## **Overview of Segments** Basic Information

### **Composition Ratio\***



### Energy

- Contributing to the achievement of a decarbonized society by maximizing renewable energy output, ensuring stable supply of renewable energy, and providing integrated engineering services
- Contributing to the stable operation and optimal management of facilities through the provision of substation equipment, uninterruptible power systems (UPSs), and energy management systems



power supply and power optimization

• Energy-saving expertise developed at Fuji Electric's

- Industry
- Realization of improved productivity and energy savings through factory automation and visualization by combining measuring instruments and IoT with power electronics application products
- Contribution to stable operation of equipment through preventive maintenance and optimal maintenance operations
- Contribution to the safety and security of social infrastructure through provision of highly reliable products, also in the railway, ship, and nuclear power businesses



Air conditioning and water treatment facilities, Machine manufacturers, Power companies, Material plants (steel, chemical, etc.), Railway companies, Shipbuilding companies, Public agencies and local government

- Early development of power electronics equipped with power semiconductors
- Extensive product lineup tailored to customer applications
- Engineering capabilities built up over a substantial delivery track record

### Semiconductors

Providing products that enable low-loss, high-efficiency power conversion in the industrial and automotive fields, and contributing to the miniaturization of and energy saving for devices and equipment



Electrical equipment manufacturers (of inverters and power conditioning systems), Machine manufacturers, Railcar manufacturers, Automobile manufacturers, and Automotive parts manufacturers

- High performance devices that greatly improve power conversion efficiency
- Packaging technologies that achieve high heat dissipation and high reliability
- Product development capabilities of modules that contribute to increasing the efficiency, compactness, and reliability of power electronics

\* Composition ratios are based on fiscal 2023 results. Figures are calculated based on the amounts before elimination and adjustment of inter-segment transactions.

factories



secure distribution of ingredients

### Food and Beverage Distribution

We provide low labor, energy saving vending machines, and

showcases and store systems that contribute to the safe and



- Top market share of beverage vending machines in Japan, China, and Southeast Asia (our estimate)
- Extensive lineup of store fixtures and equipment
- Energy-saving technologies centered on airflow control and freezing and heating, waterproofing, mechatronics technology

# Energy

We aim to expand our business through technologies that ensure the stable supply, optimization, and stabilization of energy.



Masashi Kawano Managing Executive Officer Corporate General Manager, Energy Business Group



Q. What were the achievements and challenges of the FY2023 Medium-Term Management Plan?

Steady operation of the comprehensive electrical equipment business has led to greater performance. However, accelerating the development of competitive products in the energy management and power supply and facility systems businesses remains a challenge. Under the FY2023 Medium-Term Management Plan, we focused on the comprehensive electrical equipment business, offering comprehensive proposals from system design to maintenance services for internet data centers (IDC) and semiconductor factories. This contributed to shortening customers' construction periods and reducing equipment management personnel, resulting in a nearly twofold increase in net sales in fiscal 2023 compared to fiscal 2018. Structural reforms undertaken in the ED&C components business also significantly contributed to overall energy business performance. In October 2023, we took the first step toward further business expansion under the FY2026 Medium-Term Management Plan by integrating the former Power Generation and Energy segments. This integration aims to offer unified proposals covering everything from energy generation to stabilization.

The challenges ahead include being among the first to launch competitive new products and strengthening our proposal capabilities, particularly in the decarbonization market and other growth markets.

## Q. What are the key policies and initiatives of the FY2026 Medium-Term Management Plan?

We aim to expand our business by being among the first to develop new products that contribute to the stable supply and optimization of energy in growth markets, including those related to decarbonization, and by strengthening our proposal capabilities.

Expansion of renewable energy-related businesses

We will place more focus on renewable energy-related businesses, which are expected to see further market growth due to increased investment in decarbonization.

This includes our current areas of focus, namely expanding the capacity range of our geothermal power equipment and enhancing our hydropower generation business, including pumped storage. In response to rising demand for power generation equipment upgrades, we will expand our service offerings, such as degradation diagnostics and remaining life diagnostics to improve equipment utilization rates.

#### Comprehensive renewable energy proposals and enhanced development of new products for substation systems business

As the medium- to long-term markets for decarbonization in large-scale factories and grid storage businesses continue to grow, we will enhance our comprehensive renewable energy proposal capabilities in the energy management business. By collaborating with storage battery manufacturers and PPA operators\*, we will offer comprehensive solutions that encompass renewable energy, electricity storage systems, and energy management systems (EMSs), thus helping customers to shorten their project timelines while supporting decarbonization. We expect this to drive growth in orders and sales.

In the substation systems business, we will develop new products, including gas insulated switchgear without using any greenhouse gases in response to stricter environmental regulations as well as power supplies for hydrogen production equipment, which are seeing increased demand due to growing needs for hydrogen production. We will introduce these products one after another starting in fiscal 2025.

\* PPA operators: Businesses that install solar power generation systems and other equipment on behalf of customers and sell the resulting generated electricity under a Power Purchase Agreement (PPA).





#### Expansion of business for IDCs and semiconductor factories

As demand for IDCs and semiconductor factories grows in line with the spread of generative AI, we will accelerate the development of new products, such as uninterruptible power systems (UPSs) and molded transformers—for both of which we hold the highest domestic market share. Specifically, we will develop long-life UPSs with higher capacities and reduced lifecycle costs to meet market needs and will strengthen our efforts to acquire new customers.

For a UPS, which has seen significant growth in deliveries in recent years, we will enhance our service structure to expand service-related sales.

## Further improvement of profitability in the ED&C components business

We will capitalize on the cost reduction effects of promoting sales of and transition to our newly launched core products in fiscal 2023, such as more compact, longer-life, and more environmentally friendly electromagnetic contactors and magnetic switches. In addition, we will develop new moldedcase circuit breakers and establish a competitive edge in the power distribution market.

On the manufacturing side, we aim to further improve profitability by consolidating production bases by model to achieve local production for local consumption and by improving production efficiency.

#### **R&D** Expenditures Plant and Equipment Investment (Billions of yen) (Billions of yen) 38.0 25.0 10.6 (2024 7.2 13.3 FY2023 Cumulative Plan FY2023 Cumulative Plan for FY2024-2026 for FY2024-2026 Results Results

### Plant and Equipment Investment and R&D Expenditures

#### Key Plant and Equipment Investment Plans

- Introduction of development and testing apparatuses in the energy management business
- Installation of production equipment for new products in the ED&C components business

#### Key R&D Plans

- Decarbonization, environmentally friendly products, and global products for the power generation and energy management businesses
- Expansion of the long-life UPS and next-generation UPS product series for the power supply and facility systems business
- \* Figures for R&D expenditures are classified by segment according to theme and therefore differ from the figures stated in the consolidated financial report.

## Industry

We aim to expand our businesses and improve profitability by focusing on automation systems and digital transformation solutions. We will accelerate the development of new products targeted at the green transformation and digital transformation markets.



Hiroshi Tetsutani Managing Executive Officer Corporate General Manager, **Industry Business Group** 

22% 20% 475.0 419.9 414.0 85.0 82.0 89.9 345.3 10.0% 8.7% 8.2% 6.4% 10.0 83. 47.5 36.0 34.3 22.1 -23.0 -27.4 Net Net Net Operating Profit Operating Profit Operating Operating Profit Sales FY2018 FY2023 FY2024 FY2026 Management Plan Medium-Term Results Results Management Play DX solutions Social solutions Equipment construction Automation systems -Operating Profit Rati

Q. What were the achievements and challenges of the FY2023 Medium-Term Management Plan?

In terms of achievements, streamlining of development and production through the promotion of platform use and local production for local consumption, as well as regional partner strategies, have contributed greatly to the expansion of business performance. Challenges include further improvement of profitability and expansion of overseas business.

By platforming major components, such as low-voltage inverters and measuring instruments, in the core automation systems business, we have improved development efficiency and expanded local production for local consumption globally.

The challenge is to further improve profitability by promoting platform use and local production for local consumption, as we have already been doing, and to expand our overseas business, especially in India and Southeast Asia. In addition, we will introduce new products and promote system solutions for the Green Transformation (GX) and Digital Transformation (DX) markets, where demand is expected to grow in the future.

#### Q. What are the key policies and initiatives of the FY2026 Medium-Term Management Plan?

We will focus on expanding our businesses and strengthening profitability with the automation systems and DX solutions businesses.

Improvement of profitability in the automation systems business and expansion of business through the promotion of local production for local consumption In terms of major components, we will promote standardization for materials through platform use both domestically and internationally, further expanding our approach of local production for local consumption. This will help improve profitability by reducing costs in procurement, production, and transportation associated with local manufacturing.

For low-voltage inverters, we will begin local production in the US, responding to the increased demand driven by solid investments in the oil and gas market, thus establishing a global six-region production system. Additionally, for products such as measuring instruments and smart meters, we will move forward with local production for local consumption globally, aiming to increase the local production and consumption rate of major components from 38% in fiscal 2023 to 70% in fiscal 2026. Furthermore, focusing on Asia, we will promote local production for local consumption of system products like industrial high-voltage inverters and induction furnaces, thus enhancing our competitiveness in markets abroad.

#### Expansion of overseas businesses in India and Southeast Asia

In the automation systems business, we aim to expand sales of both components and systems, particularly in India and Southeast Asia

In India, demand remains strong in material industries (e.g., steel and petroleum) and general industries (e.g., power generation, which supports infrastructure). In the components field, we will newly enter the smart meter business in the power generation field, which is expected to grow, and establish a local production system that incorporates automated production technology from Japan. For inverters, this fiscal year we will introduce new specialized products into the elevator industry, where we maintain a leading market share. For compact power supplies, we will leverage our well-regarded quality to expand orders, particularly for communication and healthcare projects. In the systems business, we aim to expand mainly in the steel field, where increased demand is expected due to construction investments in buildings and bridges.

In Southeast Asia, stable growth is expected in the fan and pump market, driven by infrastructure investment, with strong investment continuing in steel and non-ferrous metal plants as well as harbor cranes. We will push for expanded sales of components for the air conditioning market and expand our business by strengthening system proposals for harbor cranes.

#### Expansion of the DX solutions business for the manufacturing industries

Given the declining working-age population and digitalization, significant growth in the needs for automation and business transformation is expected. We will strengthen our solution

#### Sales Plans and Target Industries in India and Southeast Asia



#### Ratios of 20% net overseas sale

Business Performance Trends (Billions of yen)

proposals to help a wide range of manufacturing industries realize smart factories.

We will support optimal DX by offering package solutions tailored to customers' industries and challenges by combining software with hardware, such as inverters, sensors, testing equipment, production line machinery, and controllers that receive operational information from these products as well as smart maintenance services that analyze the collected data and energy management systems (EMS). In our own factories, we are already advancing analysis and improving operational efficiency through visualization using a manufacturing dashboard that connects management data with on-site data. We will leverage this expertise in external sales. Additionally, we are working to develop GX-related products, such as heat pumps and ejector cooling systems, to expand the range of solutions that combine saving electric and thermal energy with DX.

#### Business expansion in the mobility field

We will launch new products in the mobility field, where medium- to long-term demand is expected to increase. In the ships and harbors field, we will offer electric propulsion systems for ship electrification and shoreside power supply systems to support the realization of carbon-neutral ports. In the automotive field, we will expand our business by offering automotive power electronics products that leverage our strengths in power semiconductors.

#### Plant and **R&D** Expenditures Equipment Investment (Billions of ven) (Billions of yen) 34.0 25.0 99 Y2024 Y2024 5.5 10.7 10.3 FY2023 Cumulative Plan FY2023 Cumulative Plan for FY2024-2026 for FY2024-2026 Results Results

#### Plant and Equipment Investment and R&D Expenditures

#### Key Plant and Equipment Investment Plans

- New investments in smart meters and automotive power electronics
- · Expansion and streamlining of production for new products and production bases in Japan and overseas (including the launch of new production equipment, capacity increases, and in-house manufacturing)

#### Key R&D Plans

- Promotion of the development of new decarbonization products and environmentally friendly technologies (mobility electrification, heat products, and CO<sub>2</sub>/NH<sub>3</sub> recovery systems)
- DX-related equipment (smart factories)
- · Expansion of product offerings for global markets
- Development of platforms utilizing next-generation IGBTs
- \* Figures for R&D expenditures are classified by segment according to theme and therefore differ from the figures stated in the consolidated financial report

# **Semiconductors**

In response to growing demand for power semiconductors, we aim to expand sales and profits by increasing production capacity through continued active investment.



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

Business Performance Trends (Billions of yen)



## Q. What were the achievements and challenges of the FY2023 Medium-Term Management Plan?

Our record-breaking performance in fiscal 2023 was primarily driven by expansion of sales centered on power semiconductors for electrified vehicles (xEVs). Our challenges were in increasing production capacity and developing new products to meet the growing demand for power semiconductors.

The impact of the withdrawal from the magnetic disk business was offset by the power semiconductor business, which resulted in record highs for net sales, operating profit, and the operating profit ratio in fiscal 2023. In particular, to respond to rising demand for power semiconductors, especially those for xEVs, we expanded our production capacity for 8-inch silicon (Si) wafers to be more than five times that of fiscal 2018.

Our challenges were in further raising production capacity in response to the growing demand for power semiconductors, especially those for xEVs and renewable energy, and in maintaining and improving market competitiveness by developing next-generation IGBTs and silicon carbide (SiC) products.

#### Q. What are the key policies and initiatives of the FY2026 Medium-Term Management Plan?

We are working to ensure specifications are incorporated for power semiconductors for xEVs and renewable energy as well as to establish a production system to meet the increasing demand.

#### Expanding power semiconductor sales in the growing xEV market

In the rapidly expanding xEV market, reducing power loss and extending driving distance are significant challenges. Power semiconductors, which contribute to solving these issues, are in rapidly increasing demand, and there is a growing need to further improve efficiency.

We continuously engage in activities to encourage use of Fuji Electric's specifications for our Si-based RC-IGBT\* products, which we developed ahead of our competitors, as well as for SiC products that achieve significantly lower power loss compared to Si products. We are expanding both in Japan and overseas the number of manufacturers and vehicle models that adopt our products, thereby increasing our sales. Particularly for SiC products, we anticipate market growth and demand expansion that exceeds that of Si products. We plan to increase the net sales ratio of SiC within our automotive modules from about 1% in fiscal 2023 to approximately 5% in fiscal 2024, and further to about 20% by fiscal 2026.

While there may be a temporary reduction in sales volume due to model changes for some customers in fiscal years 2025–2026, our activities to encourage use of Fuji Electric's specifications will continue, and we expect sales growth to accelerate further from fiscal 2027 onward.

\* RC-IGBT: A product that integrates two types of semiconductors having different functions (IGBTs and freewheeling diodes) laid out alternately in a linear arrangement on a single chip. This chip structure significantly reduces power loss and enables miniaturization.

#### Expanding sales of modules for renewable energy

We intend to expand our product lineup of the 7th-generation IGBT modules, which feature high heat dissipation and high reliability, to increase their sales particularly in the renewable energy field, which keeps strong demand.

In the renewable energy field, there is a growing need for higher voltage, higher output, and higher efficiency products that contribute to miniaturization, system cost reduction, and longer equipment lifespans. We are working to develop the 8th-generation IGBT modules, which will increase output by about 20% compared to the 7th-generation IGBT modules, and large-capacity modules equipped with 3rd-generation SiC, which will increase output by about 50%.

We plan to continue to capture strong demand, with net sales in the renewable energy field expected to grow by 27% in fiscal 2024 and by 54% in fiscal 2026 compared to fiscal 2023.



comparison), FY2023 is assigned 100 for comparison purposes.

Figures are indicated as multiples of production capacity as of the end of FY2023 (comparison of capacity at the end of each fiscal year).

#### Aggressive investment in Si and SiC production capacity expansion

In response to the robust demand for power semiconductors, we plan to invest a total of 180 billion yen in plants and equipment over the three-year period through to fiscal 2026.

For power semiconductor chips (front-end process), our production capacity for 8-inch Si wafers will increase by 9% in fiscal 2024 and by 15% in fiscal 2026 compared to fiscal 2023. For 6-inch SiC wafers, production capacity will double in fiscal 2024 and expand by about nine times in fiscal 2026 compared to fiscal 2023. We will start full-scale mass production of SiC at the Tsugaru Factory in fiscal 2024, and preparations are underway for capacity expansion from fiscal 2025 onward. Additionally, we are developing mass production technology for 8-inch wafers in anticipation of medium- to long-term demand growth from fiscal 2027.

For the assembly process (back-end process), we will continue to invest to increase production capacity for automotive and industrial products while promoting local production for local consumption to improve productivity.

### Plant and Equipment Investment and R&D Expenditures



#### Key Plant and Equipment Investment Plans

- Strengthen front-end production capacity (6-inch SiC and 8-inch Si wafers)
- Strengthen back-end production capacity (industrial and automotive applications)

#### Key R&D Plans

- 8th-generation IGBT and 3rd-generation SiC
- Next-generation packaging
- Mass production technology for 8-inch SiC

\* Figures for R&D expenditures are classified by segment according to theme and therefore differ from the figures stated in the consolidated financial report.

# **Food and Beverage Distribution**

We are working to improve profitability by expanding our range of high-value-added products while building a business foundation (top-line growth) toward 2030.



Keiichi Asano Executive Officer Corporate General Manager, Food and Beverage Distribution Business Group

Business Performance Trends (Billions of yen)

Ratios of 2.8% 3.4% 4.4% net overseas sale 113.6 110.0 107.3 102.0 i9 ( 10.0% 9.0% 8.2% 19 11.0 9.2 8.8 5.8 Net Sales Operating Profit Net Operating Profit Net Sales Operating Profit Operating Profit Net Sales FY2018 FY2023 FY2024 FY2026

Results

Vending machines Store distribution --- Operating Profit Ratio

Management Plan

Medium-Term

Management Plan

Q. What were the achievements and challenges of the FY2023 Medium-Term Management Plan?

By executing a profit-focused strategy, we achieved record highs for both operating profit and the operating profit ratio in fiscal 2023. Our challenges are to further improve profitability and to expand the top line in growth areas.

Due to the unexpected impact of COVID-19, operating profit fell to –5.3 billion yen in fiscal 2020. In response, we conducted a thorough review of our strategy from the ground up. This included headcount optimization, restructuring manufacturing bases, adjusting pricing to reflect product value, and reorganizing subsidiaries. By shifting to a profit-centric management approach (from quantity to quality), we achieved a V-shaped recovery and met the goals of the FY2023 Medium-Term Management Plan in terms of both operating profit and the operating profit ratio.

The challenges going forward are to further improve profitability in our existing business areas and to build a business foundation for top-line expansion.

## Q. What are the key policies and initiatives of the FY2026 Medium-Term Management Plan?

We aim to improve profitability by increasing the added value of our products and by reducing costs while expanding the top line in growth areas such as digital transformation (DX) and new distribution fields (restaurants/food products), and global markets.

#### Expansion of high-value-added products and promotion of cost reduction

To further improve profitability in our existing business areas, we will expand the range of our high-value-added products. In the vending machine business, we will promote further expansion of our sustainable vending machine series for beverage manufacturers in Japan, which reduces power consumption by up to 20% compared to conventional models. In the store distribution business, we will offer environmentally friendly showcases and new counter fixtures in response to the needs of the convenience store market in Japan to meet the need of energy saving, environmental friendliness, and space saving. We will continue to evolve our products while enhancing our brand power. We will also intensify cost-reduction activities in manufacturing. This includes expanding platform design, automating production lines, moving to in-house parts manufacturing, and digitizing manufacturing processes to improve productivity and to further improve profitability.

#### Building a business foundation toward 2030 (top-line expansion)

We will position our DX application service business, new distribution field, and global businesses as growth areas and will strengthen these initiatives.

As an instance of the DX application service business, in the vending machine business we are introducing newly developed two-way communication devices, which can also be retrofitted to existing vending machines, to enable online operation of vending machines. This improves operational efficiency and enables dynamic pricing, thus expanding our unique DX services. In the store distribution business, the convenience store market in Japan is seeing increased demand for energy-saving and labor-saving solutions across all stores. We will offer services such as energy management to optimize the overall power consumption of stores by centrally controlling equipment such as showcases, air conditioning, and ventilation—which

#### Overview of the FY2026 Medium-Term Management Plan



#### DX Application Services (Offered Products): Two-Way Communication Devices/Recurring Services



Results

accounts for about half of a store's energy consumption—using our proprietary store controllers. We will also provide predictive maintenance services for this equipment.

As a recurring business that generates ongoing profit rather than one-time product sales, the DX application service business represents a new challenge for us. We are also exploring collaboration with telecommunications carriers for this initiative.

In the new distribution field, we will enter new markets in the restaurant, food, and agricultural industries. These industries are seeing growing demand for labor-saving solutions and automated sales due to labor shortages.

Aiming to expand our business, in the restaurant industry, we will launch self-service coffee machines that we developed in fiscal 2023, while in the food product and agricultural industries, we plan to introduce locker vending machines, which allow customers to choose product sizes and enable automated sales.

As for the global businesses, in addition to our existing markets in China and Southeast Asia, we plan to enter the rapidly growing Indian market, launching global coffee machines and energy-saving vending machines to expand our market presence.



#### Plant and Equipment Investment and R&D Expenditures

#### Key Plant and Equipment Investment Plans

- Investments to improve productivity (automation, digitization, and expanded in-house manufacturing)
- Environmental investments for manufacturing sites (CO<sub>2</sub> emissions reduction)

#### Key R&D Plans

- Strengthened product development for top-line expansion
- Products for DX application services and new distribution fields

\* Figures for R&D expenditures are classified by segment according to theme and therefore differ from the figures stated in the consolidated financial report.