

Power Generation Business Strategies

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Executive Officer

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Power Generation Business Group

Fuji Electric Co., Ltd.

- Business Overview
- Performance
- FY2023 Management Plan
 - Market Outlook
 - Business Policies / Business Plan
 - Priority Measures
 - Capital Investment / Research and Development

Provision of highly efficient, eco-friendly clean energy

Net sales (FY2022 Results)
¥87.3 billion
 (Domestic sales: 74%; Overseas sales: 26%)

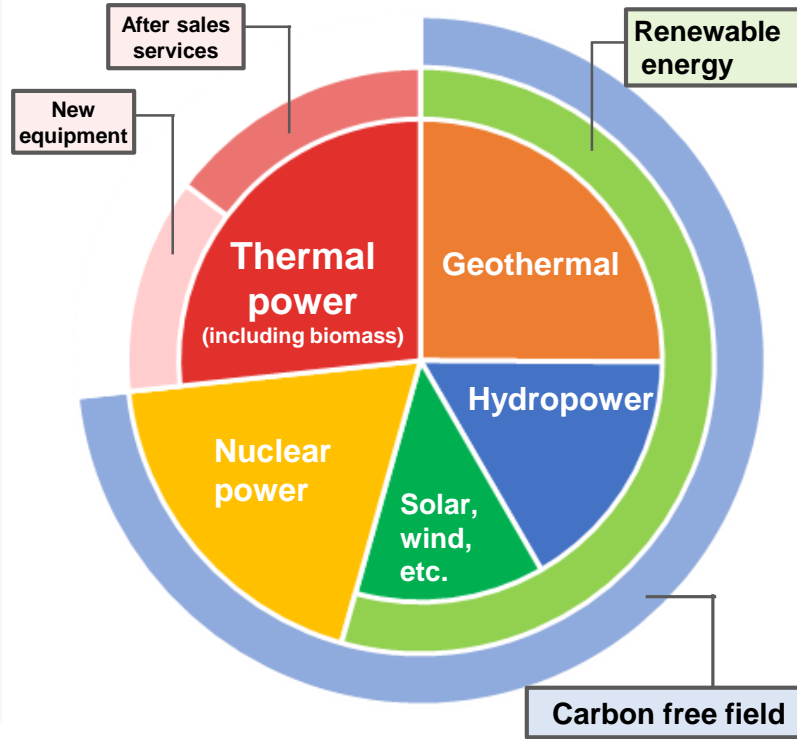
Renewable / New Energy



Thermal power generation plants
Steam turbines, generators



Nuclear power-related equipment
Fuel handling equipment and waste treatment equipment



No. 1 global share*



Geothermal power generation plants

No. 3 domestic share*



Hydropower generation plants

No. 2 domestic share*



Solar power generation systems



Wind power generation systems

No. 1 global share*



Biomass power generation plants



Fuel cells

Major Customers

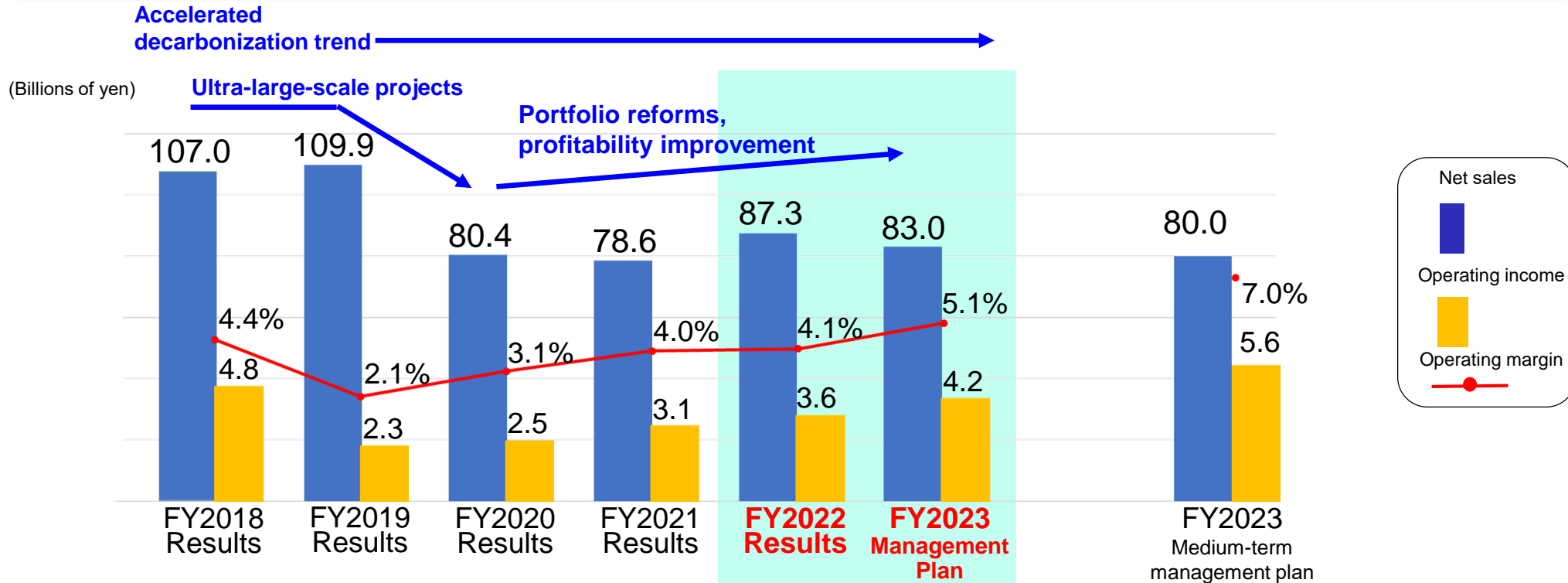
- Electricity
- Power generation
- Municipal governments

Notes:

1. Share figures for geothermal power generation plants are for FY2022 and are based on orders from 2000 forward. Share figures for solar power generation systems are based on deliveries of industrial power conditioning systems with a capacity of 500 kW or more applicable under 2012 feed-in tariff system.

2. Photograph for geothermal power generation plant displays the Muara Laboh Geothermal Power Plant (photograph provided by PT Supreme Energy Muara Laboh).

Steady progress in portfolio reforms leading to improved profitability



Successes

- More than 50% of sales generated via renewable energy-related projects
- Increase in the ratio of projects contracted for after sales services
- Improved profitability

Challenges

- Bolstering of earnings power
- Development of new products and solutions that contribute to decarbonization

Progress in Priority Measures of Medium-Term Management Plan

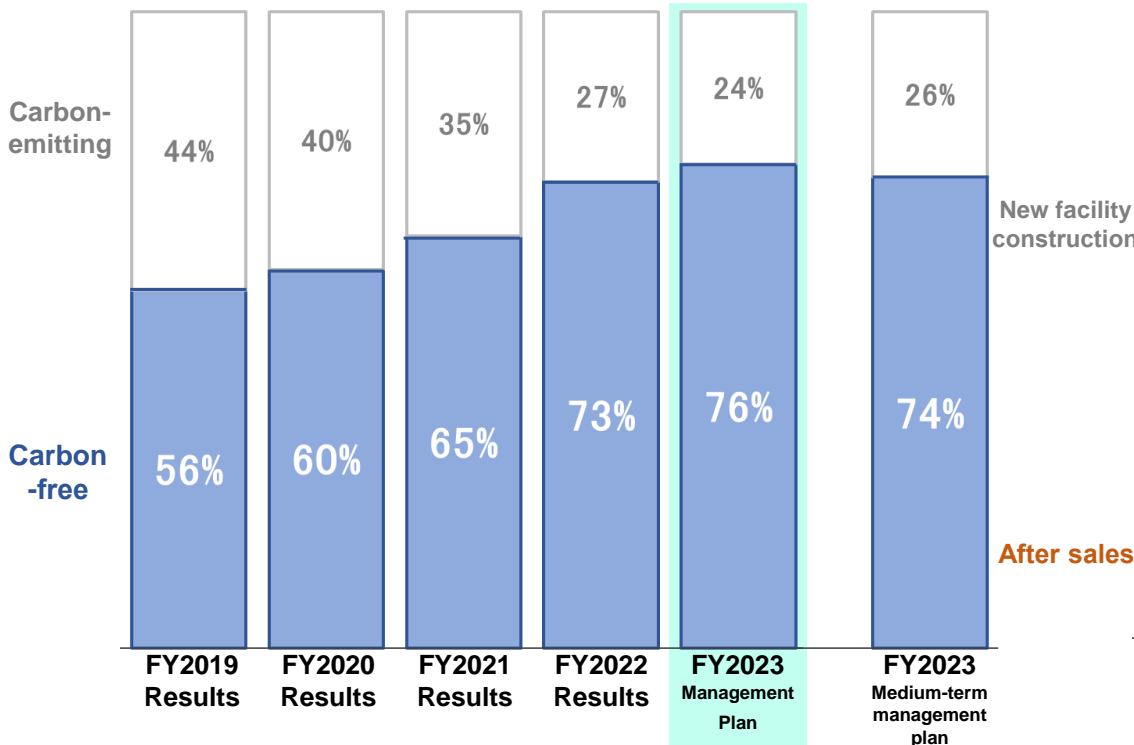
Steady progress in portfolio reforms

Priority Measures

- Focus on renewable energy and decentralized power supplies (geothermal, hydropower, solar power, wind power)
- Enhancement of after sales service businesses

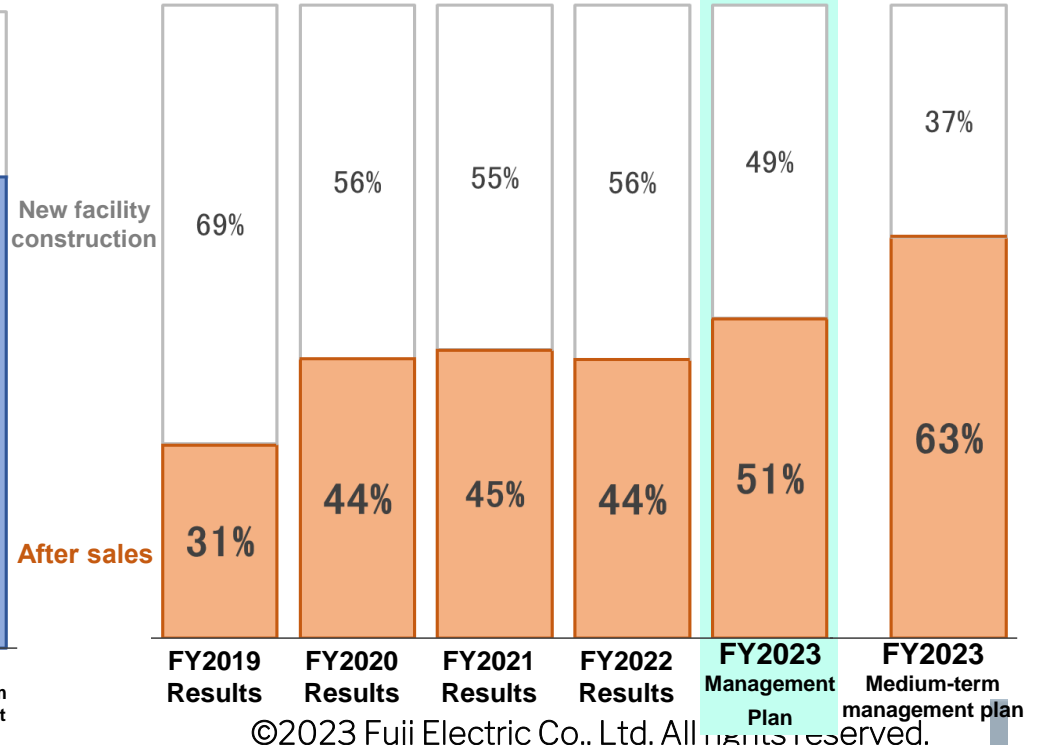
Sales Ratio by Market Need Category
(Carbon-Free / Carbon-Emitting)

Increase ratio of sales of carbon-free systems



Sales Ratio by Business Category
(New Facility Construction / After Sales)

Increase ratio of sales of after sales services



Market Outlook (FY2023)

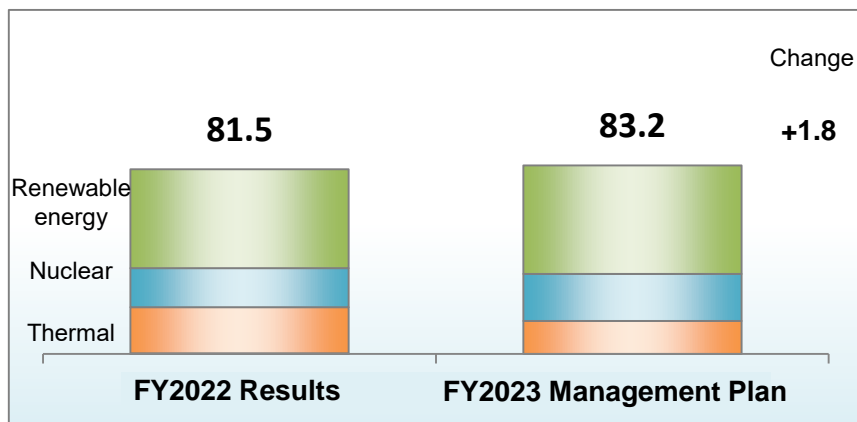
Change
(YoY)

Carbon Free Fields		Market Outlook (FY2023)		Change (YoY)
Carbon Free Fields	Renewable Energy	Geothermal	<p>Japan New Equipment : Rise in survey and development projects Concrete progress in projects with low capacities below 5 MW</p> <p>Overseas New Equipment: Expectations for excitement in resource-rich countries</p> <p>Service: Brisk demand for replacing and upgrading existing power plants after sales service</p>	Flat
		Hydropower	<ul style="list-style-type: none"> Consistent demand for scrap and build projects targeting aged facilities Brisk activity in pumped-storage hydropower market 	Flat
		Solar/ Wind, etc.	<ul style="list-style-type: none"> Ongoing growth in demand for in-house power generation systems stimulated Opportunities related to green hydrogen use 	Flat
	Nuclear	<ul style="list-style-type: none"> Transition to policy of fully utilizing nuclear power following adoption of basic green transformation policies by Cabinet of Japan Rise in decommissioning and waste treatment projects 	Growth	
	Thermal	<ul style="list-style-type: none"> Revision of facility operating plans in response to decarbonization trend and growing use of renewable energy Rising need for increased reliability in light of tight electricity supply–demand balance <p>⇒ Focus on solutions and after sales services in thermal power field</p>	Flat	

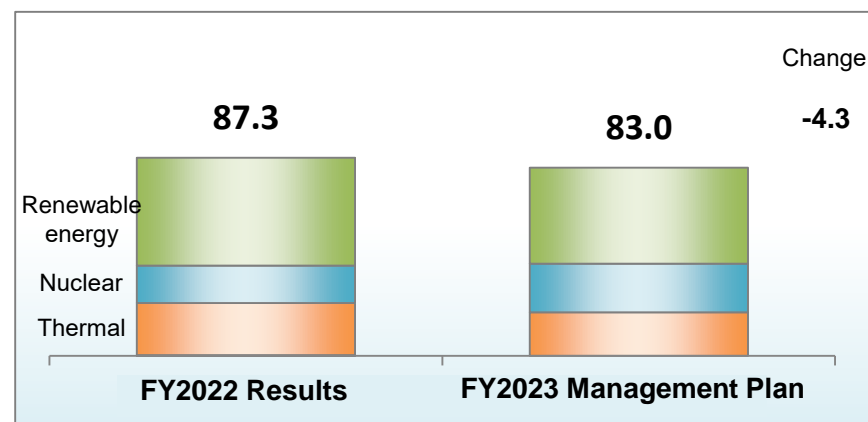
Business Policies

Expansion of operations in carbon-free areas to address changing market environment

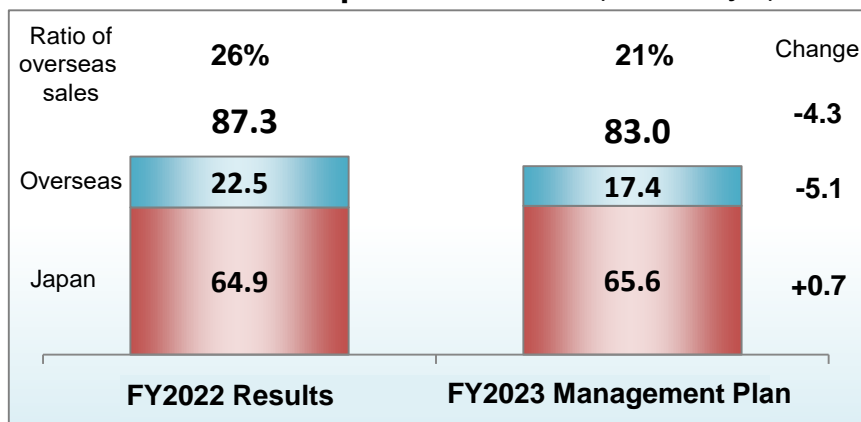
Amount of Orders Received (Billions of yen)



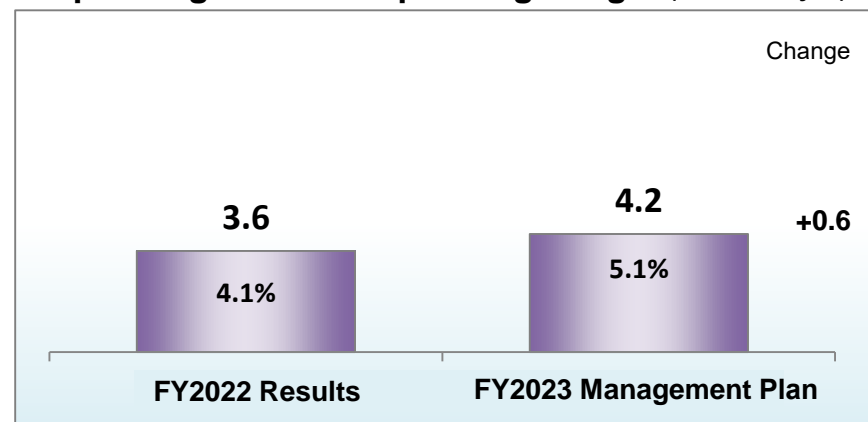
Net Sales (Billions of yen)



Net Sales in Japan / Overseas (Billions of yen)



Operating Income / Operating Margin (Billions of yen)



Expansion and enhancement of proposal offerings in response to operating environment changes

■ Renewable energy

- Geothermal power: Enhancement of flash cycle and Organic Rankine Cycle^{*1} proposal capabilities
- Hydropower: Entry into pumped-storage hydropower market
- Variable-output renewable energy^{*2} : Expansion of proposal offerings that combine electricity storage control and stabilization technologies

■ Nuclear power

- Enhancement of proposal capabilities pertaining to safe decommissioning and waste treatment

■ After sales services

- Enhancement of high-value-added solutions proposals

■ Profitability improvement initiatives

- Differentiation through improvement of ability to make high-value-added proposals
- Improvement of profitability through stronger management and reduced costs

*1 Organic Rankine Cycle: Generation method using fluids with low boiling points in place of water

*2 Solar/ Wind, etc.



Appi Geothermal Power Station
(under construction)
(Photograph provided by Appi Geothermal Energy Corporation)



Tauhara Geothermal Power Plant
(under construction)
(Photograph provided by Contact Energy Ltd.)

Japan

- Promotion of sales of flash cycle systems with less than 15 MW capacity
- Enhancement of proposal capabilities for flash cycle and Organic Rankine Cycle systems for projects with less than 5 MW capacity

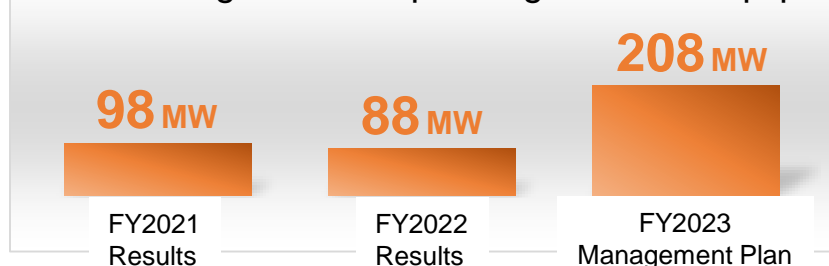
Overseas

- Ongoing order acquisition activities, Africa, Pacific Rim nations, and other promising locations
- Improvement of profitability by developing physical and human resource supply chains related to articles other than major generators and increasing management capabilities in countries developing geothermal power systems

General

- Growth of profits through stronger process management and cost reduction measures

Deliveries of geothermal power generation equipment



Deliveries of geothermal power generation equipment with capacity totaling 208 MW scheduled in FY2023 largely attributable to geothermal power plant with world-leading class single-unit generation capacity

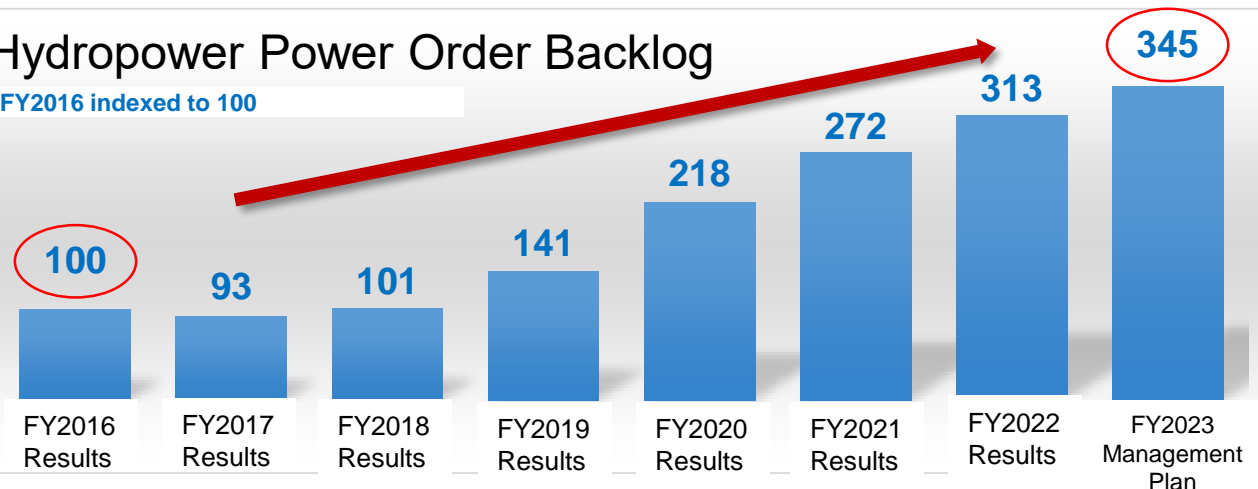


Ikusaka Hydro Power Plant
(Photograph provided by
TEPCO Renewable Power, Incorporated)

- Entry into pumped-storage hydropower market
- Effective acquisition of after sales service contracts for existing power plants (including output increases and scrap and build) by strengthening project execution systems and optimizing supply chains
- Differentiation of operations through application of new eco-friendly technologies

Hydropower Power Order Backlog

FY2016 indexed to 100



Growth in order backlog through steady incorporation of demand related to replacement and modernization of aged hydropower generation plants



Solar power generation system for Nobeoka Kujiraike (under construction)
(Photograph provided by Nobeoka Solar power)

- Incorporation of rises in growth in demand for in-house renewable energy generation systems stimulated
- Enhancement of ability to accommodate diversifying and increasingly complex customer needs
- Proposal of offerings that combine electricity storage control, stabilization, and other technologies in which Fuji Electric specializes
- Accumulation and verification of expertise pertaining to in-house renewable energy generation systems through installation and operation of solar power generation systems at Fuji Electric factories

Solar power generation system for powering Akune city hall, first regional microgrid installed by Fuji Electric, completed in March 2023



Solar power generation system for powering Akune City
(Photograph provided by Trust Bank Akune)

- Enhancement of proposal capabilities pertaining to safe decommissioning and waste treatment
- Expansion of safe decommissioning and radioactive waste treatment and launch of new products
 - Development of innovative next-generation reactors

Three Core Technologies for Helping Secure Energy Supplies throughout the Remainder of the Century

I. Remote Handling

- ◆ Nuclear fuel handling and storage
 - MOX fuel fabrication equipment
 - In-cell equipment
- ◆ High-level waste remote transportation and handling
- ◆ Remote decommissioning of nuclear reactor facilities
- ◆ Fuel handling equipment for innovative reactors

II. Radioactive Waste Treatment

- ◆ Advanced solidification technology (geopolymer)
- ◆ Waste resin treatment equipment
- ◆ Radioactive waste treatment equipment
- ◆ Remote cutting/decontamination devices
- ◆ Waste analysis systems

III. Nuclear Reactor Engineering

- ◆ High-temperature gas-cooled reactors
- ◆ Criticality test equipment
- ◆ Nuclear fusion reactor-related equipment

Contribution to fuel extraction (major part of phase 1 decommissioning) at Monju, acquisition of practical operating data for use in development of innovative next-generation reactors

- August 2018–October 2022: Fuel treatment (removal of attached Na and loading in water pool)
Treatment of all 530 units completed
- September 2019–April 2022: Extraction of fuel (from nuclear reactor)
Extraction of all 370 units completed



Monju
(Photograph provided by
Japan Atomic Energy Agency)

Enhancement of Solutions Proposal Capabilities

Enhancement of proposal value in response to decarbonization trend

Provision of Technical Services that Accommodate Diverse Customer Needs

Response to rising need for increased equipment reliability
in light of tight electricity supply–demand balance

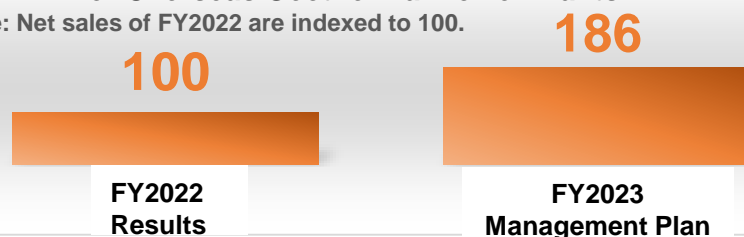
Supply of Optimal Maintenance Services

Provision of diverse service lineup including deterioration diagnoses
and lifespan extension diagnoses in order to improve facility operation ratios



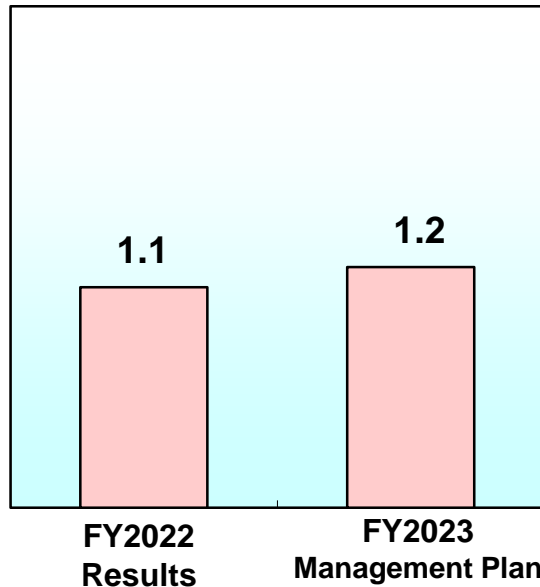
Orders for After Sales Services for Overseas Geothermal Power Plants

Note: Net sales of FY2022 are indexed to 100.



Rapid growth in orders for after sales services for overseas geothermal power plants stimulated by brisk upgrade and replacement demand associated with existing geothermal power plants in countries developing geothermal power sources

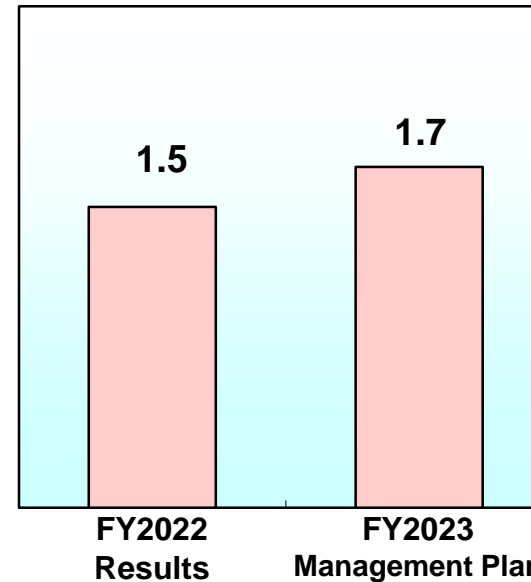
Capital Investment (Billions of yen)



Kawasaki Factory

- Production equipment upgrades/repairs
- Rationalization, etc.

Research and Development (Billions of yen)



New renewable energy and decentralized power supply products

New after sales service offerings

- Development of electricity storage and grid stabilization technologies and products
- Enhancement of inspection and repair service lineup

Note: The R&D expenditure figures above represent expenditures that have been allocated to segments based on theme and may therefore differ from figures contained in consolidated financial reports.

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