



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 second quarter of the Fiscal Year ending March 31, 2023

November 14, 2022

Summary of Consolidated Results

P3

1H FY03/23 Results

P4

- ✓ Market Environment for Construction Waste
- ✓ Market Environment for Resource Recycling
- ✓ 1H FY03/23 Net Sales, Operating Profit, and Operating Profit Margin by Segment (Cumulative)
- ✓ Cash Flows
- ✓ Capital Expenditures, Depreciation and Amortization of Goodwill

Medium-Term Business Plan

P10

- ✓ Market Size and Macro Trends of Japan's Environmental Industry
- ✓ Progress Versus the Medium-Term Management Plan and Trends in 2H of the Plan's Second Year
- ✓ Quarterly Results and Three-Year Q2 Comparison by Segment
- ✓ Quarterly Sales Performance and Future Measures

TOPICS

P15

- ✓ Regarding TRE Integrated Environmental Business (Provisional Name)
- ✓ Waste Treatment & Recycling: Glass Recycling / Acquisition of Patent for Carpet Tile Recycling Business / Change in the Completion Date of the Monzen Waste Disposal Facility (Provisional Name)
- ✓ Resource Recycling : Group Optimization / Circular Economy Initiatives
- ✓ Renewable Energy : Measures to Improve Profitability and Promote Stable Operation at Power Generation Facilities / Plans for Periodic Repairs at Each Power Plant in 2H / Effects of the Merger of Five Electric Power Retailers and Future Strategies / Integrated Business Flow of Woody Biomass Power Generation Business, Starting with TAKEEI Forestry Co., Ltd.
- ✓ One Year Since the Merger : Progress in Demonstrating Synergies / Promoting Sustainability Management

APPENDIX

P26

- ✓ Establishment of TRE HOLDINGS CORPORATION
- ✓ Company Profile
- ✓ 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

Summary of Consolidated Results

	FY03/22 Full-year Results (Note 1)	FY03/23						
		1Q Results	2Q Results	1H Results	1H Forecast		Full-year Forecast	
					Progress		Progress	
Net sales	68,234	22,842	21,367	44,210	45,500	97.2%	94,200	46.9%
Operating profit	7,659	1,204	1,890	3,094	3,800	81.4%	9,300	33.3%
Ordinary profit	7,547	1,300	1,837	3,137	3,800	82.6%	9,300	33.7%
Profit attributable to owners of parent	4,742	815	1,435	2,250	2,400	93.8%	5,900	38.1%

* 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 1H financial results since the establishment of the Company.

- Operating profit in 1H only reached 81.4% of the 1H forecast and 33.3% of the full-year forecast. However, operating profit increased 157% (+JPY685 million) from Q1 to Q2, despite a decline in net sales.
- Notably, the deficit in the renewable energy business, which had a large segment operating loss (-JPY601 million) in Q1, was almost completely eliminated in Q2.
- **We have left the full-year forecast unchanged** in light of our 2H outlook, which takes into account current order trends and other factors.

1H FY03/23 Results

Market Environment for Construction Waste

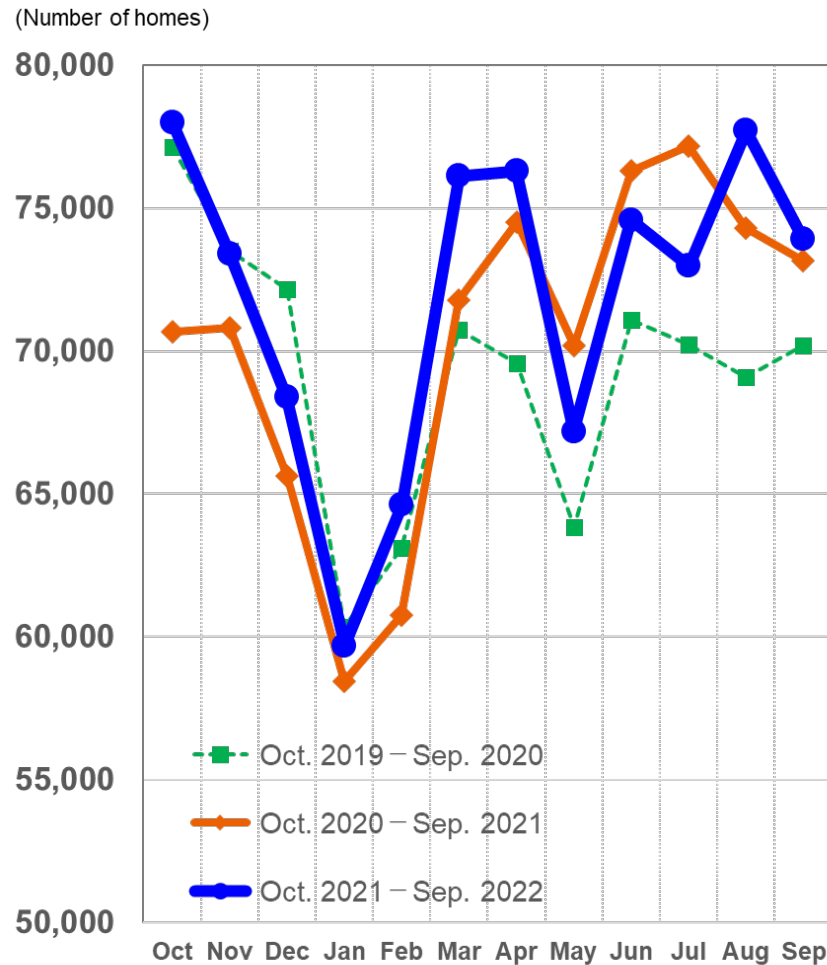
Market Environment for Resource Recycling

1H FY03/23 Net Sales, Operating Profit, and Operating Profit Margin by Segment (Cumulative)

Cash Flows

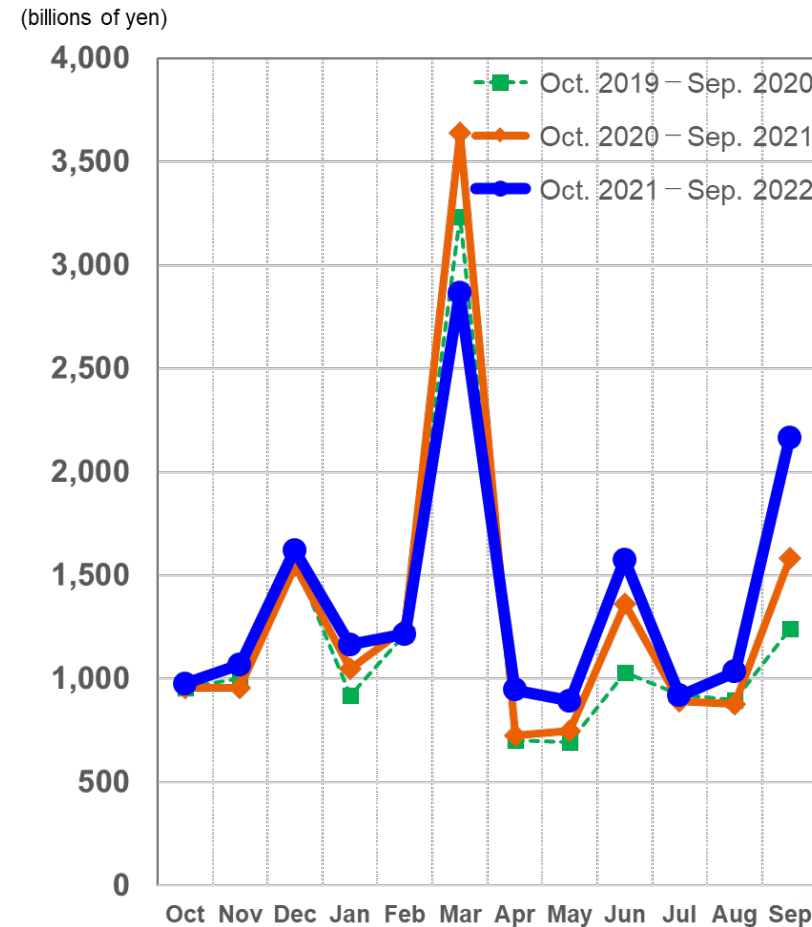
Capital Expenditures, Depreciation and Amortization of Goodwill

■ Number of new housing starts



- ◆ New housing starts showed a 4.6% YoY increase in August, the first in four months, and remained steady in September with a 1.0% YoY increase. The continuing sharp rise in material prices is a cause for concern.

■ Construction orders (50 largest companies)



- ◆ Although monthly construction orders have been up YoY for six consecutive months, there are concerns about soaring material prices and a deteriorating environment for orders.

■ Long-term trends in construction waste

- ◆ Construction waste accounts for approximately 20% of all industrial waste (approximately 400 million tons), both in terms of volume generated and final disposal.
- ◆ Enforcement of proper separation and disposal of construction materials containing hazardous substances such as asbestos is being strengthened.
- ◆ 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.

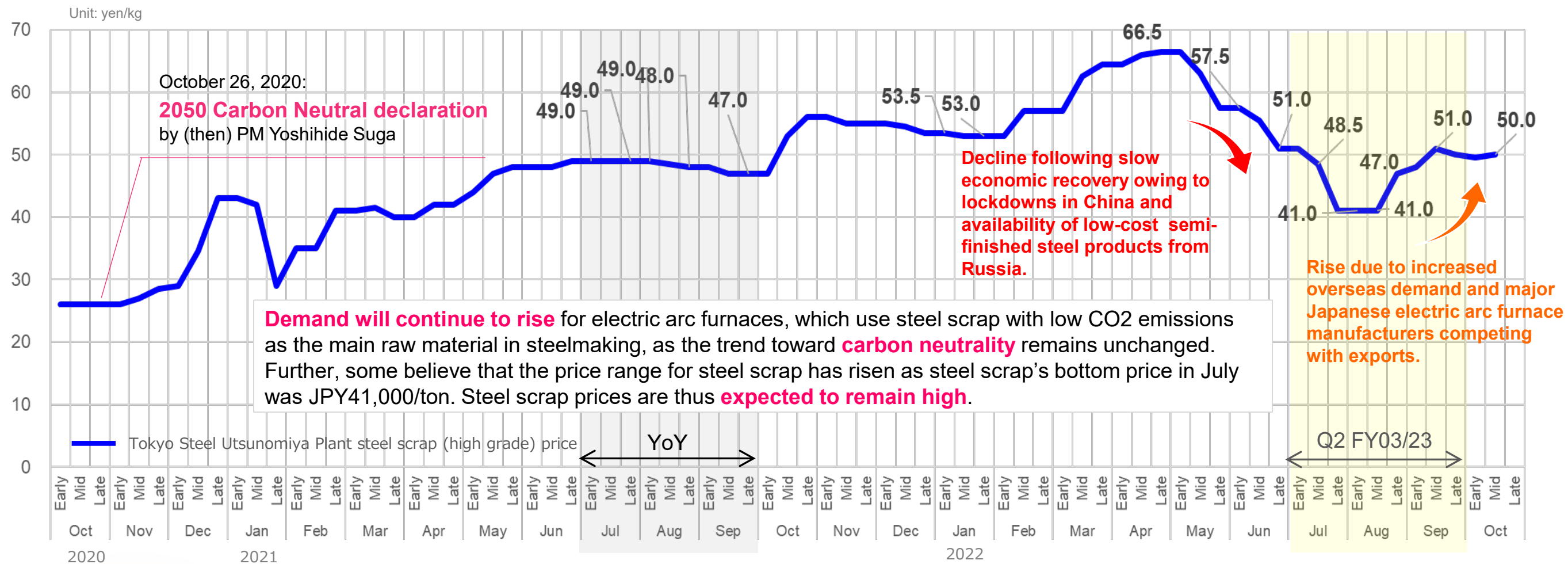
Waste Treatment and Recycling Business

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.

(Source: The Ministry of Land, Infrastructure, Transport and Tourism)

■ Steel Scrap Market

After peaking in late April 2022, steel scrap prices have continued to decline, falling from JPY51,000/ton (Tokyo Steel Utsunomiya Plant high grade price) at the beginning of July to JPY41,000/ton at the end of July. However, the price recovered to JPY50,000/ton at the end of September due to an increase in overseas demand and major Japanese electric arc furnace manufacturers competing with exports.



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.

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

(millions of yen)

	1H FY03/23 Results		
	Net sales	Operating profit	Operating profit margin
Consolidated	44,210	3,094	7.0%
Waste treatment and recycling	12,138	1,884	15.5%
Collection & Transportation / Waste treatment (Note 2)	8,158	1,228	15.1%
Recycling (Note 2)	2,696	451	16.7%
Landfill (final disposal) (Note 2)	1,411	174	12.3%
Resource recycling (Note 3)	22,872	1,634	7.1%
Renewable energy (Note 4)	6,455	-11	—
Other businesses (Note 5)	3,204	21	0.7%
Adjustments (Note 6)	-461	-435	—

Note 1: YoY comparisons are not provided as this is the first Q2 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 JPY90 million of goodwill related to the business integration.

Note 4: The renewable energy business includes JPY189 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 -JPY435 million include -JPY449 million in companywide expenses and -JPY14 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 adverse conditions such as soaring material prices, construction schedule delays, and rising fuel costs, the collection & transportation and waste treatment business promoted **thorough collection of valuable resources**, as well as **value-adding and productization of transported materials**.
- The recycling and landfill businesses promoted recycling and safe and proper disposal in our areas of expertise, despite a YoY decrease in the number of large spot projects. The **waste gypsum board recycling business in the Tokyo metropolitan area has remained strong**.

Resource recycling

- Although affected by a decrease in end-of-life vehicle recycling, restricted operations due to the reconstruction of REVER CORPORATION's Fujisawa Plant, and an increase in depreciation costs, we will strive to **secure a spread** by managing inventories versus fluctuations in the steel scrap market. **Earnings grew steadily** during the period from July to September due to **thorough recycling** with the addition of new facilities.

Renewable energy

- In power generation, although we struggled to secure wood chips in some areas, we successfully achieved **continuous stable operations** and **secured earnings**. We promoted improvements at our power plants for 2H.
- In electric power retail, **operating profit increased significantly** in Q2 as we continued to expand the use of non-FIT power sources such as RPF (solid fuels) and sold electricity at market prices.

(millions of yen)

	1H FY03/23
Cash flows from operating activities	3,383
Cash flows from investing activities	-4,167
Cash flows from financing activities	1,075
Net increase (decrease) in cash and cash equivalents	291
Cash and cash equivalents at beginning of period	24,014
Cash and cash equivalents at end of period	24,305

Free cash flows

Free cash flows for 1H resulted in a net outflow of JPY784 million, as cash outflows for the purchase of fixed assets, income taxes paid, and the purchase of shares in JW Glass Recycling Co, Ltd. exceeded pre-tax profit.

Net cash provided by financing activities amounted to JPY1,075 million, mainly due to proceeds from borrowings, which were partly offset by dividend payments.

(millions of yen)

Breakdown of major items

Cash flows from operating activities		1H FY03/23
Profit before income taxes		3,356
Depreciation		2,719
Amortization of goodwill		284
Decrease (increase) in trade receivables and contract		1,188
Income taxes paid		-2,126
Cash flows from investing activities		1H FY03/23
Purchase of non-current assets		-2,942
Purchase of shares of subsidiaries resulting in change		-1,412
Cash flows from financing activities		1H FY03/23
Increase (decrease) in short-term borrowings		2,841
Redemption of bonds		-298
Proceeds from long-term borrowings		2,600
Repayments of long-term borrowings		-2,571
Dividends paid		-1,292

Breakdown of major items

Payments for the purchase of fixed assets (under cash flows from investing activities) include investments in renovations and improvements of existing facilities.

(millions of yen)

	FY03/22 Full-year Results (Note 1)	FY03/23 1H Results	FY03/23 Full-year Forecast
Capital expenditures (Note 2)	4,395	2,942	12,547
Depreciation	5,016	2,719	6,189
Amortization of goodwill (Consolidated)	466	284	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.

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

		1H Actual	Plan
Monzen Clean Park Co., Ltd.	Disposal site development work	JPY110 million	JPY3.68 billion
TAKEEI CORPORATION	Renewal of equipment and vehicles, expansion of disposal	JPY860 million	JPY3.50 billion
Shinshu Takeei Co., Ltd.	Renewal of equipment and vehicles	JPY150 million	JPY490 million
REVER CORPORATION	Reinforcement of sorting lines	JPY80 million	JPY410 million
Green Power Ichihara Co., Ltd.	Replacement of machine parts, etc.	JPY260 million	JPY310 million
Fuji Car Manufacturing Co., Ltd.	Renewal of equipment and software	JPY40 million	JPY300 million

- The target for the completion of construction of Monzen Clean Park Co., Ltd.'s new controlled final waste disposal facility has been extended from November 2022 to the end of March 2023 (see p. 20).
- TAKEEI CORPORATION is moving forward with procedures to obtain permission to begin construction of the Narita Stable Landfill Expansion Project. Installation of **equipment to improve the quality of transported materials** at the SP building of the Kawasaki Recycling Center is **scheduled for completion in December**. We are aiming to complete pre-operational administrative inspections by the end of the year to begin **full-scale operation in FY03/24**.
- The **resin sorting lines** at REVER CORPORATION's Nasu Plant **started operation in August**. Meanwhile, **sorting lines for post-shear dust** at the Funabashi Plant **started operation in September**.

Medium-Term Business Plan

Market Size and Macro Trends of Japan's Environmental Industry

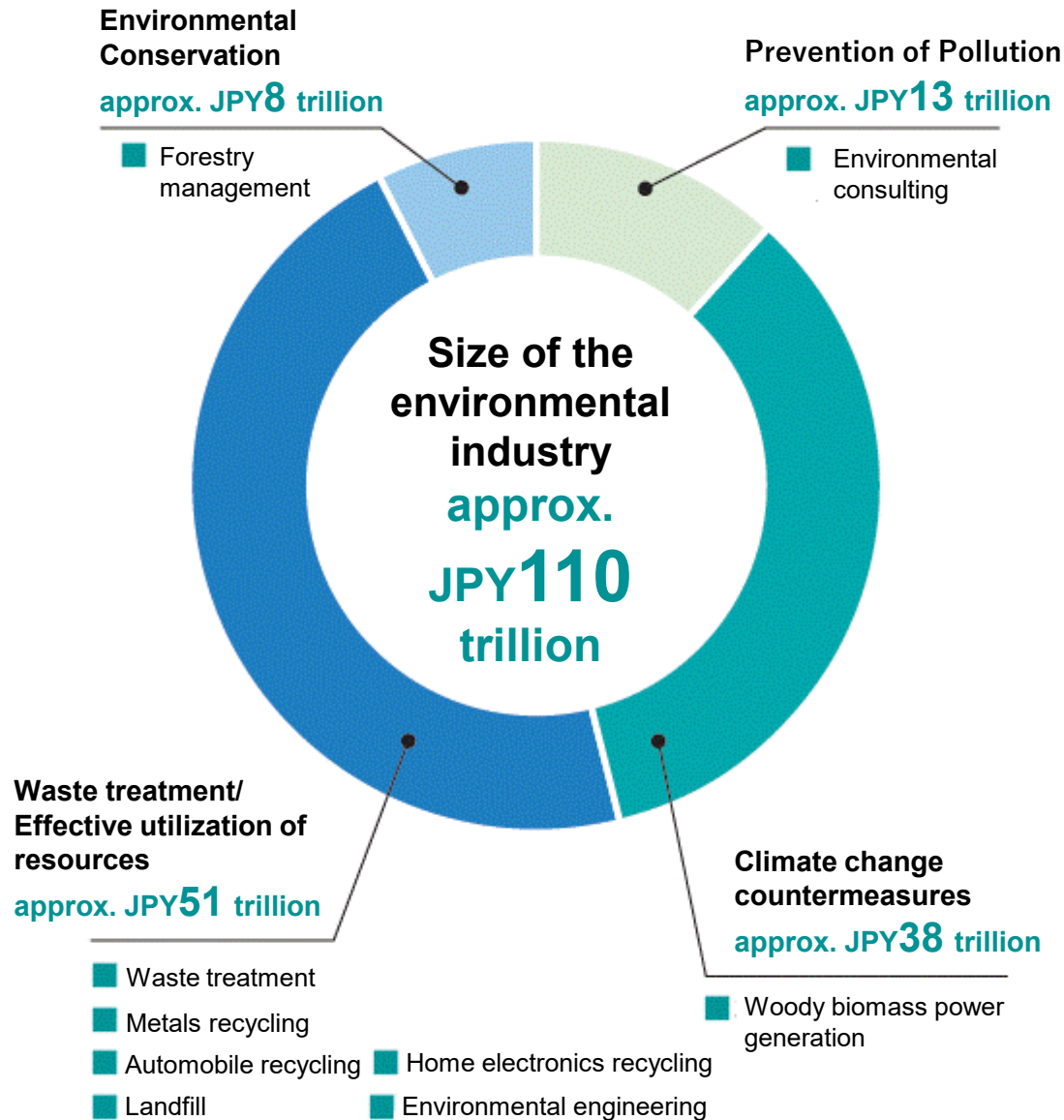
Progress Versus the Medium-Term Management Plan and Trends in 2H of the Plan's Second Year

Quarterly Results and Three-Year Q2 Comparison by Segment

Quarterly Sales Performance and Future Measures

Market size of Japan's environmental industry

approx. JPY110 trillion



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.**

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)

Progress Versus the Medium-Term Management Plan and Trends in 2H of the Plan's Second Year

(millions of yen)

	First year of Medium-term plan (FY03/22) (Note 1)			Second year of Medium-term plan (FY03/23)			Third year of Medium-term plan (FY03/24)
	Full-year Results (Note 2)	Revised Full- year Plan (Note 2)	Progress	1H Results (Note 2)	Revised Full- year Plan (Note 2)	Progress	Revised Full- year Plan (Note 2)
Net sales	90,584	89,700	101.0%	44,210	94,200	46.9%	98,000
Operating profit	10,326	10,100	102.2%	3,094	9,300	33.3%	10,150
Operating profit margin	11.4%	11.3%	–	7.0%	9.9%	–	10.4%
Profit attributable to owners of parent	7,248	6,930	104.6%	2,250	5,900	38.1%	6,440
Earnings per share (Note 3)	JPY141.1	JPY131.7	107.1%	JPY43.8	JPY114.8	-	JPY125.3

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, JPY45 million for Q1 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.

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

- Although the Company fell short of the 1H plan due to a decrease in unit prices and a decrease in the supply of end-of-life vehicles in Q2, the market price of steel scrap rebounded to JPY41,000/ton, and has remained at a high level. We will recover in 2H thanks to the addition of new facilities that allow the recovery of higher amounts of valuable resources through thorough recycling and the reduction of dust (residue).

Renewable energy

- In addition to achieving continual growth in earnings seen in Q2, we will continue to strengthen the stable operation system of its woody biomass power plant, and promote management efficiency and secure profits in the electric power retail through Takeei Denki Co., Ltd.

Quarterly Results and Three-Year Q2 Comparison by Segment

(millions of yen)

		FY03/21			FY03/22			FY03/23				
		1H Apr. 2020 - Sep.2020	2H Oct. 2020 - Mar. 2021	Full-year Apr. 2020 - Mar.2021	1H Apr. 2021 - Sep.2021	2H Oct. 2021 - Mar. 2022	Full-year Apr. 2021 - Mar.2022	Q1 Apr. 2022 - Jun. 2022	Q2 Jul. 2022 - Sep. 2022	1H Apr. 2022 - Sep.2022	YoY	
Consolidated	Net sales	32,926	40,543	73,470	43,426	47,156	90,584	22,842	21,367	44,210	+1.8%	
	Operating profit	2,197	4,530	6,727	4,842	5,483	10,326	1,204	1,890	3,094	-36.1%	
	Operating profit margin	6.7%	11.2%	9.2%	11.2%	11.6%	11.4%	5.3%	8.8%	7.0%	-	
Waste treatment and recycling	Net sales	11,679	13,058	24,738	12,224	12,922	25,146	5,893	6,245	12,138	-0.7%	
	Operating profit	1,206	2,261	3,468	2,234	2,879	5,113	917	967	1,884	-15.7%	
	Operating profit margin	10.3%	17.3%	14.0%	18.3%	22.3%	20.3%	15.6%	15.5%	15.5%	-	
	Collection & Transportation / Waste treatment (Note 1)	Net sales	8,546	9,437	17,983	8,370	9,028	17,399	4,011	4,146	8,158	-2.5%
		Operating profit	736	1,497	2,233	1,141	1,939	3,080	553	674	1,228	+7.6%
		Operating profit margin	8.6%	15.9%	12.4%	13.6%	21.5%	17.7%	13.8%	16.3%	15.1%	-
	Recycling (Note 1)	Net sales	2,087	2,320	4,408	2,398	2,631	5,029	1,241	1,454	2,696	+12.4%
		Operating profit	258	403	662	715	564	1,279	251	200	451	-36.9%
		Operating profit margin	12.4%	17.4%	15.0%	29.8%	21.4%	25.4%	20.2%	13.8%	16.7%	-
	Landfill (final disposal) (Note 1)	Net sales	1,326	1,619	2,946	1,535	1,591	3,127	715	696	1,411	-8.1%
		Operating profit	203	341	544	365	346	711	97	76	174	-52.3%
		Operating profit margin	15.3%	21.1%	18.5%	23.8%	21.7%	22.7%	13.6%	10.9%	12.3%	-
Resource recycling (Note 2)	Net sales	13,248	18,159	31,408	22,350	24,067	46,418	13,009	9,862	22,872	+2.3%	
	Operating profit	456	2,204	2,660	2,667	2,787	5,454	1,163	471	1,634	-38.7%	
	Operating profit margin	3.4%	12.1%	8.5%	11.9%	11.6%	11.7%	8.9%	4.8%	7.1%	-	
Renewable energy (Note 3)	Net sales	5,162	6,295	11,457	6,065	6,551	12,617	2,610	3,845	6,455	+6.4%	
	Operating profit	405	-71	334	-145	-160	-305	-610	599	-11	-	
	Operating profit margin	7.8%	—	2.9%	—	—	—	—	15.6%	—	-	
Other	Net sales	3,303	3,524	6,828	3,174	3,928	7,102	1,570	1,633	3,204	+0.9%	
	Operating profit	199	149	349	82	358	441	-27	48	21	-74.4%	
	Operating profit margin	6.0%	4.2%	5.1%	2.6%	9.1%	6.2%	—	2.9%	0.7%	-	
Adjustments	Net sales	-467	-494	-962	-388	-312	-700	-241	-218	-461	-	
	Operating profit	-71	-13	-85	4	-381	-376	-238	-195	-435	-	

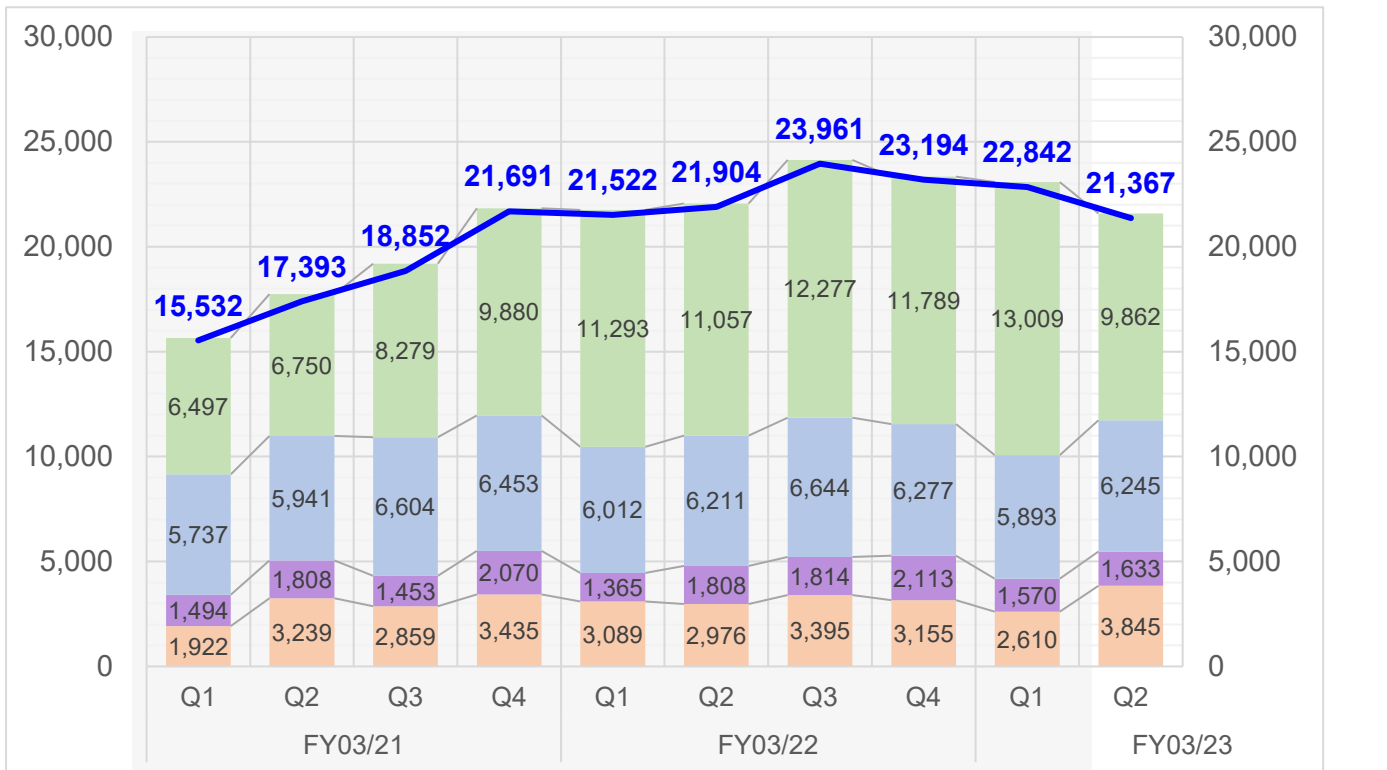
Note 1: No segment adjustments have been made for subsegments

Note 2: Operating profit for the resource recycling business includes goodwill (JPY90 million each for 2H FY03/22, and 1H FY03/23) related to the business integration.

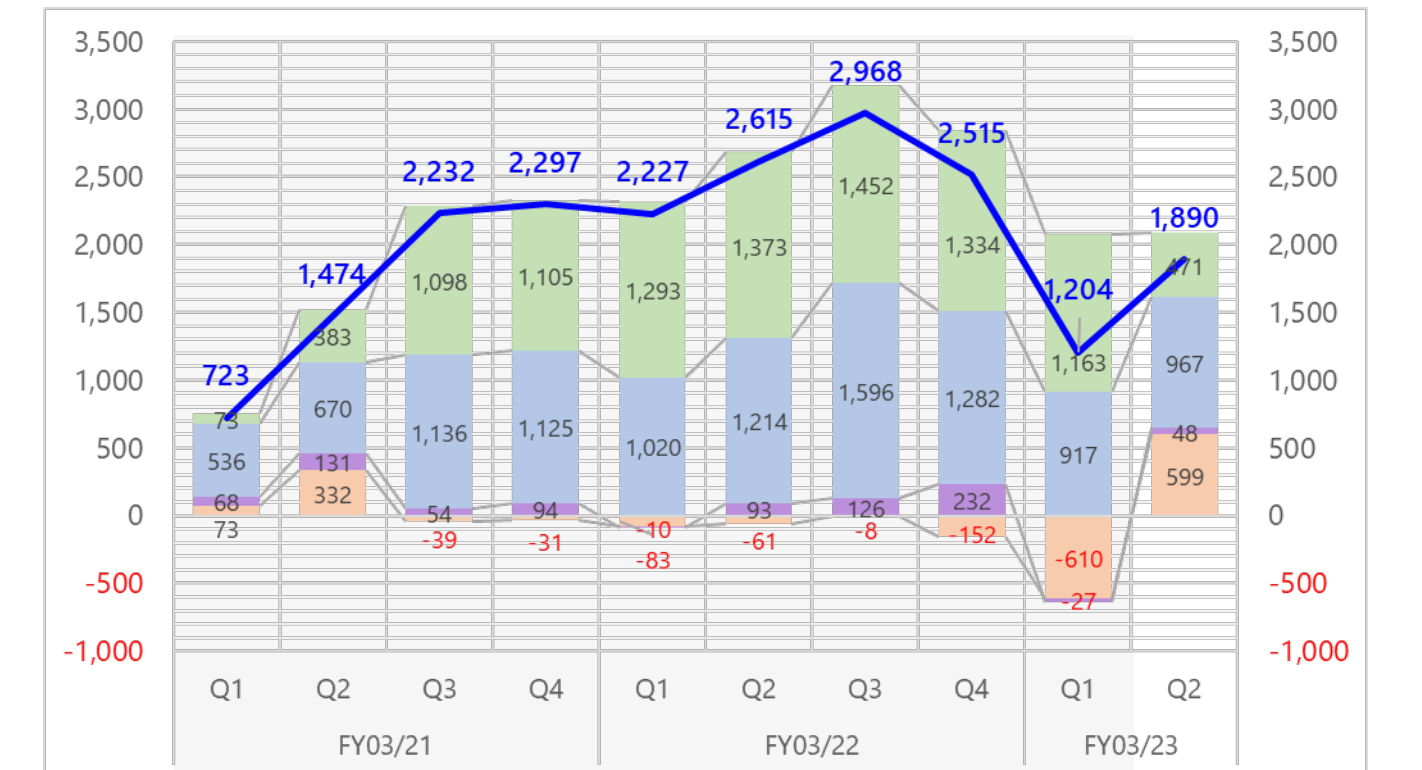
Note 3: Operating profit for the renewable energy business includes goodwill (JPY294 million in FY03/21, JPY376 million in FY03/22, and JPY189 million in 1H FY03/23) associated with the acquisition of Green Power Ichihara Co., Ltd.

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 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 thoroughly implement measures to improve profitability at each of our six power plants. In electric power retail, we will continue to reduce costs following the consolidation of the five electric power retail retailers and continue to use non-FIT power sources such as RPF. We will also promote collection of unused timber such as thinned wood through TAKEEI Forestry Co., Ltd.

TOPICS

Regarding TRE Integrated Environmental Business (Provisional Name)

Waste Treatment & Recycling : Glass Recycling / Acquisition of Patent for Carpet Tile Recycling Business / Change in the date of the Monzen Waste Disposal Facility (Provisional Name)

Resource Recycling : Group Optimization / Circular Economy Initiatives

Renewable Energy : Measures to Improve Profitability and Promote Stable Operation at Power Generation Facilities / Plans for Periodic Repairs at Each Power Plant in 2H

: Effects of the Merger of Five Electric Power Retailers and Future Strategies / Integrated Business Flow of Woody Biomass Power Generation Business, Starting With TAKEEI Forestry Co., Ltd.

One Year Since the Merger : Progress in Demonstrating Synergies / Promoting Sustainability Management

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

In the global trend toward the decarbonization of society, there is increasing demand for the resource recycling of waste plastics and other resources.

We will further refine our recycling technologies and establish new business schemes.

We will start operation at facilities and plants on the **117,000 m²** in land of our existing group sites **from 2025 to 2027**, aiming for annual sales of **JPY12 billion** when full-scale operation begins. We expect to employ **150 new workers** and **invest a total of JPY30 billion**.

We will also link **Green Power Ichihara Co., Ltd.**, which generates electricity from woody biomass in the vicinity, and **REVER CORPORATION's Ichihara Plant**, which recycles end-of-life vehicles and waste home appliances, to this structure, aiming to achieve synergy through integrated business development.

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

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

Established T&H Eco Mirai Co. Ltd. in a favorable location in the Tokyo metropolitan area to ensure stable operations with high-efficiency power generation functions.

(2) Waste incineration and power generation business

Internalize/upgrade the recovery of useful metal resources.

(3) Advanced sorting of metal resources

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

(4) Advanced sorting and recycling of waste plastics

Collaboration with Ichihara, Chiba Prefecture

An "SDGs Future City"

With the understanding and cooperation of the government and local residents, we will further contribute to the development of the local community.

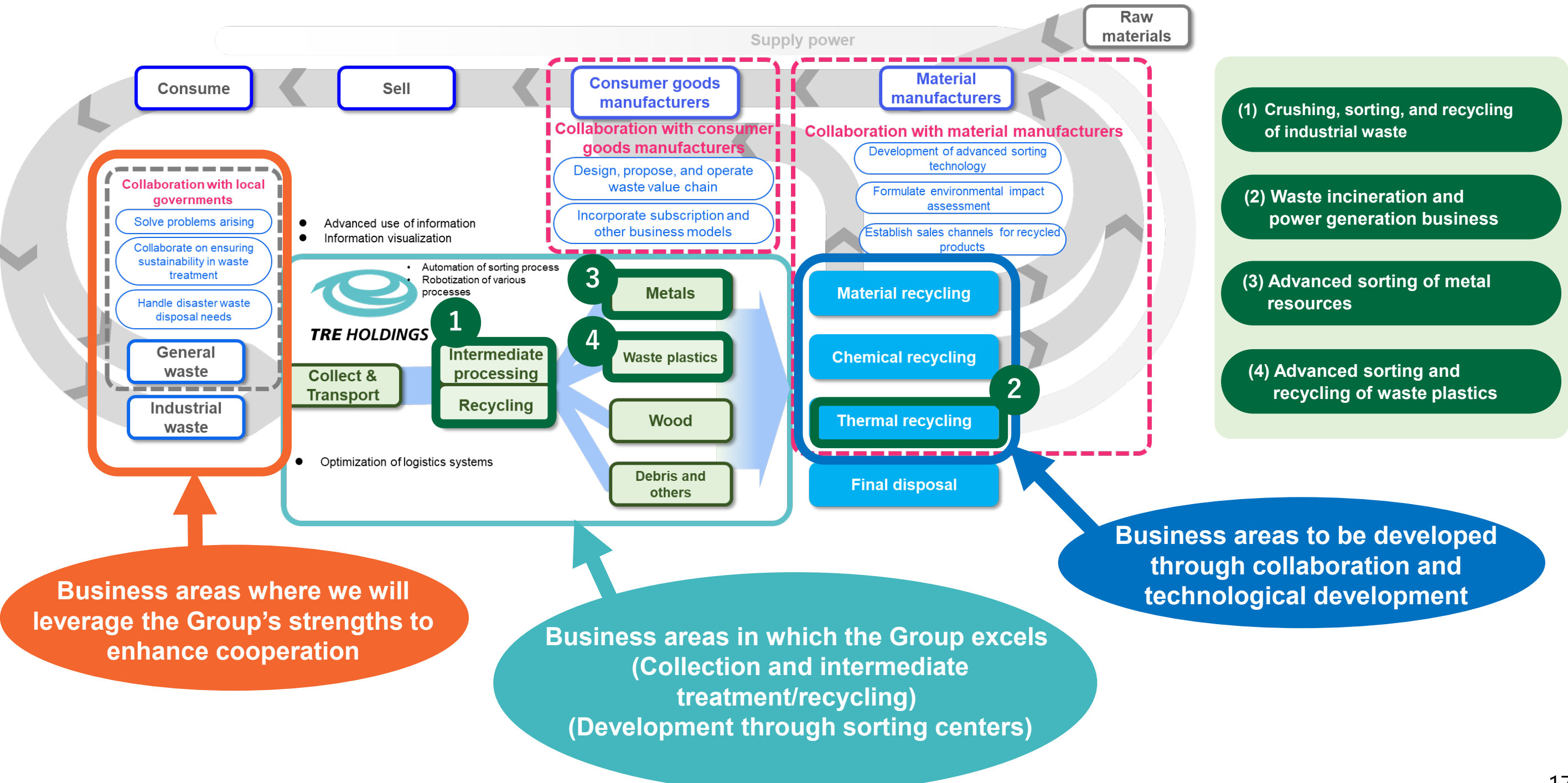
Ichihara City was selected by the Cabinet Office to be the first "SDGs Future City" in Chiba Prefecture in FY2021. Ichihara is stepping up efforts to become "a city that symbolizes the SDGs."

One of the largest woody biomass power generation facilities in the Tokyo metropolitan area

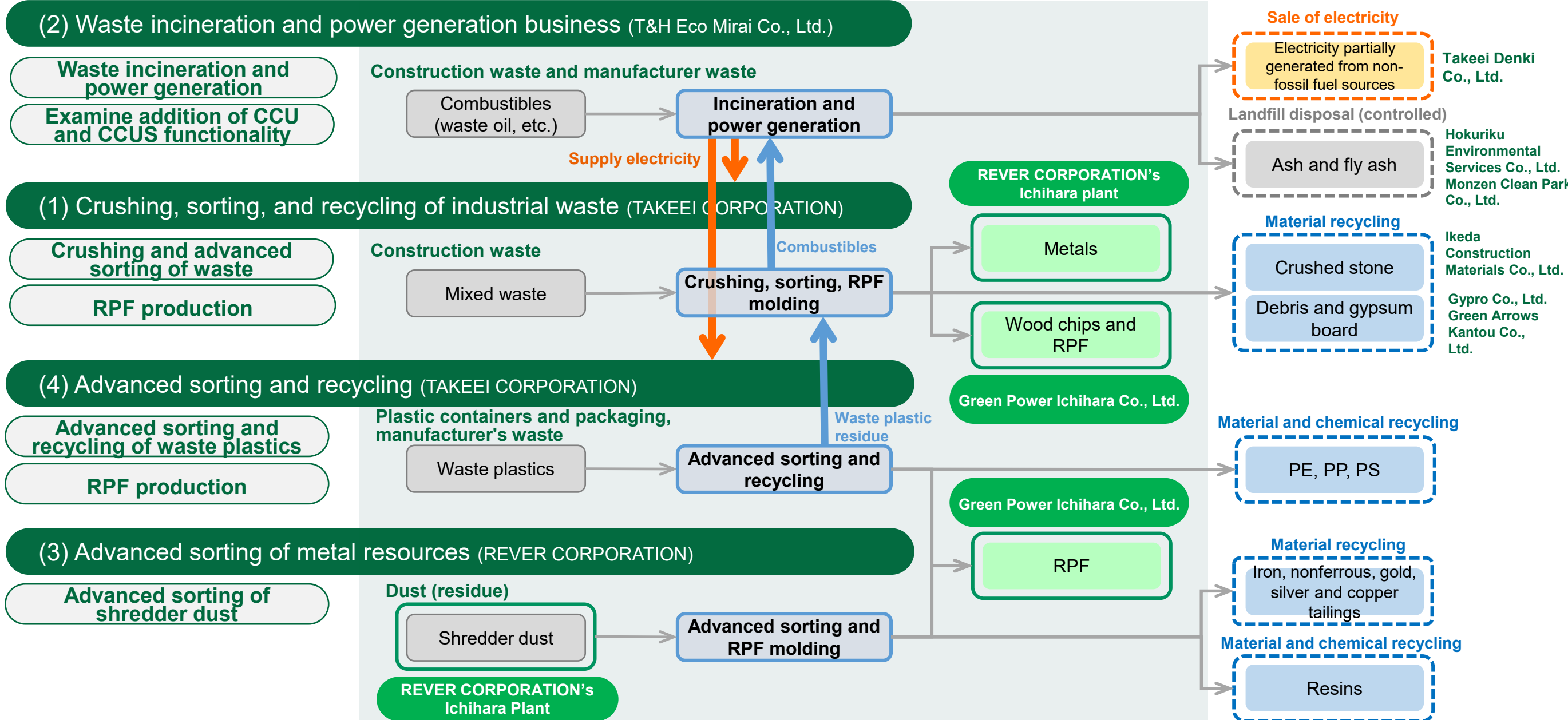
Green Power Ichihara Co., Ltd.

One of the largest crushers in Japan

REVER CORPORATION's Ichihara Plant



Processing schemes of the four new businesses



Recent Situation in the Glass Recycling Business / JW Glass Recycling Co., Ltd.

JW Glass Recycling Co., Ltd. which joined our Group in May of this year, has been reflected in our consolidated results since the Q2 (July). It continues to operate stably.

We will continue to work with Shinshu Takeei Co., Ltd. to improve the facility and enable recycling of difficult-to-process glass, such as automobile windshields, sheet glass for factories and buildings, and solar panels, for which recycling needs are increasing.

TAKEEI CORPORATION is currently in the process of applying for a permit to install a solar panel recycling facility at its Soma Plant.



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

There is a strong bond between the fiber layer on the surface of carpet tile and the PVC (polyvinyl chloride) layer on the base. This necessitates advanced cutting technology when recycling the material, and when the carpet tiles cannot be recycled due to technical difficulties, they are sent to landfills.

At TAKEEI CORPORATION's Tokyo Recycling Center, we established a dedicated plant in 2016 to the recycling of waste carpet tile.

In 2020, we developed a technology to separate the fiber layer from the PVC layer, but due to foreign substances contained in the latter, we were still unable to meet the standards required by some clients. We have now developed a technological process of "crushing" carpet tile and adding value to the transported materials by sorting by specific gravity. We obtained a patent for this process in September 2022. This process will make it possible to produce recycled raw materials of even higher purity.

We will continue to develop technology for manufacturing highly recycled raw materials from carpet tile and establish a stable recycling scheme in cooperation with manufacturers.



Waste carpet tile (crushed)

Change in the Completion Date of the Construction of the Monzen Waste Disposal Facility (Provisional Name) / Monzen Clean Park Co., Ltd.

Monzen Clean Park Co., Ltd. has decided to change the scheduled completion date of the construction of the controlled final waste disposal facility stemming from delays in the overall construction process caused by torrential rains that caused extensive damage in the Hokuriku region in August of this year, as well as delays in the construction of leachate treatment facilities.

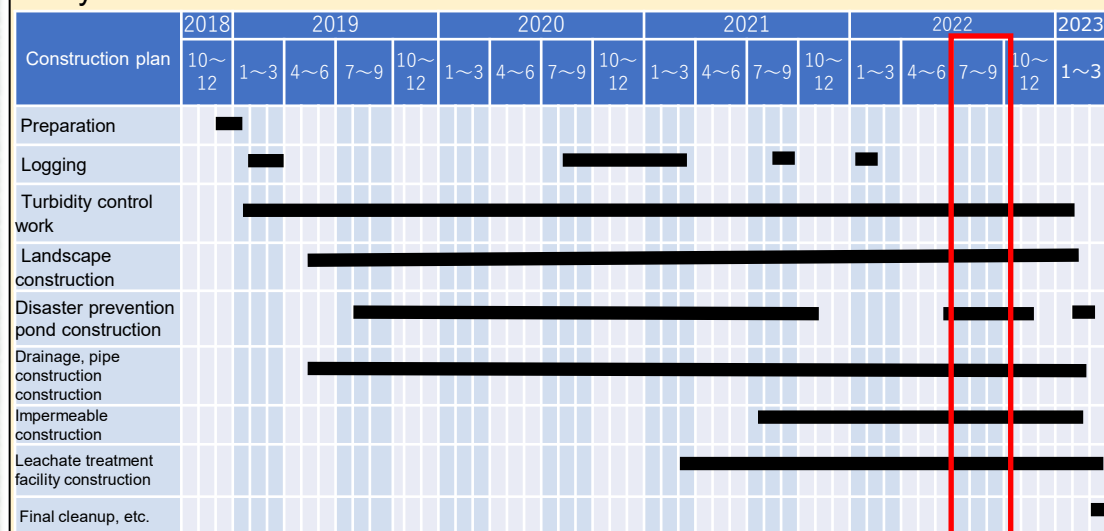
The change will have no effect on our FY03/23 earnings forecast.

Photo taken October 2022 (construction 80% complete)



Future development

Construction had been scheduled to finish at the end of November 2022, but has been extended due to the impact of heavy rains on earthworks and delays in the construction of leachate treatment facilities.



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

Scheduled completion date of construction:

Previously:
End of November 2022
After change:
End of March 2023

Scheduled opening date:

Previously: April 2023
After change: October 2023

We will continue to carry out construction safely with the environment in mind. Thank you for your understanding.

*Check the progress of construction on the Monzen Clean Park website.
<https://www.takeei.co.jp/mzcp/index.html>

	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.

Construction of Constructed Wetlands
Construction of the constructed wetland is underway. The waterway is laid with paving stones to resemble a natural stone channel.



Constructed wetlands



Waterway

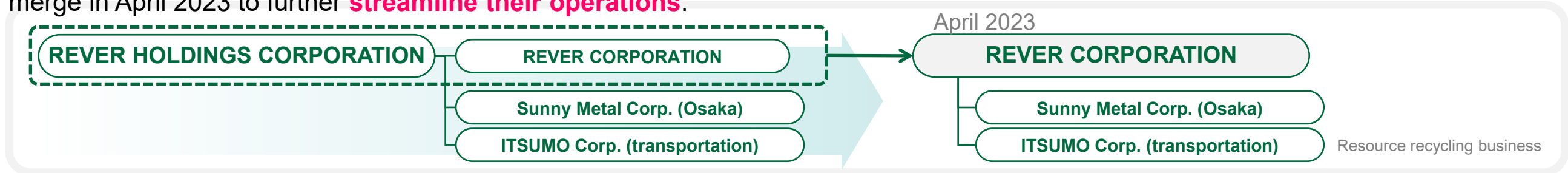


Administration building

Group Optimization

Merger of REVER CORPORATION and REVER HOLDINGS CORPORATION (scheduled for April 2023)

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**.



Circular Economy Initiatives

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

Our study of a potential business tie-up with Sumitomo Chemical is **progressing smoothly**.

Currently, sorting tests and various analyses are underway on the resin sorting line at REVER CORPORATION's Nasu Plant, using waste plastic derived from end-of-life vehicles. Further, Sumitomo Chemical has announced that it will install a pilot facility to establish a new process to produce polypropylene compound using waste plastic from end-of-life vehicles. We will continue to promote material recycling of waste plastics to reduce environmental impact through this initiative.

Operational status of new facilities

We have successfully introduced new facilities, including a **crushing line for electronic waste** at REVER CORPORATION's Higashi-Matsuyama Plant in April 2022, a **resin sorting line** at the Nasu Plant in August, and a **sorting line for post-shear dust** at the Funabashi Plant in September. We will improve efficiency while making fine adjustments to suit the base materials to be handled in preparation for full-scale operation. In April 2023, we also plan to **introduce an RPF production line** for molding and solidifying urethane dust from insulation and other materials.



Crushing line for electronic waste



Resin sorting line



Sorting line for post-shear dust

Measures to improve profitability and promote stable operation at power generation facilities

Hanamaki Biomass Chip Co., Ltd. has obtained a license for intermediate processing of wood waste (industrial waste only; application for general waste is pending). This will allow the Company to accept and effectively utilize **various types of wood waste that are defined as “waste” under the Waste Management and Public Cleansing Act**, such as **wood left over from forest maintenance (branches, leaves, and roots), miscellaneous wood from business development sites** (wood with little use as building material), and **wood obstructing rivers**.

The newly introduced “self-propelled crusher” can be moved not only to the plant but also to other sites, such as mountain forests, for processing, thereby enhancing existing processing and contributing to the reduction of wood collection costs.

Tsugaru Biomass Power Generation Co., Ltd. has already increased its power generation output by 310 kW and reduced the amount internal power transmission by installing inverters and through other measures, thereby increasing the amount of power that makes its way outside the plant and contributing to earnings.

Tamura Biomass Power Generation Co., Ltd. has strengthened its own maintenance system and is maintaining stable operation. The entire Group is strengthening its maintenance and inspection techniques for power generation facilities by, for example, holding training sessions with experienced employees.



Root cutting (stump to root tip)



Self-propelled crusher

Part of a lumberyard

Plans for periodic repairs at each power plant in 2H

Company name	Description of repairs (E.g. regular repairs, facility enhancement)	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			◎	○

We are planning many statutory and regular inspections in Q3, but do not plan to shut down for as long as we did in Q1.

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

Effects of the Merger of Five Electric Power Retailers and Future Strategies

Boost earnings

Tsugaru Apple Power Co., Ltd.

Hanamaki Ginga Power Co., Ltd.

Consolidation and optimization of management system

Yokosuka Urban Wood Power Co., Ltd.

Fukushima Mirai Power Co., Ltd.

Promote non-fossil certificate sales function

Daisen Komachi Power Co., Ltd.

TAKEEI CORPORATION (Retail Division)

Establishment of Takeei Denki Co., Ltd. (Sept. 1, 2022)

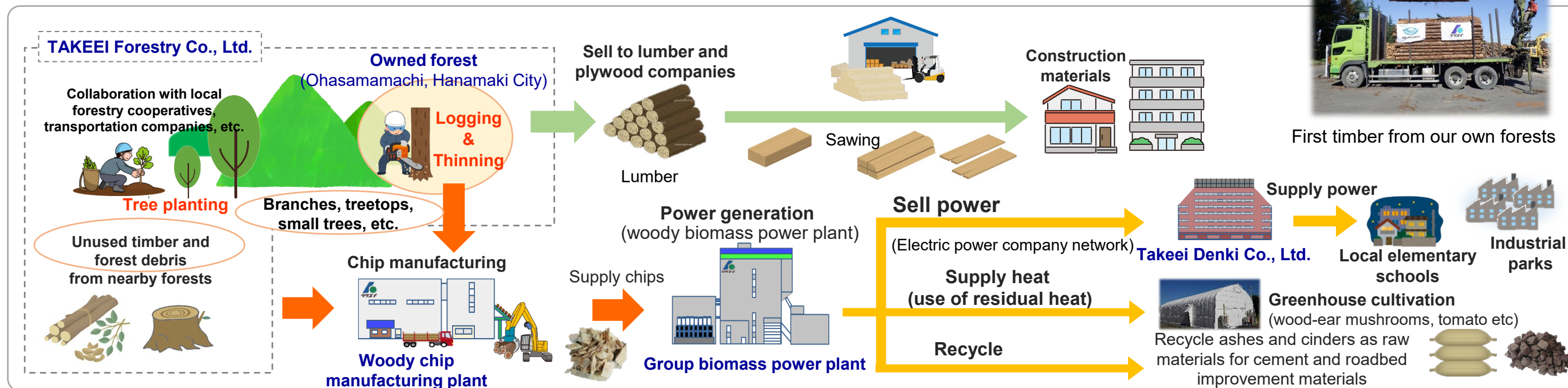
- Takeei Denki Co., Ltd. was established through the merger of five electric power retailers. Currently, we are promoting cost reductions by streamlining administrative operations and bringing in-house the integrated management of supply and demand.
- We continue to utilize non-FIT power sources such as RPF. In the medium- to long-term, we will promote sales of renewable electricity with non-fossil certificates in accordance with customer needs.

Reduce office management costs

Streamline administrative operations

Sales of non-fossil certificates

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





Strengths

- Recycling of industrial waste
- Providing reliable and secure integrated treatment services
- Renewable energy business development

Establish a joint holding company and build a structure that can rapidly generate synergies (FY2021)

Create synergies through integration and reorganization of value chains (Group handling volume: approx. 2 million tons)

Strengths

- Recycling of end-of-life products
- High quality recycling and reliable services
- Collaboration with the recycled goods industry

Promotion of sustainability management

Promotion of value-added transported materials via intermediate treatment

Promotion of cross-selling

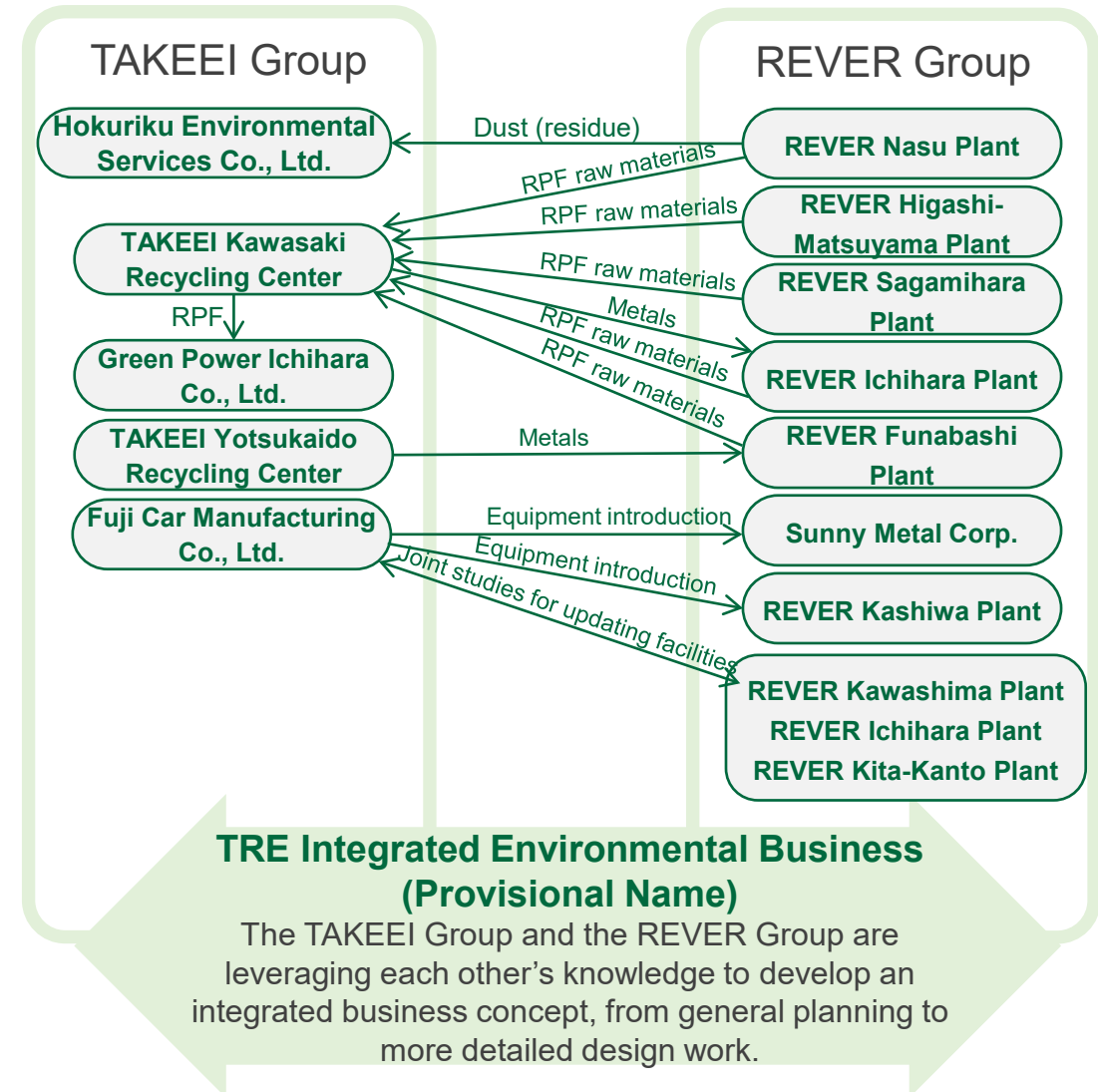
Reinforcement of RPF production system as a non-fossil fuel alternative

Support disposal of waste generated by natural disasters

We are promoting integration synergies, increasing cash generation, expanding sales, and reducing costs.

Examples of synergies

We promote the conversion of soft waste plastics discharged by the REVER Group into RPF (solid fuel) at the TAKEEI Group and use it as fuel for power generation. We also collaborate with Fuji Car Manufacturing Co., Ltd. (engineering department) to introduce equipment, conduct joint studies for introduction of equipment, and provide operational feedback.



As a comprehensive environmental company, the Group's medium-term management plans calls for sustainability management in the aim of realizing an advanced sound material-cycle society and a carbon-free society.

Creating a comfortable work environment for diverse human resources

Amid the continuing impact of the COVID-19 pandemic, we are promoting the development of a comfortable workplace environment. The TAKEEI Group introduced an electronic approval system in November of this year to promote paperless operations (the REVER Group has already introduced this system).

New group initiatives to promote the SDGs



We established the TRE SDGs Promotion Foundation through succession of the TAKEEI SDGs Promotion Foundation. We conducted cleanup activities in support of the Zero Marine Litter Week in autumn and World Cleanup Day on September 17. A total of 280 people at 32 locations participated.

Achieving carbon neutrality in Group electricity use

We aim to achieve carbon neutrality with respect to electricity consumption within five years of the merger.
[For reference] In FY03/22, business activities consumed 55,643 Mwh and we generated 609,633 Mwh.

Integrated reporting

To be announced later
this year in English



We published the TRE Holdings Integrated Report 2022 on September 1, 2022. Preparations are currently underway for the publication of the English version.

In addition, we have newly identified five materialities. Going forward, we plan to further enhance disclosure content, including the establishment of KPIs and measures to achieve them.

Establishment of CSR activity promotion department

In June 2022, we established the CSR Activity Committee to promote sustainability management across the Group in order to further strengthen our efforts to address climate change and social issues, including our endorsement of the Task Force on Climate-related Financial Disclosures (TCFD) recommendations.

Participation in the GX management promotion working group

In October 2022, we participated in the working group for GX management promotion organized by the Ministry of Economy, Trade and Industry as one of 73 member companies.

APPENDIX

Establishment of TRE HOLDINGS CORPORATION

Company Profile

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



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.



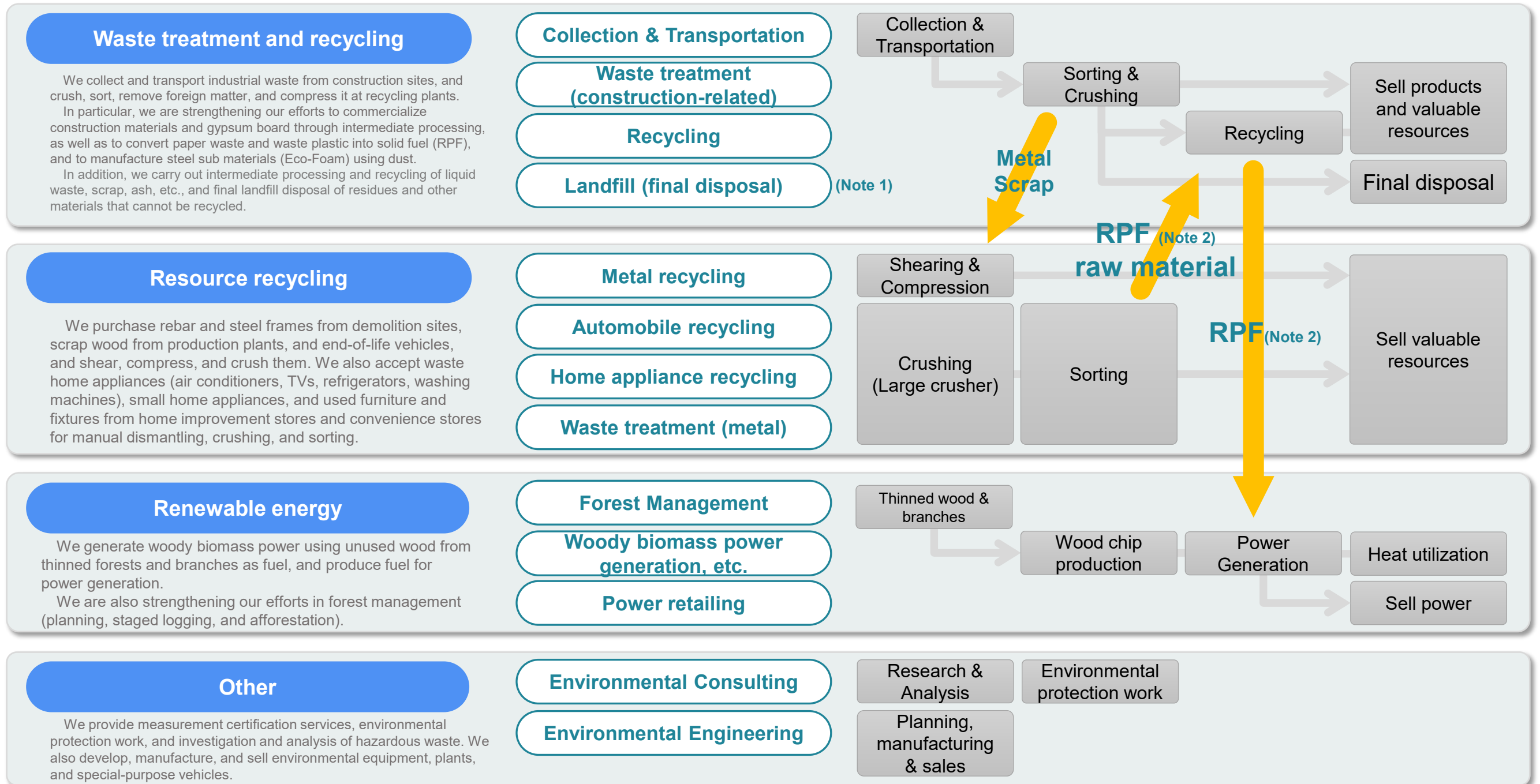
TREホールディングス株式会社

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	2,188 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-September 2022



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.

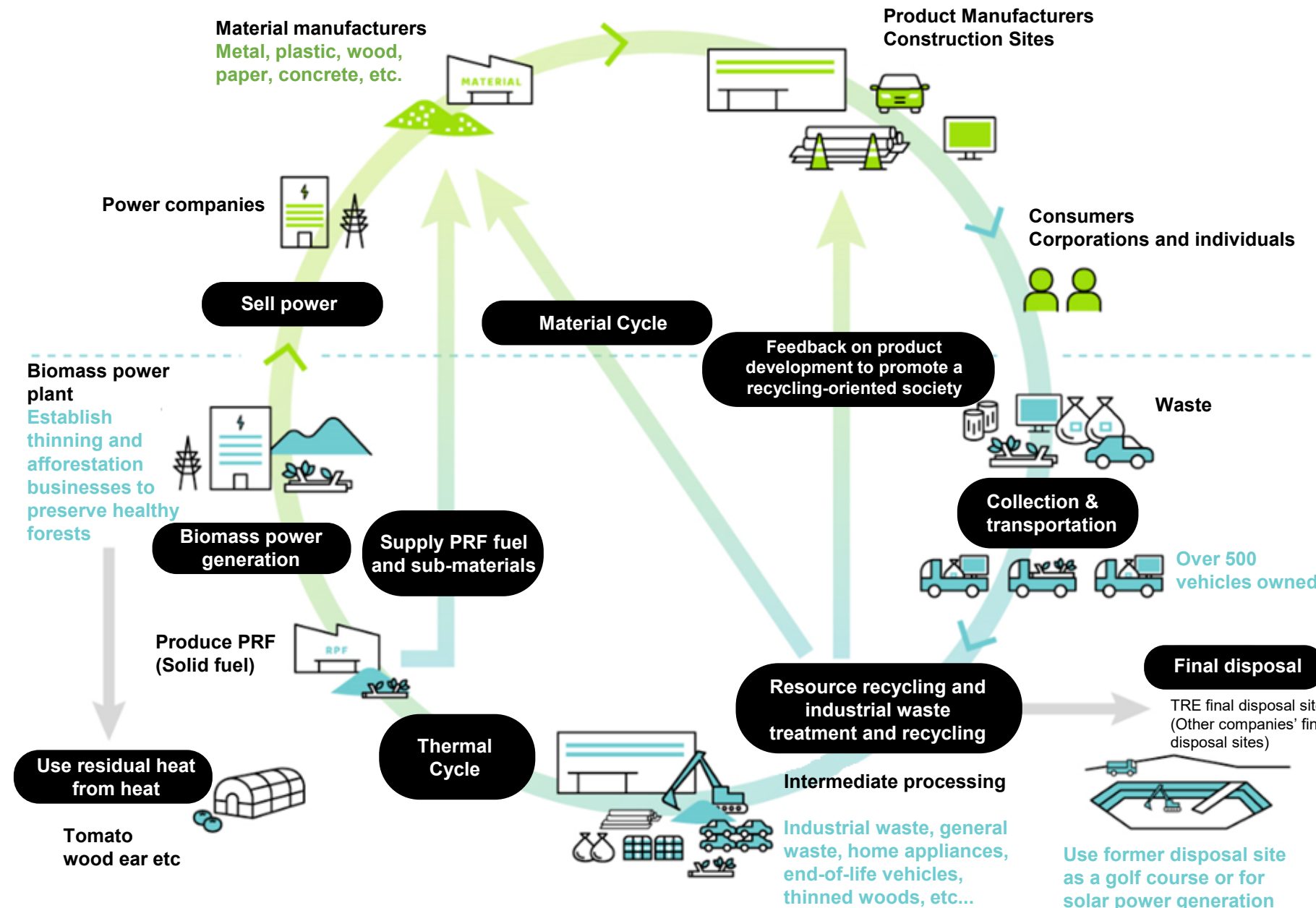
Group volume Appx. **2 million tons** per year

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

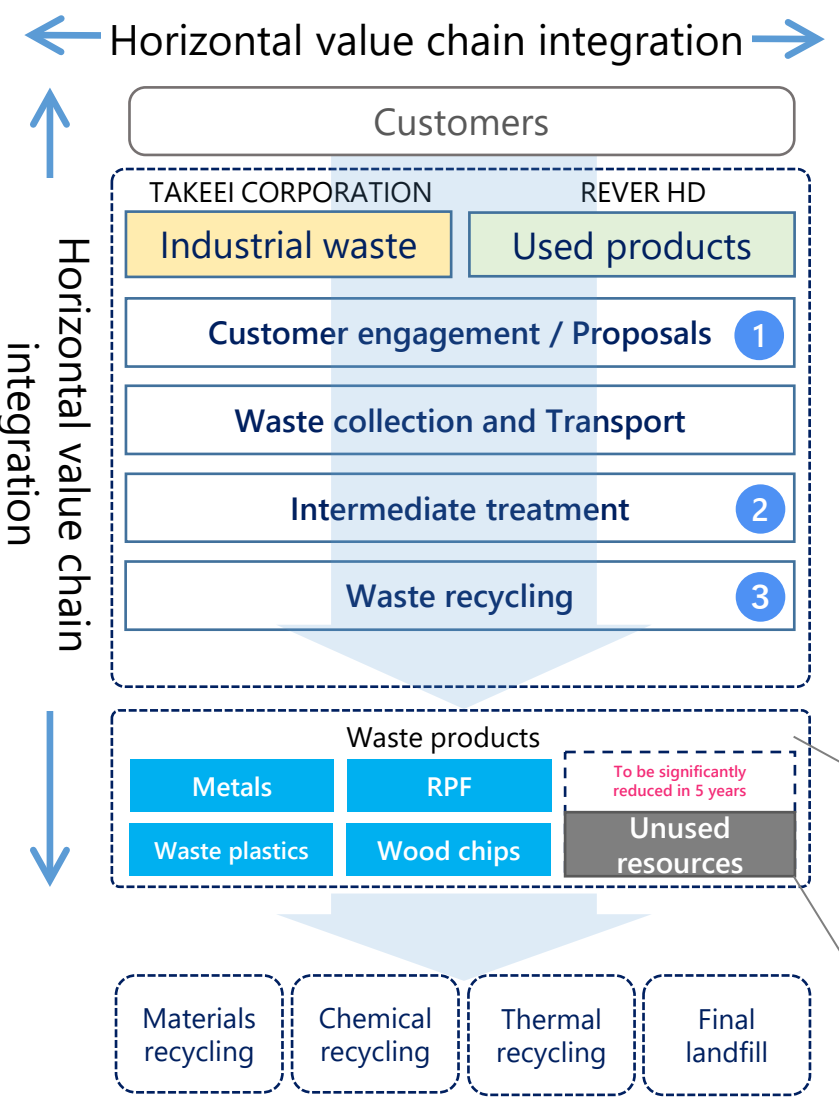
vehicles owned Appx. **500** vehicles

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

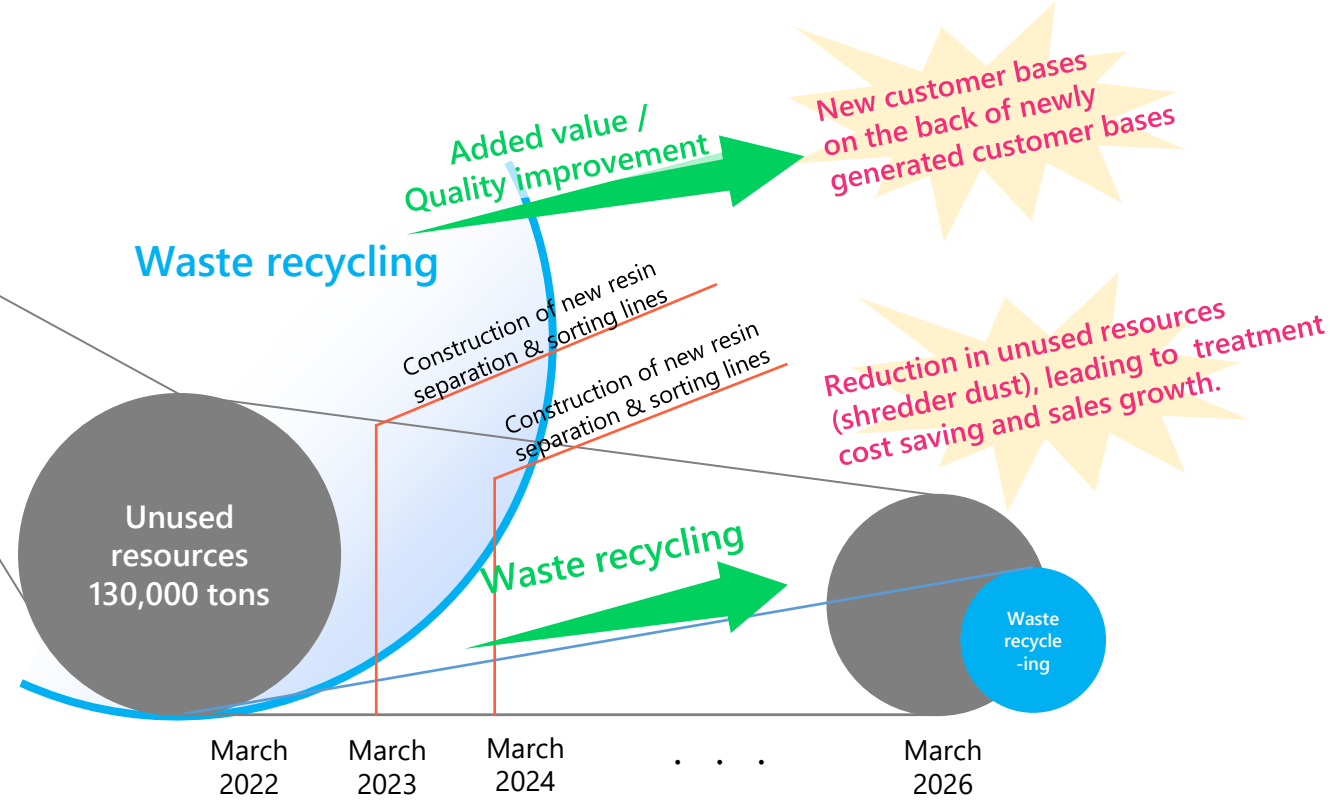
Note: Large crushers refer to crushers with a main body horsepower of at least 1,000 horsepower.



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



Planned reinforced separation & sorting lines

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.

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.

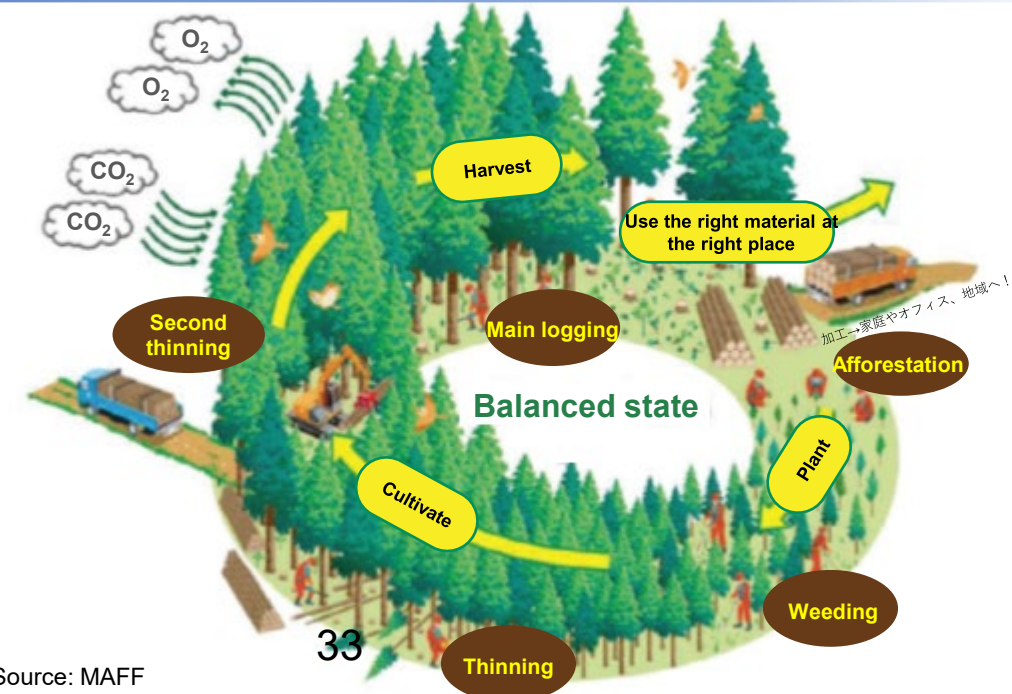
Renewable Energy business

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

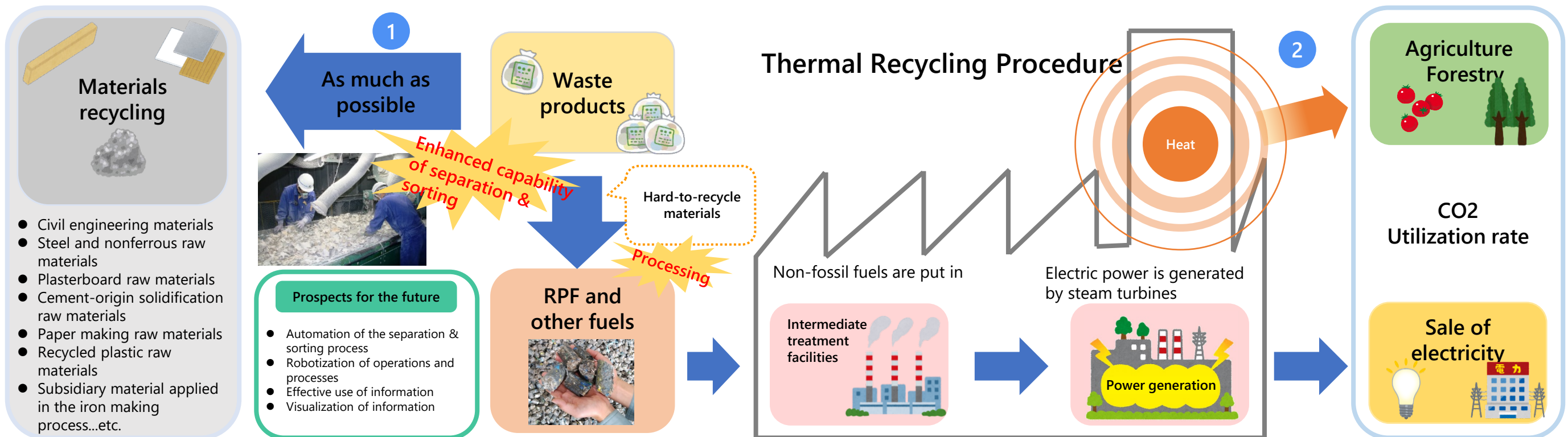
Environmental Engineering & Environmental Consulting businesses

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.
- The forward-looking statements in this document are made as of the date of this document (or as otherwise specified therein), and the Company has no obligation or policy to update such information.
- In addition, the information contained in this document regarding companies other than the Company and the Group is quoted from publicly available information, and the Company has not verified or guaranteed the accuracy or appropriateness of such information. The Company assumes no responsibility for any damages resulting from the use of this document.



TRE HOLDINGS

未来へ、捨てない創造力を。