Corporate Strategy Briefing

First Half of FY2022 (FY Ending March 2023)

DOWA HOLDINGS CO.,LTD.

November 16, 2022

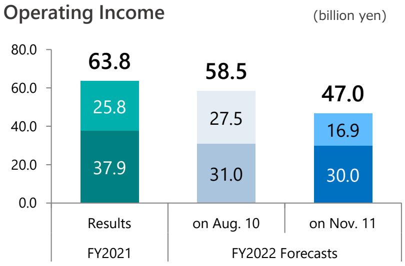
Thank you for attending our Corporate Strategy Briefing today.
My name is SEKIGUCHI Akira. I am president and representative director of DOWA HOLDINGS.
Today, I will be talking about our results for the first half of fiscal 2022 and the full-year forecast.
Then, we will be focusing on the progress of individual measures in Midterm Plan 2024.

FY2022 Full Year Forecasts

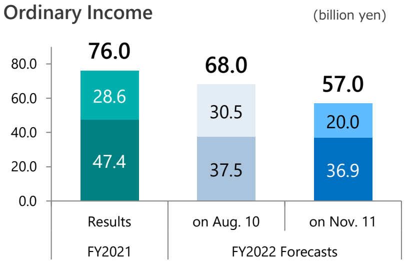
In Q1 FY2022, market prices and volumes were firm, but metal prices began softening from Q2, and electricity costs rose more than expected.
In H2 profit is expected to decline compared with H1, in part due to falling metal prices, a decrease in demand for some applications, and a sharp rise in unit prices for electricity.

Billion yen		FY2022/H1 Results	Year-on-Year	FY2022/H2 Forecasts	Year-on-Year	FY2022 Forecasts	Year-on-Year
Net Sales		**401.8**	(21.4)	**383.1**	(25.3)	**785.0**	(46.7)
Operating Income		**30.0**	(7.9)	**16.9**	(8.8)	**47.0**	(16.8)
Ordinary Income		**36.9**	(10.5)	**20.0**	(8.5)	**57.0**	(19.0)
By Segment	Environmental Management & Recycling	5.8	(0.7)	4.5	(2.5)	10.4	(3.2)
	Nonferrous Metals	23.5	(3.5)	10.1	(5.5)	33.7	(9.0)
	Electronic Materials	3.8	0.1	1.8	(1.0)	5.7	(0.8)
	Metal Processing	3.4	(0.4)	2.4	(0.4)	5.9	(0.9)
	Heat Treatment	0.7	(0.3)	1.5	(0.3)	2.3	(0.7)
	Other/ Eliminations	(0.6)	(5.6)	(0.3)	+1.4	(1.0)	(4.2)
Profit attributable to owners of parent		**22.7**	(9.8)	**12.2**	(6.1)	**35.0**	(16.0)

Operating Income



Ordinary Income

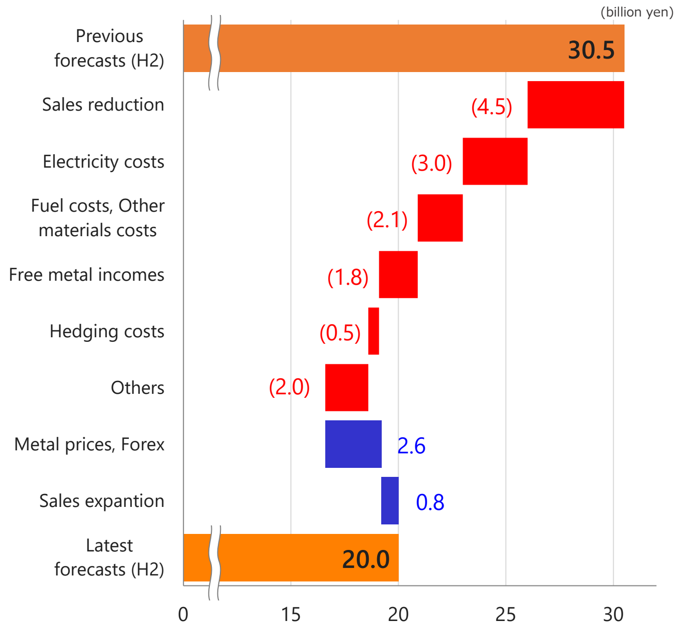


DOWA

 2

First, we are looking at our results for fiscal 2022.
In the first quarter, our performance was relatively fine. But in the second quarter, the metal market weakened and costs soared dramatically. This resulted in year-on-year plunges in net sales, operating income and ordinary income in the first half. These results were slightly below the first-half forecast figures announced in August.
In early August, torrential rain damaged areas in northern Akita Prefecture. We have several bases in that region including Kosaka Smelting & Refining, which is one of our Group's key bases. All of them were to undergo annual maintenance for the summer just after the disaster. In consideration of safety, we took the emergency action of stopping operations at these bases and annual maintenance commenced. That resulted in a decrease in the free metal sales in the Nonferrous Metals Segment.
Let me add some explanation regarding the recording of the free metal sales. The Nonferrous Metals Segment has several sites that engage in mainly the processing of recycled raw materials. These materials are more uneven in quality between lots than natural ore. To avoid later negative adjustments, we have more strict rules for recording the free metal sales.
When the collection volume and the recycling volume are balanced, there are no problems. When there is an imbalance between them, the recorded the free metal sales is the same in the long run but from the short-term perspective, the timing when it is recorded varies.
The recent emergency suspension of operations caused a temporary imbalance between the collection volume and the recycling volume, and the recording of the free metal sales was deferred. When it is cleared will depend on the future collection volume of raw materials and the status of operations. In this respect, our forecast for the second half is rather conservative.

Factor Analysis of FY2022 H2 Ordinary Income (Changes from Previous Forecasts)



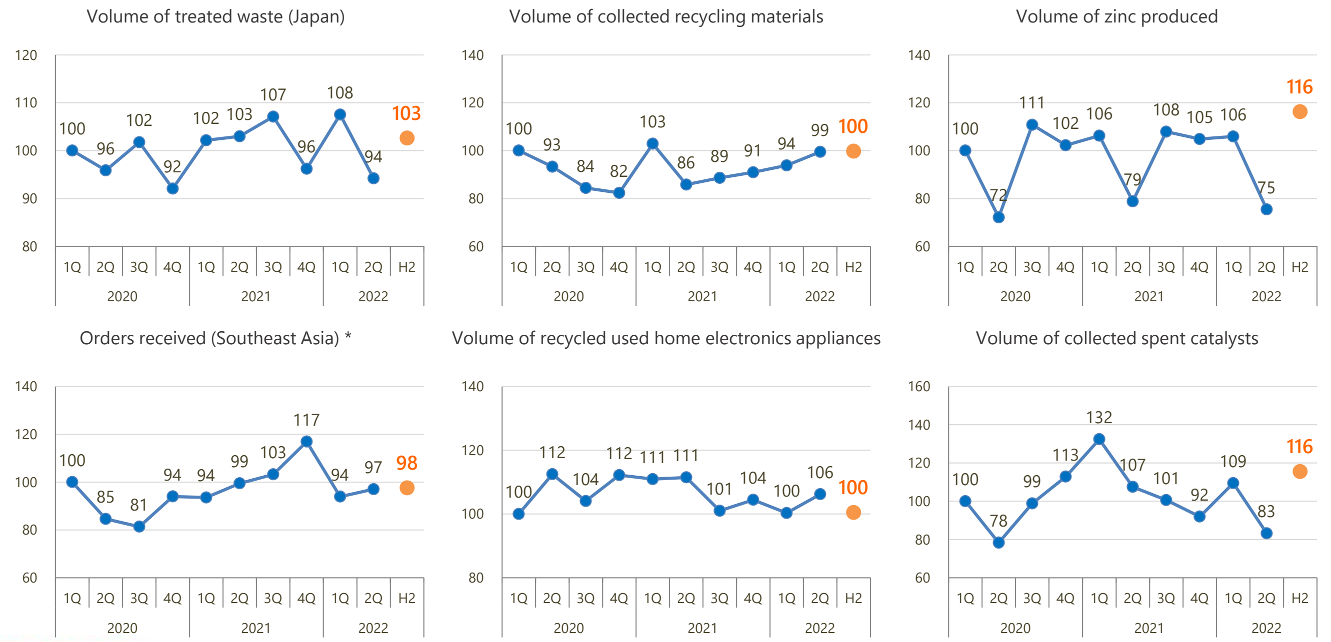
Major factors for change
- Decline in sales of products such as silver powder for solar panels and copper rolled products for smartphones.
- Downward pressure on revenue in the Nonferrous Metals segment due to sharply rising electricity costs.
- Rising unit prices due to skyrocketing global energy prices and increases in material prices.
- Differential sales in the Nonferrous Metals segment expected to decline (mainly platinum group metals).
- Hedging costs are expected to increase slightly.
- Product mix, lower profit from equity method affiliates, etc.
- Enjoying the benefits of the weak yen, mainly in the Nonferrous Metals segment and Electronic Materials segment.
- Effects of increased sales and price revisions are limited.
A decline in profit of 10.5 billion yen compared with the previous forecast is expected.

DOWA

 3

We recently revised the ordinary income forecast for the second half downwards. Although this is a downward revision from the previous forecast, the full-year ordinary income forecast has now returned to the level announced in May. This slide shows the reasons for the recent revision.
The greatest reason is a sales decline. The sales volume is expected to tumble, especially concerning silver powder for solar panels, following the increase in the market share of silver powder made in China. In our silver powder business, we anticipated that the market share of China-made silver powder would increase. Since it is now clear that this growth is faster than expected, we incorporated its impact into the second-half forecast.
For applications that require high-performance items, our high performance silver powder is expected to remain in demand. However, we foresee that the areas it is applied will be smaller. This is not confined to the second half. It will continue for the next few years. This is why it will be difficult to expect a conventional level of income from silver powder.
The reasons for the surge in the market share of China-made silver powder are unknown. Currently, almost all of the manufacturers of solar panels and paste are Chinese companies. In this situation, the number of manufacturers using China-made silver powder are actually increasing. We will continue to seek higher performance silver powder. Meanwhile, we are changing our policy to maintain a certain level of profit. In addition, we will change our orientation and appropriate staff to new products in the Electronic Materials Segment.
Copper rolled products for smartphones are also among the products whose sales dropped. We see the sales slide as part of the economic cycle. It is not that competitors enjoy superior positions. Our understanding is that the massive change of our market share occurred only in silver powder.
Next, our results were affected by soaring electricity costs. This was taken into account in the previous forecast for the second half. We calculated electricity costs on the basis of the electricity unit price three months in the future presented by the electric power company. However, the electricity unit price continued to rise to a level beyond expectations. In the current second-half forecast as well, electricity costs are based on the electricity unit price for January.
Fuel costs and other materials costs were also projected to rise in the previous forecast. The current forecast takes into account their continued increase due mainly to the depreciation of the yen.
I already explained the free metal sales earlier.
Hedging costs are linked with the metal markets. We expect them to rise slightly.
The weak yen is a positive factor for us, because we can benefit from it.
In view of the factors, I explained above, the sales decline and the cost increase will significantly impact us, and we lowered forecast figures. This is our thinking behind the latest second-half forecast.

Major Market Trends (1) (Compared to Q1 of FY2020)



DOWA *Local closing month basis, consolidated results reflected 3 months after the above.

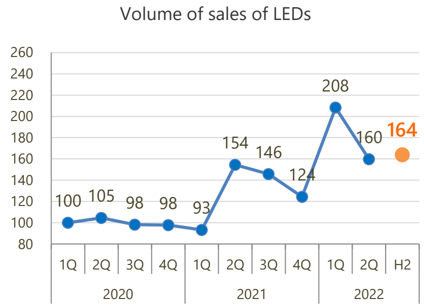
 4

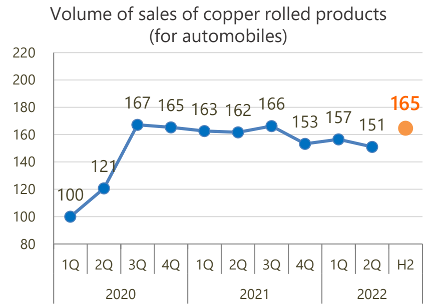
This slide demonstrates the trends in volumes of major products and services. It shows the actual state of our businesses.

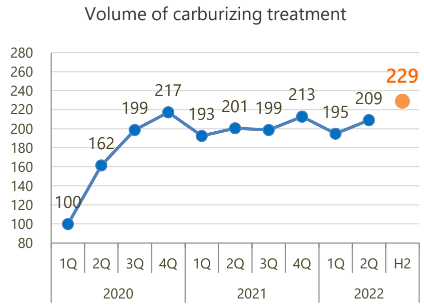
The four charts on the left-hand side show trends in the volumes in the Environmental Management & Recycling Segment. We forecast brisk volumes for the second half. We do not think that markets are changing considerably.

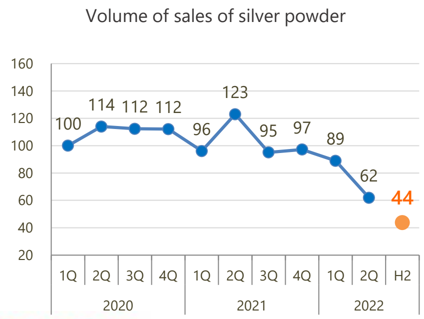
The zinc production volume and the volume of collected spent catalysts dropped in the second quarter. This is due to a torrential rain disaster. Basically, collection and production have stayed buoyant. We do not expect market trends to change significantly.

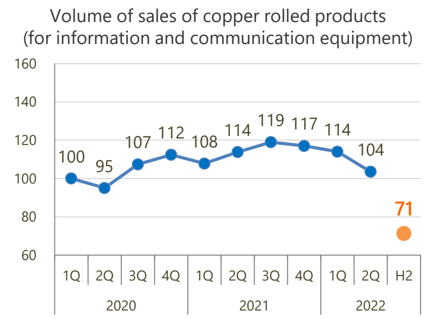
Major Market Trends (2) (Compared to Q1 of FY2020)











[H2 Market Trends (Summary)]

- While silver powder and copper rolled products for information and communication equipment will decline compared with H1, demand will generally remain firm for other products and services.
- For automotive-related products, a turnaround in demand is expected due to recovery production from Q4.
- Rising costs of electricity fuel, other materials will place downward pressure on the balance of income and expenditures.

DOWA

 5

The two charts on the left-hand side are related to products in the Electronic Materials Segment. The LED sales volume had previously been sluggish. Sales of the new LED model released in the previous fiscal year have been expanding steadily.
On the other hand, silver powder sales are as I explained earlier. We predict that they will remain 60% lower than in the first quarter of fiscal 2020 for the foreseeable future.
Sales of copper rolled products and heat treatment are relatively strong. However, sales of copper rolled products for information and communication equipment are beginning to slow down in the second half.
In a nutshell, we are facing a major challenge of creating a new source of revenue that supersedes the silver powder in the Electronic Materials Segment as soon as possible. There are several promising new products and some of them are already approved by customers. We are taking different actions together with customers in consideration of the timing of when the market concerned will rise and the timing of when our product will earn revenue.
Now, I will hand the presentation over to the next presenter.

Progress of Midterm plan 2024

Evolution of Recycling-oriented Business Model

Good morning. My name is HOSONO Hiroyuki. I am responsible for the Corporate Strategy Department.
From now, I will be giving a briefing.
Let us look at the overviews of individual segments in the second half and the progress of measures in Midterm Plan 2024.

Environmental Management & Recycling (1)

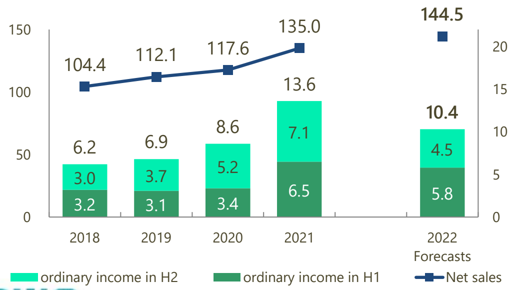
Business Overview

Business Environment (FY2022/H2)

- Waste treatment business: Volume of waste generated has will remain flat both in Japan and in Southeast Asia.
- Recycling business: Volume of collected materials for recycling will remain steady.
- Number of used home appliance units processed will remain flat.

Net Sales & Ordinary Income

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



《Major Product Trends》 (FY2021/H1＝100)

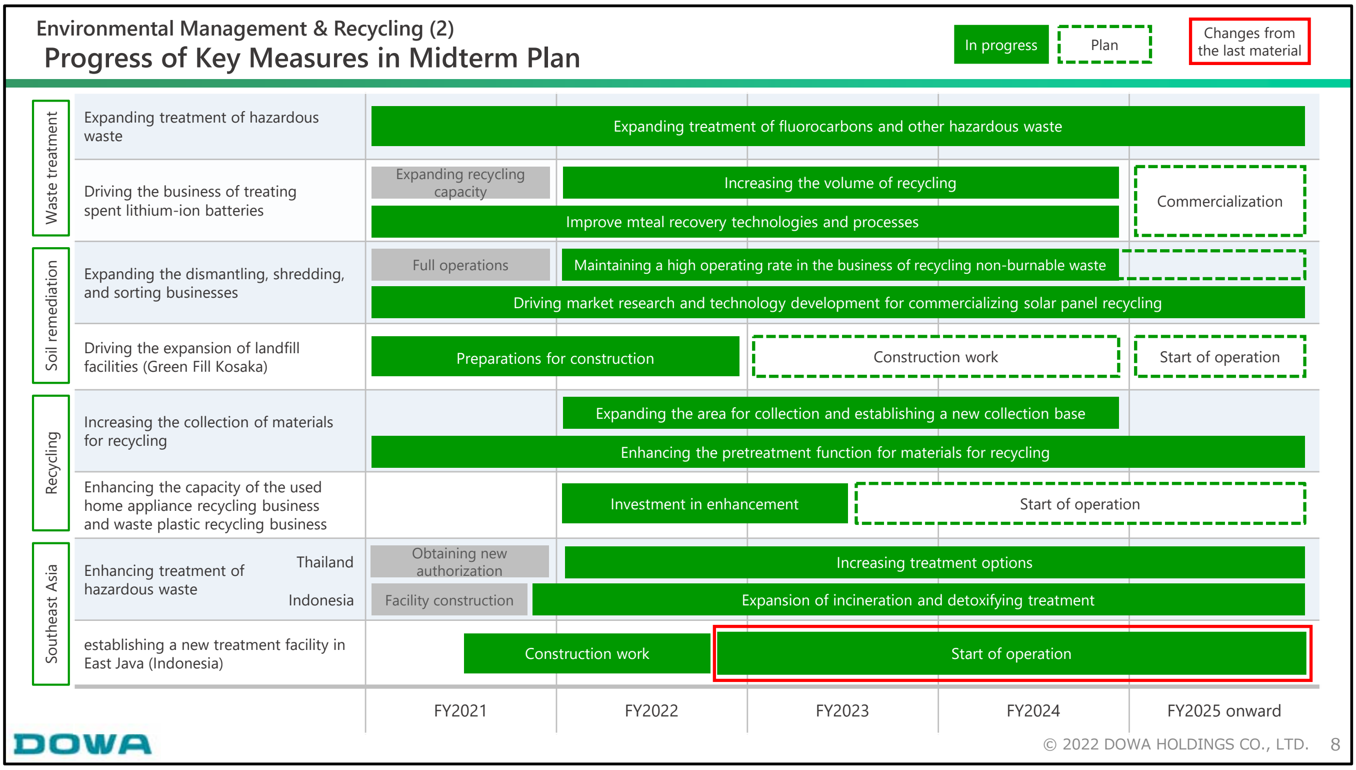
	FY2021		FY2022		FY2024
	H1	H2	H1	H2	
Volume of treated waste in Japan	100	99	98	100	99
Treatment volume in Melting and recycling business	100	121	110	120	141
Waste treatment orders received in Southeast Asia	100	114	99	101	130
Volume of recycled used home electronics appliances	100	92	93	90	100

Overview of FY2022/H2 (comparison with H1)

- Significant increase in electricity costs and the cost of fuel and sub-materials.
- A brisk volume of domestic waste will be processed for intermediate treatment. The unit price is expected to fall slightly.
- The treatment volume in melting and recycling will rise.
- In Southeast Asia, the focus will be on the processing of hazardous waste.
- In the noncombustible waste recycling business, most revenue planned in the fiscal year is concentrated in the first half.

DOWA

I will begin with an explanation of the Environmental Management & Recycling segment.
As the previous presenter said, we do not expect any major changes in domestic and overseas demand for waste treatment and recycling in the second half.
At the same time, electricity costs, fuel costs and sub-material costs are forecast to increase greatly. The result is that revenue will slow.



Next is the progress of key measures in the Midterm Plan.
This diagram is an update of the materials presented when Midterm Plan 2024 was announced in May.
Different background colors indicate the different statuses of the specific measures. Gray means that it has been done, color means that the measure is underway, and white means that it will be done in the future. In addition, a red rectangle means that there has been some progress in the measure.
The start of operations at a new landfill site in the Southeast Asian country of Indonesia is now in sight. We will be able to obtain an operation license and put the site into operation by the end of this year.
I will explain details on the next page.

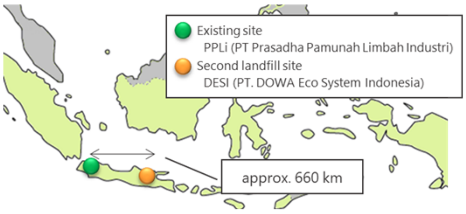
Environmental Management & Recycling (3)

Major Initiatives (details)

Strengthening of Business Response Capabilities in Southeast Asia Markets (Indonesia)

- Expansion of areas that handle orders through alliance with existing sites (PPLi), completion of construction of second landfill side (DESI) in East Java aimed at improved transportation efficiency, start of operation following certification (expected in November 2022).

→ Capture demand for hazardous waste processing that is expected to expand.



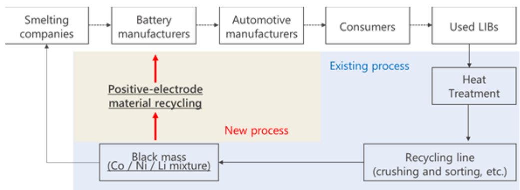
Overview of DESI

Recycling of used lithium-ion batteries

- Following Akita, a recycling line will also enter operation in Okayama (May 2022).
- Successful recycling of cathode material from spent automotive lithium-ion batteries following heat treatment.

→ Strive to enhance business competitiveness by improving processing capacity and building an efficient recycling system.

Lithium-ion battery supply chain



 9

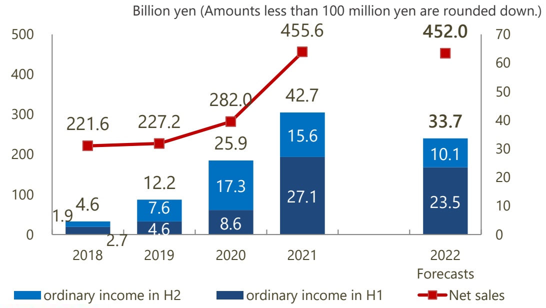
We constructed a second landfill site in East Java in Indonesia. Its opening is now in sight. The photo on this slide is a current exterior view of the site.
In collaboration with the existing site PPLi, we are aiming to increase whole sales in Indonesia to around 1.3 times the current level in fiscal 2024.
In Japan, we are working to increase recycling of used lithium-ion batteries.
For the current fiscal year, we put a recycling line in Okayama into operation following the one in Akita.
Our joint development with Akita University achieved the recycling of the cathode materials of used lithium-ion batteries. Recently, we published a press release on this success. We will be working to commercialize it.

Nonferrous Metals (1)
Business Overview

Business Environment (FY2022/H2)

- Metal prices, for both base metals and precious metals, are expected to be at a lower level than the H1 average.
- Ingot demand will be slightly sluggish, particularly for the automotive market.
- Generation of spent catalysts is firm.

Net Sales & Ordinary Income



《Major Product Trends》 (FY2021/H1＝100)

	FY2021		FY2022		FY2024
	H1	H2	H1	H2	
Volume of gold produced (Kosaka)	100	64	92	92	100
Volume of zinc produced (Akita)	100	115	98	126	115
Volume of collected spent catalysts	100	80	80	96	130
(Ref.) Volume of collected recycling materials	100	95	102	106	110

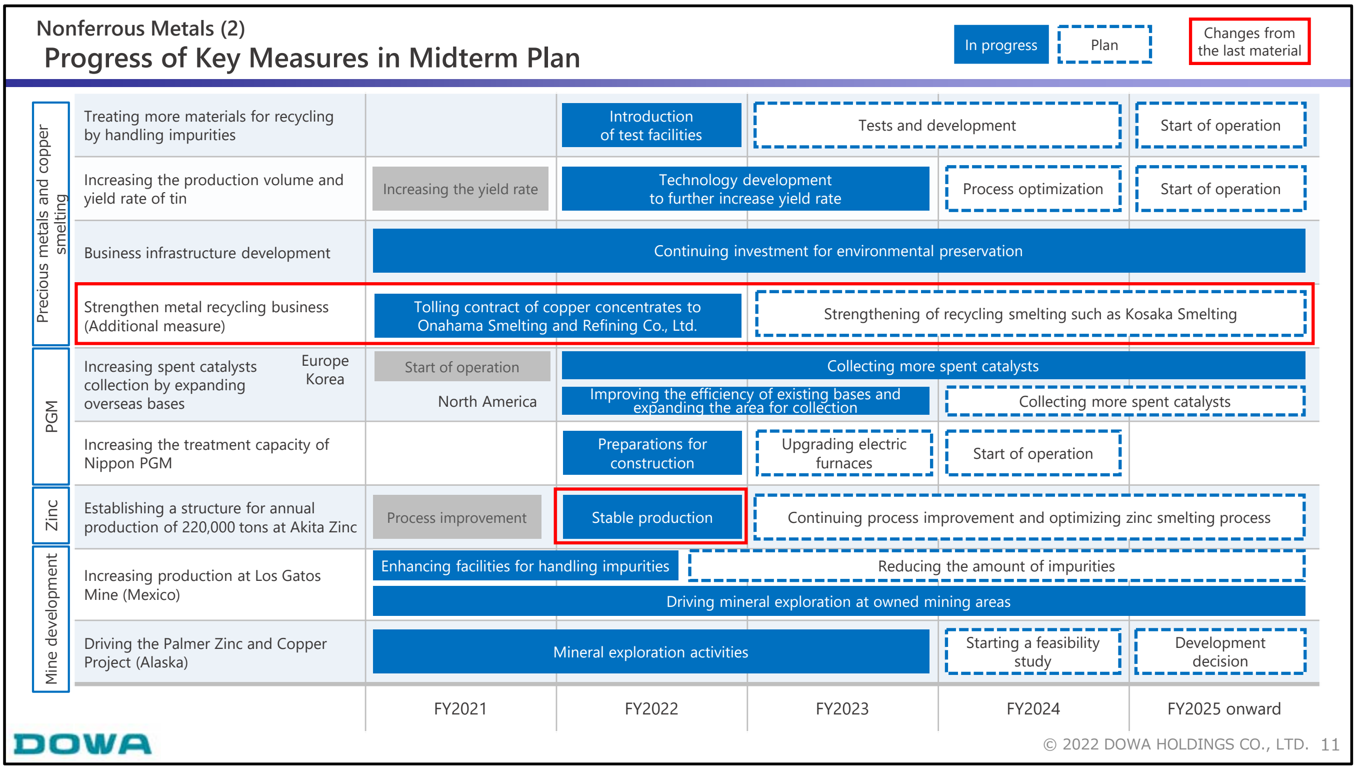
Overview of FY2022/H2 (comparison with H1)

- Due to falling metal prices and deteriorating quality of raw materials, in H2 differential revenue for platinum group metals, zinc will decline.
- In addition to an upward trend for transportation costs and unit prices for materials, electricity rates will also rise sharply.
- Collection volume of spent catalysts temporarily declined due to torrential rain but is expected to recovery in the second half of the year.

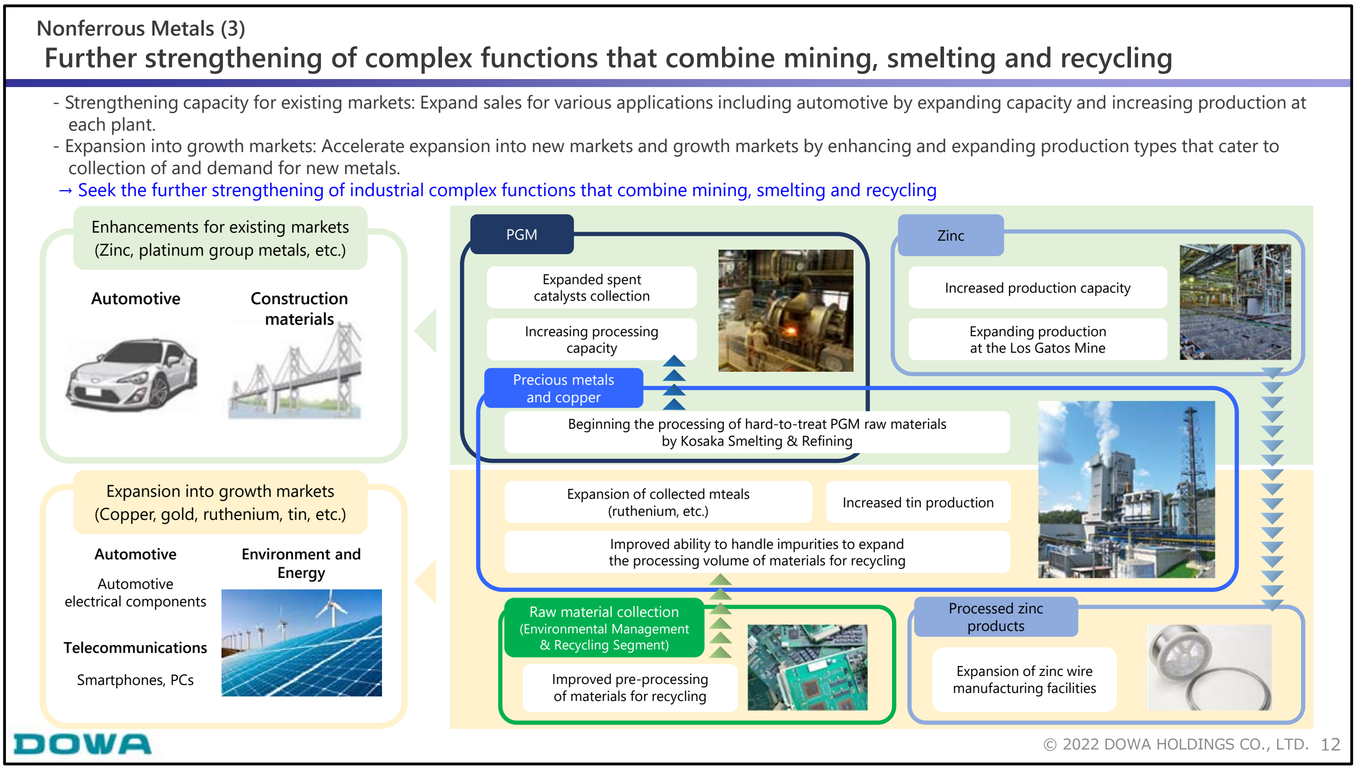
DOWA

 10

Next, we are looking at the Nonferrous Metals Segment.
The market prices of metals are expected to be lower than in the first half, whereas demand for them is forecast to be firm.
Meanwhile, costs are increasing on the whole. The forecast takes into account a decline in the profitability of the zinc smelting business particularly attributable to a sharp increase in electricity costs.
PGM recycling business implemented a temporary adjustment of operations in the first half due to torrential rains in the Akita region.
The impact of this will fade in the second half, but we have a conservative view of free metal sales.



This slide focuses on the progress of key measures in the Midterm Plan.
The tolling contract of copper concentrates with Onahama Smelting and Refining will be terminated. The termination of the contract was not included in the Midterm Plan at the time of its announcement. After this termination in the current fiscal year, we will focus more energy mainly on recycling smelting at Kosaka Smelting & Refining in the next and future fiscal years.
Our target was the production of 220,000 tons of zinc this fiscal year. However, in consideration of energy costs and other factors, we will implement zinc production that prioritizes stable production for the current fiscal year.



We have long been improving the functions of the mining, recycling and smelting complex in the Nonferrous Metals Segment. We will continue doing so.
In particular, we will add ruthenium and other metals to the lineup to expand the types of metals we produce.
We will take advantage of the functions of the mining, recycling and smelting complex to take two actions. One is to increase our efforts for existing markets. The other is to expand into growth markets.

Electronic Materials (1)

Business Overview

Business Environment (FY2022/H2)

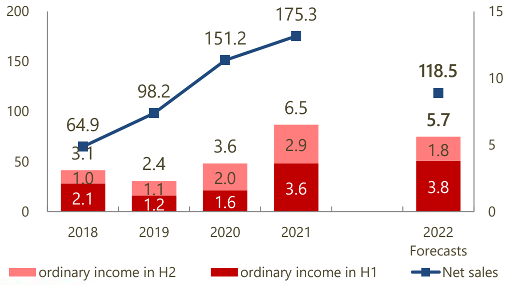
- Sluggish markets for telecommunications equipment and semiconductors.
- The sales volume of wearable devices will increase.
- Solar panels to be installed will likely continue to increase, reflecting increasing demand for new energy.

《Major Product Trends》 (FY2021/H1＝100)

	FY2021		FY2022		FY2024
	H1	H2	H1	H2	
Volume of sales of LEDs	100	109	149	132	168
Volume of sales of silver powder	100	88	69	40	112
Income from new products (e.g. evaluation sample incomes)	100	109	122	94	200

Net Sales & Ordinary Income

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

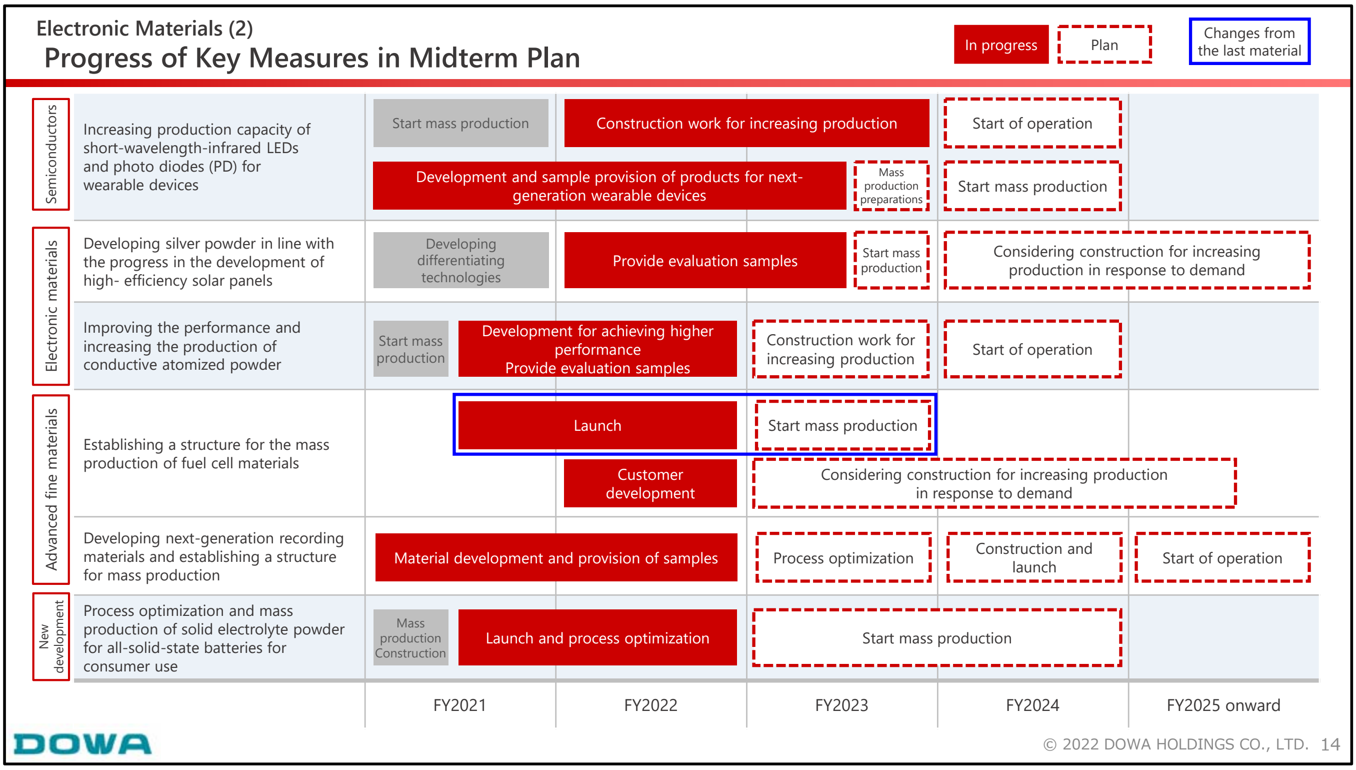


Overview of FY2022/H2 (comparison with H1)

- Solid demand for short-wavelength-infrared LEDs and photo diodes (PDs).
- Orders for silver powder in H2 are expected to be sluggish despite expanded demand for high-efficiency solar power panels.
- Sales have recording materials for data tapes have declined due to the postponement of capital investment in data centers in connection with semiconductor shortages.
- We have steadily proceeded with the development of new products and provision of evaluation samples despite some customers changing plans with fuel cell materials.

DOWA

This deals with the Electronic Materials Segment.
The telecommunications equipment and semiconductors markets were sluggish, while sales of wearable devices were increasing. This means that demand for our short-wavelength-infrared LEDs and photo diodes (PDs) will stay solid.
The solar panel market is expected to expand, but our market share is becoming smaller. The sales volume of silver powder will be poor.
Due to the semiconductor shortage, capital investments in data centers continue to be postponed. We also anticipate that sales of recording materials for data tapes will decline.



We are moving on to the progress of key measures.
We worked to prepare for the mass production of fuel cell materials, but in accordance with customer requests, the start of mass production has been delayed about half a year.
The plan projected that it would start in the second half of the current fiscal year. Now, it will start in the next fiscal year.

Major Initiatives (details)

Silver powder

- High-efficiency panels have become general purpose and market share has declined due to the worsening competitive environment from the influx of players.
- Competition for current-gen panels has intensified, making it difficult to recover market share.

→ Focus on the high-end market, mainly on next-gen panels, and further concentrate on the development of silver powder with improved properties.

Short-wavelength-infrared LEDs and photo diodes (PDs)

- Due to the development of sensing technologies, demand for wearable devices, mainly for the healthcare markets, will rapidly expand.
- Using our strength in catering to a wide range of wavelengths with a focus on infrared ranges, we will expand sales of short-wavelength infrared LEDs and PDs with advanced capabilities for wearable device sensors.

→ Also advance development aimed at next-generation models to support a variety of sensing methods.

Fuel cell materials

- The market for fuel cells (power generation through hydrogen and oxygen) is expected to rapidly grow as the development of technologies and infrastructure for carbon neutrality accelerates.

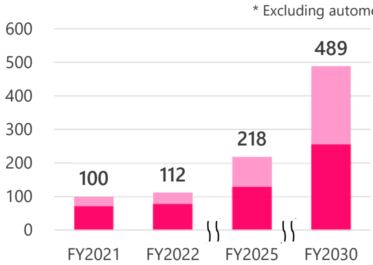
→ Development samples for industrial and commercial use have seen steady progress despite changes to the starting times for mass production in some areas.

Fuel Cells for Industrial Use (for illustrative purposes)

Fuel Cell Market

* DOWA HD research, FY2021 indexed to 100

* Excluding automotive applications



DOWA

We are now taking an in-depth look at major measures.
In silver powder, the race to capture market share is intensifying among manufacturers. After the progress of generalization of high efficiency panels which was our strength, the competition among panel manufacturers intensified. In this situation, our market share is shrinking. With a focus on the high-end market centering on next-generation panels, we will work hard to develop high performance silver powder.
Regarding short-wavelength-infrared LEDs and PDs, sensing technologies are advancing. Especially in the healthcare markets, demand for wearable devices is rapidly expanding. In this environment, we are continuing our efforts to expand sales of high-performance short-wavelength-infrared LEDs and PDs. Our development of subsequent models is underway. In the next fiscal year or later, our products will support different sensing methods.
Regarding fuel cell materials, a customer changed its plans and that led to carry-overs. Despite that, we will continue working hard on products for promising markets.

Metal Processing (1)

Business Overview

Business Environment (FY2022/H2)

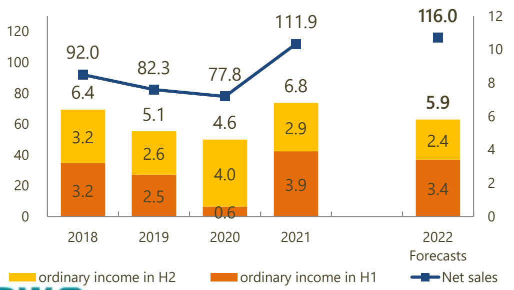
- With the shift to electrified and more intelligent automobiles, the number of automobiles produced is expected to increase to cope with recovered demand.
- While telecommunications equipment will support more functions and enable faster communication, adjustments will continue in the meantime, with a focus on Chinese market conditions.

《Major Product Trends》 (FY2021/H1＝100)

	FY2021		FY2022		FY2024
	H1	H2	H1	H2	
Volume of sales of copper rolled products (for automobiles)	100	99	**95**	**101**	107
Volume of sales of copper rolled products (For information and communication equipment)	100	106	**98**	**64**	106

Net Sales & Ordinary Income

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



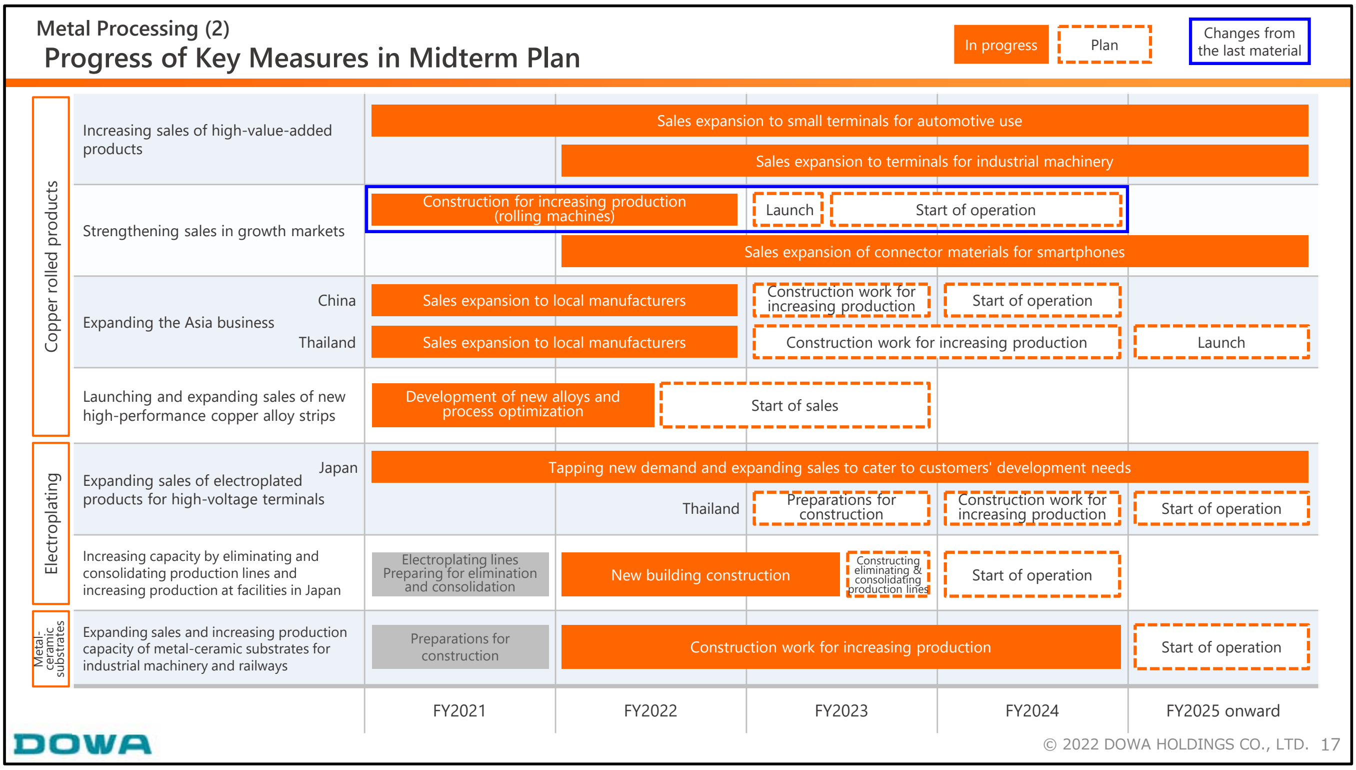
Overview of FY2022/H2 (comparison with H1)

- Production and sales will continue at high levels to eliminate the order backlog of copper rolled products for automobiles.
- Precious metal plating for automobiles is expected to recovery despite customer differences.
- Sales of copper rolled products for telecommunications equipment and semiconductors will decline.
- Strong sales of metal-ceramic substrates will continue, particularly for the industrial segment.

DOWA

 16

This page is about the Metal Processing Segment.
The business environment surrounding it did not see any major changes. While it is partly affected by the semiconductor shortage, the shift to electric and intelligent vehicles is continuing on the whole. For the second half, we assume that carmakers' production will make up for delays.
We still have order backlogs for copper rolled products for automobiles. To clear these backlogs, production and sales will be at high levels for the foreseeable future.
On the other hand, production adjustment has continued regarding products for telecommunications equipment, especially for China. Sales will fall for the second half.
Mainly for the industrial segment, sales of metal-ceramics substrates are expected to be strong.



This slide shows the progress of key measures.
Dowa Metanix is constructing rolling machines for increasing the equipment. It is slightly behind schedule. The equipment will be started up in the next fiscal year and put into commercial operation in the middle of the same fiscal year. Demand is currently slowing. This delay will have no material impact.

Metal Processing (3)

Major Initiatives (details)

Copper Rolled Products

- For automobiles: Demand is increasing, reflecting a shift to electric power and EVs.
  Launch of SilC plating® silver-graphite composite plating with low insertion force and excellent contact reliability.

→ Expansion into applications that require high sliding properties and reliability, such as charging and high-voltage terminals for Evs.

- For telecommunications equipment: Demand will increase due to the miniaturization and densification of components.
  Needs for materials that can be used for miniaturization and densification are increasing.
  Lineup of new YCuT-GM products as compact connector materials for smartphones.

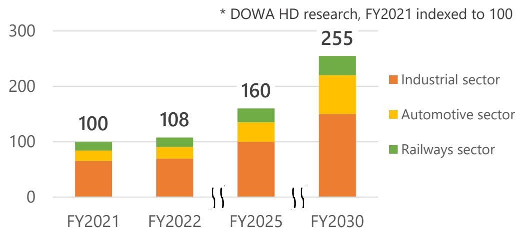
→ To coincide with the introduction of new rolling equipment scheduled to launch in FY2023, support for thin copper rolled products will be enhanced.

Metal-ceramics substrates

- In the power module market, which is the primarily application for mteal-ceramic substrates, demand will expand and the size of the market will increase, driven by the industrial and automotive sectors.

→ Investment in increased production is under way in anticipating of steadily capturing demand.

Power Module Market



Now I would like to introduce you to new products that will join the copper rolled product lineup. For automotive applications, we launched SilC plating. It is silver-graphite composite plating with low insertion force and excellent contact reliability. We will expand our products into applications requiring sliding properties and reliability such as charging and high-voltage terminals for electric vehicles (EVs).
For telecommunications applications, we released a lineup of YCuT-GM compact connector materials for smartphones. In addition to new rolling machines scheduled to be launched in the next fiscal year, we will enhance support for thin copper rolled products.
As for metal-ceramics substrates, we will invest in the expansion of production given that demand for industrial and automotive applications is buoyant.

Business Overview

Business Environment (FY2022/H2)

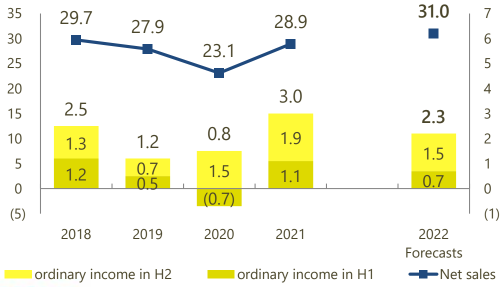
- Global automotive production is on the way to recovery from the impact of the COVID-19 pandemic.
  Domestic: Monthly fluctuations in orders will continue due to semiconductor and component shortages.
  Overseas: The recovery will be relatively fast and production will be on the rise.
- Demand for equipment maintenance will remain strong.

《Major Product Trends》 (FY2021/H1＝100)

	FY2021		FY2022		FY2024
	H1	H2	H1	H2	
Heat Treatment Sales Amount	100	105	104	103	121
Industrial Furnaces Sales Amount	100	212	118	196	208

Net Sales & Ordinary Income

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



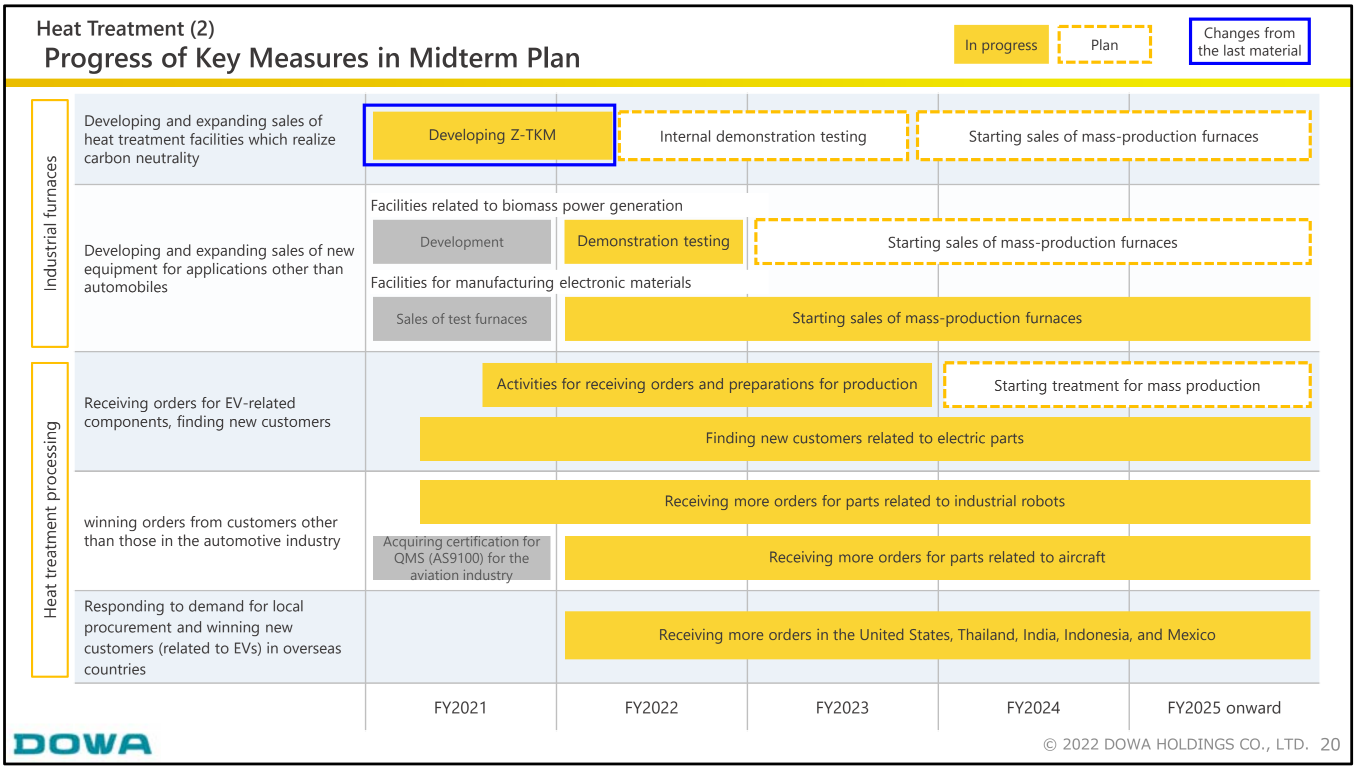
Overview of FY2022/H2 (comparison with H1)

- In the heat treatment business, the Company will build a production system to cope with demand increases and decreases, thoroughly implement operational management to minimize the impact of unit energy prices and other rising costs, and endeavor to maintain and improve revenue.
- In the industrial furnaces business, the Company will uncover customer needs and steadily work on year-end, New Year and end of period maintenance projects.

DOWA

 19

Next, we look at the Heat Treatment Segment.
We understand that automobile production is recovering. We foresee that heat treatment demand will increase in the second half. To address the rise in energy and other costs, we will manage operations more strictly to maintain and improve revenue.



This slide shows the progress of key measures.
No major changes have been made to our measures themselves. What we previously called the new furnace is now called Z-TKM, because the product name has been determined.

Heat Treatment (3)

Enhancing products and services that help achieve carbon neutrality

The Company will steadily launch new products and services on the market to respond to strong expectations in the automotive market.

SS Vacuum Carburizing Furnace

- Small lot production will be possible, and CO_2 emissions will be reduced by utilizing vacuum carburizing technology.
- From FY2020, equipment installations at customer premises in Japan and overseas have advanced.

Z-TKM

- Carburizing quenching furnace able to reduce CO_2 emissions within the heat treatment process by 60%.
- If it can be combined with green energy, ammonia burners or hydrogen burners, operation that emits almost no CO_2 in-process could be achieved.
- The Company will continue with internal demonstration testing ahead of the start of full-scale orders within FY2023.

FY2022	FY2023	FY2024
Internal demonstration testing → Introduction to in-house heat treatment line		Starting sales of mass-production furnaces

DNTN (surface hardening treatment)

- Treatment that gives high precision and high strength to nitriding treatment with low CO_2 emissions is being developed to application in gear components

Z-TKM testing furnace installed at the Hamamatsu Plant

Conceptual image of surface hardening treatment

DOWA

 21

The Heat Treatment Segment is working on three new products and services.
The first is the SS Vacuum Carburizing Furnace. The introduction of it to customers in Japan and around the world has been increasing since fiscal 2020. It can be produced in small lots and it is capable of enabling the reduction of CO_2 emissions. We have great hopes for it.
The second is the Z-TKM. It is a carburizing quenching furnace that reduces CO_2 emissions from the heat treatment process by 60% using a method that is different than the first one. Applying different conditions, it paves the way for operations that emit almost no CO_2. Like the SS Vacuum Carburizing Furnace, it is also a very promising product. For the Z-TKM, demonstration testing is currently underway with a view toward starting full-scale orders within the next fiscal year.
The last is surface treatment. In this area as well, new products are being developed.
This is the end of the business segment briefing.

Progress of Midterm plan 2024

Strengthening Sustainability Management

We are now moving on to the progress of sustainability-related measures.

Development of a sustainability-related policy structure

The Company will consolidate and organize Group policies related to sustainability and develop a policy structure that culminates in the Sustainability Basic Policy. The policy will clarify the Company's direction in each area of sustainability leading to achievement of the mission and vision (our goal in 2030).

Sustainability Basic Policy

DOWA Group will strike a balance between enhancement of corporate value and contribution to building a sustainable society by continuing to promote business activities that help to solve social issues in an effort to realize our corporate mission and vision.

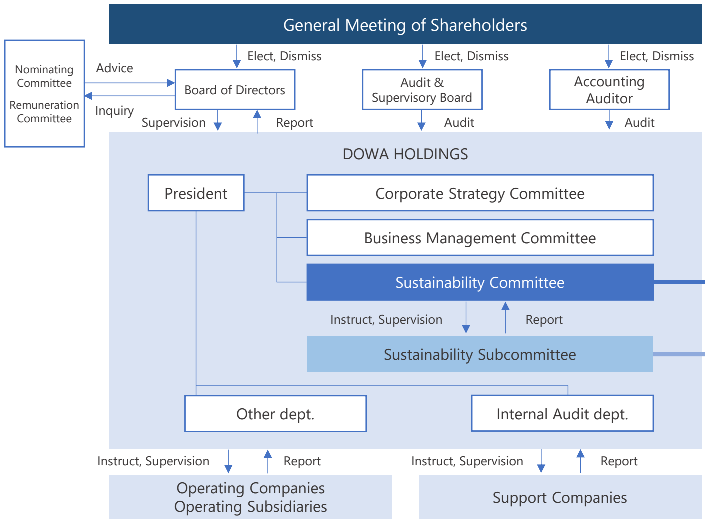
Environment	Social	Governance
Environmental Basic Policy	Safety and Health Policy	Basic Policy on Internal Control
Climate Change Policy	CSR Procurement Policy	Risk Management Basic Policy
Biodiversity Policy	Responsible Minerals Procurement Policy	Quality Assurance Policy
	Human Rights Policy	DX Basic Policy
	Human Resource Development Policy	
	Policy on Harmony with Communities	

DOWA

First, I will be talking about the development of a sustainability-related policy structure.
Our plan was to develop policies in the first half, and they have all been created.
In accordance with these policies, we will continue to accelerate our sustainability activities.

Start of new sustainability promotion system operation

From April 2022, the Sustainability Subcommittee and Sustainability Committee have been meeting regularly to discuss Groupwide matters.
The Company will shift from the sharing of information on sustainability activities to continuing to the development of Groupwide infrastructure and moving to the implementation phase of various measures in H2.



Sustainability Committee
(Chairperson: President and Representative Director)

Convened: September 2022
Agenda: Report on activities of the Sustainability Subcommittee in H1 of FY2022

→ The following three matters were reported to the HD Board of Directors meeting convened in October 2022
- **Rebuilding of internal control (Enhancing risk management structure and strengthening corporate governance)**
- **Tackling climate change**
- **Driving digital transformation (DX)**

Sustainability Subcommittee
(Chairperson: Director responsible for Corporate Strategy)

Convened: Monthly from April 2022
Agenda: Activity status related to Materiality of the DOWA Group

Regarding the sustainability promotion system, the Sustainability Subcommittee has been holding monthly since April 2022. It delivers reports on activities related to Materiality of the DOWA Group.
In September, the first meeting of the Sustainability Committee chaired by the President took place to report the deliberations of the committee. In addition, the Dowa Holdings Board of Directors meeting was held in October. Three matters discussed in the committee, the rebuilding of internal control, tackling climate change and driving digital transformation (DX), were reported to the Board of Directors.

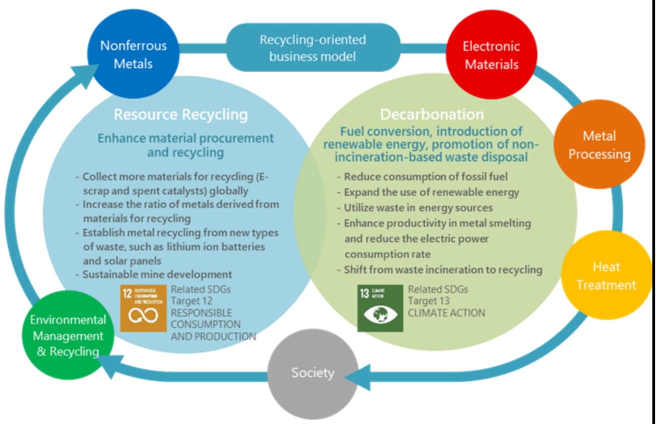
Tackling Climate Change

The Climate Change Working Group established in April 2022 identifies products and services that help tackle climate change based on two perspectives (seizing opportunities and mitigating risks), organizes the challenges that need to be addressed to meet the greenhouse gas reduction targets for FY2030, and shares various information.

Action on Climate Change in Midterm Plan 2024

Key measures	Initiatives
Creation of businesses in accordance with the market environment	■ Reinforce global resource recycling ■ Build a sustainable business model to achieve compatibility between resource recycling and decarbonization ■ Offer products and services that suit the market needs and contribute to decarbonization
Company-wide activities against climate change	■ Continuing to promote company-wide initiatives related to climate change, launch of the climate change working group ■ In-house workshops and provision of information
Reinforcement of our monitoring system	■ Streamline the calculation of greenhouse gas (GHG) emissions ■ Share our GHG emissions within the company with the use of a system and provide feedback ■ Build a mechanism for the calculation of a supply chain's GHG emissions (Scope 3)
Review of business continuity plans (BCPs)	■ Strengthening preparedness against the physical risks of climate-related disasters and incorporating climate-related disasters into existing BCP ■ Consider and discuss measures against weather disasters affecting the supply chain
Improvement in information disclosure	■ Encourage information disclosure based on the framework of the TCFD recommendations ■ Regularly share information by using the integrated report and our website

Approach to solving climate change issues



 25

Our conventional organization aimed at discussing actions to address climate change was renamed the Climate Change Working Group in April 2022. It continues to discuss issues. We have two perspectives. The first is a proactive perspective seizing opportunities, and the second is a defensive perspective lowering risks. With these perspectives, the working group identified products and services that help combat climate change, organized the challenges that need to be addressed to meet the greenhouse gas reduction targets for fiscal 2030, and shared a range of information.

Driving Digital Transformation (DX)

From early FY2021, response to the digital governance code was strengthened, and certification as a "DX Certified Operator" was obtained from the Ministry of Economy, Trade and Industry in July 2022. During the period of Midterm Plan 2024, the Company will steadily build IT infrastructure and develop DX-oriented human resources to further promote DX Groupwide.

Measures in Midterm Plan 2024	Indicators	FY2021 Results	Targets for FY2022 to FY2024
Building IT infrastructure	Operating a common Group cloud infrastructure	Start of development	Operational launch in FY2023/H2
Human Resource Training for Digital Transformations	Number of human resources trained	14	Cumulative number: 80

Building IT Infrastructure

From FY2021, the building of IT infrastructure that will enable the Groupwide utilization of data was launched. In the future, there are plans to develop and integrate the mission-critical systems common to the Group and the production systems of each business within the same infrastructure.

Human Resource Training for Digital Transformations

From FY2022, DX introduction and basic human resources training was launched.

By the end of FY2024, 40 DX promotion human resources who will promote DX at each business site, and 40 engineers who will support the technical aspects of DX promotion will be trained, resulting in 80 DX-oriented human resources in total.

Obtaining DX Certification

The Company strengthened its response to the Digital Governance Code and in July 2022 obtained certification as a DX Certified Operator from the Ministry of Economy, Trade and Industry.

Digital Transformation Certification

DOWA

 26

The next slide is about driving digital transformation (DX).
Since early in fiscal 2021, we have been strengthening our response to the digital governance code. As a result, we were certified as a DX Certified Operator by the Ministry of Economy, Trade and Industry in July 2022.
In the next three years of Midterm Plan 2024, we will steadily advance the construction of IT infrastructure and the development of DX-oriented human resources. Thus, we will continue carrying out DX on a groupwide scale. For the current fiscal year, we will particularly focus on the development of DX-oriented personnel.

Dividends

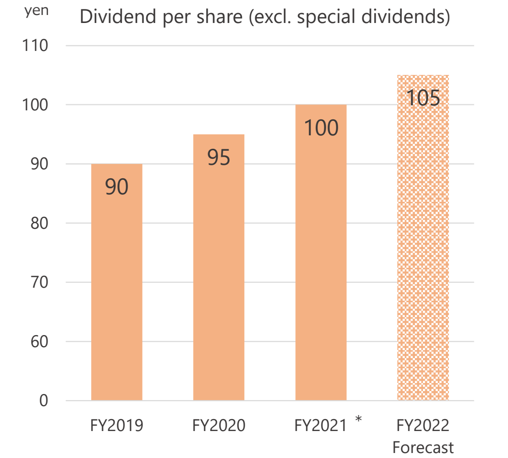
Based on the dividend policy set in Midterm Plan 2024, the dividend for this fiscal year will be 105 yen per share, marking a 5-yen increase in the ordinary dividend from the previous fiscal year. The Company will aim to further increase dividends in light of future trends in financial results, future funding needs, and other factors.

Dividends Policy

DOWA regards the payment of dividends to shareholders as one of its top management priorities. The Company sets out a policy of increasing dividends as performance allows, while ensuring sufficient internal reserves for bolstering the corporate structure and expanding business in the future in line with the basic principle of maintaining stable dividends.

Our basic dividend policy for the period of the Midterm Plan 2024 (FY2022 through FY2024) is “not to decrease the amount of ordinary dividends from the previous year's amount” and “to increase the amount of ordinary dividends in stages” because ordinary income will increase in stages from 55.0 billion yen to 70.0 billion yen under the plan.

Moreover, we will aim to increase the amount of dividends further in consideration of financial results and cash flows in each fiscal year, future prospects, and other factors.



*The total amount of annual dividend for FY2021 is 130 yen per share, with the amount of special dividend (30 yen) added to that of ordinary dividend (100 yen).

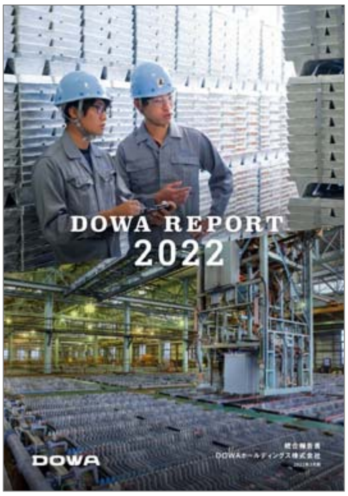
DOWA

 27

Now we are moving on to dividends.
Based on the dividend policy set in Midterm Plan 2024, the dividend for this fiscal year will be 105 yen per share, marking a 5-yen increase in the ordinary dividend from the previous fiscal year. We aim to continue to increase dividends in consideration of future financial results trends, future funding needs and other factors.

Issuance of DOWA REPORT2022 (Integrated Report)

At the end of November 2022, the Company plans to release DOWA REPORT 2022 (Integrated Report 2022, Japanese edition).
The report will cover information regarding policies, promotion structures, measures and indicators related to each material issue based on the Materiality of the DOWA Group.



DOWA

 28

Before ending my presentation, let me tell you that we will be releasing the Japanese version of DOWA REPORT 2022 at the end of November 2022. This is the 2022 edition of our integrated report.
The report will cover information regarding policies, promotion structures, measures and indicators related to each material issue based on the Materiality of the DOWA Group, so please read it.

(Appendix) Assumptions and Sensitivities

Sensitivity (Operating Income / FY2022 H2)

Million yen

	Assumptions	Fluctuation	Sensitivity
Exchange rate	145.0 ¥/$	±1 ¥/$	310
Copper	7,500 $/ton	±100 $/ton	20
Zinc	2,900 $/ton	±100 $/ton	240

* Exchange rate sensitivity; Nonferrous Metals 260 million yen and Electronic Materials 50 million yen.

Exchange Rate and Metal Prices

	FY2021			FY2022			Midterm Plan 2024
	H1	H2	Full-year	H1	H2 assumptions	Full-year	
Exchange Rate: (¥/$)	109.8	115.0	112.4	134.0	145.0	139.5	120.0
Copper: ($/t)	9,541	9,842	9,691	8,634	7,500	8,067	10,000
Zinc: ($/t)	2,954	3,554	3,254	3,597	2,900	3,248	3,800

DOWA

This slide shows the assumptions and sensitivities regarding the forecast for the current fiscal year.

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.

This concludes my presentation.
Thank you very much.