducing environmental burden.

Signs memorandum of understanding with Mizuho Leasing Co., Ltd. to create a business scheme for CE (Nov. 2022)

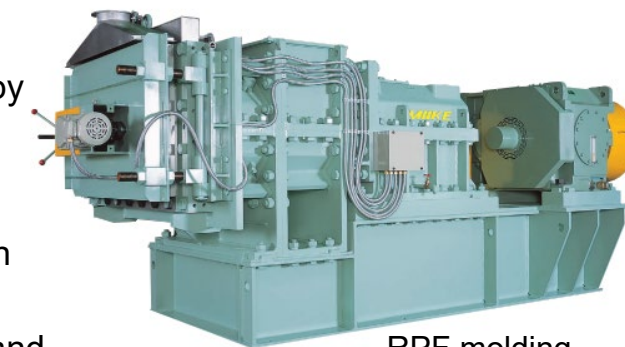
Combining our agility in collection and transportation, advanced sorting and resource recycling techniques, and energy conversion know-hows with Mizuho Leasing's expertise, customer base, information network, and know-hows in various solutions, **we aim to create a business scheme to realize a circular economy (CE)**. As the first step of this initiative, REVER CORPORATION entered into a comprehensive agreement with Mizuho Leasing Co., Ltd. for the treatment and recycling of the latter's properties.

New facility installation and upgrades

At REVER CORPORATION's Ichihara Plant, we plan to **install an RPF production line** that can mold and solidify urethane dust, such as insulation materials. Currently, we are making various adjustments and has applied for regulatory approval with the goal of commencing operations in April–June 2023.

At the Nasu Plant, we plan to **upgrade its dismantling line for waste home appliances**. In specific, we intend to reduce manual dismantling processes by utilizing the resin sorting line installed last year, and reduce workload using assisting equipment. It aims to put the upgraded dismantling line into operation in June 2023.

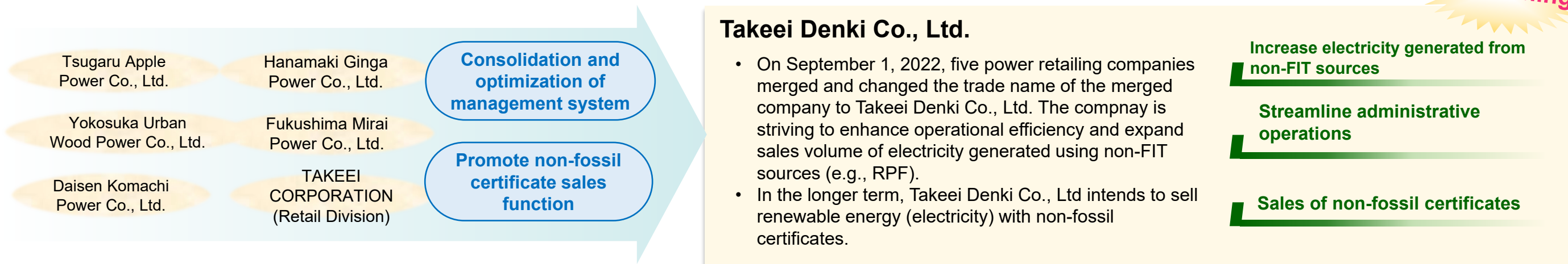
Through the installation of new lines and upgrades to existing ones, we will contribute to increasing the recycling rate of home appliances.



RPF molding machine

Effects of Merging Five Electric Power Retailers and Future Strategies

Boost earnings



Total annual output of TRE group's power plants substantially exceeds the annual power consumption of group companies (see Integrated Report 2022, p.75).

With an eye to introducing emissions trading

EU member countries and some states in North America have already introduced emissions trading, and we are certain that emissions trading will be crucial for Japan's environmental initiatives as well in the near future. We have joined the "[GX League](#)" (on December 30, 2022) to participate in emissions trading from the framework designing stage and drive green transformation (GX) of the overall socioeconomic system.

GX League was established to facilitate industry-academia-government collaboration of companies actively engaged in GX, and to promote discussions between these companies and other players in GX for the transformation of the overall socioeconomic system and experiments aimed at creating a new market.

In the "Basic Policy for the Realization of Green Transformation (GX)" released on January 22, 2023, the Japanese government, under the growth-driven carbon pricing concept, outlined its goal of investing over JPY150 trillion in GX in the next 10 years in collaboration with the private sector, and its intention to establish an emissions trading market and support the introduction of paid auctioning for power generation companies in phases.

We are able to reduce CO2 emissions through woody biomass power generation, and hence can obtain emission allowances. If emissions trading becomes a policy, we will be able to offer emission allowances to other companies and contribute to realizing a carbon-neutral society.

Thinning of Company-Owned Forest / TAKEEI Forestry Co., Ltd.

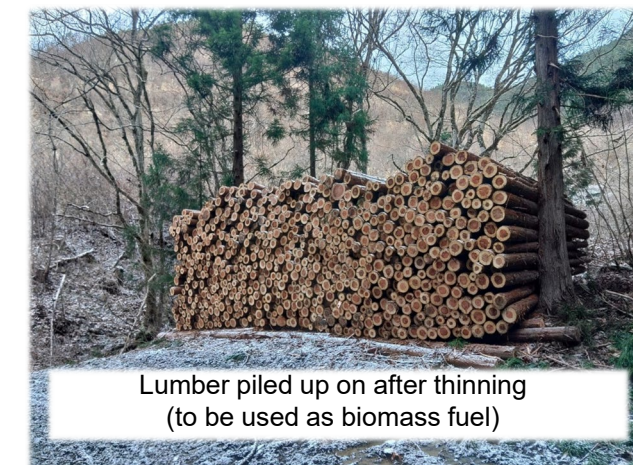
Based on the forest management plan devised in collaboration with the forecast cooperative of Hanamaki, TAKEEI Forestry Co, Ltd. has launched full-scale forestry operations, including thinning, in the forest it owns in Ohasamamachi, Hanamaki, Iwate Prefecture.

Of the branches, treetops, small trees, etc. gathered after forest thinning, those with a diameter of 18cm or above and are relatively straight are sold to local lumber mills and plywood factories for use as lumber or plywood, and those with a diameter of less than or greater than 18cm and are markedly bent are sent to Hanamaki Biochip Co., Ltd. to be used as biomass fuel. In either cases, byproducts or residues from forest thinning are delivered to their respective destinations through the local forest cooperative.

Several employees of TAKEEI Forestry Co., Ltd. and Hanamaki Biomass Power Generation Co., Ltd. have obtained Forestry Operations Planner certifications, enabling them to manage forests on behalf of forest owners. We plan to own more forests going forward.

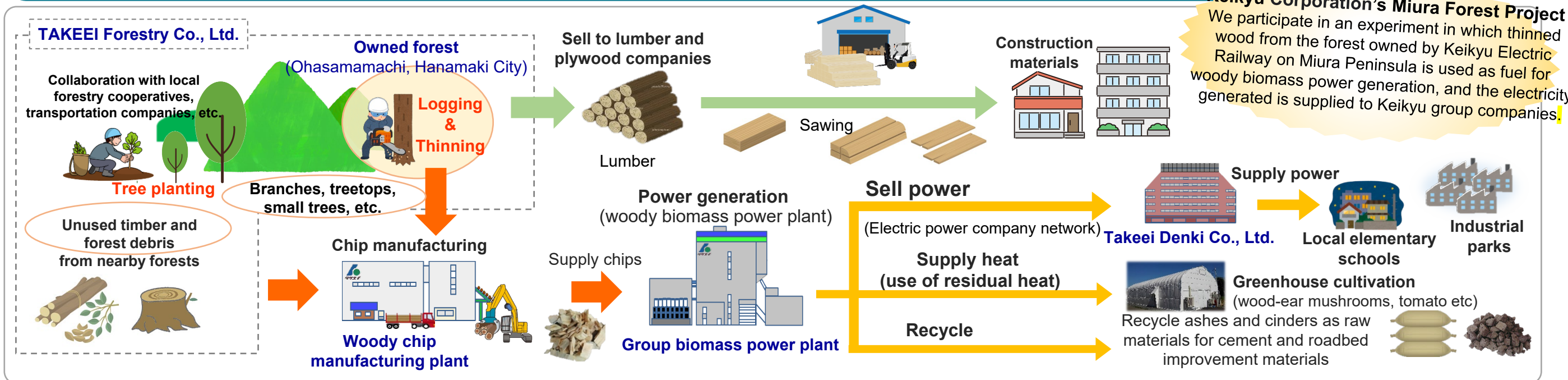


Cleared the work road



Lumber piled up on after thinning
(to be used as biomass fuel)

Integrated Business Flow of Woody Biomass Power Generation Business, Starting with TAKEEI Forestry Co., Ltd.



Keikyu Corporation's Miura Forest Project
We participate in an experiment in which thinned wood from the forest owned by Keikyu Electric Railway on Miura Peninsula is used as fuel for woody biomass power generation, and the electricity generated is supplied to Keikyu group companies.

We have created a business scheme spanning the entirety of power supply chain from the upstream to downstream, in which we procure fuel from TAKEEI Forestry Co, Ltd and stably supply power generated to customers through Takeei Denki Co., Ltd.

APPENDIX

Establishment of TRE HOLDINGS CORPORATION

Company Profile

Market Size and Macro Trends of Japan's Environmental Industry

Business Description

Resource Circulation Business Scheme

Growth Strategy (1) Extension of the recycling business towards the realization of a highly recycling-oriented society

Growth Strategy (2) Promotion of the energy business towards the realization of a carbon-free society

Challenges in the macro environment

Earth	Global warming Resource depletion Plastic pollution	Japan	Population decline Market contraction Aging infrastructure	Industry	Inefficient management Low reliability Succession issues
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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

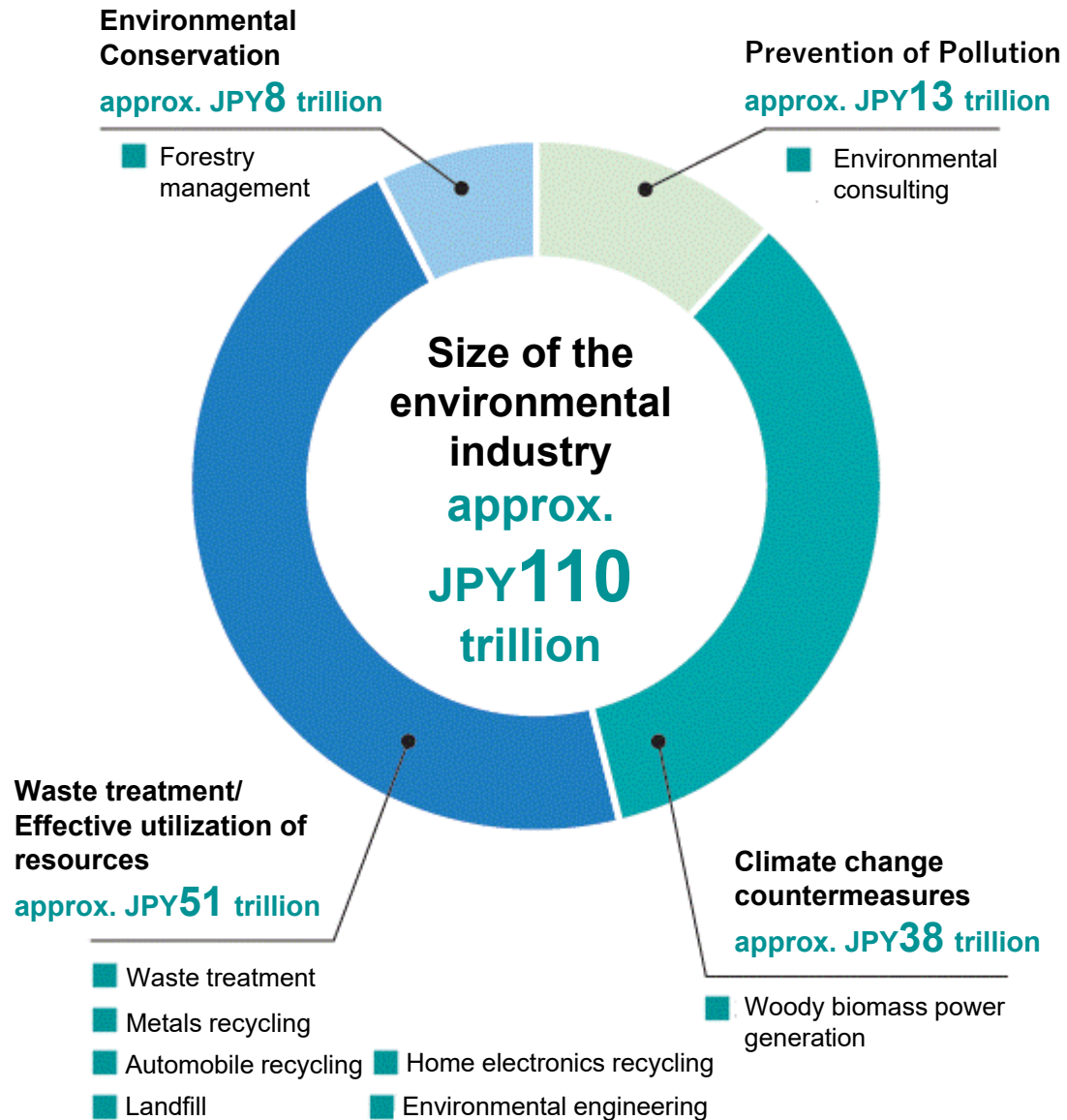
Developing new technologies
Enhancing the Recycling business
Promoting the Renewable Energy business
Preserving the Global Environment

Corporate Philosophy	To contribute to the preservation of the global environment.
Establishment	October 1, 2021
Headquarters	Chiyoda-ku, Tokyo
Representative Directors	Naoto Matsuoka, Chairman and CEO Mitsuo Abe, President and COO
Capital stock	JPY10.0 billion
Number of employees	2,172 employees (on a consolidated basis)
Group Businesses	Waste treatment and recycling, resource recycling, renewable energy, environmental engineering, environmental consulting
Subsidiaries, etc.	33 subsidiaries, 6 equity-method affiliates
Number of locations	64 locations in Tokyo metropolitan area as well as Tohoku, Hokuriku, Koshin and Kansai regions, 1 overseas location in Thailand
Key customers	Major construction companies, home builders, major steel companies, trading companies, etc.

As of End-December 2022

Market size of Japan's environmental industry

approx. JPY110 trillion



Source: "Report on the Size of the Environmental Industry Market and Employment" by the Environmental Industry Market Size Study Group, released June 2021 (2019 edition)

Macro trends in Japan's environmental industry

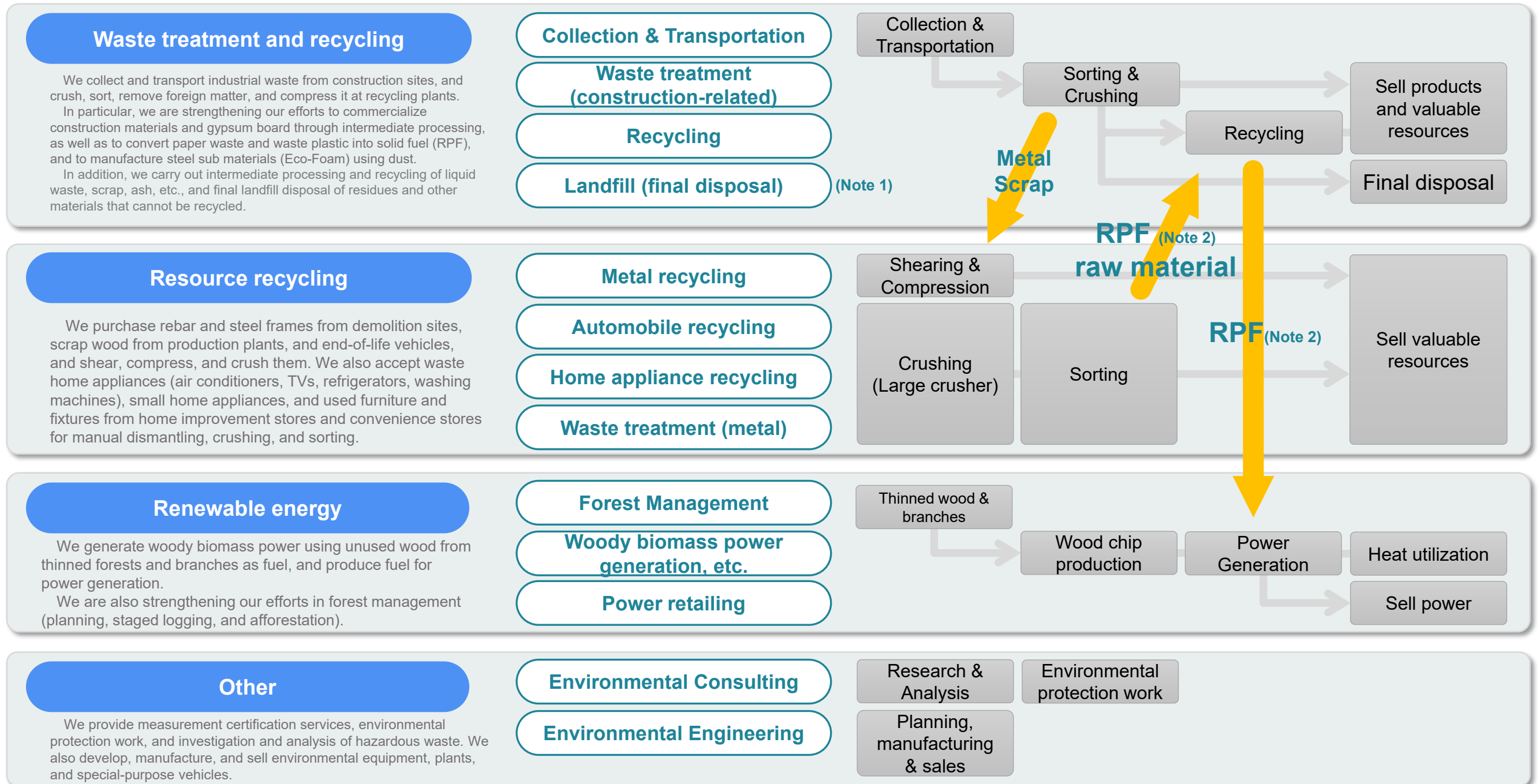
(June 2022 Ministry of the Environment statistics)

- The market shows high growth potential in the long term, despite the negative impact of the COVID-19 pandemic on each indicator YoY.
- The market size of Japan's environmental industry is estimated at JPY104 trillion, about 1.8 times that of 2000.
- The estimated scale of employment in Japan's environmental industry is about 2.5 million, about 1.4 times that of 2000.
- The value of exports from the environmental industry is estimated at JPY17 trillion, about 9.6 times that of 2000.
- The value of imports of the environmental industry is estimated at JPY5 trillion, about 9.3 times that of 2000.
- Added value in the environmental industry is estimated at JPY45 trillion, about 1.6 times that of 2000.
- The economic ripple effect of the environmental industry is estimated at JPY200 trillion, about 1.8 times that of 2000.

The Ministry of the Environment's circular economy process chart

(From the Ministry of the Environment's Central Environmental Council, August 25, 2022)

- **The goal is to increase the market size of businesses related to the circular economy from the current JPY50 trillion to more than JPY80 trillion by 2030.**



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.

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.

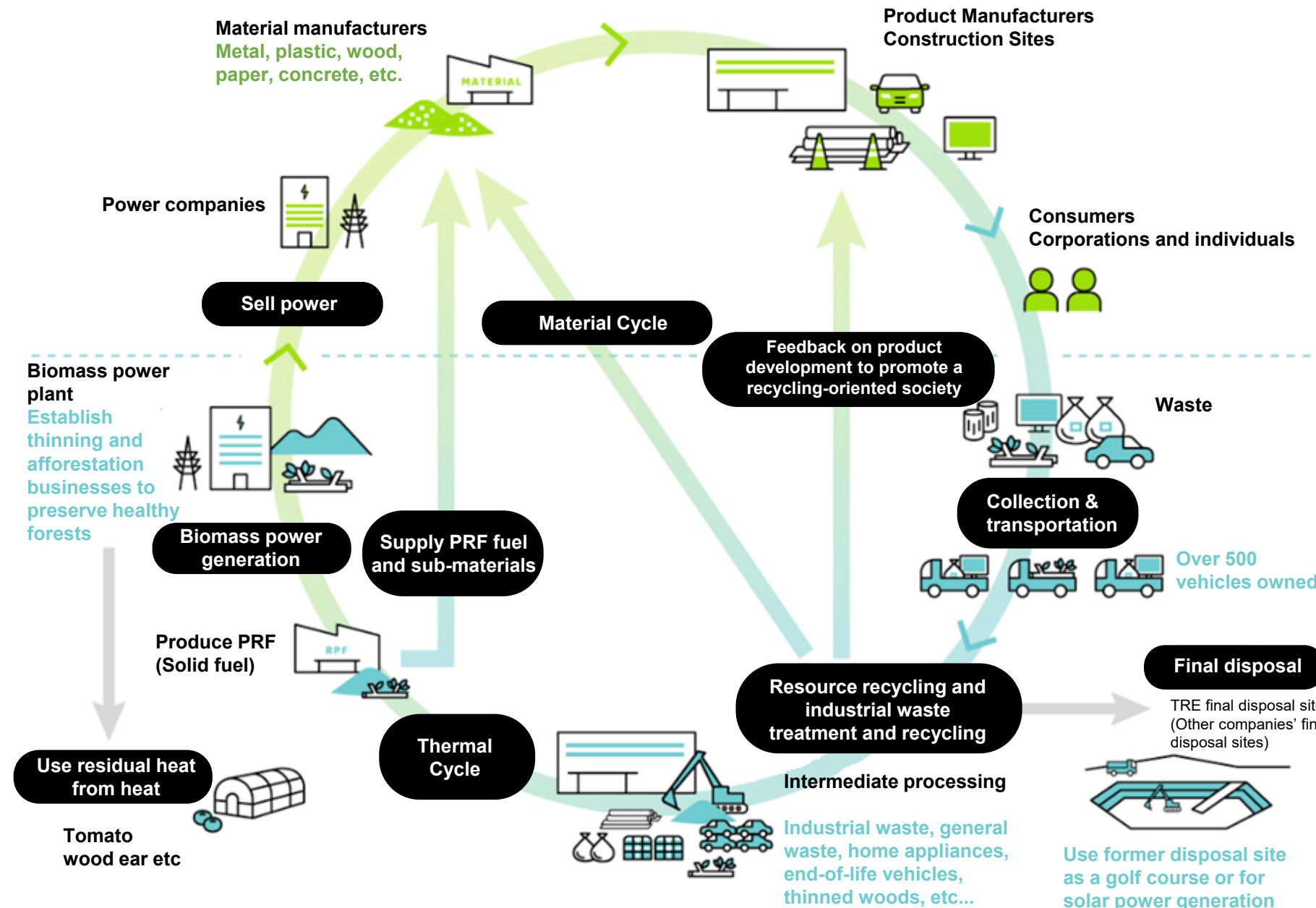
Group volume Appx. **2 million tons** per year

Intermediate processing and recycling facilities, etc. Appx. **60** locations

vehicles owned Appx. **500** vehicles

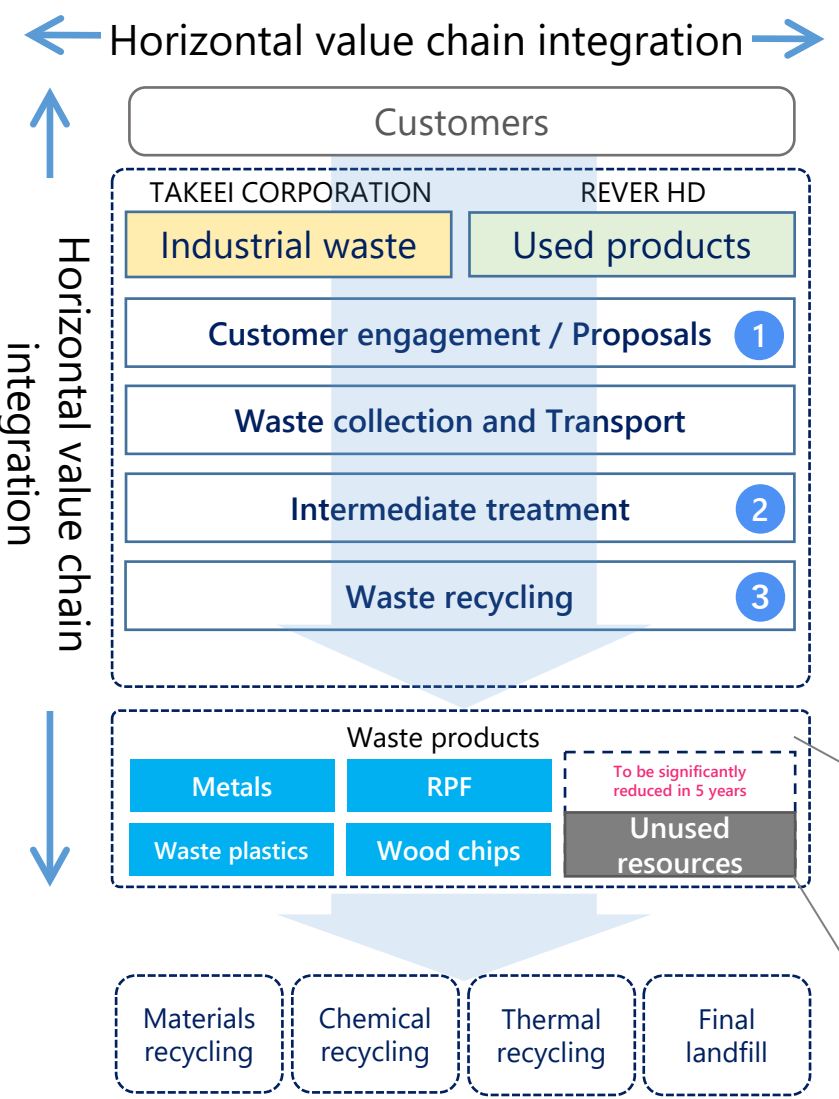
Number of large crushers **6** crushers in Kanto region

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

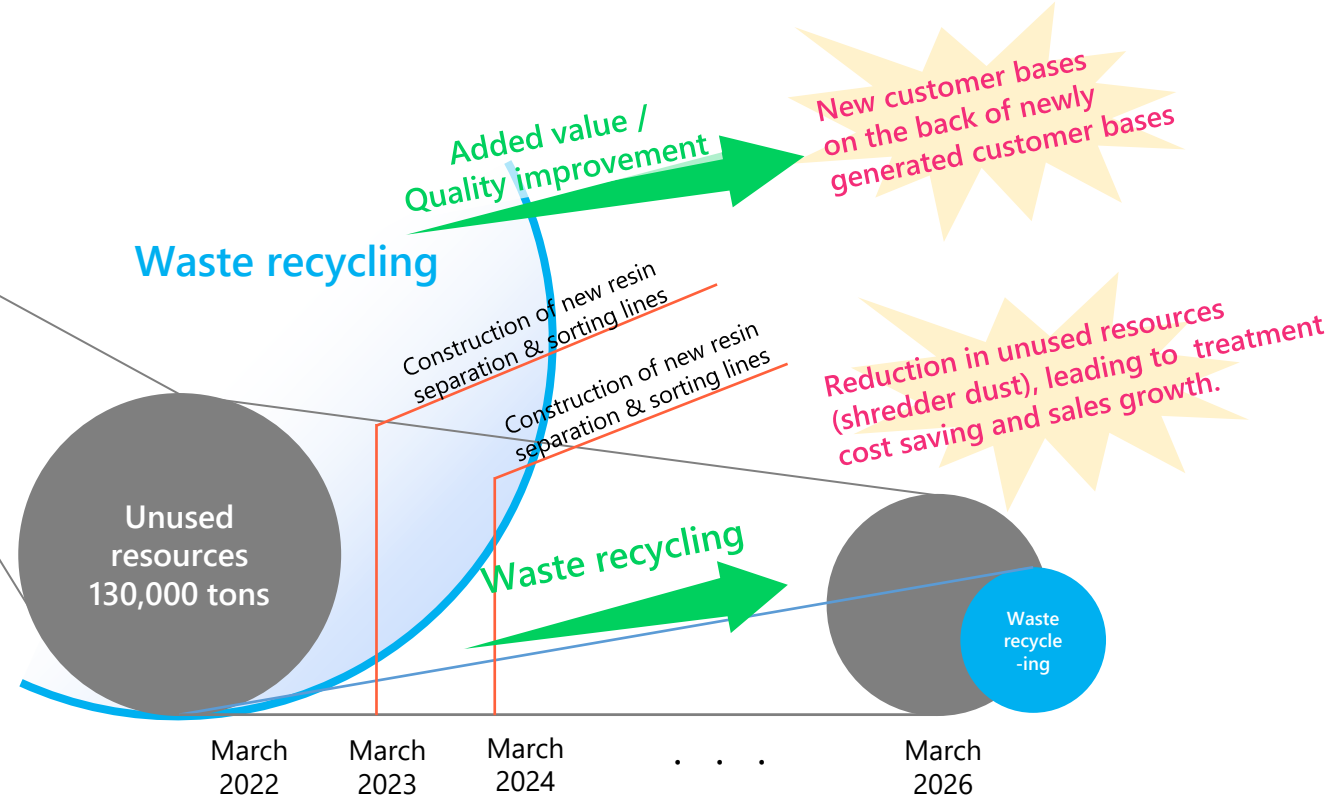


Generation of synergies by integrating and restructuring value chains

Extension of the recycling business



- Through mutual sharing of the two companies' years of accumulated expertise and insights, we are set to offer an integrated service, ranging from 'collection of discarded valuable resources and waste products' to 'recycling proposals' whilst 'improving the quality of service'. 1
- We are determined to press on with capital investment and technological development in an effort to 'add value to' waste products, and 'recycle unused resources (i.e. shredder dust)' on which the TRE Group has not fully capitalized.
 - We aim to step up a separation & sorting function in the intermediate treatment operation to increase the production of RPF (a high valued-added solid fuel for power generation, mainly made from waste plastics) and 'Eco-form' (a subsidiary material applied in the iron making process). 2
 - We are ready to adopt advanced research findings and technologies to drive plastic recycling and other resource recycling initiatives. 3



What is RPF?
 RPF (recycled plastic fuel) is a solid fuel mainly made from used paper and waste plastics. It is high in calories but releases fewer fossil.



Planned reinforced separation & sorting lines

Recycling unused resources

Extension of the recycling business

◆ RPF



We filter mixed waste for paper, textile and plastics. These are compressed and molded into a solid fuel material - 'RPF'. We plan to increase RPF production by applying this method to shredder dust among others.



Effective use of solid fuel for power generation (RPF)

RPF is a recycled material used to fuel biomass power generators and thermal recycling facilities. Among TRE Group companies, Green Power Ichihara Co., Ltd. and TAKEEI Green Recycling Co., Ltd.'s Yokosuka Plant use RPF to fuel their power generators (they are positioned as the final intergroup users).

The RPF production is expected to serve as a stable waste receiver for the new Group as well as a facilitator to recycle unused resources.

◆ Eco-form®



Dust residue contained in waste is collected with a dust collection system. The collected dust is then compressed and molded into a solid material by a compressor.

We are leveraging the production of 'Eco-form®' (a subsidiary material applied in the iron making process) to speed up process in 'resource recycling'.



An additive agent (forming suppressant) in the iron making 'converter'.

Eco-form is an additive agent used in the 'converter' that smelts iron ore. The agent prevents the slag from forming, helping produce high-quality iron. (TAKEEI Tokyo Plant already expanded its Eco-form production line in September 2020).

As each iron mill employs different quality standards, we are working on production of various added-value models to enhance the appeal of demand for recycled materials.

◆ Eco-flake



Waste carpet tiles are technically difficult to recycle, therefore many of them are discarded in landfill. In light of this, we have built a mill exclusively designed to recycle waste carpet tiles where the top textile layer is ripped off the bottom PVC layer, facilitating the recycling of this waste resource.



Recycling the PVC (polyvinyl chloride) layer to produce a reclaimed material. Eco-flake:



Waste carpet tiles are recycled into reclaimed materials, capable of meeting the high quality requirements of carpet manufacturers.

We pursue further technological development and higher quality to drive forward resources recycling i.e. recycled plastics.

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

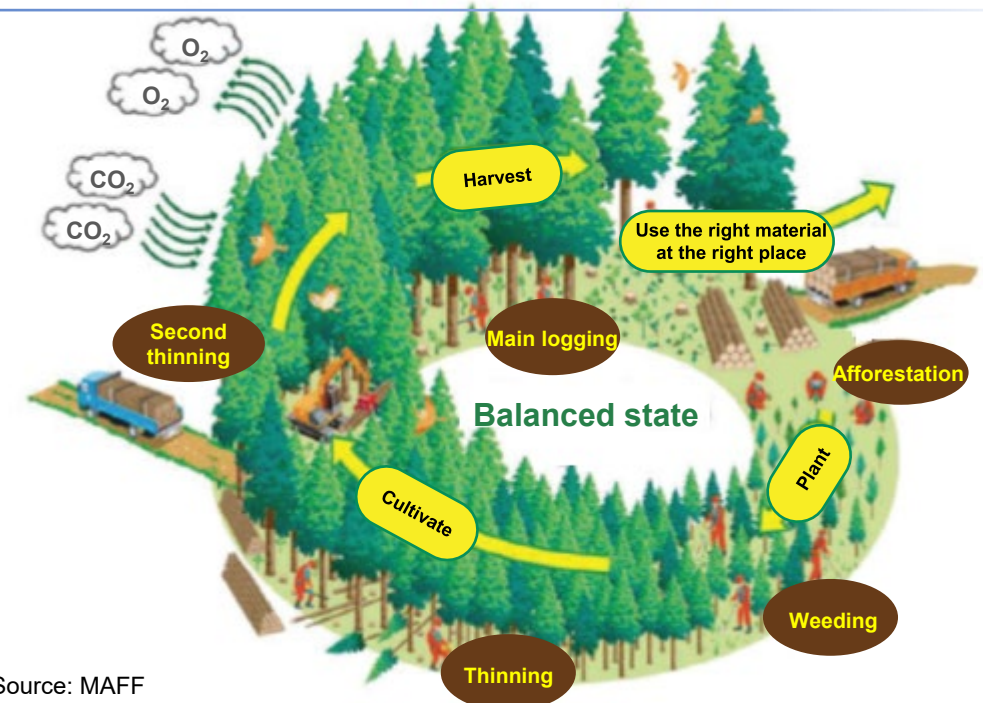
Renewable Energy business

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. (**Five** electric power retailers merged 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.

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

Annual power generated: Appx. 663,775 MWh



Source: MAFF

Tsugaru Biomass Power Generation Co., Ltd.
Tsugaru Eneveg

Hirakawa City, Aomori Prefecture

Target area of forest management

TAKEEI Forestry Co., Ltd.

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

Hanamaki City, Iwate Prefecture

Daisen Biomass Power Generation Co., Ltd.

Daisen City, Akita Prefecture

Tamura Biomass Power Generation 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 Forestry Co., Ltd.

Takeei Denki Co., Ltd.

Minato-ku, Tokyo

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

Yokosuka City, Kanagawa Prefecture

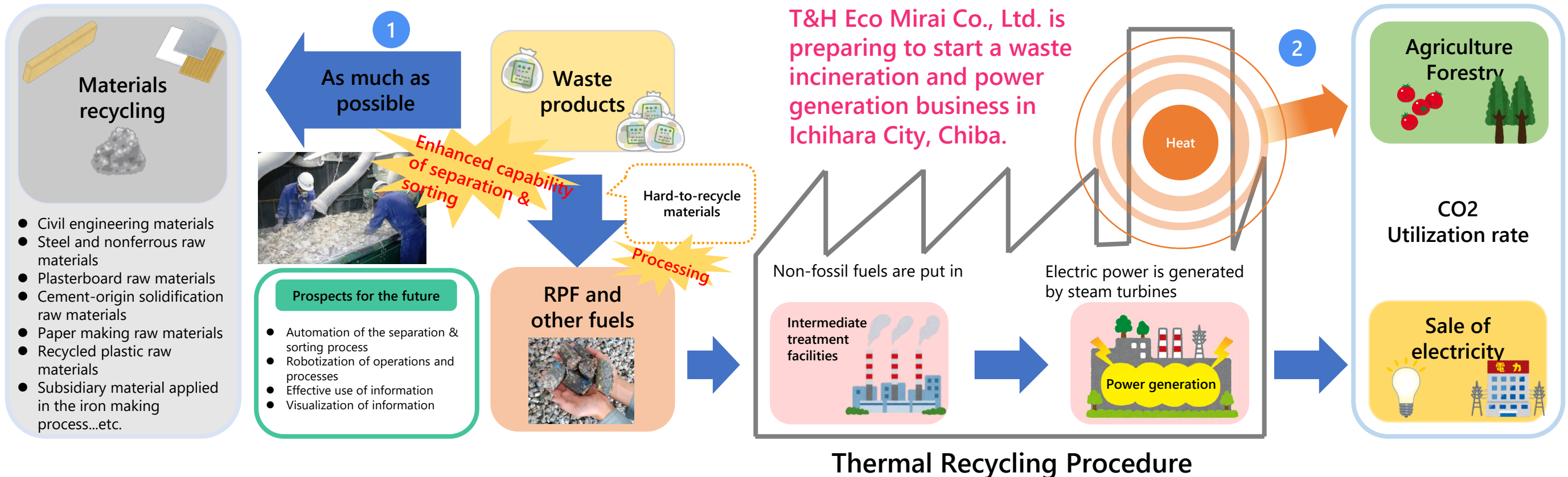
Environmental Engineering & Environmental Consulting businesses

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.

Energy recovery business using the thermal recycling system

Promotion of the energy business

- We continue to prioritize material recycling operations to support resource recycling. Meanwhile, for items difficult to recycle, we plan to commence possession of incineration facilities with a high-efficiency power generation function (able to generate thermal energy qualified for a non-fossil value certificate), with due consideration of local conditions.
 - To conduct a rigorous material recycling operation, we will ramp up the separation & sorting function which is carried out prior to material deliveries. 1
- Amidst increasingly serious global warming, the effective use of hard-to-recycle waste materials should help control fossil fuel consumption (the source of CO2 emissions).
 - The heat arising from power generation can be of secondary use in agriculture or forestry. 2
- In the long-term, we are positively discussing the potential commercialization of effective use of CO2 emitted by waste incineration and other opportunities. To accomplish this purpose, we may seek cross-industrial collaboration.



- 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。