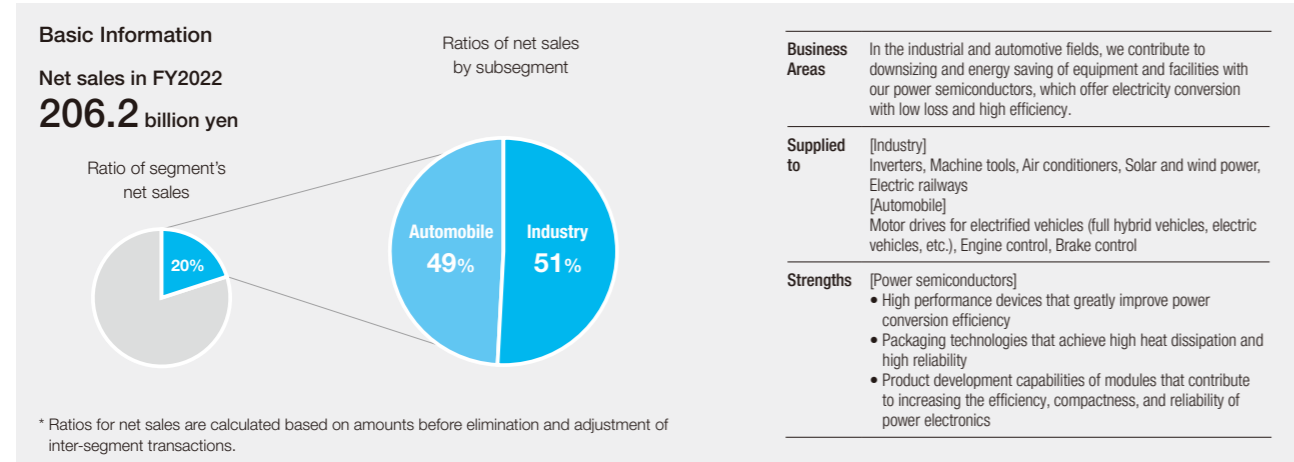


## Semiconductors



**In response to growing demand for power semiconductors for electrified vehicles, we will continue to invest aggressively and steadily increase production capacity to expand sales and profit.**

**Toru Hosen**  
Senior Managing Executive Officer  
Corporate General Manager, Semiconductors Business Group



## Market Trends and Business Opportunities

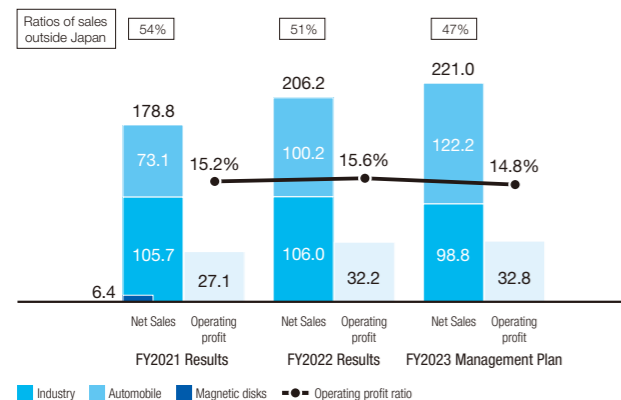
Power semiconductors help save energy thanks to their high levels of conversion efficiency and power control. Demand for these devices is rising globally, driven by environmental action aimed at decarbonization and increasing investment in automation in the manufacturing industry.

Subsegments	Market Trends and Business Opportunities
Industry	Due to growing demand for energy saving and automation, demand for factory automation equipment, such as inverters and machine tools, continues to grow, and demand for applications for renewable energy, including solar and wind, has been expanding at an average annual growth rate of 19%* from fiscal 2021 to 2023.
Automobile	Production of full hybrid and electric vehicles (EVs), which are Fuji Electric's targets, is forecasted to grow at an average annual rate of 44%* from fiscal 2021 to 2023, and the growth rate of sales from IGBTs for electrified vehicles (xEVs) is expected to exceed that of production.

\* Fuji Electric forecast based on research firm forecasts

## Fiscal 2022 Results and Fiscal 2023 Plan

**Business Performance Trends** (Billions of yen)



In fiscal 2022, the business was impacted by our exit from the magnetic disk operation, cost increase to expand the production capacity of power semiconductors, and soaring material prices and energy prices. However, thanks to increase in demand for power semiconductors for electrified vehicles and industry applications, as well as impacts of foreign exchange, we achieved net sales of ¥206.2 billion, up ¥27.4 billion year on year, operating profit of ¥32.2 billion, up ¥5.1 billion, and operating profit ratio of 15.6%, up 0.4%.

In fiscal 2023, despite the anticipated increase in fixed costs and adverse foreign exchange impacts, we forecast net sales of ¥221.0 billion, up ¥14.8 billion year on year, and operating profit of ¥32.8 billion, up ¥0.6 billion, with an operating profit ratio of 14.8%, driven by increase in sales in the growing xEVs market.

## Priority Measures

### Growing sales of power semiconductors in the xEV market

Power semiconductors contribute to reducing power loss and improving driving distance, which are major issues for xEVs, and as demand grows rapidly, there is a need for ever higher efficiency.

We are continuing to develop products to meet customers' requirement specifications, including silicon (Si) RC-IGBT\* products, which we developed independently ahead of our competitors, and silicon carbide (SiC) products, which can significantly reduce power loss compared to Si products. By increasing the number of manufacturers and models adopting our modules in Japan and abroad, we will work to expand sales beyond the increase of xEV production.

We are also planning to expand our lineup of module products, and promote the development of compact and thin package lineup for light and compact vehicles and new SiC products for EVs.

\* RC-IGBT integrates two types of semiconductors having different functions (IGBT and freewheeling diode), laid out alternately in a linear arrangement on a single chip. This chip structure allows significant reduction of power loss and miniaturization compared with conventional products in which two chips are placed separately.

### Expanding sales of IGBT modules for renewable energy applications

We are expanding our product lineup of 7th-generation IGBT modules, which feature high heat dissipation and high reliability, and increasing sales of products for the renewable energy in the industrial field.

In the renewable energy field, there is an increasing demand for higher voltage, higher output, higher efficiency products that can contribute to downsizing, system cost reduction, and longer life. We are developing the 8th-generation IGBT modules that offer an output of 10-20% greater compared to the 7th-generation, as well as large capacity modules equipped with next-generation SiC.

Going forward, we will continue to capture the strong demand in these markets to boost sales.

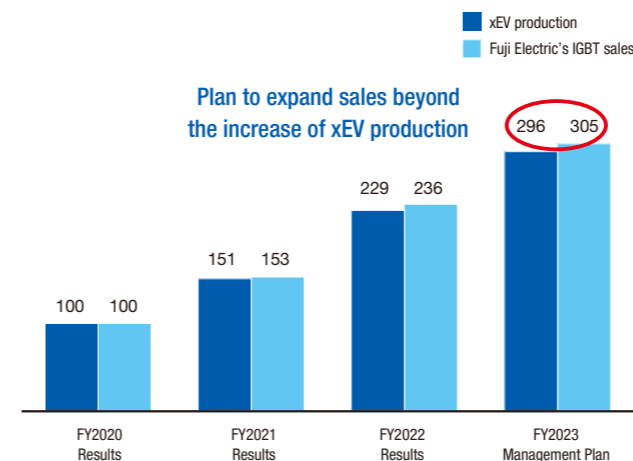
### Aggressive investments to increase production capacity for Si and SiC

In order to respond to strong demand for power semiconductors, we anticipate that our cumulative plant and equipment investment for the five years up to fiscal 2023 will increase from ¥120 billion in our initial plan to over ¥200 billion.

For the manufacturing process (front-end process) of power semiconductor chips, we are accelerating investments to increase the production capacity for 8-inch Si wafers and plan to increase production capacity in fiscal 2023 by about 2.8 times the level of fiscal 2019. For SiC products, we are preparing for the full-scale launch of mass production of 6-inch wafers in fiscal 2024, and also pursuing the development of technologies for mass production of 8-inch wafers.

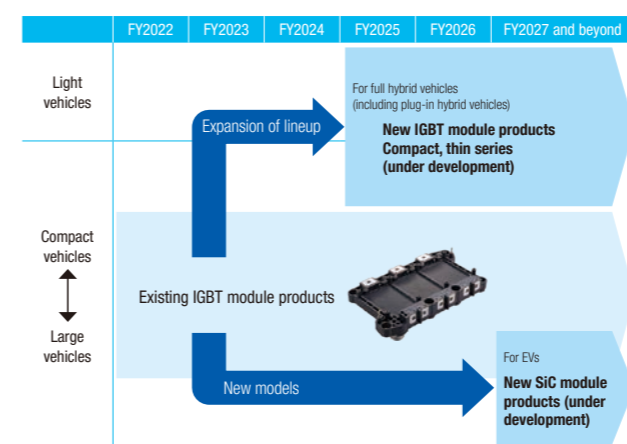
We are also continuing investments for the assembly process to increase the production capacity for automotive and industrial products.

### xEV\*1 Production Trend & Fuji Electric's IGBT Sales Plan

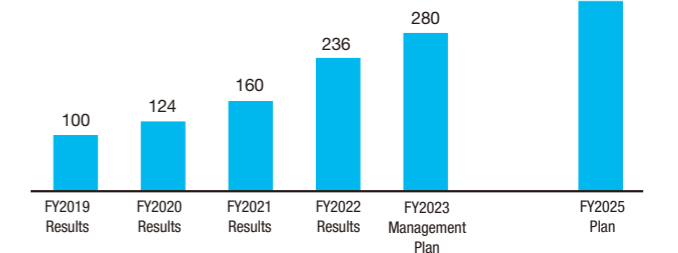


\*1 xEV: the total of full hybrid vehicles and electric vehicles (IGBT-equipped models)  
\* Figures are indicated as indices based on FY2020 results as 100

### Plans to Expand Lineup of Power Semiconductor Modules for xEVs

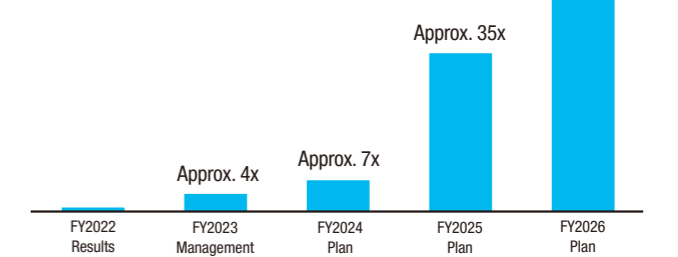


### 8-Inch Si Wafer Production Capacity (Front-End Process)



\* For production capacity (year-end comparison), FY2019 (benchmark year) is assigned 100 for comparison purposes.

### 6-inch SiC Wafer Production Capacity (Front-End Process)



\* Figures are indicated as multiples of production capacity as of end of FY2022 (comparison of capacity at end of each fiscal year)