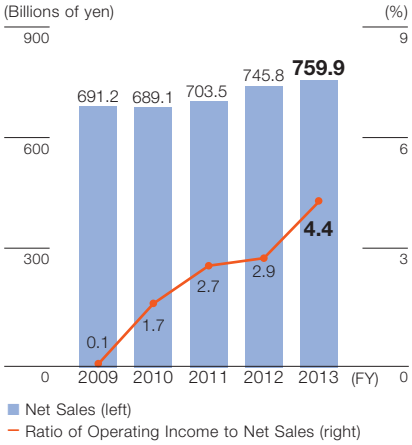
Consolidated Financial Highlights

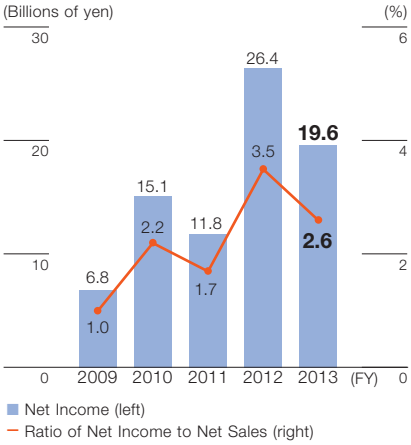
Fiscal year	2009	2010	2011	2012	Millions of yen 2013	Thousands of U.S. dollars*1 2013
Operating Results						
Net sales	¥691,223	¥689,065	¥703,534	¥745,781	**¥759,911**	**$7,450,117**
Japan	513,616	510,843	525,096	567,314	**582,223**	**5,708,076**
Overseas	177,607	178,221	178,437	178,466	**177,688**	**1,742,041**
Operating income	924	11,917	19,252	21,992	**33,136**	**324,870**
Net income	6,757	15,104	11,801	26,368	**19,582**	**191,984**
R&D and Capital Investment						
R&D expenditures	¥ 24,296	¥ 32,568	¥ 32,247	¥ 31,160	**¥ 32,029**	**$ 310,014**
Plant and equipment investment*2	19,124	27,223	24,989	31,771	**26,916**	**263,882**
Depreciation and amortization*3	26,053	27,945	29,755	31,054	**30,849**	**302,444**
Cash Flows						
Cash flows from operating activities	¥ 11,923	¥ 53,853	¥ 28,314	¥ 55,342	**¥ 53,651**	**$ 525,998**
Cash flows from investing activities	(528)	84,241	(13,489)	(24,286)	**(9,649)**	**(94,604)**
Free cash flow	11,395	138,094	14,825	31,055	**44,002**	**431,394**
Cash flows from financing activities	(62,575)	(93,468)	(32,593)	(56,827)	**(50,570)**	**(495,784)**
Financial Position						
Total assets	¥908,938	¥805,797	¥792,848	¥765,563	**¥810,774**	**$7,948,766**
Total net assets	196,134	174,935	183,217	215,672	**251,225**	**2,462,992**
Interest-bearing debt	359,790	274,019	255,865	226,717	**199,504**	**1,955,922**
Financial Indicators						
Ratio of operating income to net sales (%)	0.1	1.7	2.7	2.9	**4.4**	**—**
ROE (Return on equity) (%)	4.4	9.0	7.4	14.7	**9.3**	**—**
ROA (Return on assets) (%)	0.7	1.8	1.5	3.4	**2.5**	**—**
Total net assets ratio (%)	19.7	19.3	20.6	25.4	**28.0**	**—**
Net debt-equity ratio (times)*4	1.8	1.2	1.2	1.0	**0.7**	**—**
Debt-equity ratio (times)*5	2.0	1.8	1.6	1.2	**0.9**	**—**
Per Share Data					Yen	U.S. dollars*1
Net income	¥ 9.46	¥ 21.14	¥ 16.52	¥ 36.90	**¥ 27.41**	**$0.27**
Net assets	250.28	217.40	228.91	272.29	**317.96**	**3.12**
Cash dividends	1.50	4.00	4.00	5.00	**7.00**	**0.07**
Others					Headcount	
Employees	23,524	24,562	24,973	24,956	**25,524**	**—**
Japan	18,692	18,002	17,933	18,271	**18,022**	**—**
Overseas	4,832	6,560	7,040	6,685	**7,502**	**—**

*1 The U.S. dollar amounts represent the arithmetic results of translating yen into dollars at ¥102 = U.S. $1, the approximate exchange rate at March 31, 2014.
*2 Plant and equipment investment is the total of investment in tangible fixed assets, including acquisition amounts for lease contracts.
*3 Depreciation and amortization expense is the total of the depreciation of tangible fixed assets and amortization of intangible assets.
*4 Net debt-equity ratio: Net interest-bearing debt (interest-bearing debt – cash and cash equivalents) / Net assets
*5 Debt-equity ratio: Interest-bearing debt / Net assets

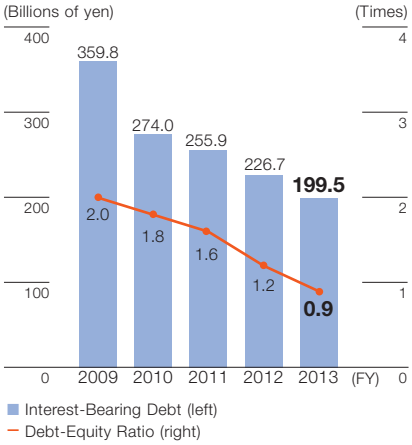
Net Sales / Ratio of Operating Income to Net Sales



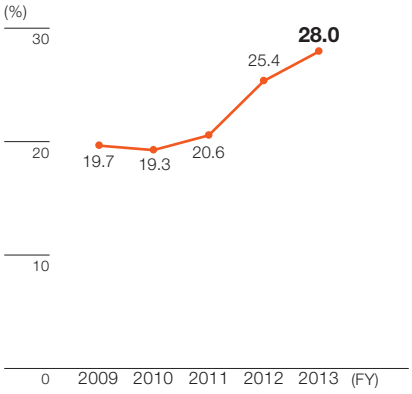
Net Income / Ratio of Net Income to Net Sales



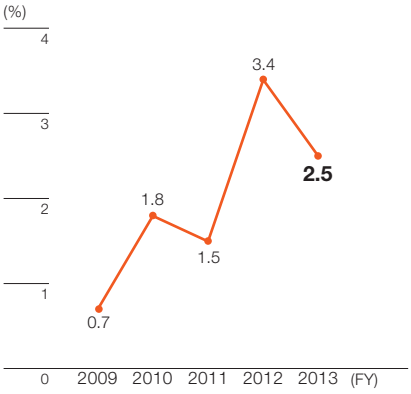
Interest-Bearing Debt / Debt-Equity Ratio



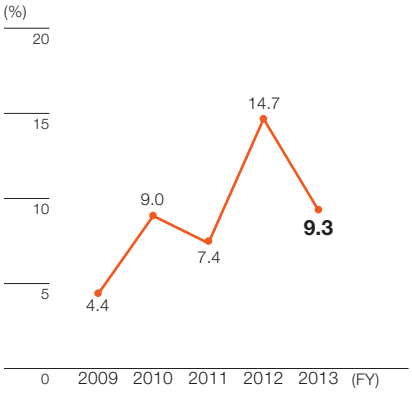
Total Net Assets Ratio



ROA



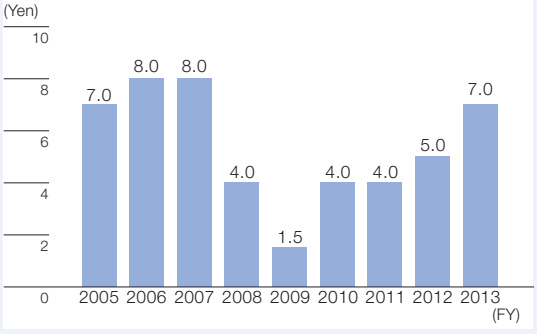
ROE



Dividend Policy

Fuji Electric's basic policy is to pay a stable, continuous dividend over the medium- to long-term. We will determine the dividend giving due consideration to our consolidated operating results, research and development and capital expenditure plans, and the economic environment going forward.

Cash Dividends per Share



Review of Operations—
Fiscal 2013 Performance and Priority Measures for Fiscal 2014

In the fiscal year ended March 31, 2014, Fuji Electric's operating environment saw strong demand in areas related to renewable energy and energy saving in the domestic market and power electronics and semiconductors in the overseas market. In response to these conditions, Fuji Electric established foundations for growth to facilitate future business expansion and promoted business management with a strong focus on earnings in order to further strengthen profitability. Net sales rose ¥14.1 billion year on year to ¥759.9 billion. Operating income improved ¥11.1 billion year on year to ¥33.1 billion. This reflected improved profitability stemming from the rigorous reduction of costs and expenses as well as a significant contribution from the vending machine business and the power semiconductors and drive businesses, which underwent business restructuring during fiscal 2012.

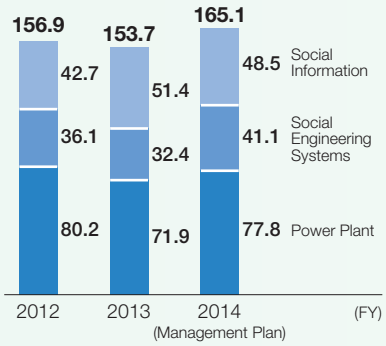
Positioning fiscal 2014 as a year of aggressive management expansion, we will work to further enhance profitability, while at the same time moving forward with efforts to expand the Industrial Infrastructure and Power Electronics businesses and reinforce our base of overseas operations.

Our plan for fiscal 2014 is to achieve net sales of ¥780.0 billion, up ¥20.1 billion year on year, and operating income of ¥38.0 billion, up ¥4.9 billion year on year.

Power and Social Infrastructure

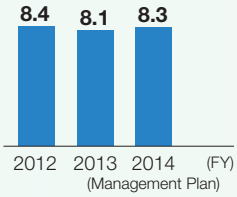
Net Sales

(Billions of yen)



Operating Income

(Billions of yen)



Fiscal 2013 Performance

Sales in the power plant business were down year on year due to a fall back from large-scale orders for thermal power generation facilities recorded in the previous fiscal year, which offset rises in orders for hydropower generation facilities and solar power generation systems.

Sales in the social engineering systems business were down due to lower demand for watt-hour meters ahead of the switch to smart meters.

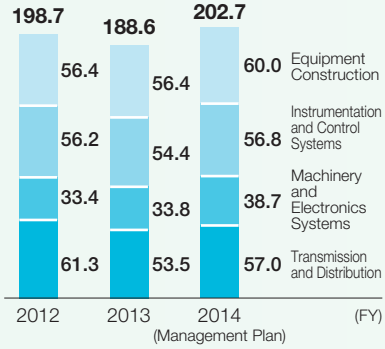
Sales in the social information business were up following a rise in large-scale orders and a demand rush in light of the upcoming end of support for Windows XP™.

Overall, the segment saw operating income worsen as lower net sales counteracted cost reductions.

Industrial Infrastructure

Net Sales

(Billions of yen)



Operating Income

(Billions of yen)

Fiscal 2013 Performance

Sales in the transmission and distribution business were down year on year, reflecting the absence of the previous fiscal year's large-scale overseas orders.

Sales in the machinery and electronics systems business increased due to a rise in orders for energy-saving equipment from Japanese manufacturers.

Sales in the instrumentation and control systems business were down as a result of lower demand for radiation measurement equipment.

Sales in the equipment construction business were relatively unchanged from the previous fiscal year.

In the business segment overall, operating income worsened year on year because lower net sales counteracted cost reductions.

	Net Sales (Billions of yen)				Operating Income / Loss (Billions of yen)			
	Fiscal 2012	Fiscal 2013	Fiscal 2014 (Management Plan*)	Fiscal 2013–14 Increase / Decrease	Fiscal 2012	Fiscal 2013	Fiscal 2014 (Management Plan*)	Fiscal 2013–14 Increase / Decrease
Power and Social Infrastructure	156.9	153.7	165.1	+11.5	8.4	8.1	8.3	+0.2
Industrial Infrastructure	198.7	188.6	202.7	+14.1	11.0	9.2	11.6	+2.3
Power Electronics	148.4	165.5	179.7	+14.2	1.2	5.4	8.3	+2.9
Electronic Devices	113.6	123.9	118.4	–5.4	–1.4	6.3	7.6	+1.3
Food and Beverage Distribution	112.1	120.1	118.6	–1.5	6.4	8.0	7.1	–0.9
Others	60.6	60.0	57.1	–2.9	1.6	1.9	1.7	–0.2
Elimination and Corporate	–44.5	–51.8	–61.6	–9.8	–5.3	–5.9	–6.6	–0.7
Total	745.8	759.9	780.0	+20.1	22.0	33.1	38.0	+4.9

* As of April 24, 2014

Priority Measures for Fiscal 2014

Continue Capturing Orders for Solar Power Generation Systems and Expand Orders of Thermal / Geothermal Power Generation Facilities and Smart Meters

In the power plant business, we will work to continue capturing orders for solar power generation systems in line with anticipated strong demand in Japan. We will also strengthen our efforts to increase orders for thermal and geothermal power generation facilities, mainly in Asia and the domestic market where demand is expected to grow. In other initiatives, we will aim to grow orders for fuel cells.

In the social engineering systems business, we will bolster our production capacity for smart meters and take steps to reduce costs and increase orders. We will also advance initiatives aiming to commercialize smart communities.

Construction of mega solar power generation is increasing, spurred by the feed-in tariff scheme for renewable energy, resulting in higher orders for solar power generation systems.

Priority Measures for Fiscal 2014

Capture Energy-Saving and Replacement Demands and Strengthen Business in Asia

In the transmission and distribution business, we will bolster our manufacturing structure centered on Fuji Tusco Co., Ltd. and the new factory in Thailand, while working to strengthen local engineering systems as we work to expand our business in Asia.

In the machinery and electronics systems business, we will focus on the automotive and Internet data center (IDC) businesses where investment is expected, while making efforts to capture replacement demand in the steel field, in which we have a strong replacement track record.

In the instrumentation and control systems business, we will step up product development and launch, while strengthening our efforts to capture replacement demand and expand overseas business.

In the equipment construction business, we will work to enlarge our presence in the creation energy field, centered on solar power generation systems, and grow our overseas business.

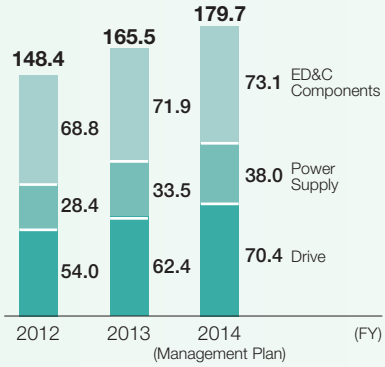
In October 2013, we launched Fuji Tusco Co., Ltd. with capital participation from a leading Thai transformer manufacturer.

Transformer

Power Electronics

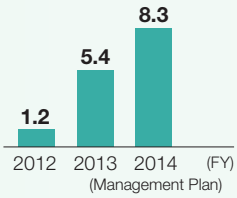
Net Sales

(Billions of yen)



Operating Income

(Billions of yen)



Fiscal 2013 Performance

In the drive business, net sales improved year on year thanks to higher demand for inverters and servo systems in Japan and overseas and the sales contributions from large overseas orders for electric equipment for railcars. Likewise, operating income also showed a year-on-year improvement due to higher sales and the benefits of the business restructuring conducted in the previous fiscal year.

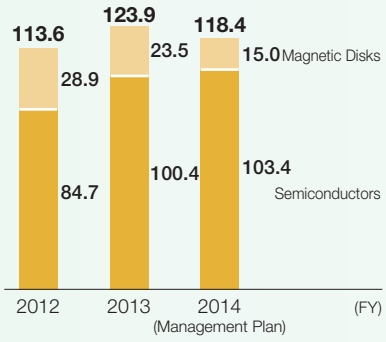
In the power supply business, net sales and operating income improved year on year as a result of increased demand for power conditioners for mega solar power generation and power supply equipment for data centers and other products.

In the ED&C components business, net sales and operating income improved year on year due to increased demand in the renewable energy field and recovery in domestic demand in the machine tools and semiconductor field.

Electronic Devices

Net Sales

(Billions of yen)



Operating Income

(Billions of yen)

Fiscal 2013 Performance

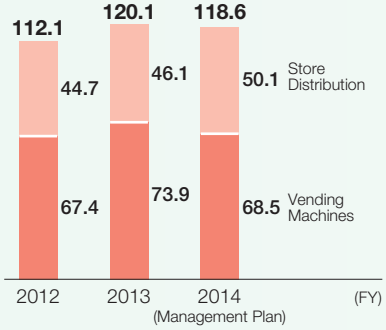
In the semiconductors business, net sales were up year on year due to strong demand in the automotive field, which continued from the previous fiscal year, as well as a recovery in demand for inverters, servo systems, and other industrial machinery in the industrial field. As a result of higher earnings and the benefits of the business restructuring conducted in relation to power semiconductors in the previous fiscal year, the business was able to realize substantially improved operating income.

In the magnetic disks business, net sales and operating income declined due to lower demand from customers.

Food and Beverage Distrubution

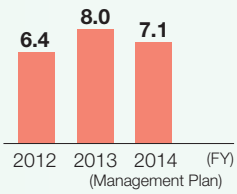
Net Sales

(Billions of yen)



Operating Income

(Billions of yen)



Fiscal 2013 Performance

In the vending machines business, net sales were up year on year as a result of steady replacement demand for energy-saving, environmentally friendly vending machines coupled with solid demand for coffee machines for convenience stores. Operating income improved following higher revenues and lower costs.

The store distribution business recorded a year-on-year increase in net sales due to higher orders for construction and renovation, mainly of convenience stores, but operating income deteriorated as a result of the impacts of higher upfront investments for the expansion of new businesses.

Priority Measures for Fiscal 2014

Business Expansion Centered on New Product Launches and the New Factory in Thailand

In the drive and power supply businesses, we will accelerate development and market launch for the global markets in mainstay products, including inverters, uninterruptible power supply systems (UPSs), and power conditioners. At the same time, we will enhance price competitiveness by expanding production at the new factory in Thailand. Furthermore, the business in China will be expanded through the joint-venture companies created between Shanghai Electric Group Co., Ltd. and the Company.

In the ED&C components business, we will concentrate on the new energy field in Japan while striving to enhance product lineups in Asia and China.

In December 2013, the new factory in Thailand started production of inverters, UPSs, and other products as the Company's core production base for products for Asia, Europe, and the U.S.

In February 2014, the Company established a joint venture for sales and production of medium-voltage inverters with Shanghai Electric Group Co., Ltd., which has a powerful sales network in China.

Priority Measures for Fiscal 2014

Launch New Power Semiconductor Products and Accelerate Development of the Next-Generation of Semiconductors

In the semiconductors business, we will pursue higher sales by launching new products and strengthening local design through design centers established in the previous fiscal year in China, Taiwan, and Europe. We will also promote cost reduction activities by expanding back-end processing overseas. Furthermore, we will also accelerate the development of next-generation power semiconductors to further future business expansion.

In China (Shenzhen), the Company is expanding its production system for industrial power semiconductor products for the Chinese market.

In October 2013, a new production line established at the Matsumoto Factory started production of SiC power semiconductors.

Priority Measures for Fiscal 2014

Strengthen Business into Growth Fields such as Overseas and Store Distribution

In the vending machines business, we will grow the business by capturing domestic renewal demand for energy-saving, environmentally friendly vending machines. In addition, we will expand the business in China and other Asian markets where demand is expected to grow by increasing production in China, starting production in the new factory in Thailand, and establishing local sales companies among other initiatives.

In the store distribution business, we will work to grow demand for store equipment, mainly for convenience stores, and expand new businesses. We will also promote the distribution systems business by making use of refrigeration technologies, including the mobile cold storage container D-BOX, and business targeting crop production facilities.

Sales of the newly launched energy-saving, environmentally friendly vending machines and coffee machines for convenience stores have risen due to strong response from customers.

Review of Operations — Overseas Operations

Fiscal 2013 Performance

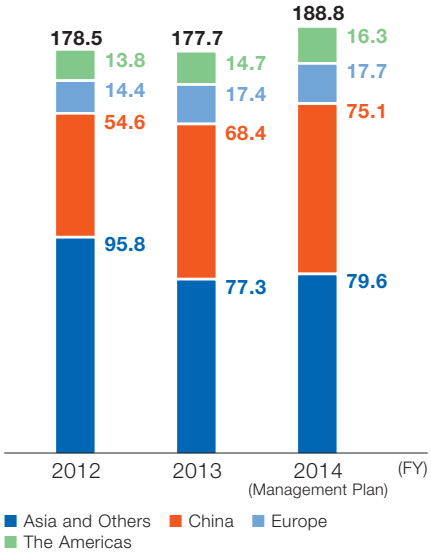
In the market environment surrounding the Company, overseas markets showed weak activity overall, but there was a recovery trend supported by the gradual recovery of major developed nations, such as the U.S. and nations in Europe.

Against this backdrop, sales of power semiconductors and power electronics increased on rising demand in China, Europe, and the Americas. In Asia, meanwhile, sales declined on a decrease in large-scale orders for power generation facilities and transformer equipment, and a decline in demand for magnetic disks.

In fiscal 2013, we worked to establish our base in Asia and China. Specifically, in Asia we built a new factory in Thailand, and made a capital investment in a Thai transformer manufacturer (Tusco Trafo Co., Ltd.). We also established sales bases in South Korea and Vietnam, and representative offices in Myanmar and Cambodia. In China, we established joint ventures in the area of medium-voltage inverters with state-owned Shanghai Electric Group Co., Ltd., and built a new factory building for power semiconductor back-end processing at Fuji Electric (Shenzhen) Co., Ltd.

Sales Outside Japan

(Billions of yen)



Priority Measures for Fiscal 2014

Enhance Sales Mainly in Asia and China

In fiscal 2014, we will steadily bring our initiatives from fiscal 2013 to fruition, and reinforce the base of our overseas operations through establishing vending machine sales and marketing subsidiaries in China and Asia and making progress on new M&As.

In Asia, we will expand sales in Power and Social Infrastructure, Industrial Infrastructure, and Power Electronics. In China, we will increase our sales of vending machines, as well as Power Electronics and power semiconductors, for which continuing strong demand is expected.

Initiatives in Asia

New Factory in Thailand to Serve as a Core Production Base for Asia

In December 2013, we completed construction of a new factory in Thailand (Fuji Electric Manufacturing (Thailand) Co., Ltd.) and commenced production of inverters, uninterruptible power supply systems, and other items.

The new factory in Thailand is positioned to serve as our core production site for products for Asia, Europe, and the U.S. Looking ahead, we plan to grow the business even further by extending the scope of production items such as vending machines and gas insulated switchgears.

Fuji Electric Manufacturing (Thailand) Co., Ltd.

Uninterruptible power supply system

Capital Investment in Thai Transformer Manufacturer

In October 2013, we made a capital investment in Tusco Trafo Co., Ltd. (hereinafter referred to as Tusco) and established Fuji Tusco Co., Ltd.

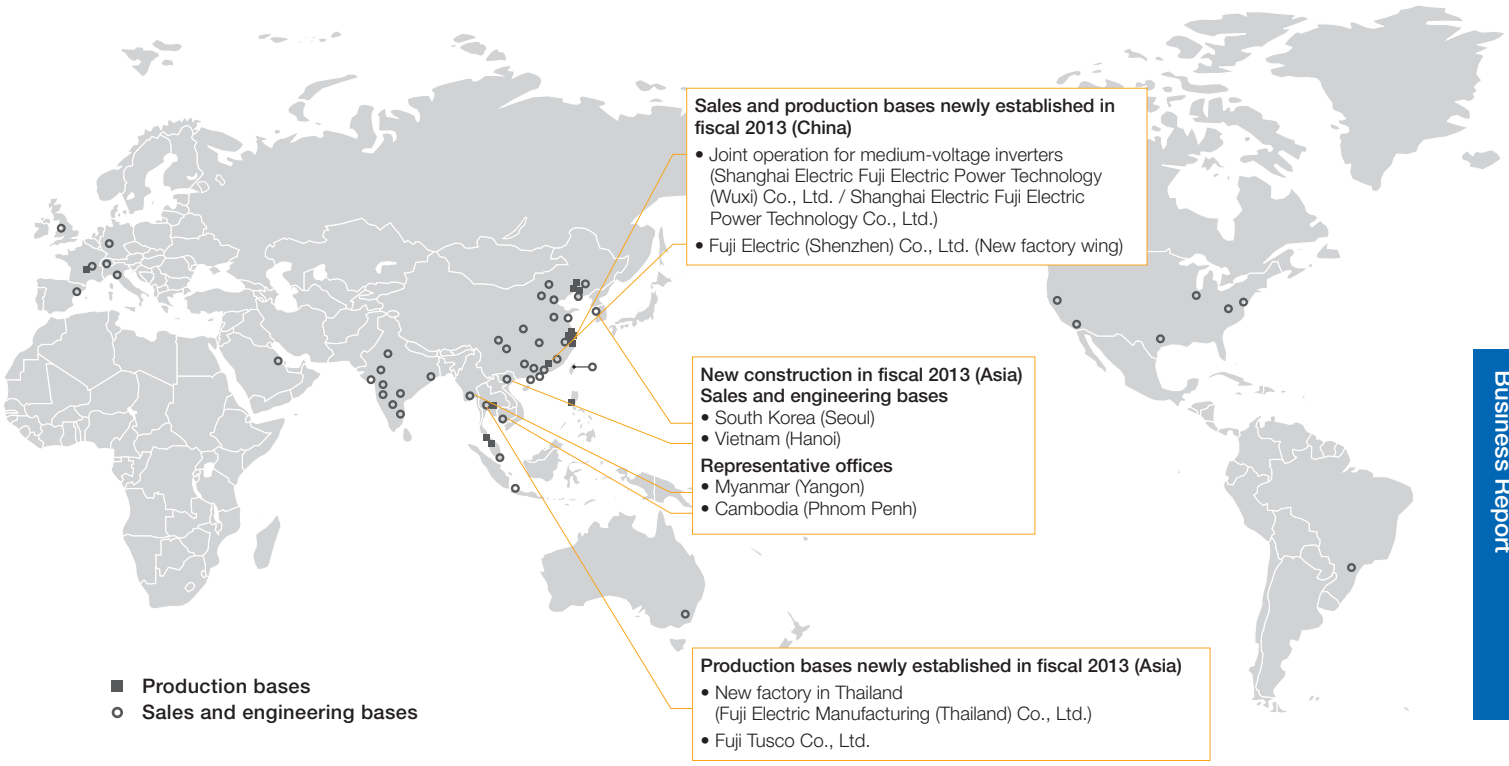
Tusco is a leading local transformer manufacturer with a good track record in supplying transformers to many governmental electric power distribution companies and private companies in Thailand, as well as in sales covering a wide area including Southeast Asia and Africa. We plan to make use of Tusco's resources to boost our product lineup and expand our sales and service networks.

New Company Information

New company name	Fuji Tusco Co., Ltd.
Business areas	Manufacture, sales, maintenance, and services for transformers, power distribution boards, and others
Date of capital investment	October 2013
Equity stake	67.7%

Transformer

Production Bases and Sales and Engineering Network (As of March 31, 2014)

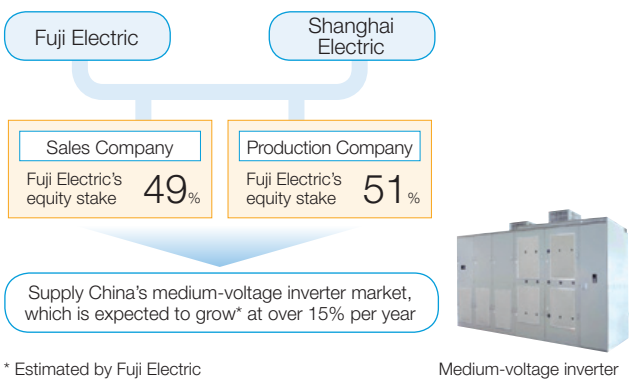


Major Initiatives in China

Established Joint Venture for Medium-Voltage Inverters with Shanghai Electric, China's Largest Medium-Voltage Motor Manufacturer

In February 2014, we established two joint ventures with China's state-owned Shanghai Electric Group Co., Ltd. (hereinafter referred to as Shanghai Electric) to carry out sales and production of medium-voltage inverters in China.

Shanghai Electric is a leading industrial electrical equipment manufacturer that has a nationwide sales network and the highest market share in China for medium-voltage motors, which are an application for medium-voltage inverters. We aim to grow our business in China by capturing synergies between Fuji Electric's power electronics and control technologies and Shanghai Electric's machine technologies and sales capabilities based on its strong brand.



* Estimated by Fuji Electric

Medium-voltage inverter

Strengthened Production Capacity for Power Semiconductor Back-End Processing Capability (New Factory Building)

In June 2013, the construction of new factory building for back-end processing production line was completed at Fuji Electric (Shenzhen) Co., Ltd. in order to strengthen production capacity for power semiconductors.

At the same time, we established design centers to swiftly develop products specified to local requirements in order to bolster our local design structure. By strengthening an integrated structure covering everything from development to sales, we will promote local production for local consumption and ultimately increase our sales in China.

Fuji Electric (Shenzhen) Co., Ltd.

Back-end processing production line

Review of Operations — Capital Expenditures and R&D Expenditures

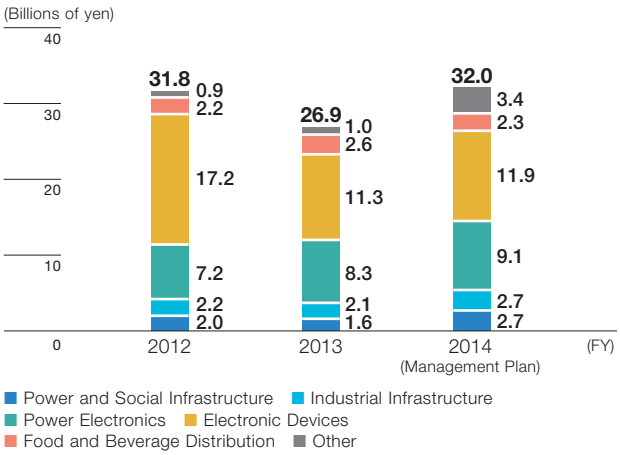
Plant and Equipment Investment

Structural Organization of Bases in Asia and Enhancement of New Product Development and Production Capabilities

In fiscal 2013, we focused on the power electronics and industrial infrastructure fields, where sales growth was expected, building a new factory in Thailand to serve as a core production site for products for Asia, Europe, and the U.S., and introduced production facilities for products such as inverters and uninterruptible power supply systems. We also proceeded to automate our facilities for manufacturing smart meters to prepare for mass production. In addition, we established a 6-inch SiC mass production line for next-generation power semiconductor devices.

Looking ahead, at the new factory in Thailand we will expand the production capacity for power electronics. We will also expand our business areas to include fields such as industrial infrastructure and food and beverage distribution, and introduce production facilities for gas-insulated switchgear and vending machines. In doing so, we will strengthen it as a core production site. We will also respond to increasing orders for smart meters by accelerating investment in automated facilities. Finally, we will introduce facilities to develop next-generation power semiconductors, and build new research and development buildings to enhance our development capabilities for creating new products.

Amount of Plant and Equipment Investment



R&D Expenditures

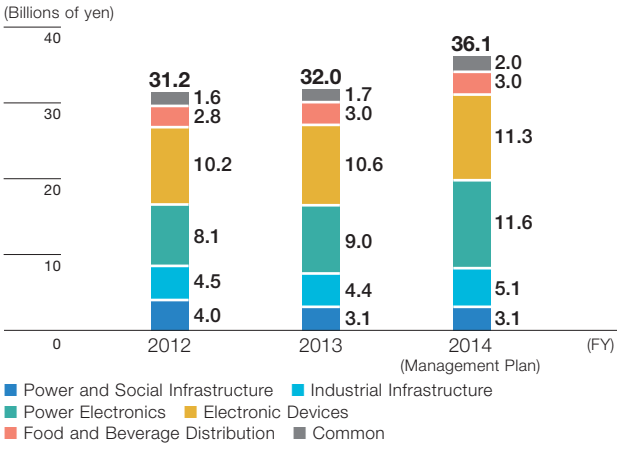
Strengthen Core Technologies in all Aspects and Accelerate Development of New Products

Fuji Electric is bolstering its core technologies, such as power semiconductors and power electronics, and developing distinctive components and systems. In addition, we are also working to develop new products that generate Company-wide synergies between thermal, machinery and, control systems.

In fiscal 2013, we continued our development of next generation power semiconductors by SiC (silicon carbide) that will reduce energy use in a wide range of industrial sectors. Moreover, to accelerate the development of power electronics equipment that applies these SiC power semiconductors, such as power conditioners and uninterruptible power supply systems, we concentrated our R&D expenditure on electronic devices and power electronics.

Looking ahead, Fuji Electric will work to expand its global operations by speeding up product development through open innovation with research institutions and universities, while also continuing to promote the product development in line with local needs. Specifically, we will promote initiatives such as our development of SiC power semiconductors with the National Institute of Advanced Industrial Science and Technology* and the establishment of the Zhejiang University—Fuji Electric Cooperation Center in China. We will also continue construction of research and development buildings in our three main sites in Japan (the Tokyo Factory, the Matsumoto Factory, and the Fukiage Factory) with the goal of enhancing our research and development structure.

R&D Expenditures



Note: Figures for research and development expenses are allocated by research theme and therefore differ from those in the Consolidated Financial Report.

* An independent administrative institution

Research and Development

Combining its core technologies in power semiconductors and power electronics with instrumentation and control systems, Fuji Electric is focusing R&D on products and systems that effectively and stably provide and use electricity and thermal energy.

R&D Policies

- **Expand and strengthen core technologies of power semiconductors and power electronics**
- **Accelerate new product development though technology synergies between thermal, machinery, and control systems**
- **Promote open innovation**

Major Initiatives in Fiscal 2013

Power and Social Infrastructure

- We developed smart meters for electric power companies and will continue to enhance our lineup of products that meet our customers' needs.

Industrial Infrastructure

- We developed the MICREX-VieW XX (double X), a small- and medium-scale monitoring and control system which offers the newest monitoring, operating, and engineering capabilities to factory production lines and other facilities, while maintaining compatibility with existing systems.

- We developed the F-COOLNEO, an air conditioner which combines both indirect outside air cooling and a heat pump to offer significant energy savings. The F-COOLNEO was developed for data centers, as well as production facilities fields such as precision electronic equipment, food, and chemicals.

Power Electronics

- We developed the DC1,000 V / 660 kW indoor-type power conditioner, a unit which is highly resistant to sea salt corrosion.
- For customers in Asia, China, and Europe, we expanded the lineup of the FRENIC-Ace series of high-performance, standard-type inverters, which can be customized according to customers' applications.

Electronic Devices

- We developed the AT-NPC 3-level 12in1 IGBT modules, which significantly reduce the power loss and the sizes of power electronics components such as inverters and uninterruptive power supplies.

- For switching power supply controls, we developed the 2nd Generation LLC Current Resonant control ICs, which achieve lower standby power and provide enhanced protection functions.
- In the area of the next-generation power semiconductors by SiC, we are the first in the industry to establish production technology for a 6-inch SiC wafer line.

Food and Beverage Distribution

- We developed the D-BOX, a mobile refrigerated storage container with a traceability function, capable of maintaining a constant temperature for five hours without the need for electricity.

New Technology/Technological Foundation

- We worked with the University of Tokyo and JAMSTEC (Japan Agency for Marine-Earth Science and Technology) to jointly develop an aerosol* particle combined analyzer which enables the identification of PM2.5 sources.

* Microscopic liquid or solid particles that are suspended in a gas

Case Example

Market Introduction of SiC Power Semiconductors and SiC Power Electronics Featuring SiC Power Semiconductors for Next-Generation Power Saving

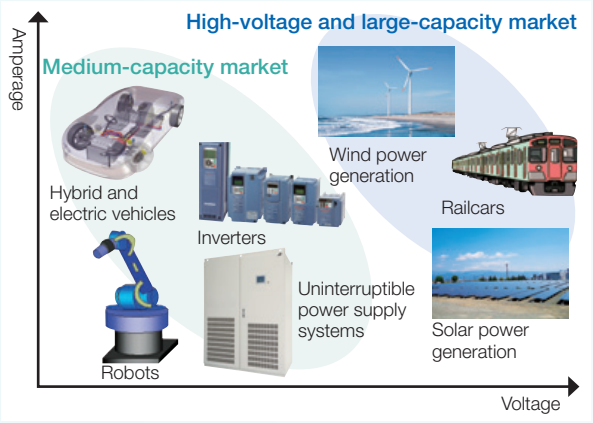
Potential of SiC Power Semiconductors

There is a demand for power semiconductors that can control large amounts of electricity precisely and efficiently in order to increase power conversion efficiency and realize high energy savings.

Compared to a conventional semiconductor material, SiC conducts electricity easily and suppresses electric power loss. Power semiconductor devices using SiC enable significant energy savings and enable the products they are used in to be smaller and lighter.

By advancing the commercialization of SiC power semiconductors and SiC power electronics, Fuji Electric is bolstering its initiatives in the medium-capacity market, including inverters, where we have focused our efforts, as well as the high-voltage and large-capacity markets, where renewable energy including solar power generation systems is expected to bring expansion.

Markets for Application of SiC Power Electronics



Creation of a Production Line for 6-Inch SiC Power Semiconductors

Constructing a production line for 6-inch SiC power semiconductors was considered a challenge. In October 2013, in order to drive down the cost of SiC power semiconductors and hasten the introduction of SiC power electronics into the market, Fuji Electric completed a 6-inch production line first in the industry, and also back-end process assembly and testing line.

Following this achievement, in May 2014, we announced the launch of a large-capacity power conditioner for mega solar power generation using SiC power semiconductors (sales scheduled to begin in August 2014).


Power conditioner using SiC power semiconductors


SiC power semiconductor

Case Example

Research to Analyze Atmospheric Pollutant PM2.5 and Other Fine Particles

Voice A Message from the Development Partner

Associate Professor
Nobuyuki Takegawa,
(Then) Research Center for Advanced Science and Technology, the University of Tokyo
(Currently) Professor at the Environment and Geochemistry Research Laboratory of the Graduate School of Science and Engineering, Tokyo Metropolitan University

PM2.5 are fine particles smaller than 2.5 micrometers in particle diameter, believed to significantly impact both health and climate change. In order to correctly understand these impacts and study solutions, it is first necessary to measure the fine particles in the atmosphere in real time. As such, the development of equipment to perform such an analysis became a pressing issue.

In response, we at the University of Tokyo launched a collaborative effort, joining forces with Fuji Electric, which possesses instrumentation technologies, and JAMSTEC (Japan Agency for Marine-Earth Science and Technology), which has its own unique measurement technologies. We were commissioned by the Japan Science and Technology to work on an advanced measurement device development program, and in fiscal 2008, we began joint research towards the development of such a device.

During the research process, the close industry-academia partnership-based development platform, in which engineers worked full-time at the university, played a major role in moving the program forward.

In particular, one of the keys to developing the analyzer was a particle trap for capturing particulate matter. In our discussions with the engineers, we discovered that we could utilize Fuji Electric's micromachining technology, which we had not considered at the beginning. This led to a remarkable increase in the performance of the equipment. Making use of these various technology synergies, in March 2013, we succeeded in developing a combined aerosol particle analysis technology capable of analyzing the main components of PM2.5 in real time.

Going forward, the commercialization of analyzers applying this technology will allow us to shed light on the sources of PM2.5 and establish effective countermeasures for it. Furthermore, this technology will hopefully lead to an overall understanding of the impacts that the various fine particles suspended in the atmosphere have on the earth overall, as well as a general understanding of climate change.

Intellectual Property

Fuji Electric, based on respect for both the intellectual property (IP) rights it owns as well as those owned by other companies, is working to implement IP strategies that are aligned with our business and R&D strategies. By advancing these initiatives, Fuji Electric will continue to strengthen and expand its business globally.

IP Policies

- **Comprehensively strengthen our patent portfolio* by working from stages of business and R&D planning**
- **Investigate and respond to overseas IP systems and status**
- **Reinforce IP activities at overseas bases**

* A group of patents strategically acquired in relevant technical fields with the goal of securing leeway in business fields, avoiding litigation, and establishing a competitive advantage

Source: Nomura Research Institute, Ltd.

Major Initiatives in Fiscal 2013

IP Activities in Consideration of Business and R&D Resources

For key research themes and products, the IP divisions worked with the business group and the R&D group to strengthen the patent portfolio. Also, efforts were focused on filing patent applications, centered on businesses related to energy and power electronics.

Looking ahead, we will work to construct a patent portfolio providing an absolute advantage in our business operations. We will take steps to avoid operational risks relating to other companies' patents, and make aggressive use of patents through licensing, collaboration, and other means.

Main Fields for Patent Applications

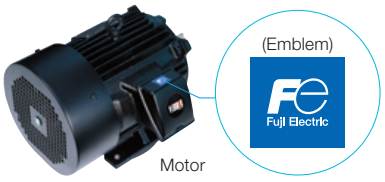
- Patents relating to increasing the efficiency and energy-saving of power electronics products
- Patents relating to semiconductors such as SiC-related technologies
- Patents relating to vending machines

IP Activities Responding to Globalization

Fuji Electric is taking steps to strengthen its global IP activities and to reduce operational risks related to IP by conducting searches of overseas IP and continuing to implement measures against counterfeit products.

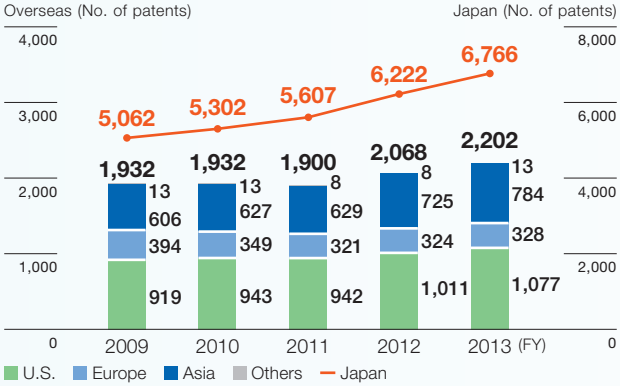
In fiscal 2013, our local IP division in China gathered IP information and implemented countermeasures against counterfeit products and technology leakage. Moreover, we are continuing to survey recent developments in the IP systems of Southeast Asia and India, where our business continues to grow. We have strengthened business relations with IP law firms in these regions.

We have also worked to keep pace with the globalization of our business by increasing the number of overseas patent applications. We are steadily applying for trademarks overseas on our newly designed emblem.

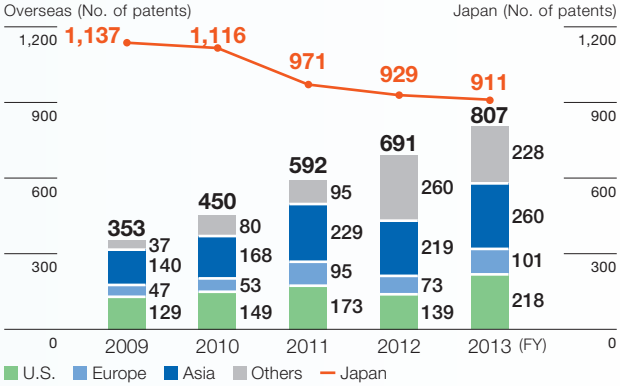


The Fuji Electric product emblem has been newly trademarked

Number of Patents Held in Japan and Overseas



Number of Patent Applications in Japan and Overseas



Manufacturing

Based on our localization policies (local design, local production, and local consumption), Fuji Electric has adopted a manufacturing framework with three hubs, where production bases in Japan act as the mother factories for global manufacturing operations, with two other hubs in China and Asia. To further enhance our manufacturing capabilities, in addition to focusing on our on-site capabilities through supply chain innovation activities, we also work to strengthen our capabilities in terms of production technology and human resources, with the view to honing our competitiveness further.

Three Pillars Supporting Manufacturing

On-Site Capabilities
The ability to achieve higher productivity, lower costs and other goals by enhancing technical skills needed at production sites

Production Technology
The ability to develop and apply manufacturing methods, production processes, and production equipment to achieve customer satisfaction

Human Resource Development
The handling down of our accumulated technologies and skills that are necessary for innovation in manufacturing

Major Initiatives in Fiscal 2013

Strengthening Production Technology Capabilities

Fuji Electric is bolstering its production technology capabilities in order to ensure highly-competitive manufacturing. Core production engineers are concentrated at the Facility Technology Center in Saitama Prefecture to develop facility technologies and core fundamental technologies. In collaboration with factories, the achievements of their work are applied to actual manufacturing facilities and production process improvements.

Specifically, with the aim of automating production facilities, production lines, and testing and evaluation facilities, we have taken steps to enhance the facility technologies of manufacturing sites by converting tasks and concepts at these manufacturing sites into simple automated equipment. At the same time, we are using robot technology to develop automated production lines capable of handling a wide variety of products and varying quantities, enabling shorter lead times and higher productivity.

Assembly Automation (Azumino Factory, GE Fuji Meter Co., Ltd.)

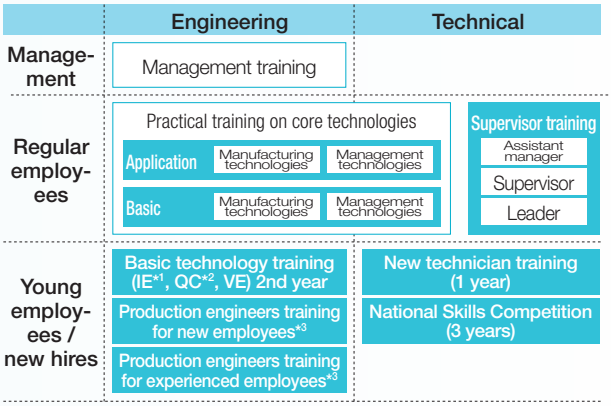
In fiscal 2013, we worked on automating the assembly process, with the aim of expanding orders for smart meters. We are automating the printed circuit board test process by developing conveyors for the testing, soldering, and coating processes, which were formerly performed manually.

Automated printed circuit board inspection line

Bolstering Human Resource Development

To strengthen manufacturing capabilities, which are fundamental to manufacturers, our factories in Japan are working as mother factories to amass technologies and expertise while nurturing production engineers and technicians who can succeed at overseas manufacturing bases. At overseas production bases, we are improving both operational quality and efficiency by developing technicians, upgrading quality management systems, and pursuing supply chain improvements, which are the roots of manufacturing.

Manufacturing Training System



*1 IE: industrial engineering
*2 QC: quality control
*3 Newly established

Production Engineers Training for New Employees

In fiscal 2013, we held group training lasting three months for new employees in the production technology division. The trainees spent the first two months learning fundamental knowledge such as core technologies and essential skills. Following this, the trainees split into teams and made an automated conveyor. They learned the series of facility construction processes, from planning, design, procurement, assembly, adjustments, and evaluation, which are needed to handle production technology.

Winning a Prize at the National Skills Competition

At the 51st National Skills Competition held in November 2013, three employees from Fuji Electric F-Tech Co., Ltd. participated in the die-cutting category and won the silver and bronze medals. Fuji Electric will continue to strengthen its manufacturing capabilities by making sure that talented technicians grow to become central figures at manufacturing bases.

Making an automated conveyor

National Skills Competition

Voice A Message from an Employee

Natee Nararatnkul
Senior Manager of Manufacturing Department
Fuji Electric Manufacturing (Thailand) Co., Ltd.

Launch of Asian Production Base

When launching the new production base in Thailand, we tried to minimize operation loss by formulating and executing a fine-tuned carry-in plan for materials and equipment, and by preparing facilities and a production system to handle a wide variety of products. More than anything else, we focused on developing personnel who will be passionate about manufacturing. The Suzuka Factory and other mother production bases took the lead role in educating, instructing, and certifying personnel with respect to important basic tasks for ensuring product quality. They conduct task training and work systematically to improve the frontlines, and pass along our manufacturing DNA to our future leaders. As an Asian product base, we will continue to grow for providing low-priced, high-quality products to our customers.


Production line of factory in Thailand

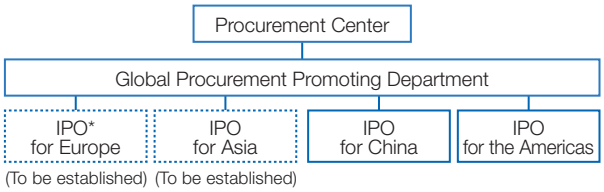
Procurement

In order to increase earning power and reduce risks, Fuji Electric has built a global procurement system and strives to keep down the costs of the materials used in products as well as indirect materials. Also, in our procurement activities, we emphasize social responsibility in building partnerships with our suppliers.

Procurement Policy

- **Expand global procurement**
- **Reduce costs by promoting development purchasing activities**
- **Reduce all indirect material costs, including office supplies**
- **Promote CSR in procurement**

Global Procurement System



* International Procurement Office
A procurement base that discovers new leading suppliers in countries around the world and provides procurement services for Fuji Electric Group business sites.

Major Initiatives in Fiscal 2013

Expanding Global Procurement and Development Purchasing

With the aim of building an optimal procurement system on a global basis, Fuji Electric is working to expand its IPO function to Asia and Europe, following similar efforts in China and the United States.

In fiscal 2013, we put in place a development purchasing system that involves the procurement division from the development and design phase for new products. Furthermore, we cultivated new leading suppliers, and achieved the transition to local procurement in Thailand, where Fuji Electric is focused on increasing production in particular. We also increased the procurement of materials with specifications suited to each region, which helped to reduce costs.

Going forward, we will continue to use development purchasing to help lower costs and further strengthen each IPO function as we pursue optimal procurement on a global basis.

Members of the Procurement Division
at Fuji Electric Manufacturing (Thailand) Co., Ltd.

Promoting CSR in Procurement

Fuji Electric believes that it is important to aim to be a company with high social value by working with our suppliers to fulfill our corporate social responsibility (CSR). To this end, the procurement divisions carry out approaches aimed at preventing compliance violations or infringements on human rights (such as forced labor and child labor) throughout the entire supply chain.

Also, from the perspective of protecting the environment, we are proactively pursuing green procurement, whereby we procure materials with small environmental footprints from suppliers actively engaged in environmental protection.

In fiscal 2013, we enhanced our internal compliance with procurement-related laws and regulations. In Japan, we held internal training sessions for the procurement division, as well as the sales, services, engineering and design divisions (a total of 1,372 people attended 41 sessions in all). Overseas, we established rules and standards to comply with the differing laws and regulations of each country.

We promoted understanding of CSR among our suppliers through procurement policy briefings and procurement seminars, which we hold at our business sites each year.

Going forward, we will continue to teach both employees and suppliers about CSR through training sessions and seminars, which we conduct globally. We will also expand the scope of the CSR Questionnaire for suppliers with whom we have large orders.

Reduce Procurement Risk

As a part of our business continuity plan (BCP), we have formulated a procurement BCP which includes the following three aspects, 1) building a supplier damage information collection system, 2) securing multiple suppliers for key components; and 3) establishing alternate sites to carry out procurement operations.

In fiscal 2013, we built a supplier damage information collection system among procurement divisions in order to quickly comprehend the delivery status of procured materials in the event of a major disaster or other catastrophic event. Also, we are aiming to establish multiple suppliers for important components. When establishing multiple suppliers, we intend to select at least one overseas supplier in terms of reducing natural disaster risk and foreign currency risk. Furthermore, in order to receive the cooperation of suppliers of important components, we conducted a questionnaire of each supplier's business continuity plans and evaluated them.

Going forward, we will continue to enhance our procurement BCP by establishing sites that can take over procurement operations in the event of a disaster and achieving inventory flexibility across the Group, including suppliers.

* Please refer to page 47 "Risk Management" for information on BCP initiatives.

Conflict Minerals

Fuji Electric has agreed with the philosophy of the Japan Electronics and Information Technology Industries Association (JEITA) and has established a policy of not supporting acts that violate human rights through its suppliers. Based on this policy, we have worked to ban the use of minerals associated with the funding of armed insurgents, human trafficking, forced labor, child labor, abuse, war crimes, and other human rights violations. These minerals include tin, tantalum, tungsten, gold and its derivatives produced in the Democratic Republic of the Congo or areas of conflict in surrounding countries.

Based on the policies of the JEITA's Responsible Minerals Trade Working Group, in Fiscal 2013 Fuji Electric held training about human rights violations and conflict minerals for its procurement divisions, as well as the sales, services, technology, and design divisions at 12 sites in Japan (a total of 328 people attended the 12 training sessions).

Going forward, we will continue to work alongside our suppliers to fulfill our social responsibility by appropriately addressing the conflict minerals issue.

Voice A Message from a Supplier

Takeshi Shinohara
Executive Officer, Sales Division
Akiko Yoshida
Sales Division, Sales Department 2
DENKISEIKOSHA CO., LTD.

CSR Training for Suppliers

DENKISEIKOSHA CO., LTD. is a manufacturer that provides peripheral devices for electric power supply equipment, mainly transformers and reactors.

A lot of emphasis is being placed on environmental regulations and other CSR initiatives these days. As part of our efforts to bolster our CSR program, we participate in the seminars that Fuji Electric holds twice a year at its Kobe Factory.

In addition to topics such as Fuji Electric's business plans and procurement policies, the seminars cover issues based on society's demands, including compliance, CSR, and BCP. At a seminar about conflict minerals, we learned that using minerals originating from conflict areas may indirectly support the human rights violations that occur in those areas. It was a great opportunity for us to identify and figure out the issues that our company should address going forward.

As we move ahead, we will aim to be a company that is trusted by society and that grows alongside our stakeholders, as we continue to provide excellent products and services. Furthermore, we will strive to comply with laws and regulations, protect the environment, and contribute to society as part of our corporate social responsibility.