

Toyo Tanso Co., Ltd.

***Results for the First Half of the Fiscal Year Ending December 31, 2023***

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**August 21, 2023**  
**Toyo Tanso Co., Ltd.**

# Summary of Results for the First Half of the Fiscal Year Ending December 31, 2023

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# 1. Results for the First Half of the Fiscal Year Ending December 31, 2023

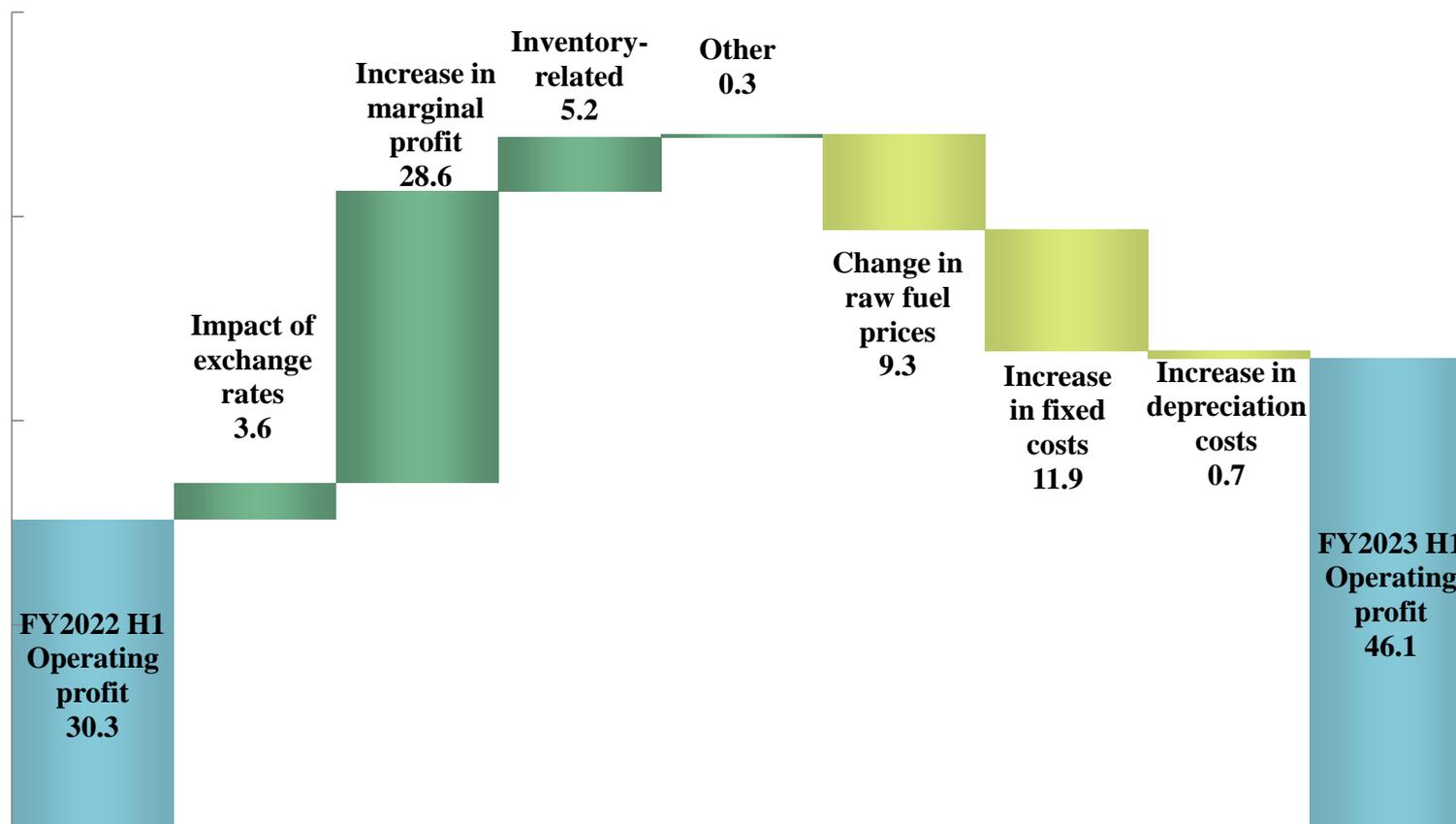
|  | FY2022 H1                                   | FY2023 H1                             |   |                           |                           |
|--|---|---------------------------------------|---|---------------------------|---------------------------|
|  |   | (F)                                   | (A)   | Year-on-year change       | Versus forecasts          |
| (Unit: Yen, millions)                          |   |                                       |   |                           |                           |
| <b>Net sales</b>                               | <b>20,293</b>                               | <b>23,000</b>                         | <b>23,712</b>                               | <b>+ 3,419 / + 16.8 %</b> | <b>+ 712 / + 3.1 %</b>    |
| <b>Operating profit</b>                        | <b>3,039</b>                                | <b>3,800</b>                          | <b>4,610</b>                                | <b>+ 1,571 / + 51.7 %</b> | <b>+ 810 / + 21.3 %</b>   |
| (Ratio of operating profit to net sales)       | <b>15.0%</b>                                | <b>16.5%</b>                          | <b>19.4%</b>                                |                           |                           |
| <b>Ordinary profit</b>                         | <b>3,705</b>                                | <b>3,800</b>                          | <b>5,338</b>                                | <b>+ 1,633 / + 44.1 %</b> | <b>+ 1,538 / + 40.5 %</b> |
| (Ratio of ordinary profit to net sales)        | <b>18.3%</b>                                | <b>16.5%</b>                          | <b>22.5%</b>                                |                           |                           |
| <b>Profit attributable to owners of parent</b> | <b>2,564</b>                                | <b>2,600</b>                          | <b>4,128</b>                                | <b>+ 1,563 / + 61.0 %</b> | <b>+ 1,528 / + 58.8 %</b> |
| <b>Basic earnings per share (yen)</b>          | <b>122.29</b>                               | <b>123.97</b>                         | <b>196.85</b>                               |                           |                           |
| <b>Exchange rate</b>                           | 122.9 yen/\$<br>134.3 yen/€<br>18.9 yen/CNY | 124 yen/\$<br>136 yen/€<br>18 yen/CNY | 134.8 yen/\$<br>145.8 yen/€<br>19.5 yen/CNY |                           |                           |

## 2. Factors Affecting Changes in Operating Profit

(first half of fiscal year ended December 2022 vs. first half of fiscal year ending December 2023)

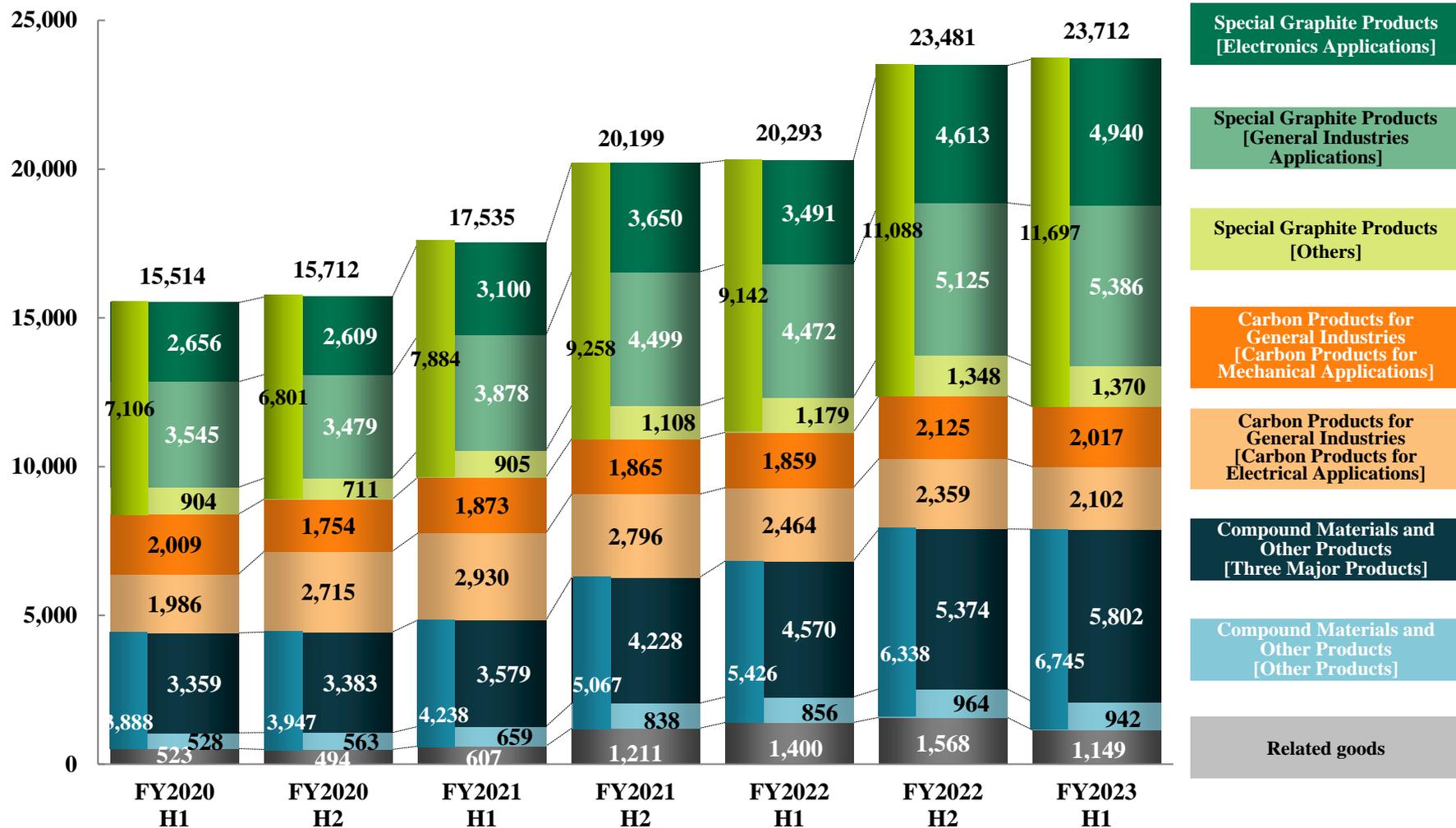
- ✓ Increased by 51.7% year on year, as an increase in marginal profit (product mix, price pass-ons, and one-off sales of high-value-added products) and a weaker yen offset increases in personnel and other fixed costs and rising raw fuel prices

(Unit: Yen, 100 millions)



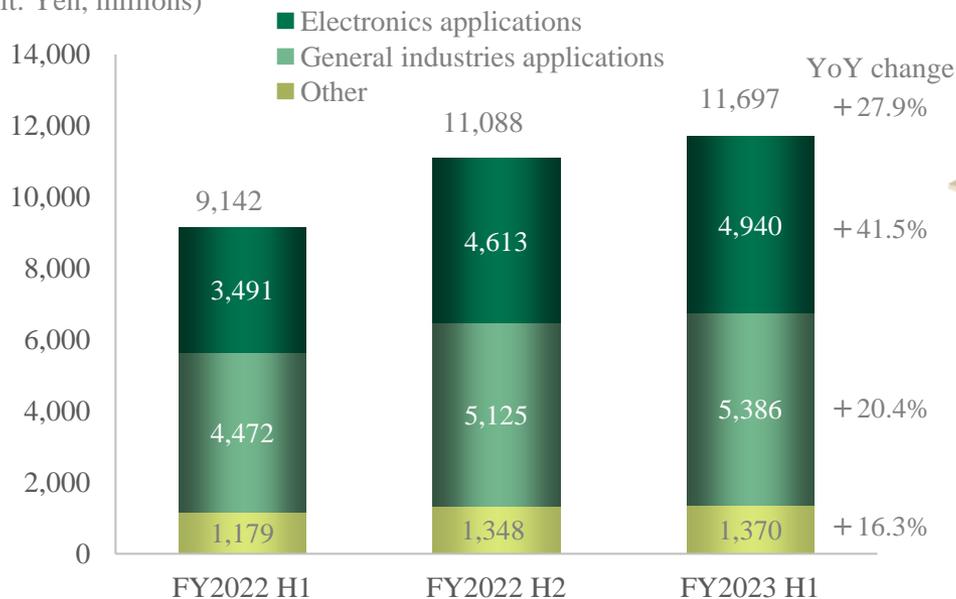
### 3. Net Sales by Product and Segment

(Unit: Yen, millions)



### 3. Net Sales by Product and Segment: Special Graphite Products

(Unit: Yen, millions)



Continuous casting dies



Devices for single-crystal silicon manufacturing



EDM electrodes

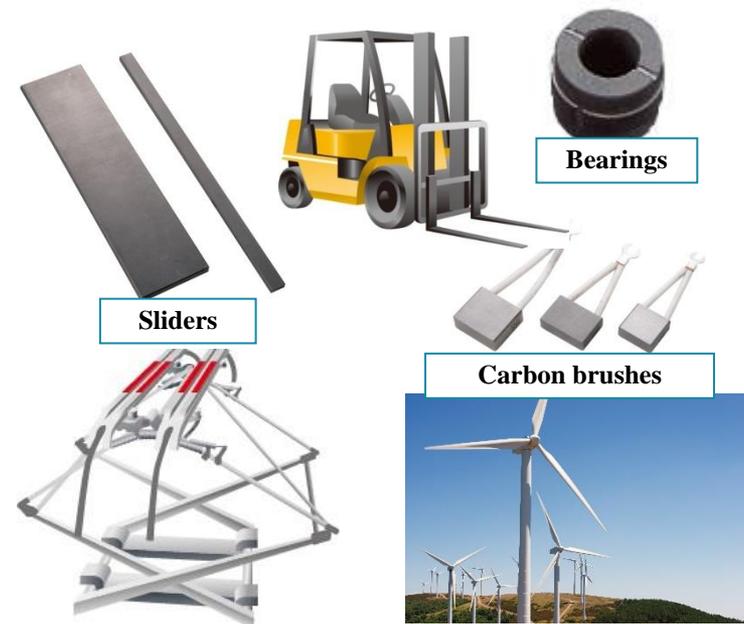
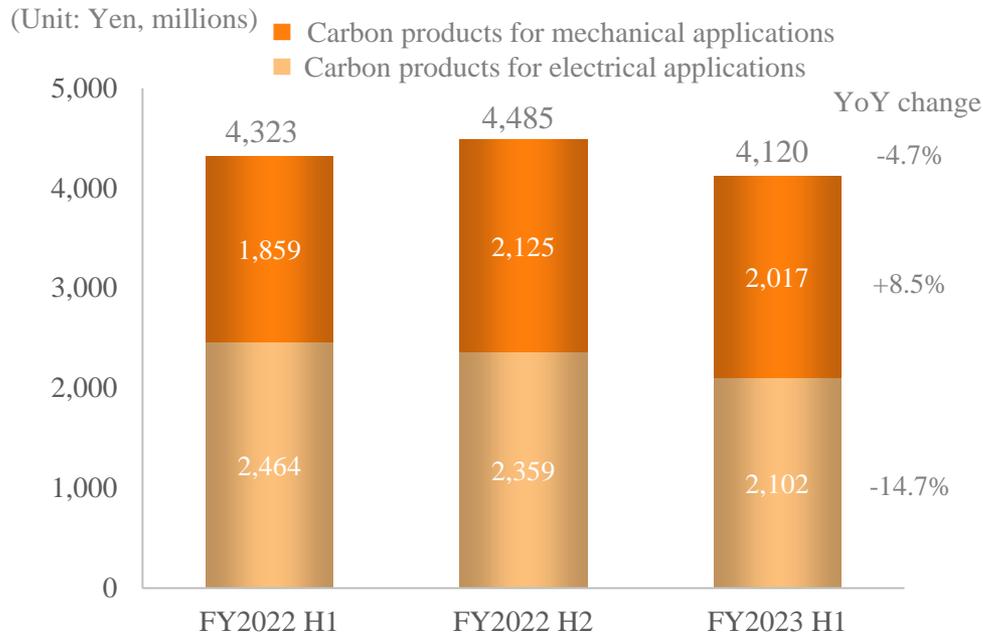
#### [Electronics applications]

Increased significantly year on year, driven by continued robust demand for products for single-crystal silicon manufacturing applications and products for compound semiconductor manufacturing applications for SiC wafers. Sales for both applications reached record highs. Sales of products for solar cell manufacturing applications were significantly curtailed through selective order acceptance.

#### [General industries applications]

Demand for continuous casting applications and industrial furnace applications increased significantly year on year, driven by factors such as the recovery of operations in automotive industries and steady capital investment. EDM electrode applications also performed solidly.

### 3. Net Sales by Product and Segment: Carbon Products for General Industries



#### [Carbon products for mechanical applications]

Sales of bearings, sealing rings, and pantograph sliders increased year on year on firm demand.

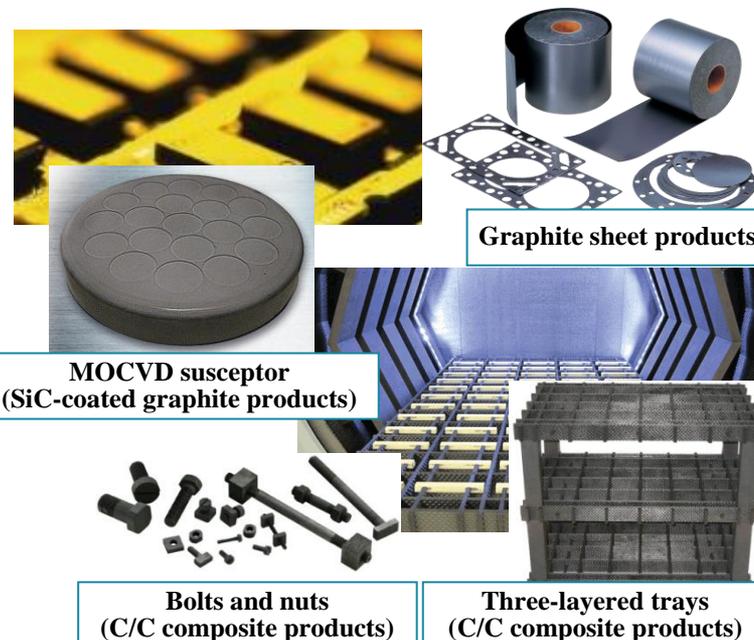
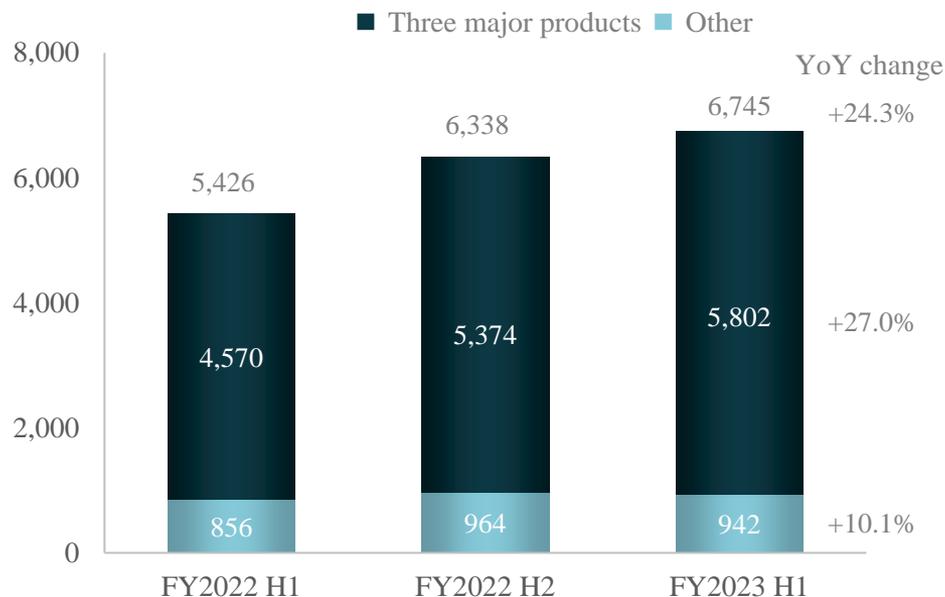
#### [Carbon products for electrical applications]

Demand for small motor applications for home appliances and power tools decreased significantly due to production adjustments by customers.

Steady progress was made in opening up new large motor applications due to recognition of the high performance of our products. Although volume is still small, adoption is progressing for industrial machinery including wind power generation.

### 3. Net Sales by Product and Segment: Compound Materials and Other Products

(Unit: Yen, millions)



#### [Three major products]

Sales of SiC-coated graphite products increased substantially year on year for silicon and SiC epitaxial applications, with remarkable growth for the latter in particular. Sales for LED applications were slack due to correction in the main Chinese and other Asian markets.

C/C composite products for both industrial furnace applications and semiconductor applications performed well, increasing substantially year on year.

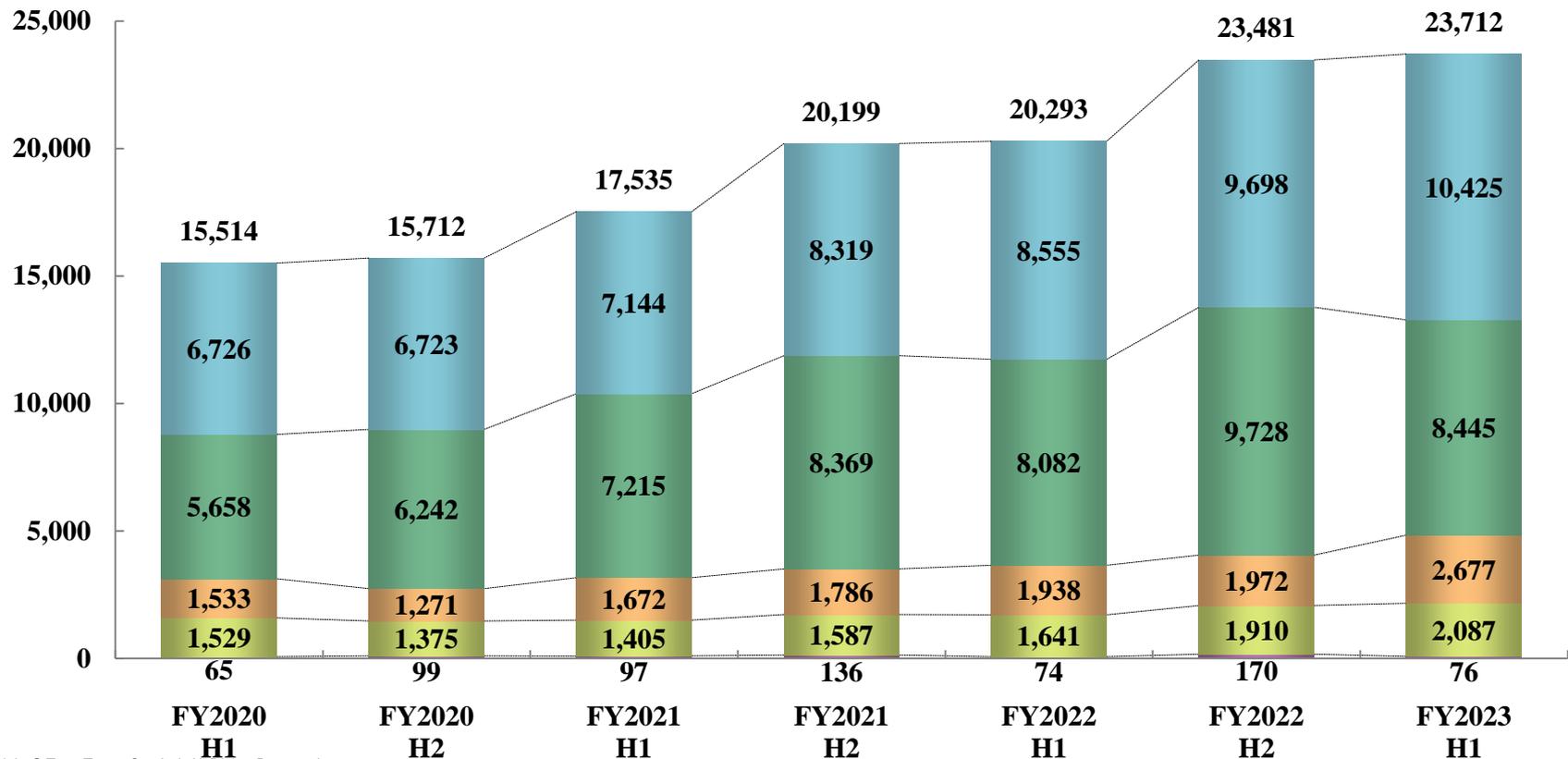
Sales of graphite sheet products increased year on year, with steady demand for semiconductor and metallurgical applications, despite weak demand in automotive applications.

## 4. Sales by Region

✓ Sales in Japan, Europe, and North America increased steadily, supported by demand for semiconductor and metallurgical applications. Year-on-year sales in Asia were also positive, despite corrections for carbon products for electrical applications and in some regions.



(Unit: Yen, millions)



## 5. Consolidated Balance Sheet and Statement of Cash Flows for the First Half of the Fiscal Year Ending December 31, 2023

| Consolidated Balance Sheet              | (Unit: Yen, millions) |               |               | Consolidated Statement of Cash Flow                         | (Unit: Yen, millions) |                |
|---|-----------------------|---------------|---------------|---|-----------------------|----------------|
|   | Jun. 30, 2022         | Dec. 31, 2022 | Jun. 30, 2023 |   | FY2022 H1             | FY2023 H1      |
| <b>Total assets</b>                     | <b>87,847</b>         | <b>89,432</b> | <b>92,203</b> | <b>Cash and cash equivalents at beginning of period</b>     | <b>12,470</b>         | <b>11,773</b>  |
| Notes and accounts receivable – trade   | 15,373                | 16,606        | 16,464        | <b>Net increase (decrease) in cash and cash equivalents</b> | <b>(199)</b>          | <b>852</b>     |
| Inventories                             | 17,981                | 18,416        | 20,939        | <b>Cash and cash equivalents at end of period</b>           | <b>12,270</b>         | <b>12,626</b>  |
| Property, plant and equipment           | 31,604                | 31,138        | 32,096        | Net cash provided by operating activities                   | 3,032                 | 2,329          |
| <b>Total liabilities and net assets</b> | <b>87,847</b>         | <b>89,432</b> | <b>92,203</b> | Net cash provided by (used in) investing activities         | <b>(2,489)</b>        | <b>60</b>      |
| Interest-bearing liabilities            | 219                   | 285           | 0             | Net cash provided by (used in) financing activities         | <b>(1,342)</b>        | <b>(1,860)</b> |
| Share capital                           | 7,947                 | 7,947         | 7,947         |   |                       |                |
| Net assets                              | 76,012                | 77,200        | 81,131        |   |                       |                |
| <b>Equity ratio</b>                     | <b>86.5%</b>          | <b>86.3%</b>  | <b>87.9%</b>  |   |                       |                |

# **Forecasts for the Fiscal Year Ending December 31, 2023**

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# 1. Forecasts for the Fiscal Year Ending December 31, 2023

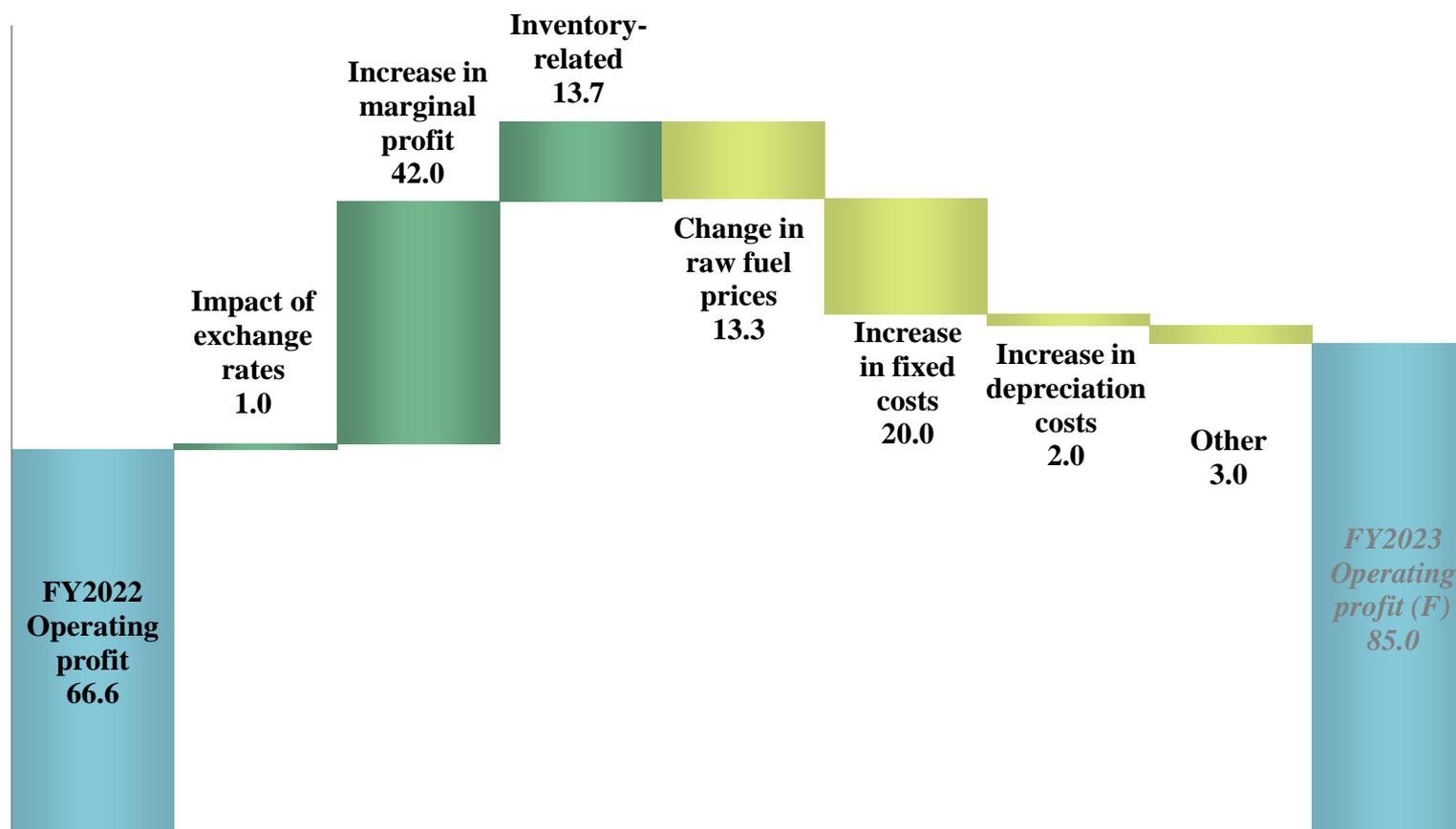
| (Unit: Yen, millions)                          | FY2022                                      |           |        | FY2023                             |                  |           |        |                    |                          |  |
|--|---|-----------|--------|------------------------------------|------------------|-----------|--------|--------------------|--------------------------|--|
|  |   | Breakdown |        | Previous forecast*                 | Current forecast | Breakdown |        | YoY                | Versus previous forecast |  |
| H1   |   |           | H1 (A) |                                    |                  |           |        |                    |                          |  |
| <b>Net sales</b>                               | 43,774                                      | H1        | 20,293 | 47,000                             | 48,500           | H1 (A)    | 23,712 | + 4,725 / + 10.8 % | + 1,500 / + 3.2 %        |  |
|  |   | H2        | 23,481 |                                    |                  | H2 (F)    | 24,787 |                    |                          |  |
| <b>Operating profit</b>                        | 6,667                                       | H1        | 3,039  | 8,000                              | 8,500            | H1 (A)    | 4,610  | + 1,832 / + 27.5 % | + 500 / + 6.3 %          |  |
|  |   | H2        | 3,628  |                                    |                  | H2 (F)    | 3,889  |                    |                          |  |
| (Ratio of operating profit to net sales)       | 15.2%                                       |           |        | 17.0%                              | 17.5%            |           |        |                    |                          |  |
| <b>Ordinary profit</b>                         | 7,369                                       | H1        | 3,705  | 8,000                              | 9,300            | H1 (A)    | 5,338  | + 1,930 / + 26.2 % | + 1,300 / + 16.3 %       |  |
|  |   | H2        | 3,664  |                                    |                  | H2 (F)    | 3,961  |                    |                          |  |
| (Ratio of ordinary profit to net sales)        | 16.8%                                       |           |        | 17.0%                              | 19.2%            |           |        |                    |                          |  |
| <b>Profit attributable to owners of parent</b> | 5,181                                       | H1        | 2,564  | 5,500                              | 7,000            | H1 (A)    | 4,128  | + 1,818 / + 35.1 % | + 1,500 / + 27.3 %       |  |
|  |   | H2        | 2,617  |                                    |                  | H2 (F)    | 2,871  |                    |                          |  |
| <b>Basic earnings per share (yen)</b>          | 247.08                                      | H1        | 122.29 | 262.25                             | 333.77           | H1 (A)    | 196.85 |                    |                          |  |
|  |   | H2        | 124.79 |                                    |                  | H2 (F)    | 136.92 |                    |                          |  |
| <b>ROE</b>                                     | 6.9%  |           |        | 6.9%                               | 8.8%             |           |        |                    |                          |  |
| <b>Exchange rate</b>                           | 131.5 yen/\$<br>138.1 yen/€<br>19.5 yen/CNY |           |        | (Exchange rate assumptions for H2) |                  |           |        |                    |                          |  |
|  |   |           |        | 124 yen/\$                         | 133 yen/\$       |           |        |                    |                          |  |
|  |   |           |        | 136 yen/€                          | 146 yen/€        |           |        |                    |                          |  |
|  |   |           |        | 18 yen/CNY                         | 19 yen/CNY       |           |        |                    |                          |  |

\*Announced on Feb.14, 2023

## 2. Factors Affecting Changes in Operating Profit (fiscal year ended December 2022 vs. fiscal year ending December 2023)

- ✓ Operating profit to increase by 27.5% due to an increase in marginal profit (volumes, price pass-ons, and product mix) and inventory-related impacts, despite increases in fixed costs (mainly personnel expenses), depreciation, etc.

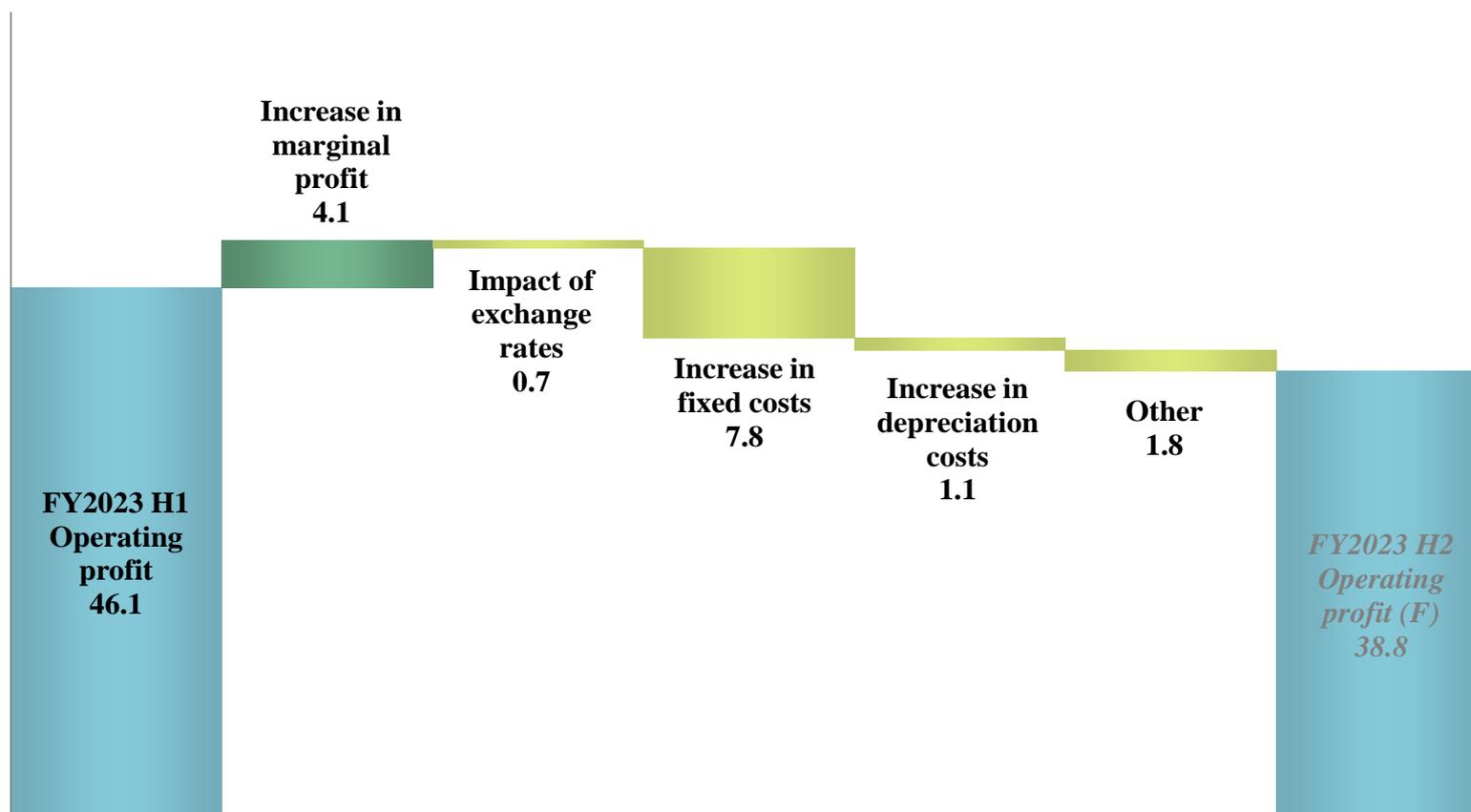
(Unit: Yen, 100 millions)



## 2. Factors Affecting Changes in Operating Profit (first half vs. second half of fiscal year ending December 2023)

- ✓ Although marginal profit is expected to increase with higher sales, fixed costs are forecast to increase due to an increase in personnel expenses.
- ✓ The plan for the second half of the fiscal year has been revised due to an expected decrease in the marginal profit rate caused by product mix differences (decrease in carbon products for general industries and increase in related goods) and an increase in fixed costs.

(Unit: Yen, 100 millions)



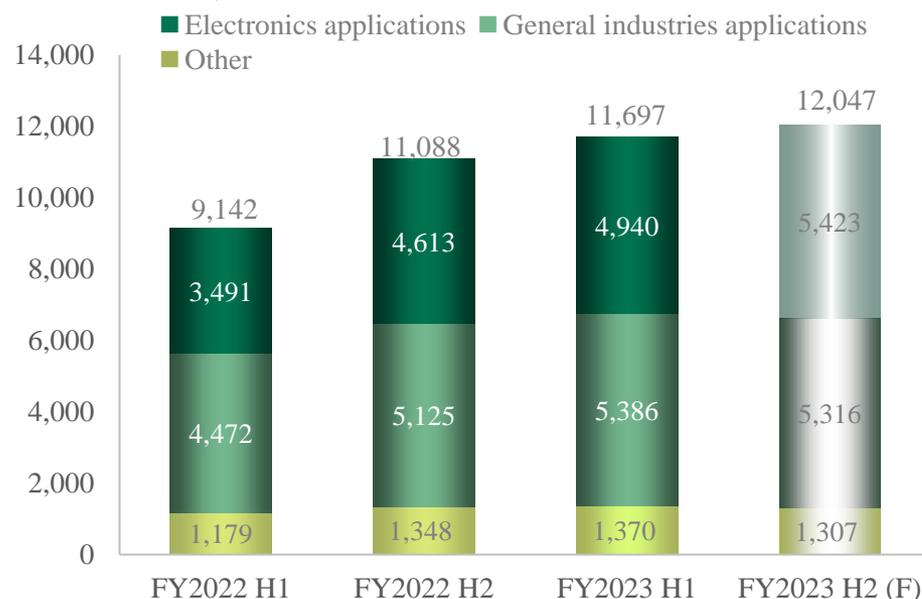
### 3. Net Sales by Product and Segment

| Product and Segment<br>(Unit: Yen, millions)  | FY2022        |               |               | FY2023        |               |               |              | Changes indicate YoY increases or decreases |               |
|---|---------------|---------------|---------------|---------------|---------------|---------------|--------------|---|---------------|
|   | H1            | H2            | Full year     | H1            | Changes       | H2 (F)        | Changes      | Full year                                   | Changes       |
| <b>Special Graphite Products</b>  | 9,142         | 11,088        | <b>20,230</b> | 11,697        | +27.9%        | 12,047        | +8.7%        | <b>23,744</b>                               | +17.4%        |
| <b>Electronics Applications</b>   | 3,491         | 4,613         | <b>8,104</b>  | 4,940         | +41.5%        | 5,423         | +17.6%       | <b>10,363</b>                               | +27.9%        |
| <b>General Industries Applications</b>  | 4,472         | 5,125         | <b>9,598</b>  | 5,386         | +20.4%        | 5,316         | +3.7%        | <b>10,702</b>                               | +11.5%        |
| <b>Others</b>   | 1,179         | 1,348         | <b>2,527</b>  | 1,370         | +16.3%        | 1,307         | -3.0%        | <b>2,678</b>                                | +6.0%         |
| <b>Carbon Products for General Industries<br/>[Carbon Products for Electrical Applications]</b> | 1,859         | 2,125         | <b>3,985</b>  | 2,017         | +8.5%         | 1,923         | -9.5%        | <b>3,940</b>                                | -1.1%         |
| <b>Carbon Products for General Industries<br/>[Carbon Products for Electrical Applications]</b> | 2,464         | 2,359         | <b>4,823</b>  | 2,102         | -14.7%        | 2,285         | -3.2%        | <b>4,388</b>                                | -9.0%         |
| <b>Compound Materials and Other Products</b>  | 5,426         | 6,338         | <b>11,765</b> | 6,745         | +24.3%        | 7,231         | +14.1%       | <b>13,976</b>                               | +18.8%        |
| <b>Three Major Products</b>   | 4,570         | 5,374         | <b>9,944</b>  | 5,802         | +27.0%        | 6,353         | +18.2%       | <b>12,156</b>                               | +22.2%        |
| <b>Other Products</b>   | 856           | 964           | <b>1,820</b>  | 942           | +10.1%        | 877           | -9.0%        | <b>1,820</b>                                | +0.0%         |
| <b>Related goods</b>  | 1,400         | 1,568         | <b>2,969</b>  | 1,149         | -17.9%        | 1,300         | -17.1%       | <b>2,449</b>                                | -17.5%        |
| <b>Total</b>  | <b>20,293</b> | <b>23,481</b> | <b>43,774</b> | <b>23,712</b> | <b>+16.8%</b> | <b>24,787</b> | <b>+5.6%</b> | <b>48,500</b>                               | <b>+10.8%</b> |

### 3. Net Sales by Product and Segment: Special Graphite Products

| Product and Segment<br>(Unit: Yen, millions) | FY2022 |        |               | FY2023 |         |        |         | Changes indicate YoY increases or decreases |         |
|--|--------|--------|---------------|--------|---------|--------|---------|---|---------|
|  | H1     | H2     | Full year     | H1     | Changes | H2 (F) | Changes | Full year                                   | Changes |
| <b>Special Graphite Products</b>             | 9,142  | 11,088 | <b>20,230</b> | 11,697 | +27.9%  | 12,047 | +8.7%   | <b>23,744</b>                               | +17.4%  |
| <b>Electronics Applications</b>              | 3,491  | 4,613  | <b>8,104</b>  | 4,940  | +41.5%  | 5,423  | +17.6%  | <b>10,363</b>                               | +27.9%  |
| <b>General Industries Applications</b>       | 4,472  | 5,125  | <b>9,598</b>  | 5,386  | +20.4%  | 5,316  | +3.7%   | <b>10,702</b>                               | +11.5%  |
| <b>Others</b>                                | 1,179  | 1,348  | <b>2,527</b>  | 1,370  | +16.3%  | 1,307  | -3.0%   | <b>2,678</b>                                | +6.0%   |

(Unit: Yen, millions)



#### [Electronics applications]

- Strong demand will continue for both single-crystal silicon manufacturing applications and compound semiconductor manufacturing applications. For solar cell manufacturing applications, we will continue selective order acceptance.

#### [General industries applications]

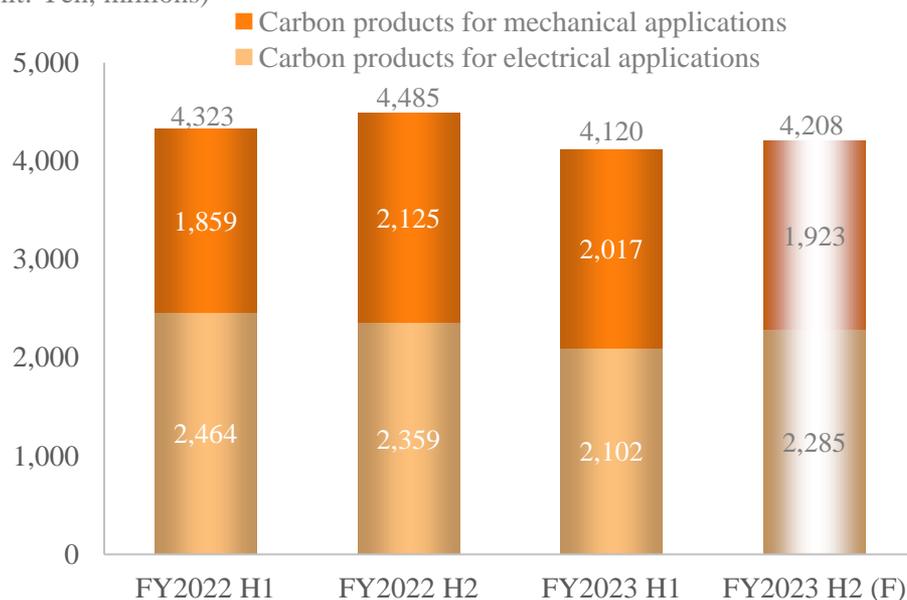
- We expect firm demand for metallurgical applications such as industrial furnace applications and continuous casting applications, with sales for EDM electrode applications remaining solid as well.

### 3. Net Sales by Product and Segment: Carbon Products for General Industries

| Product and Segment<br>(Unit: Yen, millions)  | FY2022 |       |              | FY2023 |         |        |         |              |         |
|---|--------|-------|--------------|--------|---------|--------|---------|--------------|---------|
|   | H1     | H2    | Full year    | H1     | Changes | H2 (F) | Changes | Full year    | Changes |
| <b>Carbon Products for General Industries [Carbon Products for Mechanical Applications]</b> | 1,859  | 2,125 | <b>3,985</b> | 2,017  | +8.5%   | 1,923  | -9.5%   | <b>3,940</b> | -1.1%   |
| <b>Carbon Products for General Industries [Carbon Products for Electrical Applications]</b> | 2,464  | 2,359 | <b>4,823</b> | 2,102  | -14.7%  | 2,285  | -3.2%   | <b>4,388</b> | -9.0%   |

Changes indicate YoY increases or decreases

(Unit: Yen, millions)



#### [Carbon products for mechanical applications]

- Demand will remain stable overall for mainstay products such as bearings, sealing rings, etc., despite corrections by certain customers.
- Steady demand is anticipated to continue for pantograph sliders.

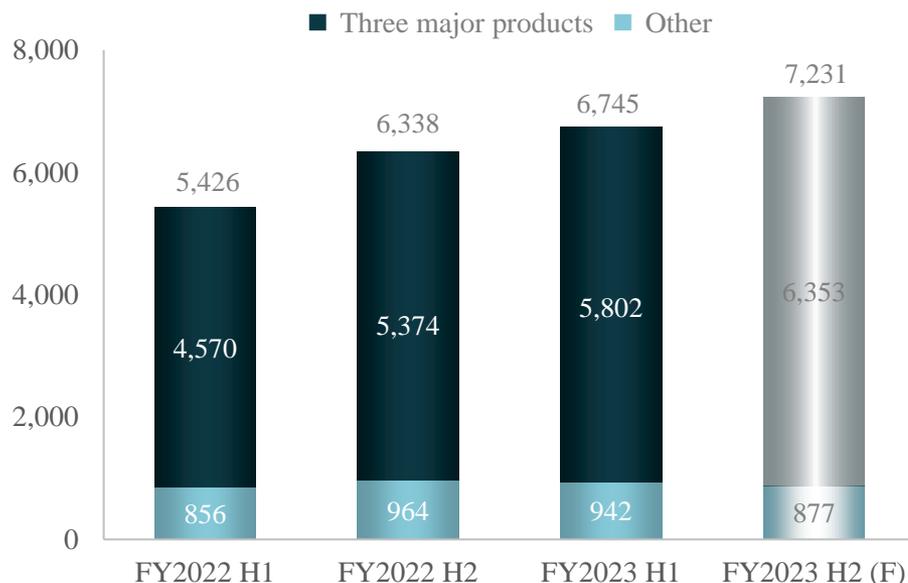
#### [Carbon products for electrical applications]

- Signs of correction in demand for small motor applications for home appliances and power tools have been increasing since the second half of last year, and will remain at a low level in the second half of this fiscal year.
- Although volumes will remain small for large motor applications for industrial machinery, we are progressively opening-up new applications, such as for wind power generation. We will continue to capture these sales.

### 3. Net Sales by Product and Segment: Compound Materials and Other Products

| Product and Segment<br>(Unit: Yen, millions) | FY2022 |       |               | FY2023 |         |        |         | Changes indicate YoY increases or decreases |         |
|--|--------|-------|---------------|--------|---------|--------|---------|---|---------|
|  | H1     | H2    | Full year     | H1     | Changes | H2 (F) | Changes | Full year                                   | Changes |
| <b>Compound materials and other products</b> | 5,426  | 6,338 | <b>11,765</b> | 6,745  | +24.3%  | 7,231  | +14.1%  | <b>13,976</b>                               | +18.8%  |
| <b>Three major products</b>                  | 4,570  | 5,374 | <b>9,944</b>  | 5,802  | +27.0%  | 6,353  | +18.2%  | <b>12,156</b>                               | +22.2%  |
| <b>Other</b>                                 | 856    | 964   | <b>1,820</b>  | 942    | +10.1%  | 877    | -9.0%   | <b>1,820</b>                                | +0.0%   |

(Unit: Yen, millions)



#### [Three major products]

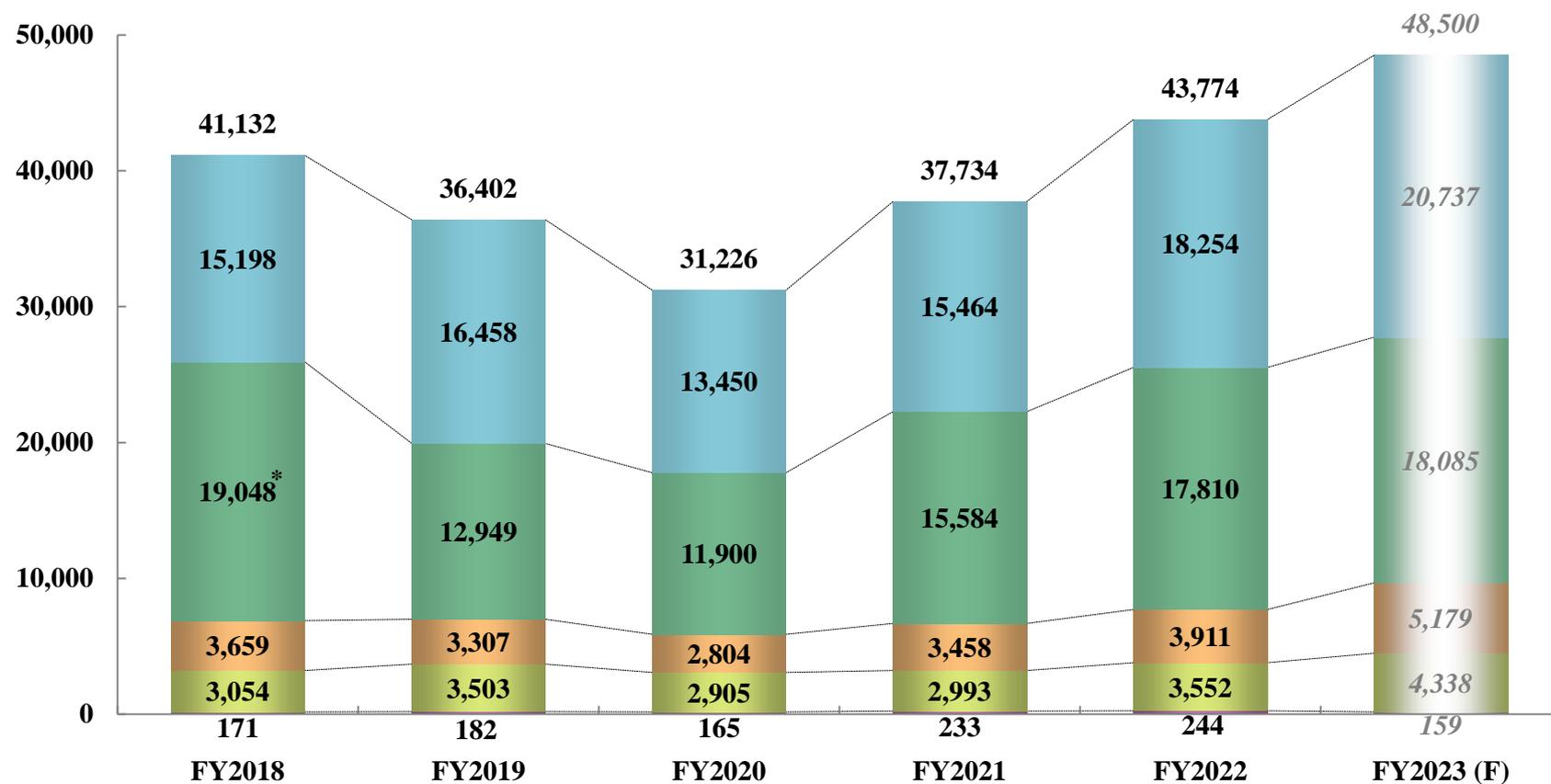
- For SiC-coated graphite products, strong demand is expected to increase for SiC epitaxial applications. Demand for silicon epitaxy applications will remain at a high level with some signs of correction. Demand for LED applications, which had been correcting, is showing signs of a gradual recovery.
- Some of the capacity increase investments to be completed in 2024 have already begun operation, and will contribute to sales from the second half.
- C/C composite products are expected to exceed the previous year's results, driven by industrial furnace applications.
- With demand remaining firm, graphite sheet products are expected to maintain the previous year's levels for automotive, semiconductor, and metallurgical applications.

## 4. Sales by Region

- ✓ Sales are steadily increasing in all regions.
- ✓ We will practice timely and appropriate management of production activities including delivery times, quality, and cost across the group to enable timely supply matching demand trends.



(Unit: Yen, millions)

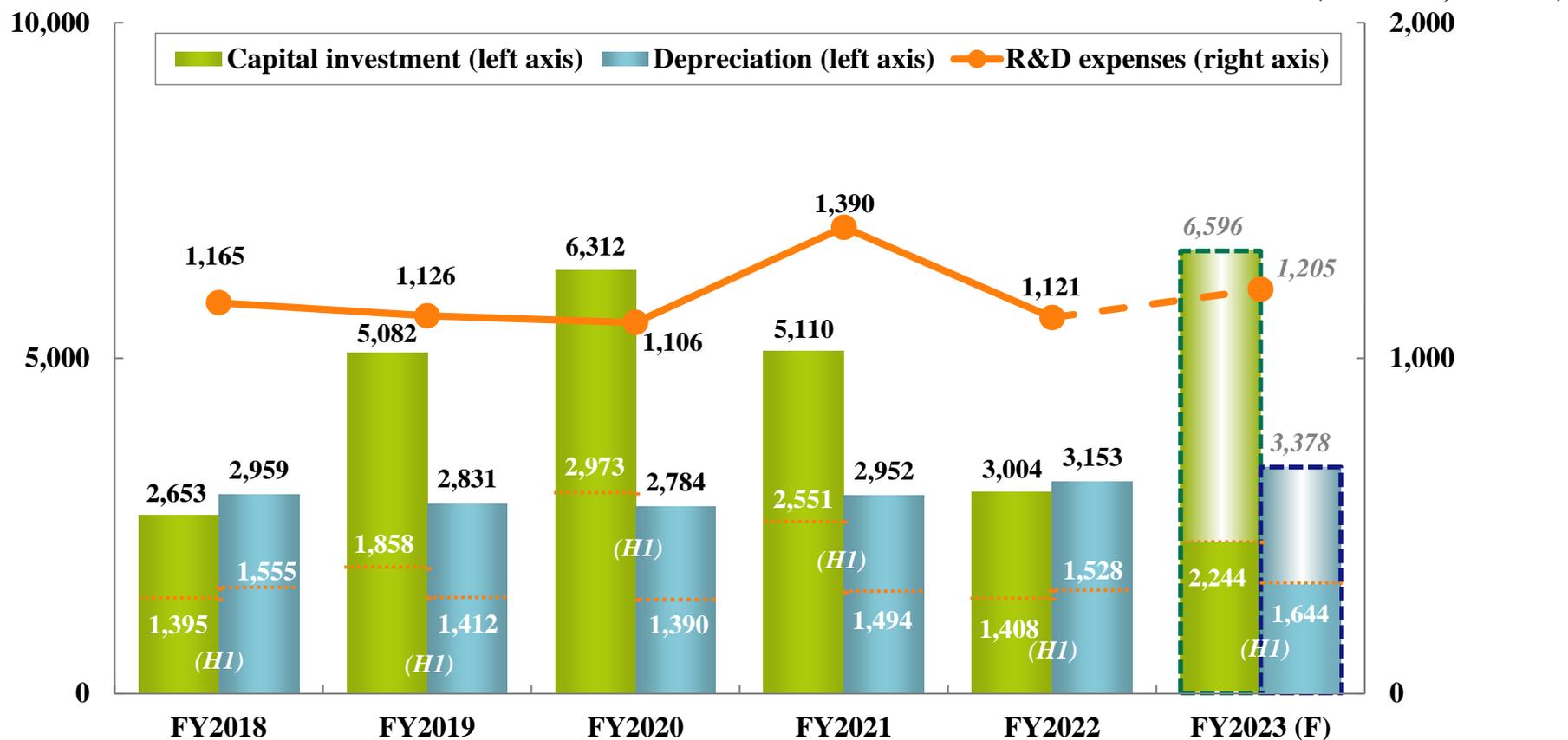


\* Net sales in Asia for FY2018, include 3,204 million yen in net sales for China's high-temperature reactor-pebble-bed modules (HTR-PM).

## 5. Capital Investment, Depreciation, and R&D Expenses

- ✓ Capital investment in FY2023 will increase significantly over the previous year, despite falling below the initial plan, due to factors such as revisions to the timing of implementation. Steady progress is being made toward executing the 51.5-billion-yen capital investment plan under the Medium-Term Management Plan.

(Unit: Yen, millions)



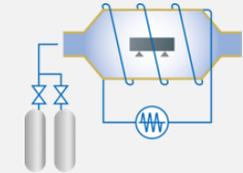
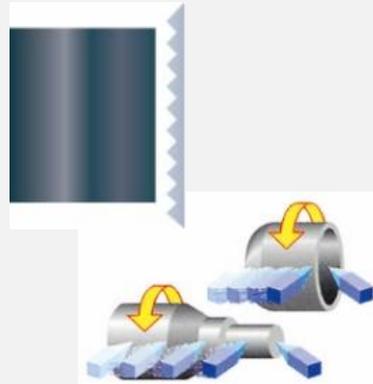
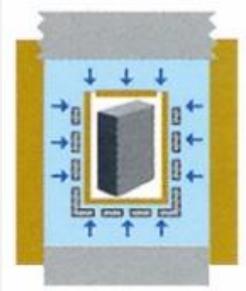
## ✓ Enhance competitiveness in the market by reinforcing capacity of value-added processes

Isotropic graphite manufacturing

Shape machining

Purification processing

Coating (SiC/TaC)



Remove impurities in graphite materials through heat treatment under a halogen gas atmosphere to meet the high purity requirements for semiconductor applications.

Coating with dense films such as SiC or TaC ensures stability at high temperatures and provides excellent oxidation, corrosion, and chemical resistance. It also prevents the release and dispersion of graphite powder and the emission of gases and impurities from the graphite substrate.

**Value-added processes**



Materials for silicon wafer manufacturing furnaces



Materials for SiC wafer manufacturing furnaces

**Materials for wafer manufacturing**



Susceptors for silicon epitaxial growth (SiC-coating graphite products)

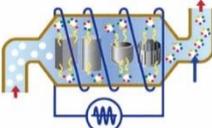


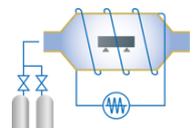
Susceptors for SiC epitaxial growth (TaC-coating graphite products)

**Materials for epitaxial growth**

## 5. Details of Strategic Investments under the Medium-Term Management Plan (Decided Items)

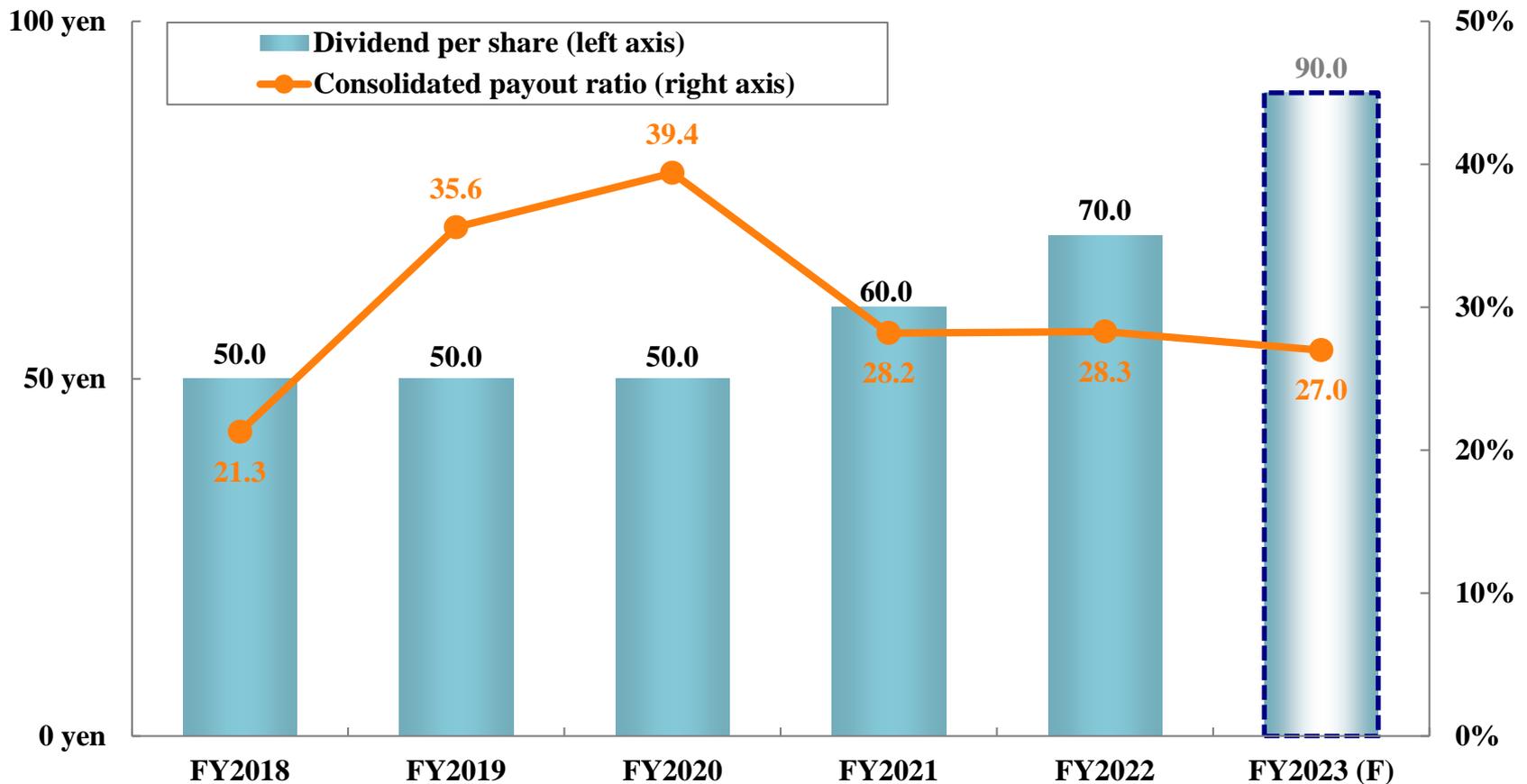
- ✓ Capacity for value-added processes, focusing on semiconductor applications, is being bolstered globally through sequential decisions and execution. Further capacity increases through additional strategic investments are under consideration.

|  | Area                                 | Investment      | Capacity increase       | Start of production                         | Major application  |
|--|--------------------------------------|-----------------|-------------------------|---|--|
| <br>Purification processing | Japan<br>(New building construction) | 5.0 billion yen | 1.9 times<br>(vs. 2022) | Gradually from Q2 of FY2024 to Q3 of FY2025 | <ul style="list-style-type: none"> <li>• Materials for semiconductor manufacturing (wafer manufacturing, epitaxial growth, ion implantation, etc.)</li> <li>• Medical use (materials for X-ray targets)</li> </ul> |
|  | United States<br>(Expansion)         | 1.5 billion yen |                         |   |  |
|  | China<br>(Expansion)                 |                 |                         |   |  |
|  | Italy<br>(New construction)          |                 |                         |   |  |
|  | Germany<br>(Expansion)               | 1.0 billion yen |                         |   |  |

|  | Investment details / Area | Investment      | Capacity increase       | Start of production | Major application   |
|--|---------------------------|-----------------|-------------------------|---------------------|---|
| <br>Coating | SiC coating<br>(Japan)    | 2.0 billion yen | 1.5 times<br>(vs. 2022) | Q4 of FY2024        | <ul style="list-style-type: none"> <li>• Materials for semiconductor manufacturing (wafer manufacturing, epitaxial growth, etc.)</li> </ul> |
|  | TaC coating<br>(Japan)    | Not disclosed   | 2 times<br>(vs. 2023)   | Q3 of FY2024        |   |

- ▶ Some SiC coating equipment has already started operating and will contribute to sales in the second half of FY2023.

- ✓ With the upward revision of performance, the dividend forecast for FY2023 has been raised by 10 yen over the initial plan. Shareholder returns commensurate with profit growth will continue going forward.



# TOYO TANSO

Inspiration for Innovation

**Note: This presentation contains “forward-looking statements” and forecasts of business results. These statements are not historical facts but instead represent the Company’s beliefs regarding future events, many of which, by their nature, are inherently uncertain and beyond the Company’s control. It is possible that the Company’s actual results may differ, possibly materially, from the anticipated results and financial condition indicated in these forward-looking statements.**

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