## Management Plan for Fiscal 2017 (By Segment)

### Power Electronics Systems-Energy Solutions and Industry Solutions

Fuji Electric provides energy solutions, which contribute to the consistent supply, optimization, and stabilization of energy, as well as industry solutions, which contribute to improved productivity and energy savings via factory automation and monitoring.

#### **Business Areas**

- **Energy Solutions**
- Energy management Factory energy management systems, power distribution smart meters
- Transmission and distribution Substation equipment,
- industrial power supply facilities Power supplies
- Datacenters, uninterruptible power systems, power conditioning systems, switchboards
- ED&C components Power distribution and control equipment





#### **Industry Solutions** Factory automation

- Inverters, motors, factory automation components and systems
- Process automation Drive control systems.
- measurement and control systems Environmental and social systems
- Distribution systems, plant factories, measuring instruments and sensors, radiation monitoring systems, transportation systems
- Equipment construction Electrical and air-conditioning equipment installation IT solutions
- Information systems

Power /

Telecommunications

Energy Solutions

101





Distribution /

Transportation

Sensors

Plant monitoring and control system

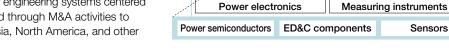
Industry Solutions

#### **Power Electronics Systems Business Policies**

- Create competitive components
- Enhance systems using competitive components
- Expand overseas businesses by leveraging systems

With a focus on power semiconductors and sensors, Fuji Electric will create competitive components, including power electronics, measuring instruments, and control equipment. These components will be utilized to form high-value-added systems, which we will bundle with engineering and after-sales services and provide to customers to resolve the issues they face.

In addition, we will reinforce our engineering systems centered on overseas subsidiaries acquired through M&A activities to expand systems operations in Asia, North America, and other regions.



### **Business Linked Through Cross-Business Structure**

We are implementing business policies through a new cross-business structure for development, engineering, production, and after-sales services.

#### Development

Fuji Electric will create differentiated products through marketing practices based on actual market needs. To this end, development will be accelerated for power electronics equipped with SiC power semiconductors as well as for systems that combine sensors, control equipment, and IoT technologies. We will also standardize designs and expand use of shared parts to shorten development lead times and reduce costs.

#### Production

Fuji Electric will optimize its global supply chain by stepping up coordination between global mother factories in Japan and overseas production bases. In addition, productivity improvements and cost reductions will be pursued through business-wide system quality management, expanded in-house production and standardization, and automation.

#### Engineering

Fuji Electric will provide visualization of plant system costs. At the same time, we will bolster system proposal capabilities through reductions in costs and lead times achieved by standardizing systems and developing systems packages for specific target industries with a focus on differentiated products.

Materials /

Assembly

IoT / Systems

Control equipment

#### After-Sales Services

Fuji Electric will seek to increase customer satisfaction by consolidating after-sales service divisions to provide one-stop service based on the customer's perspective. We will also enhance facility maintenance proposals in Japan and reinforce overseas after-sales business foundations as we strive to grow our service sales on a global basis.

### **Energy Solutions**

### **Priority Measures for Fiscal 2017**

#### Strengthen the Transmission and Distribution **Business**

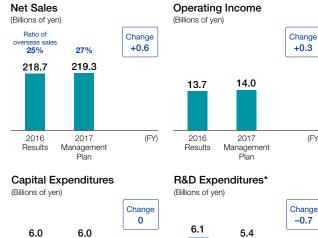
Fuji Electric will devote efforts to incorporating domestic replacement demand for substation equipment while enhancing manufacturing and engineering capabilities in Asia.

#### **Reinforce the Data Center Business**

Fuji Electric aims to reinforce its data center business, which is expected to see demand growth in Asia and North America. To support this business, we will develop system packages bundling uninterruptible power systems (UPSs) with indirect external air-conditioning and other equipment. We will also promote sales of UPSs equipped with SiC power semiconductors as differentiated products in the domestic and overseas markets.

#### Capture Domestic Construction Demand in ED&C **Components Business**

Out of consideration for the strong domestic construction demand, Fuji Electric will seek to increase sales of ED&C components by redoubling efforts to take advantage of demand from distribution panel manufacturers as well as from machine tool and other machinery manufacturers.





#### **Capital Investment**

2016

Results

• Production facilities for smart meters and ED&C components, etc

#### **Research and Development**

 Development of low-cost smart meters and electricity storage systems, expansion of series of SiC-equipped UPSs, etc.

### **Industry Solutions**

#### **Priority Measures for Fiscal 2017**

#### **Expand the Factory Automation Systems Business**

Looking to capture factory automation demand centered on assembly processing plants in China and Japan, Fuji Electric will expand its factory automation systems business through combinations of servo systems, programmable logic controllers, and other equipment.

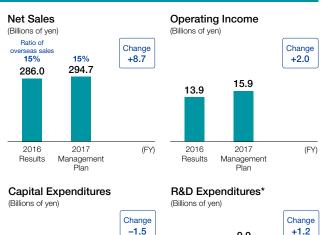
#### Strengthen the Process Automation Business

Our process automation business targets steel and chemical plants as well as other customers in the materials industry. In this business, Fuji Electric will boost productivity in domestic manufacturing industries and take advantage of replacement demand for energy-saving equipment, among others. At the same time, the Company will strengthen its overseas operations by leveraging engineering companies in Vietnam and India.

#### **Increase Distribution Field Sales**

Fuji Electric will seek to expand sales in the distribution field, which is growing in Japan, by deploying systems solutions that incorporate IT facility monitoring and other functions into distribution control and cold chain systems.

\* Figures for B&D expenditures above have been divided by segment based on theme and may therefore differ from the figures contained in the consolidated financial report for the fiscal year ended March 31, 2017.



#### 9.9 87 6.3 4.8 (FY) 2016 2017 (FY) 2016 2017 Results Management Results Management Plan Plan

#### **Capital Investment**

- Rationalization of facilities at power electronics systems factories and introduction of production equipment for new products, etc. **Research and Development**
- SiC applied power electronics equipment, factory automation systems, motion and servo equipment, field equipment and systems compatible with IoT, etc.

(FY)

## Management Plan for Fiscal 2017 (By Segment)

## **Power and New Energy**

Fuji Electric's sophisticated plant engineering capabilities meet the growing demand for electricity by providing high-efficiency thermal power generation plants as well as eco-friendly geothermal, hydro, solar, and wind power generation equipment and fuel cells.

#### **Business Areas**



#### **Priority Measures for Fiscal 2017**

Fuji Electric will target consistent, ongoing business growth by catering to rising demand for renewable energy and other forms of power and by expanding after-sales businesses.

#### **Expand Orders for Thermal Power Generation Plants**

In the midst of the progressive deregulation of the electricity retail market in Japan, Fuji Electric will work to continue receiving thermal power-related orders from power producers while approaching new customers. At the same time, we will expand orders in Asia and the Near and Middle East.

Thorough management of project progress will also be practiced while reducing costs.

#### **Grow Renewable Energy Orders**

The Company will strive to continue receiving geothermal power-related orders in Asia while growing orders in the African and Central and South American markets. In Japan, sales promotions for binary geothermal power generation systems will be advanced while leveraging our past delivery track record.

In the solar power field, we will target an ongoing flow of orders for large-scale engineering, procurement, and construction projects in Japan while simultaneously entering into the Asian market.

#### Secure Stable Earnings by Expanding After-Sales **Businesses**

Fuji Electric will establish new bases in the Middle East and develop a global network linking Japan, Taiwan, the Americas, and Indonesia with the aim of expanding its thermal and geothermal power after-sales businesses. At the same time, increased sales will be targeted at RTS Holdings, Inc., a U.S. company that was acquired and subsequently converted into a subsidiary in fiscal 2015, while also deploying this company's expertise at other overseas after-sales service bases. We thereby aim to increase the service provision capabilities of these bases.



#### **Capital Expenditures**

(Billions of ven)

#### **R&D** Expenditures\*

**Operating Income** 

6.5

2017

Management

Plan

Change

-1.0

(FY)

(Billions of yen

7.5

2016

Results



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#### **Capital Investment**

 Rationalization of production facilities at the Kawasaki Factory, enhancement of equipment at RTS, etc.

#### **Research and Development**

 Improvement of thermal power turbine efficiency, development of new power conditioning sub-system models for solar power generation systems, development of next-generation fuel cells, etc.

### **Electronic Devices**

Across the industrial, automotive, and consumer fields, Fuji Electric contributes to high power conversion efficiency and energy savings by supplying power semiconductors, which are key devices in power electronics.

#### **Business Areas**



#### Priority Measures for Fiscal 2017

In its power semiconductor business, Fuji Electric will accelerate the development of high-value-added products in the industrial and automotive fields to create a highly profitable operating structure and grow sales. We will also seek increased productivity by investing in equipment for manufacturing new products and bolstering 8-inch wafer production capacity.

Our focus in the magnetic disk business will be to secure stable sales volumes and maintain profitability.

# Increase Sales of Power Semiconductors for the Industrial Field

A major focus will be promoting sales of 7th-generation IGBT modules that realize greater energy savings while enabling equipment to be made more compact and light requirements. Specific applications targeted with these modules will be numerical control machinery and robots, which are performing well amid the trend toward factory automation and adoption of IoT technologies, and air-conditioning equipment, which is witnessing growing demand centered on China.

#### Step Up Power Semiconductor Product Development

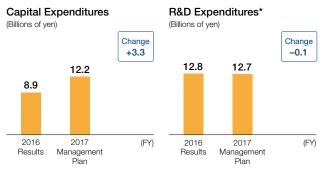
Currently, there is demand for the components used in electric vehicles to be made lighter and more compact in order to increase driving performance and reduce environmental impacts. Fuji Electric will respond to this trend by utilizing its cutting-edge chip, package, and cooling technologies to develop IGBT modules boasting the industry's top levels of output electric power density. Through these efforts, we aim to realize future sales growth.

Furthermore, we will expand our series of SiC products, which contribute to higher levels of power conversion efficiency and more compact equipment, for a wide range of fields, including the industrial equipment, railway, and automotive fields. Development ventures for enhancing performance will also be accelerated.

#### Bolster 8-Inch Power Semiconductor Wafer Production Capacity

We will bolster the 8-inch wafer production capacities of the Matsumoto Factory and the Yamanashi Factory while shifting toward large-diameter wafer fabrication in front-end processes to increase productivity.





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#### **Capital Investment**

 Production equipment for 7th-generation IGBT modules and SiC products, 8-inch wafer production capacity increases, expansion of automotive module production equipment, doubling of air conditioner intelligent power module production capacity, etc.

#### **Research and Development**

• SiC devices and modules, 7th-generation IGBT module product development, automotive devices and modules, etc.

## Management Plan for Fiscal 2017 (By Segment)

## Food and Beverage Distribution

In the food and beverage distribution field, Fuji Electric helps to ensure the safety and security of food and beverage products by combining its core heating and cooling technologies with mechatronic and IoT technologies to provide ideal products and solutions.

#### **Business Areas**



#### **Priority Measures for Fiscal 2017**

In the vending machine business, we will maintain our leading share in the domestic market while expanding operations in the growing Chinese and Southeast Asian markets.

Meanwhile, we will step up the development and proposal of new products that provide energy-saving and laborsaving benefits to convenience stores and that address operating environment changes in the store distribution business.

# Maintain Top Share of Domestic Vending Machine Market

We aim to maintain the current level of domestic sales in the vending machine business, despite the contraction of the Japanese market. To accomplish this goal, we will respond to customer needs by developing new vending machine models that can be operated with increased efficiency. These vending machines will, for example, use IoT technologies to realize labor savings, formulate sales projections, or offer remote malfunction monitoring functions.

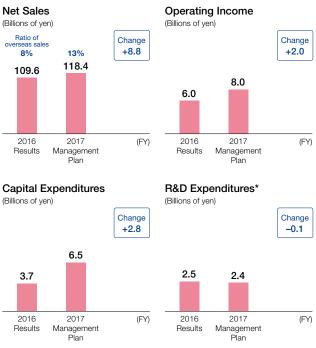
We will seek to maintain consistent levels of production to increase productivity as we also reduce costs and regionalize operating structures.

# Enhance Vending Machine Business Structures in China and Southeast Asia

Vending machine demand in China and Southeast Asia is expected to grow together with automation and cashless payment needs. We are thus working to enhance our business structures in these areas. For example, the completion of the second vending machine factory in Dalian, China will enable us to produce 100,000 units a year in this country. Development, sales, and after-sales services systems in China will also be strengthened. In Southeast Asia, we are making efforts to meet the needs for replacing second-hand vending machines with brand new ones mainly in Thailand and to expand our lineup of models. In addition, we are actively managing operator companies, which use vending machines as a venue to sell the items contained therein. The Company is thereby working to create new markets.

#### **Contribute to Development of Appealing Stores**

Fuji Electric is bolstering its efforts to develop and propose new vending machine models that address the laborsaving needs of the domestic convenience store market as well as the changing customer demographics and tastes seen therein.



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#### **Capital Investments**

• Construction of second Dalian factory, expansion of in-house store equipment production, etc.

#### **Research and Development**

 Development of fundamental technologies that contribute to labor savings and new models of vending machines for the Chinese and Asian markets, etc.