

Corporate Strategy Briefing

FY2022 (FY Ended March 31, 2023)

DOWA HOLDINGS CO.,LTD.

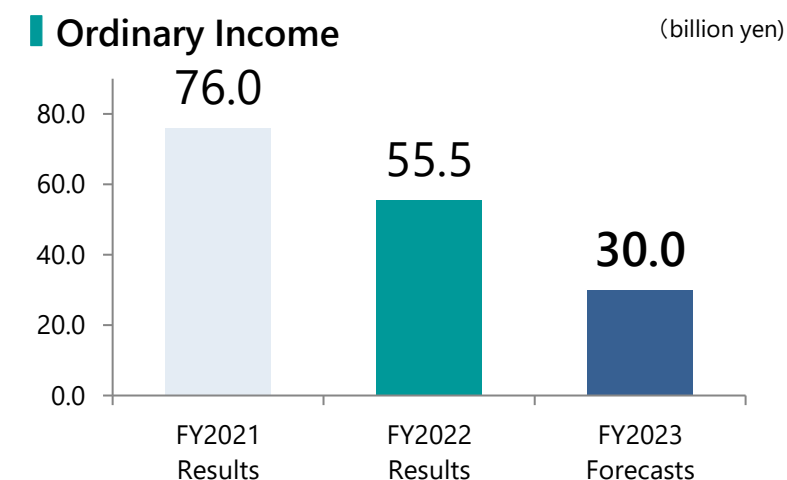
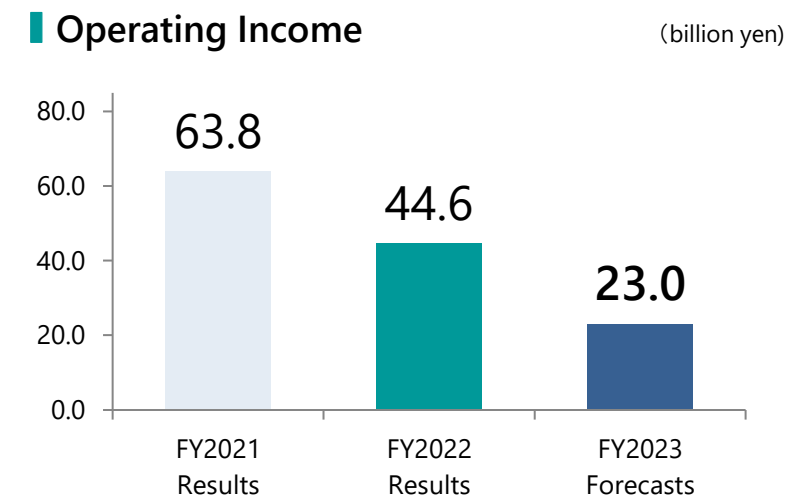
May 19, 2023

FY2022 Results, FY2023 Forecasts

In FY2022, profits reached at a high level, although being impacted by falling metal prices and rising energy costs and material prices.

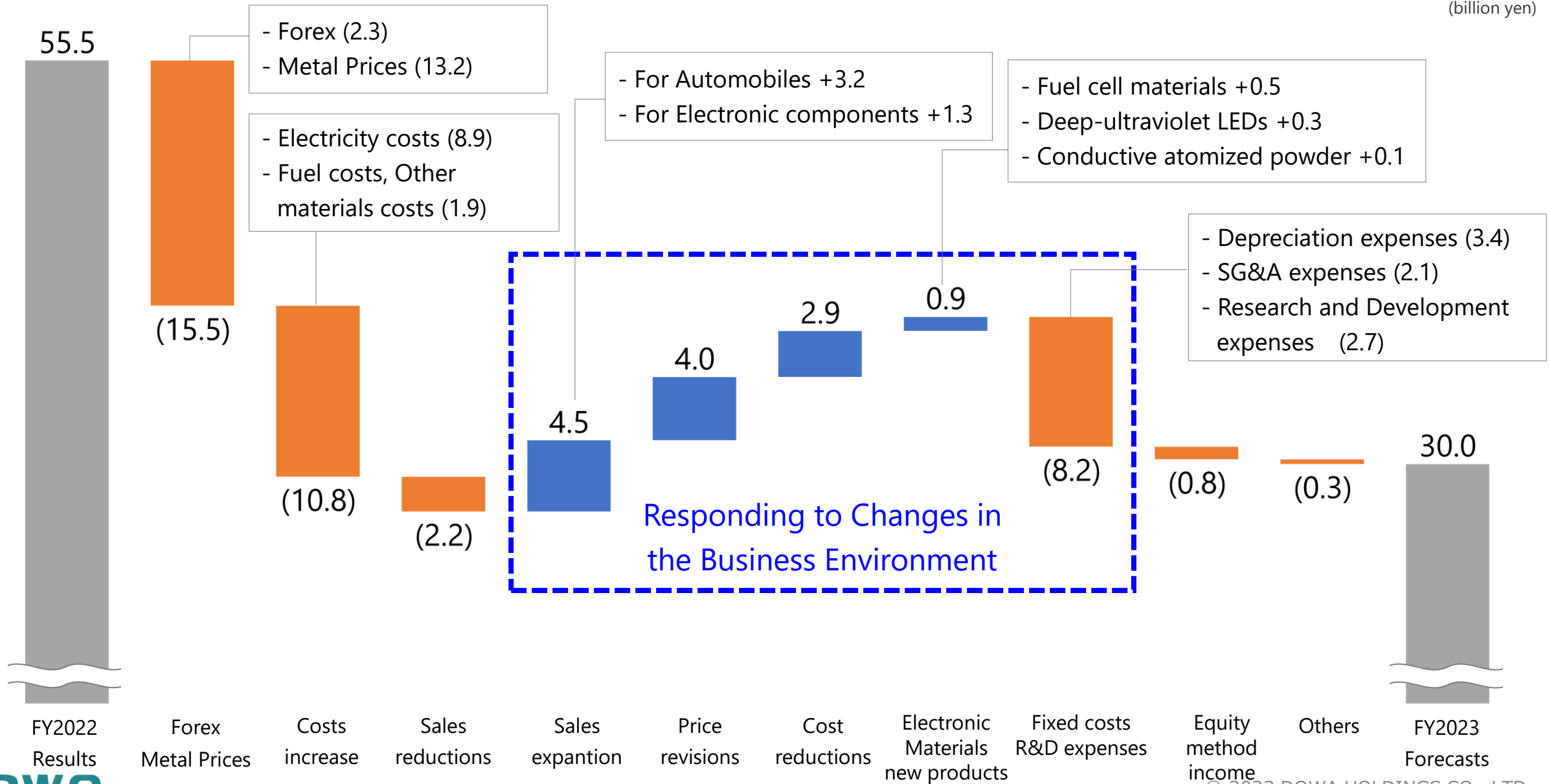
In FY2023, sales and profits are expected to be decline, reflecting uncertainty over the future of the global economy, combined with the impact of falling metal prices, further rises in electricity costs and other costs, and increased depreciation and research and development expenses due to upfront investment for future growth.

Billion yen		FY2021 Results	FY2022 Results	FY2023	
				Forecasts	Year-on-Year
Net Sales		831.7	780.0	680.0	(100.0)
Operating Income		63.8	44.6	23.0	(21.6)
Ordinary Income		76.0	55.5	30.0	(25.5)
By Segment	Environmental Management & Recycling	13.6	11.9	10.0	(1.9)
	Nonferrous Metals	42.7	33.1	10.0	(23.1)
	Electronic Materials	6.5	4.5	2.3	(2.2)
	Metal Processing	6.8	5.5	4.5	(1.0)
	Heat Treatment	3.0	1.8	3.0	+1.1
	Other/ Eliminations	3.2	(1.5)	0.2	+1.7
Profit attributable to owners of parent		51.0	25.0	20.0	(5.0)



FY2023 Forecasts Factor Analysis of Ordinary Income (Year-on-Year)

(billion yen)



Responding to Changes in the Business Environment: Details of Measures and Their Monetary Impact (YoY) (1)

The business environment in FY2023 is expected to be more tough, due to a weakening metals prices and further increases in energy costs, particularly electricity costs. In addition to advancing short-term measures to improve profitability, while steadily implementing actions set forth in the Midterm Plan 2024 towards further strengthen each business.

■ Sales expansion

+4.5 billion yen

- Demand for automotives and telecommunications-related products and services are expected to be recovered from the second half onward, taking actions to capture that rebounding demand.

■ Price revisions

+4.0 billion yen

- Implement timely and appropriate price revisions for each product and service in light of soaring global energy costs and other prices.

■ Cost reductions

+2.9 billion yen

- Step up initiatives for appropriate costs and cost reductions Groupwide.
- Implement optimum operation based on demand trends in the Zinc smelting business.

Responding to Changes in the Business Environment: Details of Measures and Their Monetary Impact (YoY) (2)

With the aim of having new products and services contribute to revenue at an early stage, accelerating various measures in R&D, manufacturing and sales, while steadily working on the investments and R&D activities needed for future growth.

■ Increase Revenue from New Products

+0.9 billion yen

(New products contribution in the Electronic Materials Segment)

- Steadily progress the sample provision and preparations for mass production of products expected to generate expanded revenue in the future, including fuel cell materials, deep-ultraviolet LEDs and conductive atomized powder.

■ Increase in Depreciation

(3.4) billion yen

- Continue to investment in equipment maintenance and business infrastructure that is essential for the sustainable continuation of business.
- Accelerate and improve the sophistication of data utilization (DX) by launching operation of a common Group cloud infrastructure.
- Make systematically investments that are essential for future growth, including expanding collection capacity of spent catalysts, and augmenting capacity of semiconductor manufacturing facilities and copper rolled product manufacturing facilities.

■ Increase R&D expenses

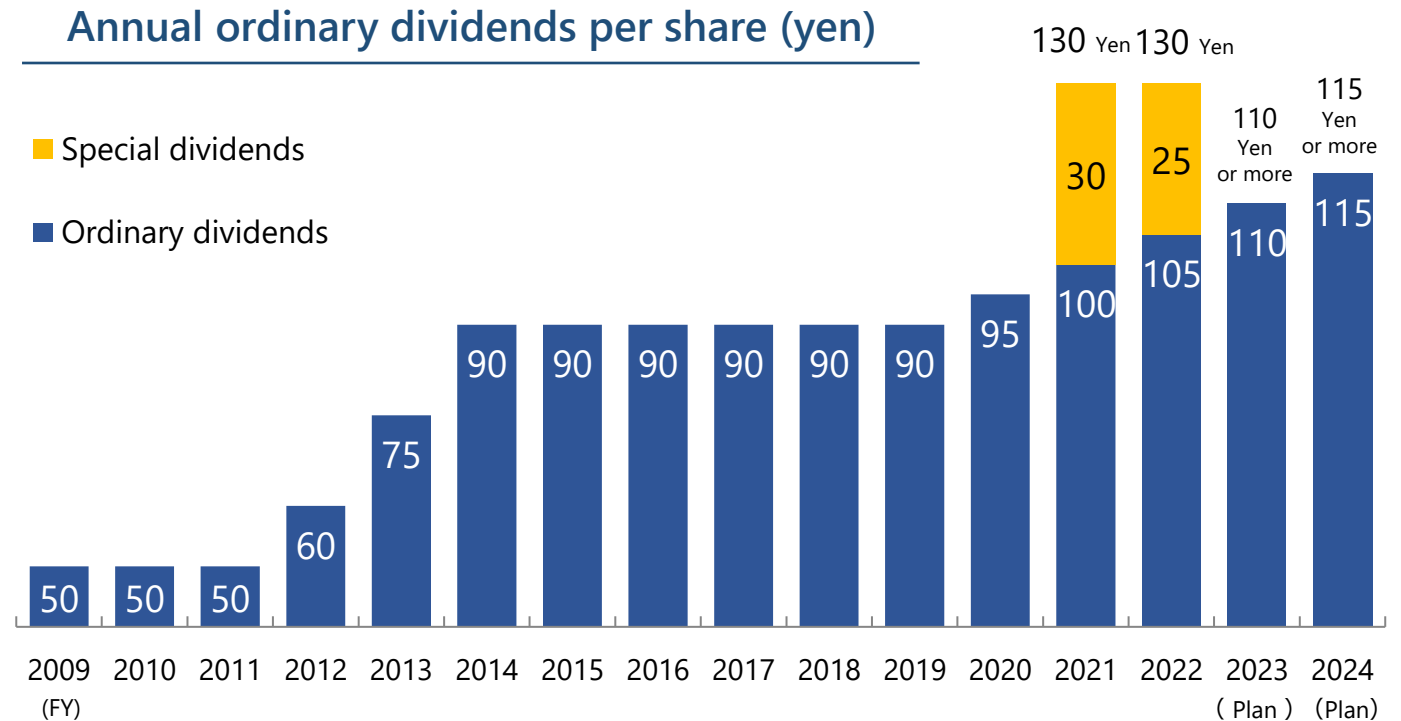
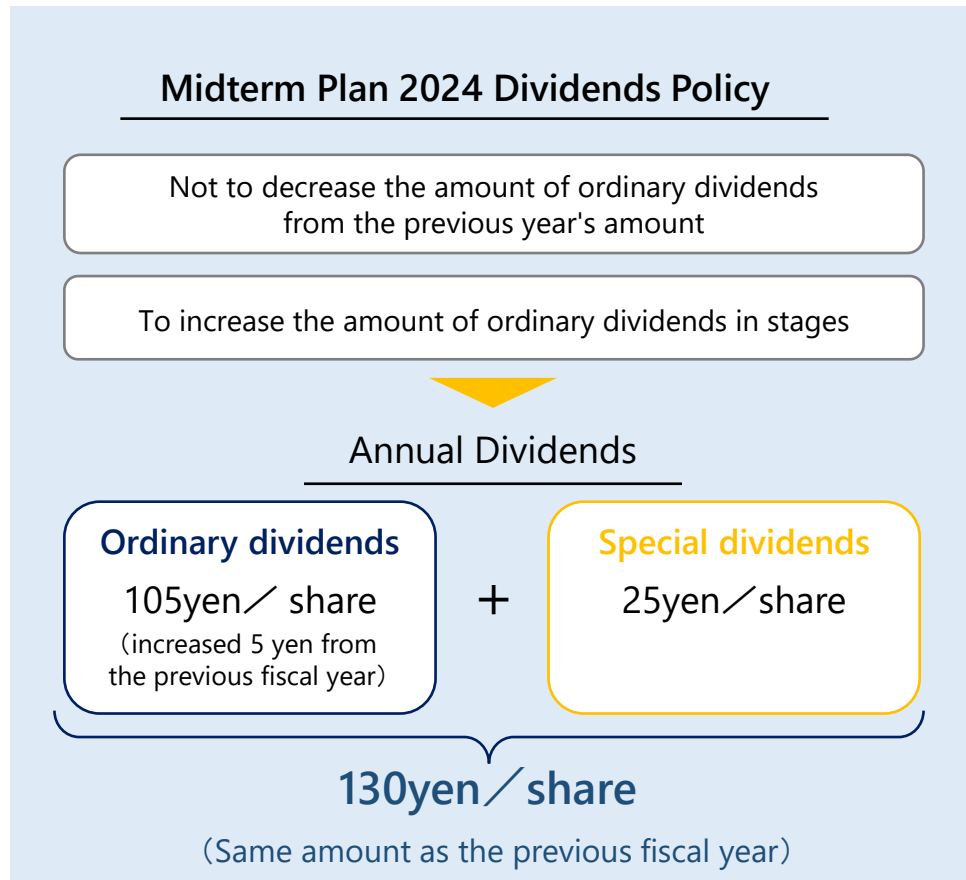
(2.7) billion yen

- Drive development of short-wavelength infrared LEDs and photo diodes (PDs) for next-generation devices and silver powder for the high-end market.
- Strengthen exploration activities in the Palmer Project to stably secure zinc concentrates.

Dividends

Based on the Dividends policy under the Midterm Plan 2024, the Company has decided, taking into consideration future growth investments and our financial position at the end of fiscal year, to add special dividends of 25 yen per share in addition to the ordinary dividends of 105 yen per share, which increased 5 yen from the previous fiscal year, since our business performance for the year ended March 2023, was the second highest on record.

As a result, the total annual dividends per share for the year ended March 2023 is 130 yen (ordinary dividends 105 yen + special dividends 25 yen).



*Figures for the annual ordinary dividends per share for FY2016 and before were corrected to those after the stock split.

Midterm Plan 2024



Midterm Plan 2024 Strategies in Each Business

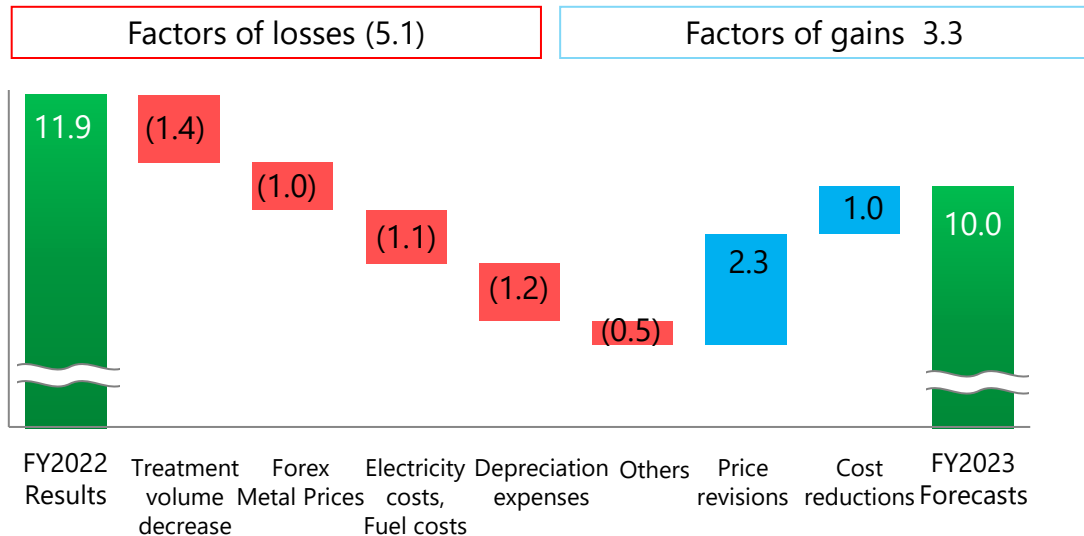
Business Overview

Business Environment (FY2023)

- Waste processing business: Orders will be firm both in Japan and Southeast Asia. The treatment volume in melting and recycling business will rise.
- Recycling business: The collection volume of materials for recycling and number of used home appliances processed will remain flat.

Ordinary income (Year-on-Year)

Billion yen (Amounts less than 100 million yen are rounded down.)



《Major Product Trends》

(FY2022/H1 = 100)

	FY2022		FY2023		FY2024
	H1	H2	H1	H2	
Volume of treated waste in Japan	100	99	105	102	101
Treatment volume in Melting and recycling business	100	104	111	123	128
Waste treatment orders received in Southeast Asia	100	116	116	122	131
Volume of recycled used home electronics appliances	100	97	103	98	108

Outlook for FY2023

- Orders for waste treatment and recycling will remain firm in Japan and Southeast Asia, but orders for PCB waste and noncombustible waste are expected to decline.
- Due to a decline in the metal market, sales revenue from scrap metal is projected to fall.
- Electricity costs, fuel costs and the costs of secondary materials will continue to rise.
- We will strive to maintain or improve profitability through price revisions and cost reductions.

Progress of Key Measures in Midterm Plan

Finished

Preparatory stage

Business contribution

	FY2021	FY2022	FY2023	FY2024	FY2025 onward	
Waste treatment	Expanding treatment of hazardous waste					
	Expanding treatment of fluorocarbons and other hazardous waste					
Waste treatment	Expanding recycling capacity	Increasing the volume of recycling			Commercialization	
		Improve metal recovery technologies and processes				
Soil remediation	Full operations	Maintaining a high operating rate in the business of recycling non-burnable waste				
		Driving market research and technology development for commercializing solar panel recycling				
Soil remediation	Preparations for construction		Construction work		Start of operation	
Recycling			Expanding the area for collection and establishing a new collection base		Increasing the collection	
	Enhancing the pretreatment function for materials for recycling					
Recycling	Akita	Changes to plant layout, expansion of facilities			Full operation	
		Kumamoto	Plant expansion, expansion of facilities			
Southeast Asia	Thailand	Obtaining new license	Increasing treatment options			Enhancing treatment
	Indonesia	Facility construction	Expansion of incineration and detoxifying treatment			
Southeast Asia	establishing a new treatment facility in East Java (Indonesia)		Construction work	Increasing the collection	Full operation	

Growth Strategy for the Indonesia Business

The waste treatment market in Indonesia is expected to expand further, due to the country having one of the world's largest populations and a high economic growth rate.

(1) Expanding Scale of Operations

- DESI began operations in January 2023.
- Expanded and enhanced collection of waste from East Java and outside Java.

2023: Strengthened sales activities to expand waste collection volume.

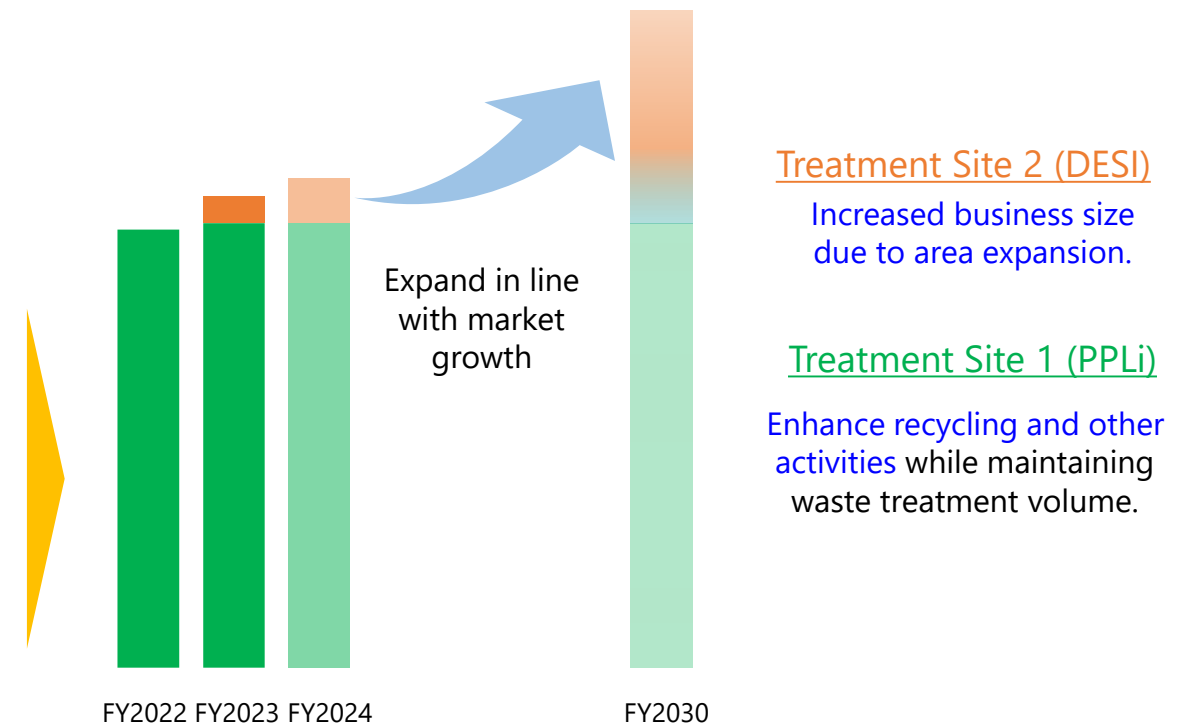
→ Aim to achieve profitability on a single month-basis within the year.

2024: Aim to contribute to revenue due to full-scale operation.

(2) Increasing Competitiveness

- Due to market expansion, competition is expected to intensify, resulting in falling unit prices for waste treatment.
- We will maintain and improve competitiveness by offering an expanded menu of recycling options and strengthening local treatment services (oil and gas industry, etc.).

Expansion of waste treatment volume



We will work to further enhance the value of the Indonesia business by upgrading and expanding our comprehensive waste management service.

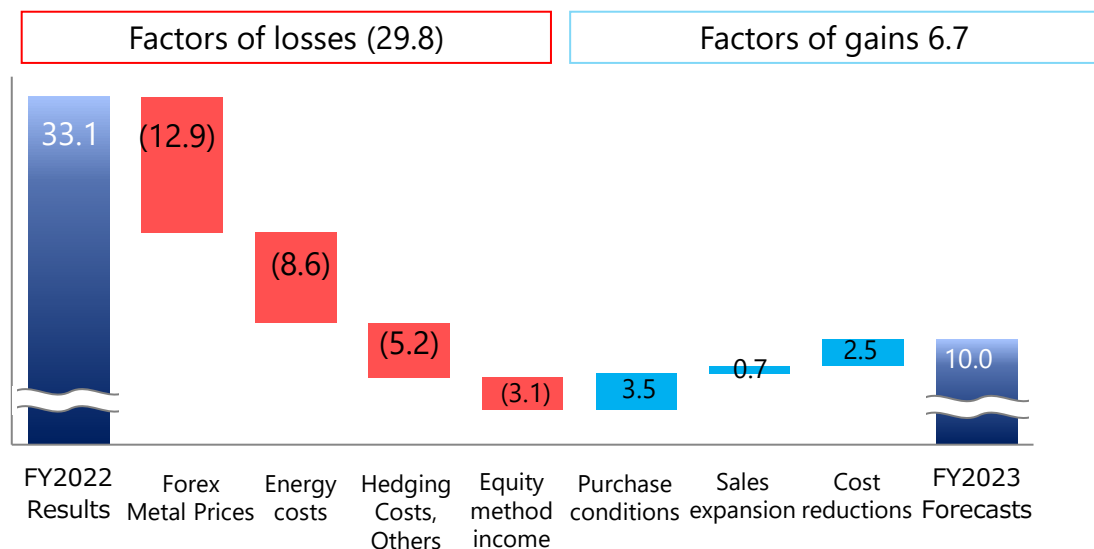
Business Overview

Business Environment (FY2023)

- Demand for zinc will be sluggish in the construction materials market, although is expected to gradually recover in the automotive market.
- Due to falling PGM prices, spent catalysts will be on the decline from the market, but are expected to recover in the future.

Ordinary income (Year-on-Year)

Billion yen (Amounts less than 100 million yen are rounded down.)



《Major Product Trends》

(FY2022/H1 = 100)

	FY2022		FY2023		FY2024
	H1	H2	H1	H2	
Volume of gold produced (Kosaka)	100	94	85	102	109
Volume of zinc produced (Akita)	100	121	99	116	116
Volume of collected spent catalysts	100	100	114	120	120
(Ref.) Volume of collected recycling materials	100	103	105	99	110

Outlook for FY2023

- Metal prices, for both base metals and precious metals, are expected to be at a lower level than the previous year.
- The yen is expected to be stronger against the dollar compared with the previous year.
- Electricity costs and other energy costs will remain at a high level
- Purchase conditions for zinc raw materials will improve.
- We will strengthen the collection of spent catalysts, focusing on North America and Europe.
- We will strive to improve profitability through sales expansion and cost reductions.

Progress of Key Measures in Midterm Plan

Finished

Preparatory stage

Business contribution

		FY2021	FY2022	FY2023	FY2024	FY2025 onward
Precious metals and copper smelting	Treating more materials for recycling by handling impurities		Introduction of test facilities	Tests and development		Start of operation
	Increasing the production volume and yield rate of tin	Increasing the yield rate	Technology development to further increase yield rate		Process optimization	Start of operation
	Business infrastructure development	Ongoing investment to develop business infrastructure and enhance functions in the Kosaka District				
PGM	Increasing spent catalysts collection by expanding overseas bases	Europe Korea	Start of operation	Collecting more spent catalysts		
		North America	Strengthening system for increased processing through site relocation and expansion		Start of operation	
	Increasing the treatment capacity of Nippon PGM		Preparations for construction	Large-scale electric furnace repair	Increase processing volume	
Zinc	Establishing a structure for annual production of 220,000 tons at Akita Zinc	Process improvement	Stable production	Optimum production based on demand trends and electricity costs situation		
Mine development	Increasing production at Los Gatos Mine (Mexico)	Enhancing facilities for handling impurities		Expanded supply of low-impurity refined ore to Akita Zinc		
		Driving mineral exploration at owned mining areas				
	Driving the Palmer Zinc and Copper Project (Alaska)	Mineral exploration activities and acquisition of various permissions and authorizations		Mineral exploration, feasibility study activities		

Improved Profitability and Strengthening of the Zinc Business

Although electricity costs will remain at a high level and the zinc business will be heavily impacted due to the large amount of electricity it consumes, we will strive to improve profitability and strengthen business in order to maintain and expand complex functions that form the basis of the Nonferrous Metals Business.

(1) Initiatives to Improve Profitability

We will work to improve profitability by reducing costs and reviewing the sales mix of zinc products.

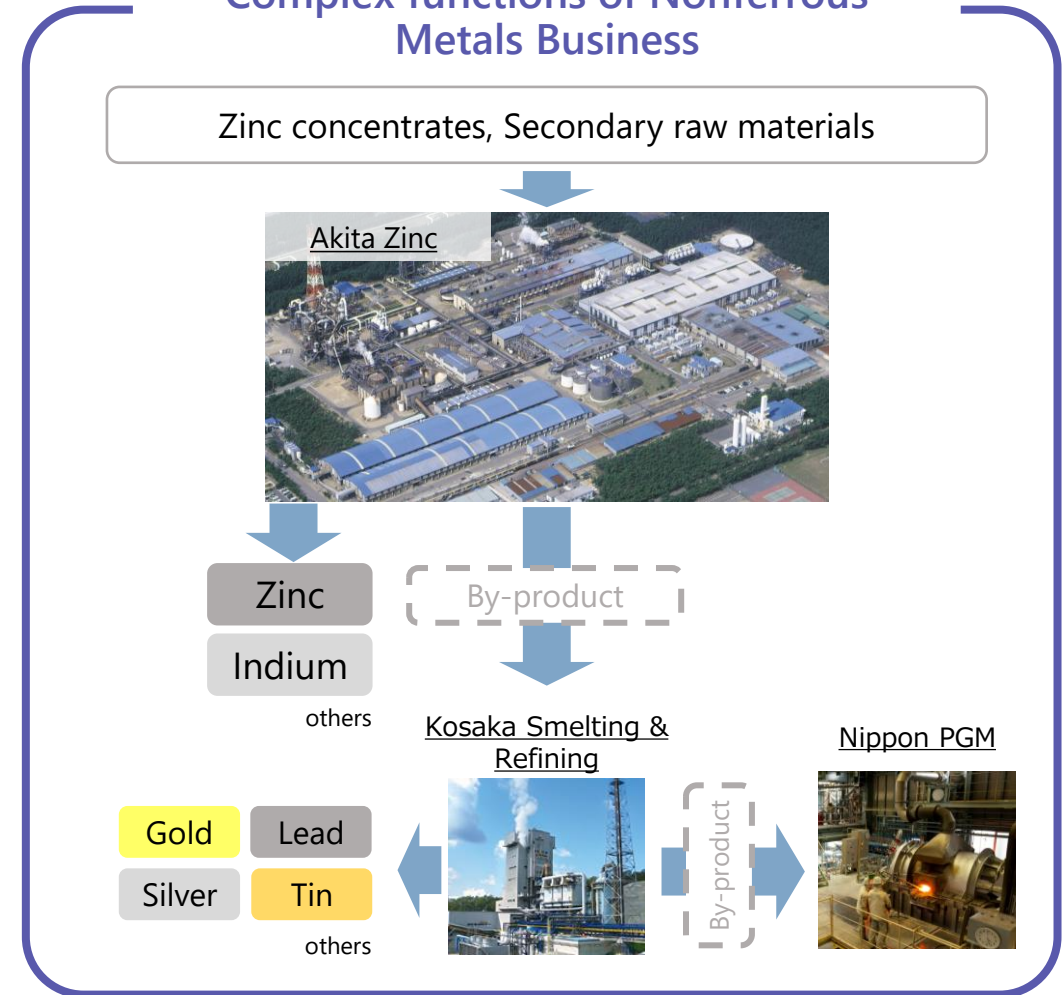
- Cost reductions at Akita Zinc through management of operations on an hourly basis.
- Reduction of the sale of low-margin products by reviewing the sales mix of zinc products.

(2) Initiatives to Strengthen the Business Operations

Boost earnings capabilities in terms of both manufacturing and sales to strengthen the operating structure.

- Improve quality at the Los Gatos Zinc Mine due to the installation of equipment to remove impurities, and improved productivity at Akita Zinc.
- Increase recovery of valuable metals by volume through higher productivity and the promotion of by-product processing.
- Expand sales in Southeast Asia due to the start of increased production at the Thailand site.

Complex functions of Nonferrous Metals Business



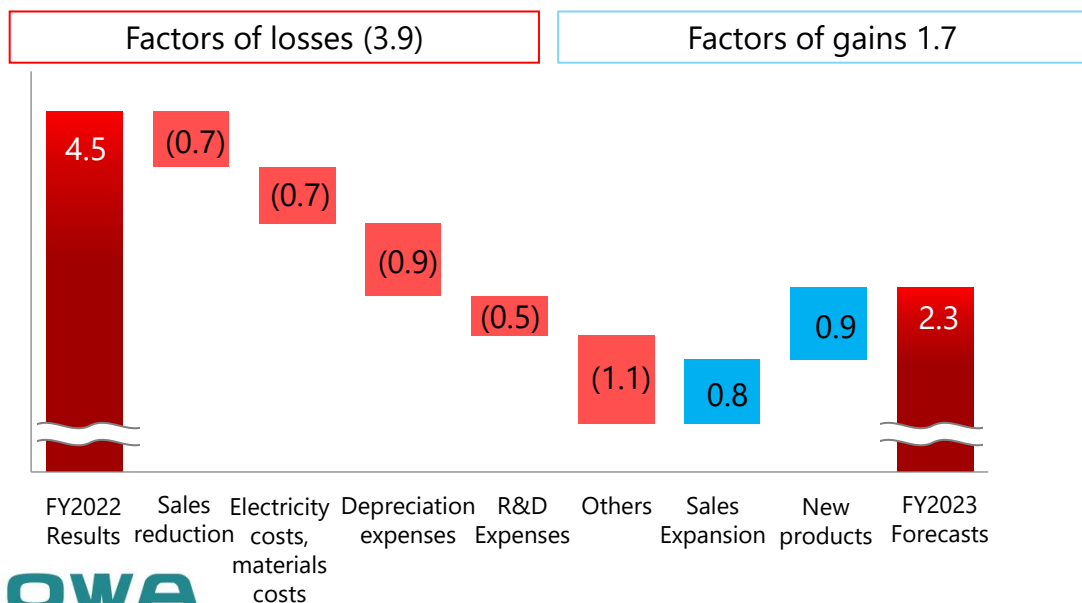
Business Overview

Business Environment (FY2023)

- The telecommunication equipment and semiconductor market is expected to recover from the second half of the year.
- Sales volume of wearable devices will enter an adjustment phase.
- Volume of solar panel installations will increase, reflecting increased demand for new energy, and the switch to high-end products will make progress.

Ordinary income (Year-on-Year)

Billion yen (Amounts less than 100 million yen are rounded down.)



《Major Product Trends》

(FY2022/H1 = 100)

	FY2022		FY2023		FY2024
	H1	H2	H1	H2	
Volume of sales of LEDs	100	64	80	88	113
Volume of sales of silver powder	100	77	69	81	Under review
Income from new products (e.g. evaluation sample incomes)	100	127	152	174	185

Outlook for FY2023

- Demand for Short-wavelength infrared LEDs and photo diodes (PDs) will recover gradually.
- We will aim to increase sales of silver powder from the second half of the year in response to the adoption of high efficiency solar panels for the high-end market.
- We will make steady progress on the development of new products and the provision of evaluation samples, focusing on fuel cell materials and deep ultraviolet LEDs.
- Demand for conductive atomized powder will rebound from the second half of the year.

Progress of Key Measures in Midterm Plan

Finished

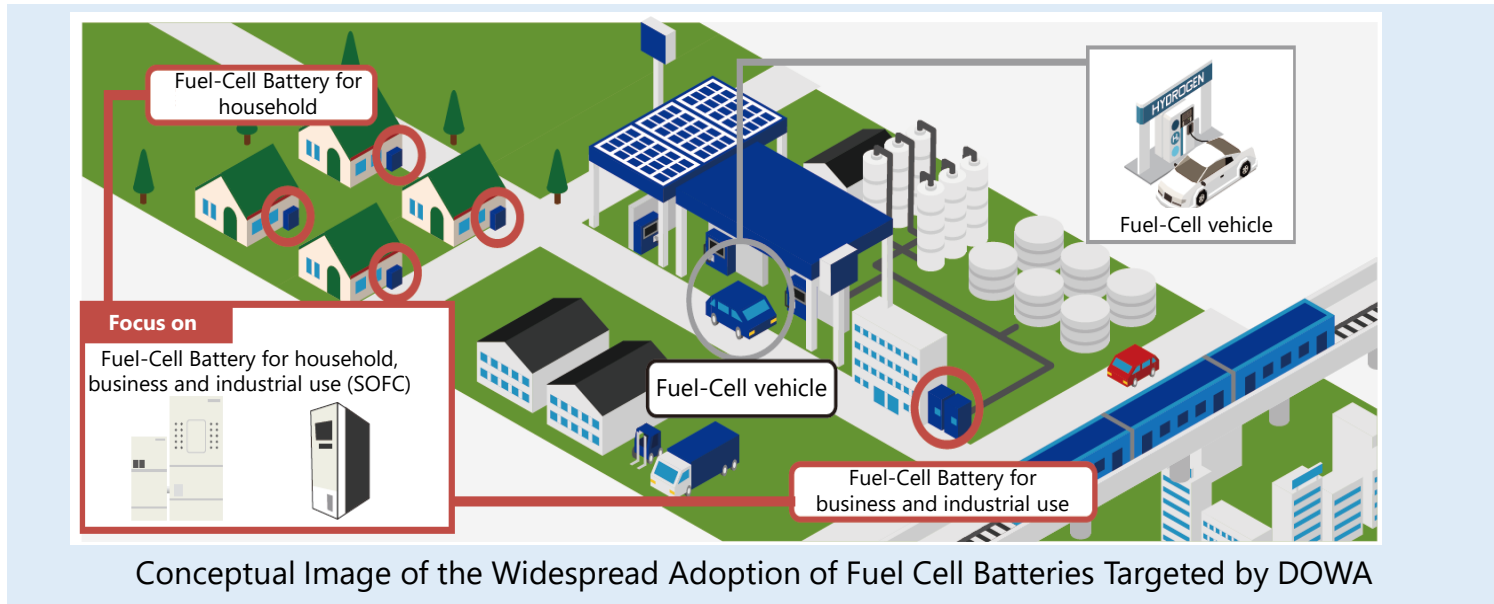
Preparatory stage

Business contribution

	FY2021	FY2022	FY2023	FY2024	FY2025 onward
Semiconductors	Increasing production capacity of short-wavelength-infrared LEDs and photo diodes (PDs) for wearable devices	Start mass production	Construction work for increasing production		Increase production in response to expanded demand
		Development and sample provision of products for next-generation wearable devices			Mass production preparations
Electronic materials	Developing silver powder in line with the progress in the development of high- efficiency solar panels	Developing differentiating technologies	Provide evaluation samples for the high-end market	Start mass production	Further expansion of sales for the high-end market
		Start mass production	Development for achieving higher performance, Provide evaluation samples	Construction work for increasing production	Start increasing production
Advanced fine materials	Establishing a structure for the mass production of fuel cell materials		Launch	Construction work for increasing production	Start mass production
			Customer development	Mass production preparations	
Advanced fine materials	Developing next-generation recording materials and establishing a structure for mass production	Material development and provision of samples		Process optimization	Construction and launch
					Start of operation
New development	Process optimization and mass production of solid electrolyte powder for all-solid-state batteries for consumer use	Mass production Construction	Launch and process optimization	Mass production preparations	Start mass production

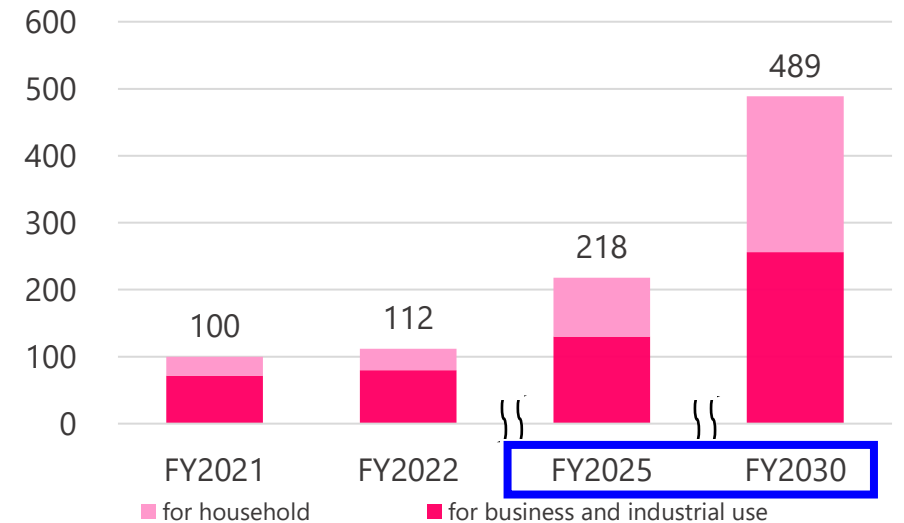
Commercialization of Fuel Cell Materials

- The market for fuel cell batteries which react hydrogen (or ammonia) with oxygen to generate electricity will expand in an effort to achieve worldwide carbon neutrality.
 - In addition to practical utilization in cars, demand will also expand as a stationary energy source for **household, business and industrial use**.
 - DOWA's fuel cell materials powder is used as a cathode material for stationary fuel cell batteries, and has been **highly evaluated thanks to our proprietary powder control technologies**.
- Fuel cell battery manufacturers are **planning to invest in increased production** in North America, Europe and Asia.
 - Evaluation samples of our products have also shifted to the initial mass production stage, and we will promote construction investment to acquire certification and **start full-scale mass production during the second half of FY2023**.



Fuel Cell Market

* DOWA HD research, FY2021 indexed to 100
 * Excluding automotive applications



We will position the product as a core business in our next Midterm Plan, and demand is expected to expand further due to accelerating carbon neutrality efforts.

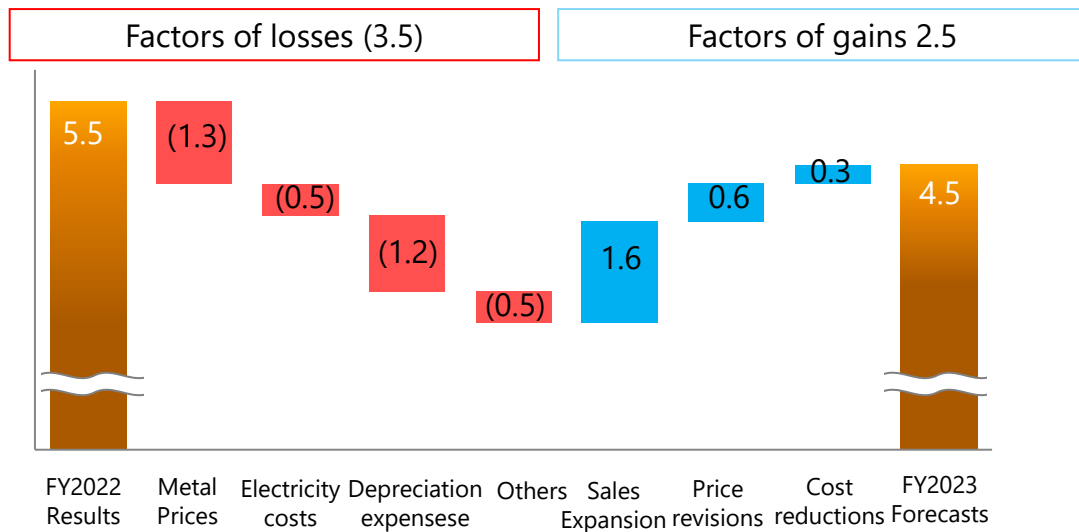
Business Overview

Business Environment (FY2023)

- With the shift to electrified and more intelligent automobiles, the number of automobiles production is expected to gradually rebound.
- While telecommunications equipment will continue to offer greater functionality and faster speeds, demand will recover from the second half of the year.

Ordinary income (Year-on-Year)

Billion yen (Amounts less than 100 million yen are rounded down.)



《Major Product Trends》

(FY2022/H1 = 100)

	FY2022		FY2023		FY2024
	H1	H2	H1	H2	
Volume of sales of copper rolled products (for automobiles)	100	102	105	104	113
Volume of sales of copper rolled products (For information and communication equipment)	100	64	75	92	108

Outlook for FY2023

- Sales of copper rolled products for automobiles will increase due to expansion for products for EVs.
- Precious metal plating for automobiles will gradually recover.
- Copper rolled products for telecommunications equipment and semiconductors will recover in demand from the second half.
- Strong sales of metal-ceramic substrates will continue, particularly for the industrial segment.
- We will strive to improve earnings capabilities by increasing sales, implementing price revisions and cutting costs.

Progress of Key Measures in Midterm Plan

Finished

Preparatory stage

Business contribution

		FY2021	FY2022	FY2023	FY2024	FY2025 onward
Copper rolled products	Development of new products and expanded sales tailored to customer needs in the automotive sector	Development of new alloys and process optimization	Sales expansion to high-voltage terminals for automotive use			
		Development of new plating technologies and provision of evaluation samples	Mass production preparations	Start mass production		
	Strengthening of sales to the telecommunications sector	Construction for increasing production (rolling machines)	Launch	Start of operation, Improved support for thin copper rolled products		
		Sales expansion of connector materials for smartphones	Sales expansion to terminals for industrial machinery			Expansion into peripheral applications
	Entry into new markets and strengthening of sales					
Expanding the Asia business	China	Sales expansion to local manufacturers	Construction work for increasing production		Start of operation	
	Thailand	Sales expansion to local manufacturers	Construction work for increasing production		Start of operation	
Electroplating	Expanding sales of electroplated products for high-voltage terminals	Japan	Tapping new demand and expanding sales to cater to customers' development needs	Mass production preparations	Mass production preparations	
		Thailand		Constructing production lines	Start of operation	
	Increasing capacity by eliminating and consolidating production lines and increasing production at facilities in Japan	Electroplating lines Preparing for elimination and consolidation	New building construction		Constructing, eliminating, consolidating production lines	Start of operation
Metal-ceramic substrates	Expanding sales and increasing production capacity of metal-ceramic substrates for industrial machinery and railways	Preparations for construction	New building construction		Launch	Start of operation
			Launch	Start of operation		

Growth Strategy for the Metal Processing Business

Automotive Applications

- The components are equipped in new cars due to model changes that occur every few years.
 - With the growth of electrification and the switch to EVs, demand has expanded for high-performance high voltage terminals, compact terminals and communications equipment.

[Copper rolled products]

- We will pursue the development of materials that cater to the needs of next-generation models and expand sales with the use of products that combine [high-performance copper alloys](#), [Sn reflow plating and silver-graphite composite plating \(SiC plating®\)](#).

[Plating]

- [High performance Ag plating for high voltage terminals is under development](#), with evaluation samples being provided for their use in next-generation models.
- Plant construction aimed at structural improvements through [the upgrading and reorganization of domestic production lines](#) is proceeding smoothly.

Telecommunications Applications

- Demand for semiconductors will expand with the introduction of new smartphone models and growth in the data server sector.
 - Demand for thin copper rolled products will expand due to the miniaturization and densification of components.

[Copper rolled products]

- [The response to the demand for thin copper rolled products](#) will be further enhanced due to extensive variations including titanium copper, corson and nickel-based alloys, and [the new rolling equipment](#) scheduled to launch in the first half of FY2023.



Conceptual image of the completed DOWA Hightech Plating Plant building in Saitama Prefecture



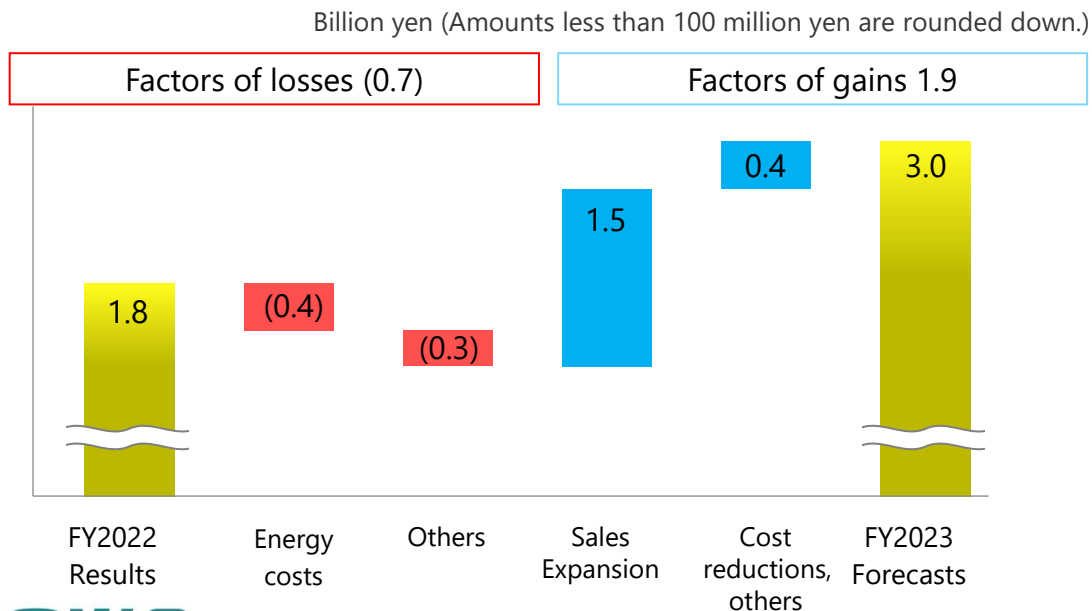
Nickel-based alloys (42%Ni-Fe)

Business Overview

Business Environment (FY2023)

- The impact of reduced automotive production due to semiconductor and component shortages will ease into the second half of the year, and heat treatment demand will also experience a moderate recovery.
- Due to the advance of EV adoption, electrification-compatible vehicles as a percentage of total production will increase.
- There will be changes to the type and composition of components that require heat treatment.

Ordinary income (Year-on-Year)



《Major Product Trends》

(FY2022/H1 = 100)

	FY2022		FY2023		FY2024
	H1	H2	H1	H2	
Heat Treatment Sales Amount	100	109	112	121	116
Industrial Furnaces Sales Amount	100	171	113	173	177

Outlook for FY2023

- Demand for heat treatment processing will gradually rebound from the second half of the year.
- Price revisions and cost reductions measures will continue in response to higher energy unit prices and other rising costs, and we will endeavor to secure earnings capabilities.
- In the industrial furnaces business, we will seek expanded orders by developing and launching new products that reflect decarbonization and other customer needs.

Progress of Key Measures in Midterm Plan

Finished

Preparatory stage

Business contribution

	FY2021	FY2022	FY2023	FY2024	FY2025 onward
Industrial furnaces	Developing and expanding sales of new equipment for applications other than automobiles Facilities related to biomass power generation Development	Demonstration testing		Starting sales of mass-production furnaces	
	Facilities for manufacturing electronic materials Sales of test furnaces	Improved performance		Starting sales of mass-production furnaces	
Heat treatment processing	Developing and expanding sales of heat treatment facilities which realize carbon neutrality (Z-TKM) Industrial furnaces Installation of demonstration equipment for basic development	Demonstrating testing and design of mass-production furnaces		Launch of mass-production furnace sales and expanded orders	
	Receiving orders for EV-related components, finding new customers Heat treatment processing	Heat treatment processing		Installation of mass-production furnaces	Mass production preparations
Heat treatment processing	Receiving orders for EV-related components, finding new customers Finding new customers related to electric parts	Activities for receiving orders and preparations for production		Acquire demand and increase orders for electric units	
	Winning orders from customers other than those in the automotive industry Receiving more orders for parts related to industrial robots	Receive more orders in line with customers' production increase			
	Winning orders from customers other than those in the automotive industry Acquiring certification for QMS (AS9100) for the aviation industry	Receiving more orders for parts related to aircraft			
	Responding to demand for local procurement and winning new customers (related to EVs) in overseas countries	Receiving more orders in the United States, Thailand, India, Indonesia, and Mexico			

Utilization of Z-TKM to capture growing market



- CO₂ emissions from the heat treatment process are reduced to around 40% compared with conventional furnaces.
- If green energy is utilized, reductions of more than 90% are possible.
- The lead time taken for treatment is shortened to roughly 60% compared with conventional furnaces.
- The same size as a conventional furnace, making it easy for customers to replace.

Z-TKM Development and Market Launch Plan

FY2022: Installation of demonstration unit, accumulation of operational data
Start of heat treatment prototyping using customer products.

FY2023: Further cost improvements, establishment of mass production furnace specifications.

→ Launch of external sales of mass production furnaces (second half).

→ Installation of mass production furnaces at in-house heat treatment plant.

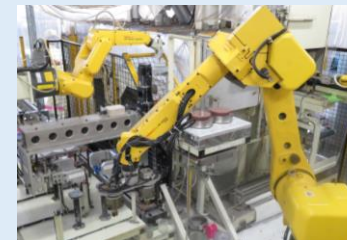
FY2024: Launch of consignment heat treatment processing.

We will cultivate Z-TKM to be a core product of the Heat Treatment Business, and broadly roll out the product to areas expected to experience high rates of growth, such as the automotive sector.

Automotive



Industrial robots



Construction equipment





Progress of Midterm plan 2024 Strengthening Sustainability Management

Initiatives to Strengthen Sustainability Management

We are steadily driving initiatives planned in the Midterm Plan 2024 in each area of sustainability to achieve our Mission and Vision.

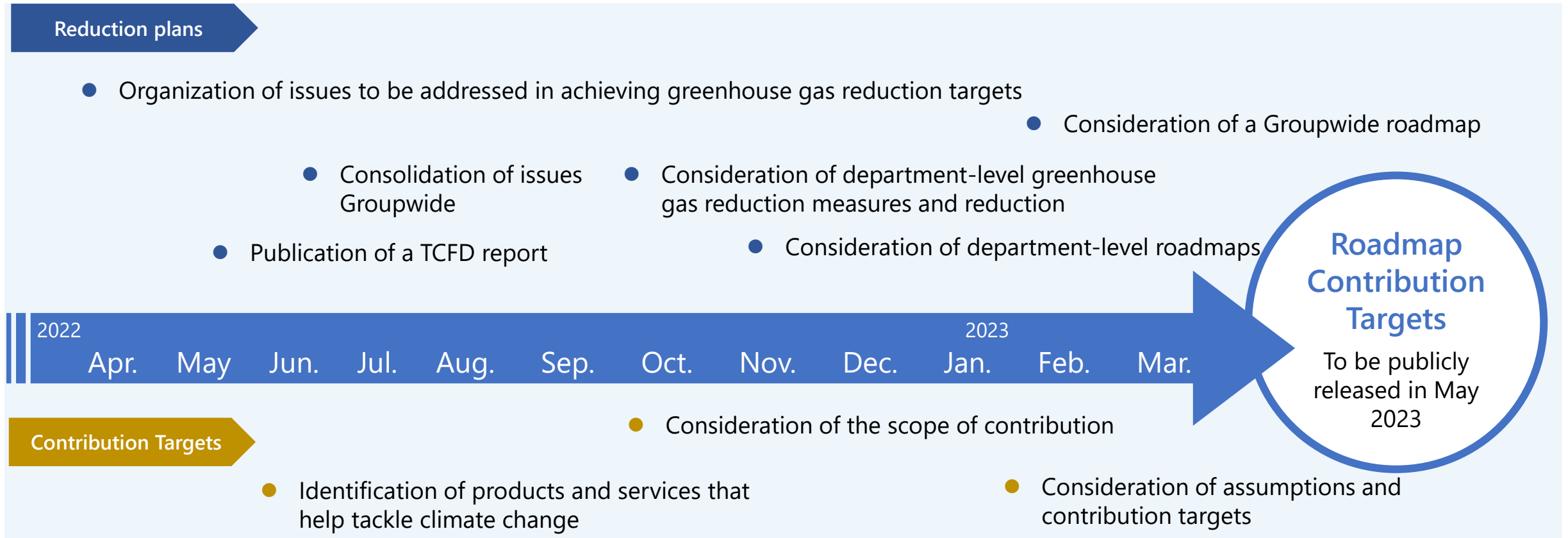
	目標	2022										2023				
		Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	
System for promotion	Sustainability Subcommittee	Meet monthly	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Sustainability Committee	Meet biannually						●					●			
	Reporting to the Board of Directors	Twice per year							●					●		
	Reporting on the status of dialogue with shareholders to the Board of Directors	Twice per year						●				●				
E	Publication of a TCFD report	Within FY2022		●												
	Publication of Reduction Roadmap and Contribution Targets	Within H1 FY2023	●	Organize issues, consideration roadmap and contribution targets												● (Plan)
S	Publication of the human resource development policy	Within FY2022								●						
	Certified as Outstanding Health & Productivity Management Organization 2023	Within FY2022											●			
	Obtaining DX Certification	Within FY2022				●										
G	Reassessment of risks and reflection to the 2023 action plan	Within FY2022													● Start operation	
	Strengthening of Quality Assurance System	Within FY2022	●	Rebuilding Quality Assurance System, promote company-wide activities												● Transition to new system

Responding to Climate Change

The following are [scheduled for public release in May 2023](#) based on the two perspectives (risks and opportunities) of the TCFD recommendations.

- [Roadmap](#) for achieving carbon neutrality in 2050 and meeting interim targets for greenhouse gas reductions in FY2030.
- [New contribution targets](#) for products and services that help tackle climate change.

Details of Activities in FY2022



Materiality 6

Increasing organizational power (including promotion of diversity, work-life balance, and human resources development)

Drive initiatives to enhance human capital with key initiatives of developing human resources who make changes happen and securing diverse human resources and workstyles.

■ Promotion of Diversity

- Increase the percentage of newly hired employees who are women (at HD) (target: 30%).
 - [Among new employees hired in April 2023, 32% were women.](#)
 - Began to develop environments and facilities that enable the full participation of women at each plant.
- Introduce an extension of mandatory retirement age (target: introduction at all domestic Group companies by FY2024).
 - [Introduced at 32 of 53 companies.](#) We aim to complete introduction at all companies during FY2023.

■ Building working environment to continue to work (work-life balance)

- Strengthen support for employees balancing childcare and family care responsibilities with work.
 - Introduced a work-from-home system, enhanced the shorter working hours and limited district working system, upgraded the childcare and family care leave systems.
- [Have conducted an employee satisfaction survey since FY2022](#) with the aim of reducing employee turnover.

■ Human Resource Development

- In June 2022 we published our Human Resource Development Policy and Initiatives to Develop an Environment to Cultivate Human Resources.
- We will revamp our internal training systems and equally provide employees motivated to learn with learning opportunities.

The percentage of newly hired employees who are women (at HD)



Driving Digital Transformation (DX)

We will steadily implement initiatives that are key to the promotion of our DX business strategy, namely the development of IT infrastructure, strengthened digital security and the cultivation of DX-oriented human resources, and further promote DX on a Groupwide basis.

Midterm Plan 2024			FY2022 Results	Targets for FY2023
Measures	Indications	Targets for FY2022 to FY2024		
Building IT infrastructure	Operating a common Group cloud infrastructure	Operational launch in FY2023/H2	Progress as planned	Operational launch in FY2023/H2
Human Resource Training for Digital Transformations	Number of human resources trained	Cumulative number: 80	67 (plan 27)	38 (105 total)

Development of DX-oriented Human Resources

- We have started efforts to cultivate human resources capable of utilizing AI to drive DX, and engineers with specialized skills. In FY2022, we achieved progress in excess of the planned personnel.
 - In the latter half of FY2023, we will launch operation of a common Group cloud infrastructure and accelerate the utilization of data by DX-oriented human resources.

Companywide Promotion of DX

- Utilizing support company sites in our major districts in Japan (Akita, Kanto, Chubu, Okayama), we will strengthen the promotion of DX at each business site.
 - Through the introduction of AI-driven production technologies and the building of cloud-based systems, [business and revenue contributions will start in some areas.](#)

Examples of DX

- Improved metal value utilizing data science at smelting and refining site
- Improved productivity and lower costs with the introduction of AI in the development of process plans at metal processing site
- Reduced accident risks using AI-based image analysis at recycling site



(Appendix) Assumptions and Sensitivities

Sensitivity (Operating Income / FY2023)

Million yen

	Assumptions	Fluctuation	Sensitivity
Exchange rate	132.0 ¥/\$	±1 ¥/\$	610
Copper	8,500 \$/ton	±100 \$/ton	40
Zinc	2,800 \$/ton	±100 \$/ton	470

* Exchange rate sensitivity; Nonferrous Metals 500 million yen and Electronic Materials 110 million yen.

Exchange Rate and Metal Prices

	FY2022			FY2023			Midterm Plan 2024
	H1	H2	Full-year	H1 assumptions	H2 assumptions	Full-year assumptions	
Exchange Rate: (¥/\$)	134.0	137.0	135.5	132.0	132.0	132.0	120.0
Copper: (\$/t)	8,634	8,468	8,551	8,500	8,500	8,500	10,000
Zinc: (\$/t)	3,597	3,067	3,332	2,800	2,800	2,800	3,800

DOWA

Forward-looking statements made in this document, such as business forecast, are based on the information available at this time and on certain premises that the Company assumes to be reasonable. Actual performance may differ materially from such forecasts due to a variety of factors.