

# Kureha Corporation

Financial Results Presentation for the 2Q of the Fiscal Year Ending March 2025

November 12, 2024

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I am Kobayashi of Kureha Corporation. We have announced a substantial downward revision to our full-year forecast. At a closer look, two of the businesses that we expect to drive our growth, namely, PVDF and PGA, are encountering headwinds beyond our expectations. Our remaining businesses are largely in line with our business plans.

The slowdown of the EV market exceeded our expectations. As for the future outlook, I attended a battery show in the US last month and noticed the exhibition was packed with visitors. I spoke with industry associates and confirmed that there was almost unanimous agreement that the shift to EVs is certain, although it will be delayed by about two years from the original plan.

As for PGA, the medium and high-temperature areas, where gas is mainly produced, are our key business fields. The gas market price has been very low, and the number of drilling has significantly decreased. This fiscal year will be the bottom for the sales of PGA.

This situation gave me the impression that the growth scenario depending on a specific product segment is very much influenced by the economy and technology trends. Therefore, to achieve more stable growth, it is essential to grow other business segments, namely Specialty Chemicals and Specialty Plastics as well.

In addition, we must reshape our operations to a leaner and effective management structure in addition to increasing our sales. From cost-effective perspective, there are some room to improve in expense usage or utilization of human resources. Therefore, our current direction is to cut away inefficiencies to achieve a leaner, more robust organization.

# Performance Highlights (1)

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## FY2024 2Q Results

Revenue and profit				(billion yen)	
	FY24	FY23		25/3 2Q	
	2Q	2Q	Diff.	Initial forecast	Diff.
Advanced Materials	28.5	34.0	-5.5	34.0	-5.5
Specialty Chemicals	16.2	17.1	-0.9	15.5	0.7
Specialty Plastics	22.8	23.4	-0.6	21.0	1.8
Construction	5.3	5.4	-0.0	6.5	-1.2
Other operations	8.8	8.6	0.2	8.0	0.8
<b>Segment revenue</b>	<b>81.6</b>	<b>88.5</b>	<b>-6.8</b>	<b>85.0</b>	<b>-3.4</b>
Advanced Materials	1.2	2.8	-1.7	3.4	-2.2
Specialty Chemicals	0.7	0.8	-0.1	0.6	0.1
Specialty Plastics	4.0	4.3	-0.4	2.2	1.8
Construction	0.4	0.2	0.2	0.4	0.0
Other operations	1.2	1.1	0.1	0.4	0.8
<b>Core operating profit</b>	<b>7.5</b>	<b>9.2</b>	<b>-1.7</b>	<b>7.0</b>	<b>0.5</b>
Adjustments	-0.5	-0.0	-0.5	-0.5	0.0
<b>Operating profit</b>	<b>7.0</b>	<b>9.1</b>	<b>-2.2</b>	<b>6.5</b>	<b>0.5</b>
<b>Profit*</b>	<b>5.7</b>	<b>6.8</b>	<b>-1.1</b>	<b>5.0</b>	<b>0.7</b>

\*Profit attributable to owners of the Company

### FY2024 2Q YoY changes: Main Factors

- Revenue and profit for PVDF used in LiB binders have declined because of a continued slowdown and inventory adjustments in the EV and LiB markets.
- Revenue and operating profit of home products fell owing to lower sales volume.
- Despite lower PPS sales, operating profit increased due to improvement in equity in earnings.

### FY2024 2Q changes from initial forecast : Main Factors

- PVDF is down due to the above reasons.
- Revenue of heat-shrinkable multilayer (ML) film increased before closing the business.
- Revenue of environmental engineering increased due to higher demand.

### Exchange rate

	FY24.2Q	FY23.2Q
1USD=	152.8	141.1
1EUR=	166.1	153.5
1CNY=	21.2	19.8

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(4)

I am Tanaka, in charge of Corporate Strategies and Accounting Division.

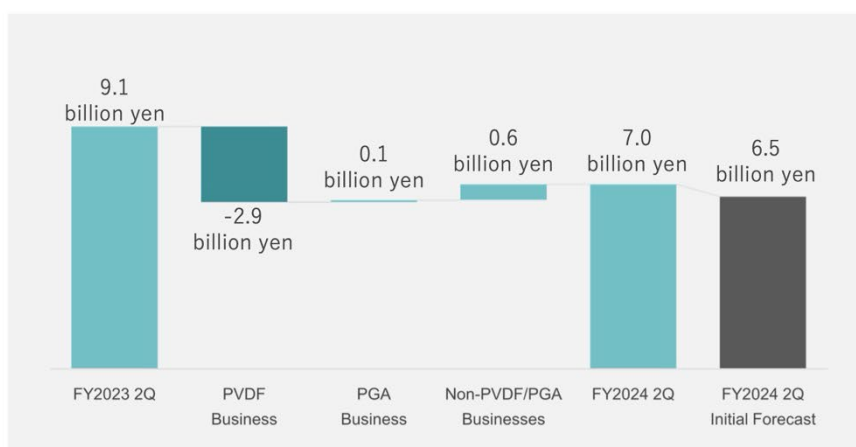
First, here are the results for Q2 of the fiscal year ending March 31, 2025. The leftmost result shows segment sales of JPY81.6 billion and operating profit of JPY7 billion, which is JPY2.2 billion less than the previous year and JPY0.5 billion more than the initial forecast. Compared to the same period of the previous year, the EV market was very quiet, leading a considerable drop in PVDF sales and profits.

The difference from the initial forecast is that, although PVDF sales have declined, sales of heat-shrinkable multilayer films (ML) business have increased significantly due to the end of sales and withdrawal from the business, and sales in the environmental business have increased due to an increase in industrial waste treatment. We managed to exceed the initial forecast despite the slowdown of PVDF and PGA.

## Analysis of Factors Affecting Operating Profit: FY2024 2Q Results

Despite a significant decline in profit for the PVDF business due to the slowdown in the EV market, other existing businesses maintained roughly the same profit levels as the previous year.

### YoY Change



(5)

Operating profit is JPY7 billion. This shows the YoY change by products, PVDF, PGA, and others. As the president mentioned earlier, the drop in PVDF was significant. The other businesses are almost on the same level of the previous year. Comparing with the initial forecast shown in the most right, the operating profit was slightly positive.

# Performance Highlights (3)

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## FY2024 Annual Forecast

### Revenue and profit

				(billion yen)	
	FY24 Revised forecast	FY23 Actual	Diff.	FY24 Initial forecast	Diff.
Advanced Materials	57.0	64.5	-7.5	70.0	-13.0
Specialty Chemicals	30.0	33.9	-3.9	29.0	1.0
Specialty Plastics	40.0	47.3	-7.3	40.0	-
Construction	15.0	13.9	1.1	14.5	0.5
Other operations	18.0	18.2	-0.2	16.5	1.5
<b>Segment revenue</b>	<b>160.0</b>	<b>178.0</b>	<b>-18.0</b>	<b>170.0</b>	<b>-10.0</b>
Advanced Materials	-0.5	4.8	-5.3	5.7	-6.2
Specialty Chemicals	0.9	1.7	-0.8	1.0	-0.1
Specialty Plastics	6.0	8.2	-2.2	5.2	0.8
Construction	1.0	1.5	-0.5	0.8	0.2
Other operations	2.1	2.5	-0.4	1.3	0.8
<b>Core operating profit</b>	<b>9.5</b>	<b>18.6</b>	<b>-9.1</b>	<b>14.0</b>	<b>-4.5</b>
Adjustments	0.5	-5.8	6.3	-	0.5
<b>Operating profit</b>	<b>10.0</b>	<b>12.8</b>	<b>-2.8</b>	<b>14.0</b>	<b>-4.0</b>
<b>Profit*</b>	<b>7.0</b>	<b>9.7</b>	<b>-2.7</b>	<b>10.0</b>	<b>-3.0</b>
*Profit attributable to owners of the Company					
EPS	134.02	173.03		191.45	
ROE	3.3%	4.5%		4.6%	

## FY2024 Annual YoY Change: Key Differences

- Weak PVDF sales due to slowdown in the EV market, especially in Europe
  - Less gains on PGA inventory revaluation due to lower demand from stagnant shale gas/oil drilling market
  - Inventory adjustments by agrochemical customers
  - Intensified competition in household products market
  - Impact of withdrawal from ML film business
- Core operating profit decreased by 9.1 billion yen. Cancellation of PVDF manufacturing facility expansion in China and withdrawal from the ML film costed 5.8 billion last year, make the gap of operating profit 2.8 billion.

## FY2024 Annual Forecast Revision : Main Factors

- Advanced plastics are performing below initial expectations. PVDF market does not foresee its recovery this fiscal year, and PGA will be affected by persistent low shale gas prices.

## Exchange rate and sensitivity

	FY23 Actual	FY24 Initial forecast	1H FY24 Actual	2H FY24 revised forecast	FX sensitivity *Impact of one-yen depreciation on operating profit per 2H
1USD=	¥144.6	¥145.0	¥152.8	¥150.0	An increase of ¥0.07bn
1EUR=	¥156.8	¥158.0	¥166.1	¥163.0	An increase of ¥-0.01bn
1CNY=	¥20.1	¥20.0	¥21.2	¥21.0	An increase of ¥0.05bn

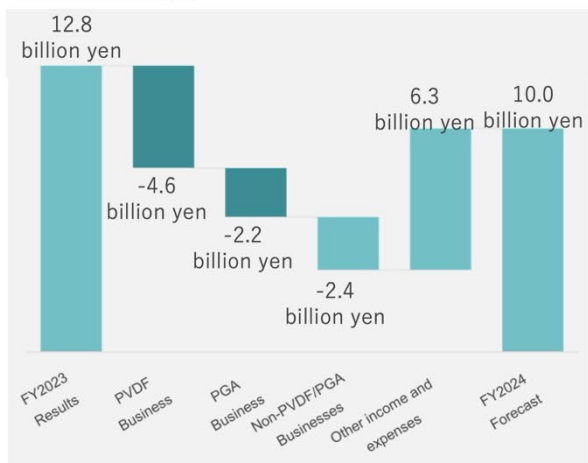
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This is full-year forecast based on Q2 result. The sales are JPY160 billion and operating profit JPY10 billion, making a significant drop of JPY4 billion compared to our initial forecast of JPY14 billion in operating profit. Again, the deterioration of the EV market and the stagnant shale gas drilling market are two major factors that have forced us to significantly downgrade our plans from our initial forecast.

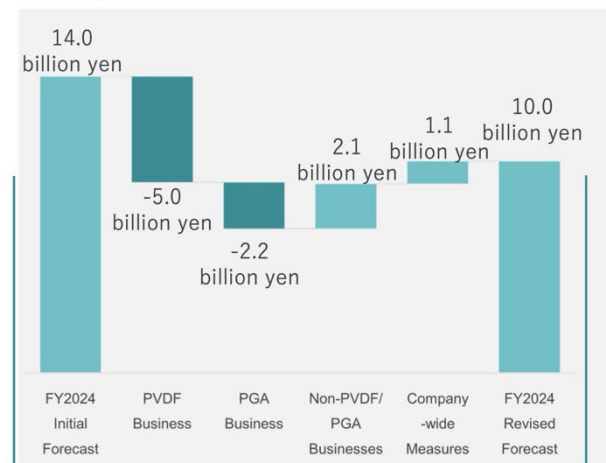
## Analysis of Factors Affecting Operating Profit: FY2024 Forecast

We aim to strengthen our profit base by addressing the shortfall in the PVDF and PGA businesses through securing more profit in other existing businesses and further cost reductions across the company.

### YoY Change



### Change vs. Initial Forecast

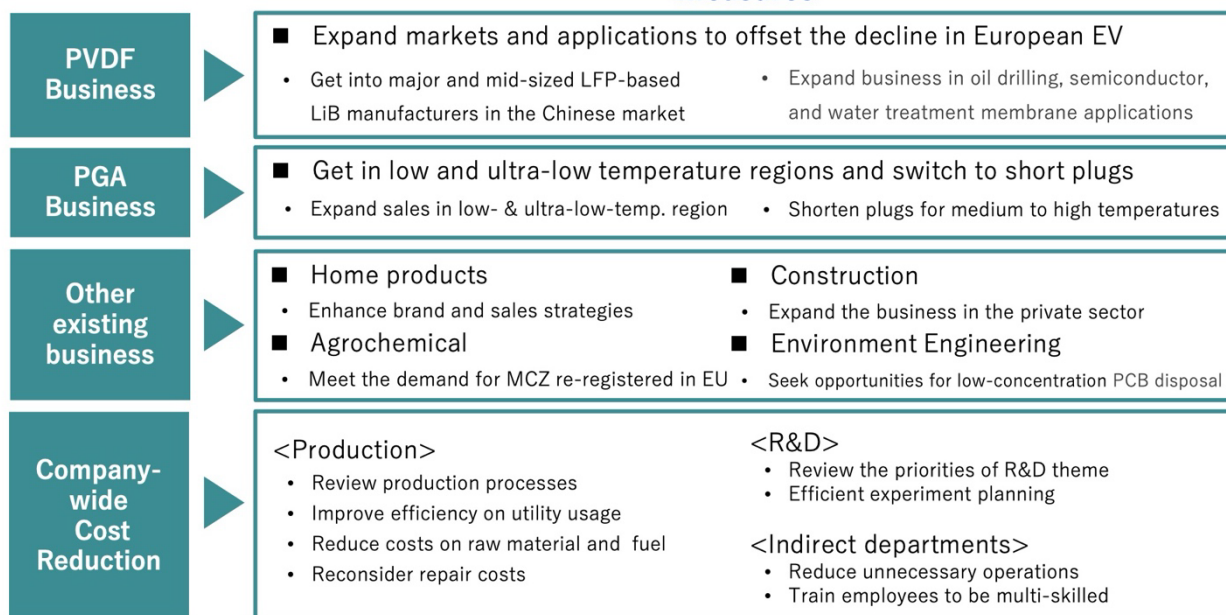


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I am presenting the results in a similar waterfall chart. This is a comparison to the last year. All of PVDF, PGA, and other businesses are down, but with the company-wide adjustment, which is shown at the Other income and expense, the total operating profit is JPY10 billion. Compared to the initial forecast, PVDF and PGA have fallen sharply, but we have managed to reach JPY10 billion by securing profits from other existing products and further cost reductions throughout the Company.

We aim to achieve the target for FY2025 by improving the performance of all existing businesses and through further cost reduction measures to offset the decline in profits of the PVDF and PGA businesses.

## <Measures>



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I'd like to talk about what we plan to do in the next fiscal year, the final year of the medium-term management plan, given the situation where the PVDF and PGA markets are not expected to improve significantly.

As for the PVDF business, it would be tactless if we simply wait for the EV market to recover. We aim to expand the sales to other applications and adoption and sales expansion for LFPs.

As for PGA, we have been working to expand the market from the medium- to high-temperature range to the low-temperature and ultra-low-temperature range. We have acquired good results in field tests.

As for other existing businesses, we aim to expand sales of household products, which are our B-to-C signature products. We will strive to achieve stronger sales expansion. For fungicides, we are developing new products in the mid-term, and as of now, we will continue to sell Metconazole. Additionally, we will address construction and environmental projects as described in the document.

We are planning to implement company-wide cost reduction measures to cover the areas that cannot be covered by business operations alone. We will thoroughly reduce costs in all areas such as production, research, and indirect departments in this fiscal year and next.



Promoting the development of new products and businesses in three focus areas: Environment and Energy, Life, and Digital Communications

## Target Launch Timelines/Peak Sales Goals for Major New Businesses & Products (Agricultural Fungicides)

Field	Product Name	Development Start	FY2025	FY2026	FY2027	FY2028	FY2029	FY2030	Sales Target (at Peak)
Life	Fungicide	FY2021	Safety Test	Applications to Countries				Launch	20bn yen+
	Anti-Adhesion Film	FY2017	Preclinical Test		Clinical Trial		Launch		10bn yen+
	Biostimulant	FY2018	On-site Test□	Launch				Launch	10bn yen+
Environment & Energy	SiC Fiber	FY2017	Prototype□	Plot Plant Operation				Launch	10bn yen+
	PFAS Destruction	FY2022*	Field Test□	Launch				Launch	2bn yen+
Digital Communications	3D Touch Panel	FY2019	Launch						7bn yen+

Note: \* Indicates the start of joint development with Claros Technologies.

## Initiatives in Life

### Agricultural Fungicides

- Agricultural fungicides targeting crops such as cereals, corn, fruits, and vegetables.
- New high-safety agrochemicals designed to meet stricter regulations worldwide, especially in Europe.



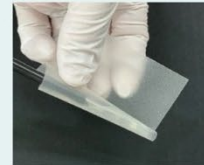
## Biostimulants

- Technology that enhances crop yield
- Currently conducting field tests in Japan, Europe, and US



## Anti-Adhesion Film

- Film designed to prevent post-surgical adhesions
- Offers excellent adhesion prevention and ease of handling



## Initiatives in Environment & Energy

### PFAS Destruction

- Technology to efficiently convert low-molecular PFAS in water into safe substances
- Main targets are the chemical, semiconductor, and water treatment industries
- Successfully demonstrated PFAS destruction at a major chemical manufacturer's plant



The pilot equipment of Claros Technologies.

### SiC (Silicon Carbide) Fibers

- Fibers composed of carbon and silicon
- Lightweight, high strength, and excellent heat resistance
- Main target is the aerospace sector

## Initiatives in Digital Communications

### 3D Touch Panels

- Touch sensors that can detect strength of pressure
- Capable of recognizing touch even underwater or when wearing gloves
- Main targets are industrial equipment, medical devices, and automobiles



(31)

This page describes our medium- and long-term initiatives for new products and business development.

We have identified the three fields of the Environment and Energy, the Life, and the Digital Communications as our target and priority business fields, and we aim to develop new products in these three fields as described above.

In the life science field, we aim to launch bio-stimulants for agriculture, and anti-adhesion film. In the Environment and Energy field, we are developing processing technology that renders PFAS harmless, and silicon carbide fiber. In the information promotion field, 3D touch panels will be introduced. We aim to launch the products highlighted in blue in the document first.

I would like to note that these products will contribute our financial performance after this mid-term plan



**CO<sub>2</sub> emissions reduction**

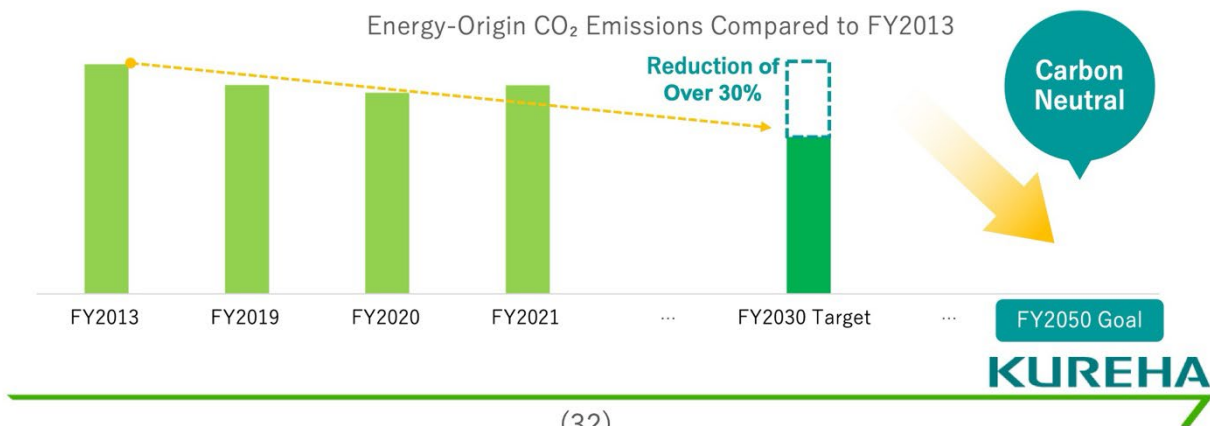
**Over 30%** (FY2030 Goal, Compared to FY2013 Levels)

- At the Iwaki Factory's coal-fired power plant, **technical studies on fuel conversion** have provided a path toward meeting the 2030 goal.
- We are **exploring additional reduction measures to ensure achievement of the 2030 goal** and potentially raise the target.

**Zero waste emission ratio**

**Below 1.5%** (FY2025 Goal)

- On track to meet our target of reducing final (landfill) disposal volumes by **recycling waste** generated in the production process and **converting it into valuable materials**.
- We are also seeking ways to further **reduce waste generation** and **promote recycling efforts**.



(32)

Regarding the reduction of environmental impact, we have set a goal of reducing CO<sub>2</sub> emissions by 30% or more by 2030 compared to the FY2013 level. Our Iwaki site accounts for the majority of our CO<sub>2</sub> emissions, and we have good prospect that we can reduce CO<sub>2</sub> emissions by 30% or more by reducing CO<sub>2</sub> from coal-fired power generation at the site. Since this involves investment, we are now working on the plan.

On the other hand, we have set a target of reducing the waste emissions rate to 1.5% or less in the next fiscal year, and we are on track to archive the target through the recycling, valorization technologies and collaboration with our business partners. We are making progress in reducing this environmental impact as planned.

# Fostering Synergy between Company and Employees

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## Employees' Psychological Connection to the Company (Engagement)

Feeling proud of the company,  
liking workplace colleagues,  
enjoying daily work

Sympathizing with the  
company's vision and policies

Having opportunities to grow  
through work

Employees feel a psychological connection in diverse ways, with varied values.

etc.

To empower our diverse workforce to thrive and grow with enthusiasm, we launched an engagement survey in FY2023 to better understand our current situation. Using the survey insights, we have implemented the following initiatives.

### Promoting Mutual Understanding Between Management and Employees

#### Town Hall Meetings (Dialogue with Management)

- In FY2023, we conducted dialogues with top management and small-group discussions with management in each region of the company.
- In FY2024, in addition to dialogues with top management, we plan to hold small-group discussions, especially for young and mid-level employees who have limited daily interactions with management. By increasing opportunities for direct dialogue, we aim to foster mutual understanding.

### Engagement Improvement Measures

#### Initiatives to Improve Engagement

- We recognize that fostering company-wide awareness is crucial for improving engagement. To address this, we held workshops and briefings mainly for line managers, who are responsible for daily management, to explore and develop engagement enhancement measures.
- Understanding the importance of a continuous cycle of result analysis and action, we carry forward our engagement survey into FY2024.

(33)

Fostering synergy between Company and employee. This is one of the themes we set in our mid- to long-term plan. Our president often tells employees that the Company and employees should have a win-win relationship. Employees can enjoy their work, agree with the Company's policies, and grow through their roles. This is the direction we want to move forward.

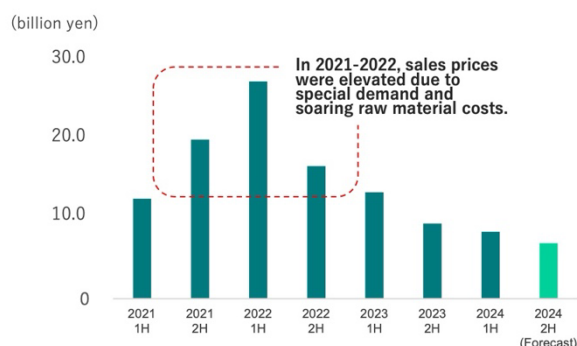
I described two major initiatives related to this. We began to hold town hall meetings last year with a primary focus on identifying how to enhance employee engagement with the Company. Our president, together with four board members including myself, and young employees held the meetings several times to talk about what is happening at the Company, what we are doing and individual thoughts on future development. We are continuing this approach..

Also, in terms of improving employee engagement with the Company, we launched a survey last year to find out what aspects can boost employee engagement. We conducted the same survey again this year in August and are in the process of compiling the results. I feel that it is important for the Company to emphasize the importance of employee engagement at all times.

## EV and LiB Market

Initial Forecast: Expected recovery during FY2025  
 Current Outlook: Continued uncertainty throughout FY2025, with recovery in the European market delayed until 2026.

## PVDF Revenue



**We expect the PVDF business to be in the red this fiscal year due to lower sales caused by slowdown in the EV market.**

## Overview and Strategies

### LiB Applications

#### Europe

- EV sales volumes are lower than the previous year, with no sharp recovery expected. The market is anticipated to remain below expectation.

#### North America

- While EV market growth has slowed, PHEV sales are increasing. Looking ahead, BEV, PHEV, and HEV markets are expected to steadily expand.
- Although the launch of new factories by customers has been delayed, we have provided them with samples and preparations at the customers' end are also being progressed.

#### China

- Our R&D centers in Japan and China are proposing newly developed products for LFP-based LiBs, with sample evaluations currently underway at LiB manufacturers. To offset the stagnation in the EU market, we aim to achieve early adoption and sales expansion with these products in China.

#### Japan

- Japanese LiB manufacturers are prioritizing building domestic supply chains due to geopolitical risks, and we are enhancing our proposal activities to these companies.

### Industrial Applications

- For further sales expansion, we are conducting marketing for industrial pipes used in oil drilling, fittings and pipes used in semiconductor manufacturing equipment, and applications for water treatment membranes.

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Our strength is in NMC lithium-ion battery for European markets. Currently, our business in the European market has been considerably affected, and the media recently reported that the EV market saw an extremely tough year.

Initially, we expected a recovery in FY2025, but we have heard from various manufacturers, including battery manufacturers, automobile manufacturers, and battery component manufacturers, and the consensus among them is that the European market will recover in FY2026 or later.

Traditionally, our priority has been to supply mainly NMC lithium-ion battery for European market due to our supply capacity issue. Now that we have considerable supply capacity, we are particularly looking forward to North American applications.

Because of the so-called Inflation Reduction Act, IRA, Chinese battery manufacturers and Chinese EV manufacturers are unable to enter the market. We see this market as our focus market that we can potentially expand our business.

As mentioned by our president at the beginning of this presentation, we see no doubt that the US market will be a growing area from a long-term perspective, but I wonder if there is a delay of one or two years in the start-up, especially in the construction of new battery and EV plants. On the other hand, EV plants have already started up, especially in the southern markets in the US, and we have already begun supplying them. In addition, sample evaluations used in newly constructed factories are currently in progress.

The storage batteries for ESS (Energy Storage System), which are also LFP-based batteries, have been launched and evaluations are progressing well, and we expect to be able to start selling to ESS application. We have seen rapid growth of the market in China, especially in LFP-based lithium-ion batteries, where our presence is not so significant. We have a strong desire to secure this market and are making full use of our R&D centers in Japan and China to make proposals for product development. Some Chinese battery manufacturers can proceed with the evaluations comparatively quickly, and we are working to expand sales in the hope of somehow starting sales by the end of FY2025.

Japanese market in terms of batteries and EVs is not active as the other markets, but we believe that the market will gradually expand in the future. We would like to follow up with Japanese battery manufacturers and try to link this to sales. We would like to diversify our applications, so we are working to expand sales of industrial pipes used in oil drilling, semiconductor manufacturing equipment, joint pipes, water supply, and water treatment applications.

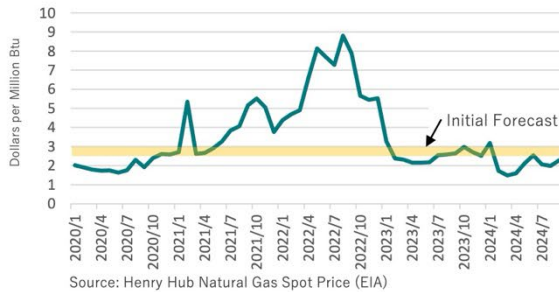
In response to the recent rapid decline in sales of PVDF, we are planning to temporarily shut down our main plant in Iwaki from this month to the end of March next year to reduce the inventory. With that in mind, this fiscal year, we need to write down some inventories. Although it is not clear when and how the sales volume recover in the following years, we currently expect that it will not be until FY2026 or later that we will actually be able to increase production capacity utilization, boost sales, and recover its profitability.

Some of you may ask if this business has really hit the bottom this year. As for sales, our customers have indicated that they plan to purchase more next fiscal year, so we believe that the current sales decline indicates the bottom of the market.

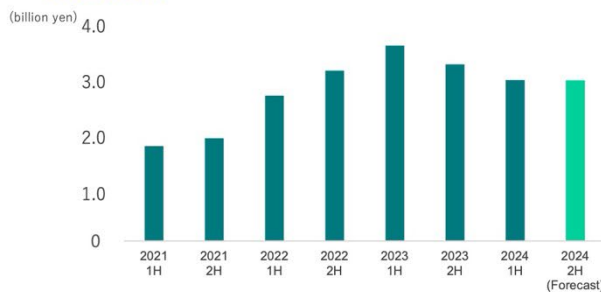
On the other hand, the recovery for EVs in Europe will depend on government subsidies and incentives in each country, as well as the availability of hot-selling EVs. The tariff on Chinese-made EVs in Europe was set up to 45.3% from 17.8%, and we expect this impacts the market in the future.

We currently expect we likely to post slight increase in sales for FY2025 in case the difficult situation continues. We are closely monitoring various information, and we believe that a full recovery will take place in FY2026 or later.

## Market (Gas Prices)



## Revenue



## Overview and Strategies

### Medium- to High-Temperature Regions

- Drilling activity in one of our primary markets, gas fields, has stalled due to North American gas prices falling below our anticipated range of 2.5–3 USD/mmbtu. The market environment is expected to gradually improve in line with projected natural gas price recovery as forecasted by the EIA\*.
- Awareness of our products has increased, and with the recovery of market conditions, we expect to expand sales in medium- to high-temperature regions.

### Low- to Ultra-Low Temperature Regions

- Progress has been made on two types of plugs developed for low- / Ultra-Low temperature wells:
  - Low-Temperature Plug: Field tests have been completed at seven companies, resulting in repeat orders from multiple firms. Full-scale sales have commenced, with efforts underway to promote full-bore adoption in medium-temperature fields and to expand usage in low-temperature fields.
  - Ultra-Low-Temperature Plug: Development of the resin formulation has progressed and expect to make prototypes within this fiscal year, with field tests planned for early next fiscal year in ultra-low-temperature regions.

**Although full-scale sales of low-temperature plugs will commence, performance is expected to fall short of initial plans. This is projected to result in a fiscal-year loss due to reduced gains from inventory revaluation.**

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\*EIA: U.S. Energy Information Administration

First, market overview. The market can be divided into two: gas fields and oil fields. Compared to the total market in the previous year, the market has shrunk by approximately 10%.

With the closer look of the market size, it shows that the oil field remained steady and slightly increased over the previous year, while the gas field saw its market size decrease by half from the previous year. This is mainly due to the slump in gas prices, but also largely due to the effective use of associated gas from oil fields.

As for sales for this fiscal year, we are continuing to work on medium-temperature gas fields even though the gas field sales were halved. We could still increase our market share in this segment and assess that the sales decline will be within the 10% to 15% range.

At present, the market share of the low-temperature and ultra-low-temperature areas are increasing due to the shrinkage of gas prices and the gas field market, making the 80% of the market for low-temperature and ultra-low-temperature areas and 20% for medium- to high-temperature areas.

We have entered the market for medium- to high-temperature applications because of the characteristics of PGA. To enter the market for low and ultra-low-temperature applications, where the market is large, we started trials of low-temperature plugs this summer. As I have already mentioned, 10 companies have already adopted them.

We are taking steps to ensure that we can get orders from large clients by the end of the fiscal year who need a certain level of run history. Furthermore, with regard to the ultra-low temperature grade, we have developed the formulation, and we can move forward with field trials next fiscal year.

As for the low-temperature applications, there are still six months until the next fiscal year, and we assume that we can build up necessary run history by the end of this fiscal year, and the low-temperature products will contribute to a full year. However, with regard to ultra-low temperature plugs, new plan to acquire run history by the end of September, leaving only half a year in the next fiscal year.

Meanwhile, short type plugs have also been on field trial since September. The short plug features a slightly faster disassembly for the client because the overall size is reduced while maintaining high reliability, and then the amount of debris is reduced.

We designed the new plugs to use less water when installed, significantly improving cost performance. We are currently conducting field tests.

As for the outlook for the next fiscal year, we expect these short plugs and low-temperature plugs to make a full contribution. At this point, we don't know exactly how much this will contribute but based on the results of the current field trial, we believe that it will make a substantial contribution.

Finally, here are this year's gains and losses. We had assumed a gain from inventory revaluation of JPY2 billion to JPY3 billion, but this return will be reduced to about one-fourth, deteriorating the result. This revaluation gain will positively impact on our financial result in next year when sales grow.



## Question & Answer

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### PVDF

**[Q]:** I would like to ask your thoughts on PVDF sales growth in FY2025 and FY2026. Also, you say that the business is operating loss, but how much will that improve? Can you please explain this first, perhaps qualitatively?

**[A]:** We expect that the government will offer some kind of incentives for the European EV industry and battery industry in 2025, now that the tariffs with China have been settled.

In addition to this recovery, in the US market, where we expect the market to expand, there are plans for new EV and battery plants starting up in 2H of 2025 to 2026. Therefore, we believe that we can expand sales by more than 50% during 2025 and 2026. In the long run, I am certain that the market will expand due to tighter environmental regulations. One of the keys to this expansion is expected to be in FY2026.

We must make every effort to avoid continuing the current situation to next year. We will commit to turning the business into profitable at the very least next year.

**[Q]:** Regarding your capital investment plan, I was wondering if Iwaki is on schedule.

**[A]:** Construction is proceeding as planned at this time. Mechanical completion is scheduled for March 2026, and commercial production is scheduled for October or November 2026. Yet we may potentially see some changes in the circumstances. So, we must monitor the circumstances carefully and assess whether October 2026 is truly the appropriate timing to start operation. Depending on the situation we may consider some delays. We have the Iwaki current and new plants and another one in China. I want to examine what is the best mix for us to conduct production.

**[Q]:** Lastly, since you mentioned cost competitiveness for LFPs and ESS applications, could you elaborate further if possible, whether you referred to new users for battery manufacturers or existing major clients?

**[A]:** In addition to Chinese customers, we are proceeding with plans for other battery manufacturers. The current trend is to use LFPs for ESS rather than for automotive applications.

While existing major battery clients struggle with highly unstable business performance in their automotive market, there is a move to expand ESS. Existing clients have completed their evaluations, and we started selling our products to them.

As for the competitiveness of LFP, we hope to enter the Chinese LFP market, where the Chinese Homopolymers are used in many cases, making it a very price competitive market. On the other hand, we want to introduce our products with our quality superiority. Our products can reduce the amount of additives and contribute to the stability of production. We can further enhance the quality by adding flexibility, for example, or thickening the coating solution. We plan to expand our sales by highlighting potential contributions to the battery quality enhancement.

## PGA

**[Q]:** Regarding the future outlook, I think you mentioned that you are targeting the Permian, and other areas for low and ultra-low temperatures.

**[A]:** The main market for low and ultra-low temperatures is the Permian, which is the largest market, accounting for 35%- 40% of total market Entering this Permian is our objective.

Even in Permian, the temperature range is quite a mix of low and ultra-low temperatures. Because in Permian the length of the well is very long and number of plugs used in one well is 50-120.,Therefore, even when our products are adopted for only 1/3 of the deepest part of the well, the sales volume will result in a huge increase .

**[Q]:** How do you think the FY2025 will be positioned?

**[A]:** Regarding the low-temperature grade, we have already completed field trials with 10 companies, and we expect that the grade to be up and running by the end of FY2025. On the other hand, we expect 100% contribution from ultra-low-temperature grades in H2 of FY2025 or the beginning of FY2026, since the introduction of such grade will be in the next fiscal year.

## New Business

**[Q]:** 3D touch panels. Can you give us some additional information on the progress in this area, such as what the applications will be, when they will start up, and whether the scale will be larger than originally planned?

**[A]:** As for 3D touch panels, the first thing we focused on after the launch is just as described here. Our main targets are industrial equipment, medical equipment, and automobiles. In particular, all of these applications can be prone to errors, if a simple touch on the screen can execute the command, like smartphones for example. Because of this, the market is very attentive to the demand for a switch that can be turned on with the proper amount of force. We plan to launch this field first.

However, in this field, while the automobile has a certain market size, yet the total market size is not so large. To ultimately reach the goal of JPY7 billion, we set our target to incorporate a part of the tablet device and smartphone market. Therefore, we are currently conducting market development and technology development in two stages.

[END]