

Power Generation Business Strategies

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Fuji Electric Co., Ltd.

- Business Overview
- Progress under Medium-Term Management Plan
- FY2022 Management Plan
 - Market Outlook
 - Business Policies / Business Plan
 - Priority Measures
 - Capital Investment / Research and Development

Provision of highly efficient, eco-friendly clean energy

Power Generation

Renewable / New Energy

<p>No. 1 global share*</p>  <p>Geothermal power generation plant</p>	<p>No. 3 domestic share</p>  <p>Hydropower generation plant</p>	<p>No. 2 domestic share*</p>  <p>Solar power generation systems</p>
 <p>Wind power generation systems</p>	<p>No. 1 domestic share*</p>  <p>Biomass power generation plant</p>	 <p>Fuel cells</p>
 <p>Thermal power generation plant Steam turbines, generators</p>		 <p>Nuclear power-related equipment Fuel handling equipment and waste treatment equipment</p>

Major Customer Industries

- Electricity
- Power generation
- Municipal governments

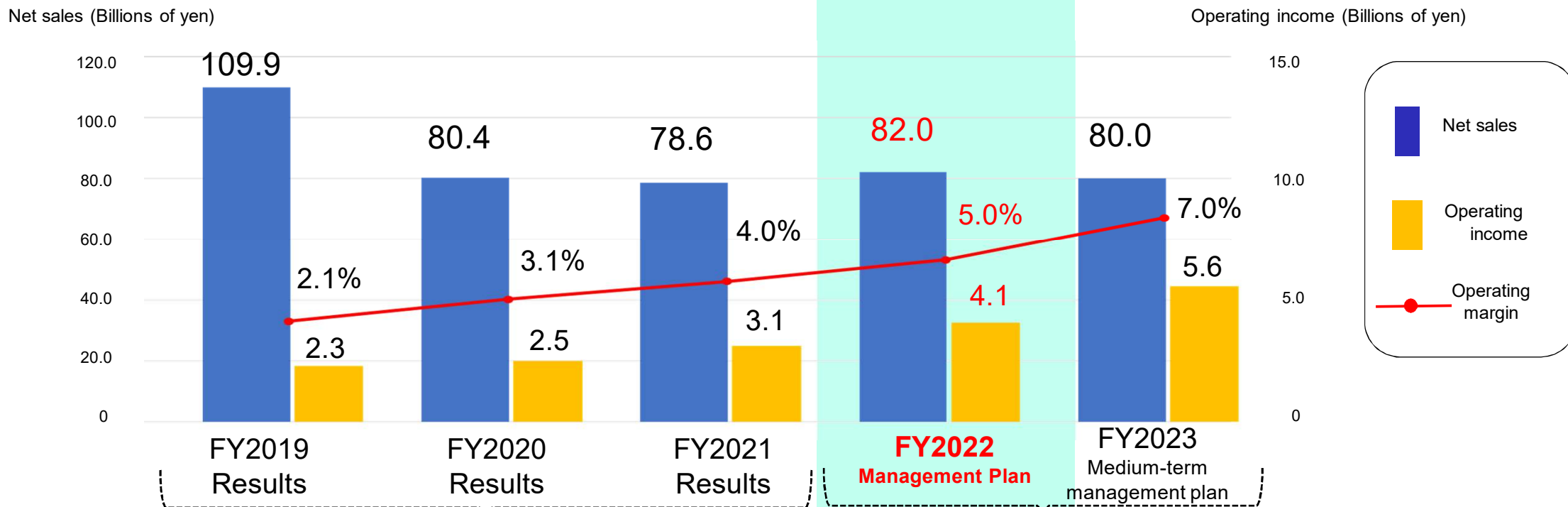
* Based on FY2021 performance; Source: Fuji Electric Co., Ltd.

Notes: 1. Share figures for geothermal power generation plants are for FY2021 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).

Progress of Medium-Term Management Plan

Steady progress in portfolio reforms leading to improved profitability



Successes from FY2019–2021 (Three Years)

- 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

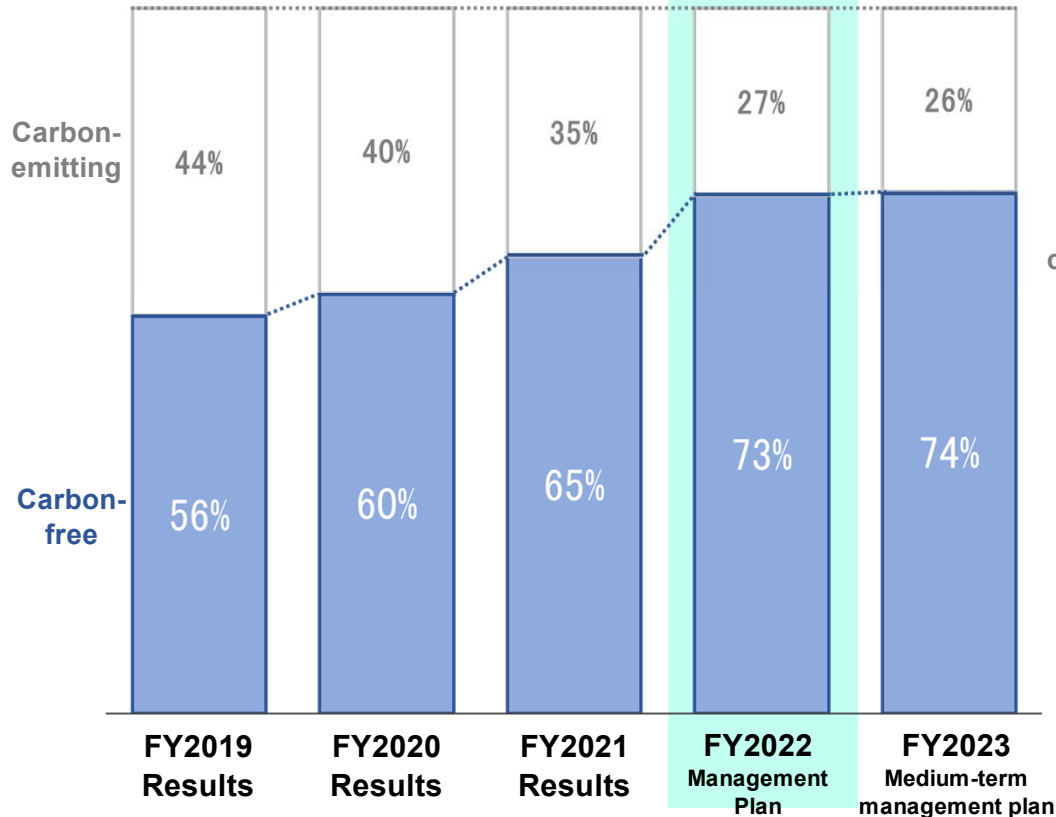
Steady progress in portfolio reforms

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)

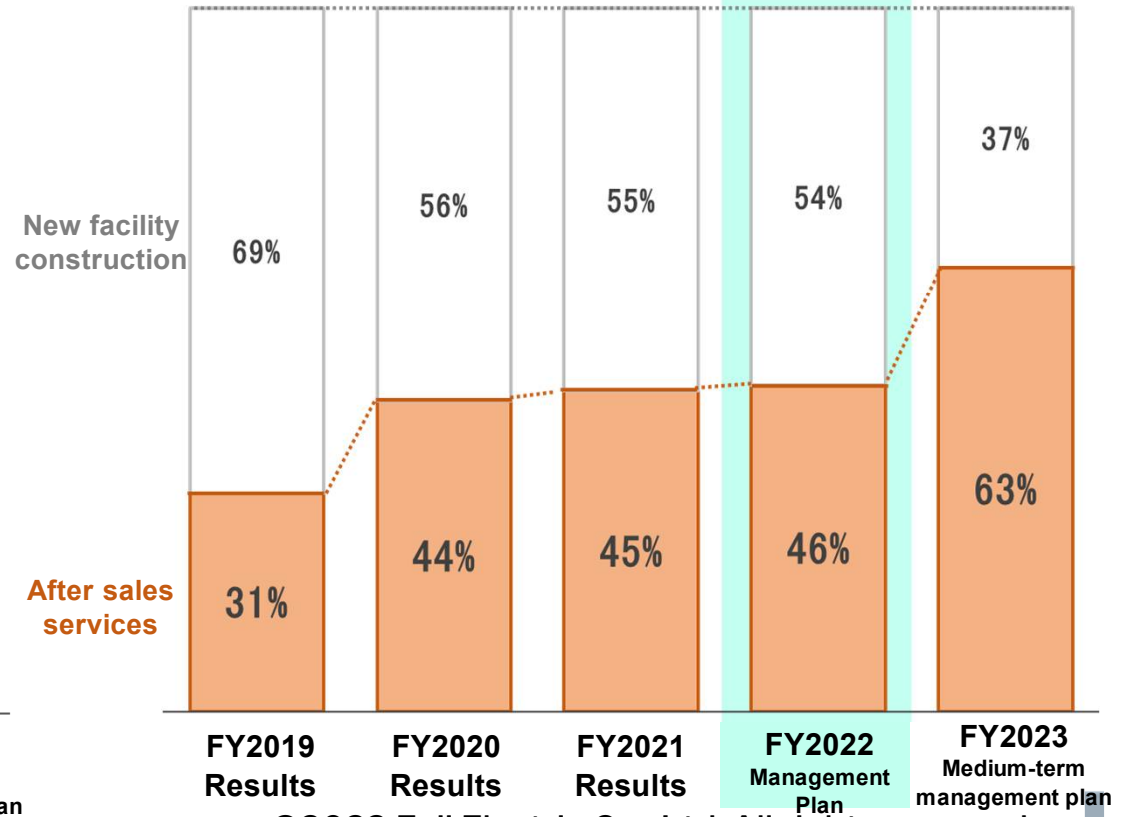
Increase ratio of sales of carbon-free systems



Sales Ratio by Business Category

(New Facility Construction / After Sales Service)

Increase ratio of sales of after sales services



Market Outlook

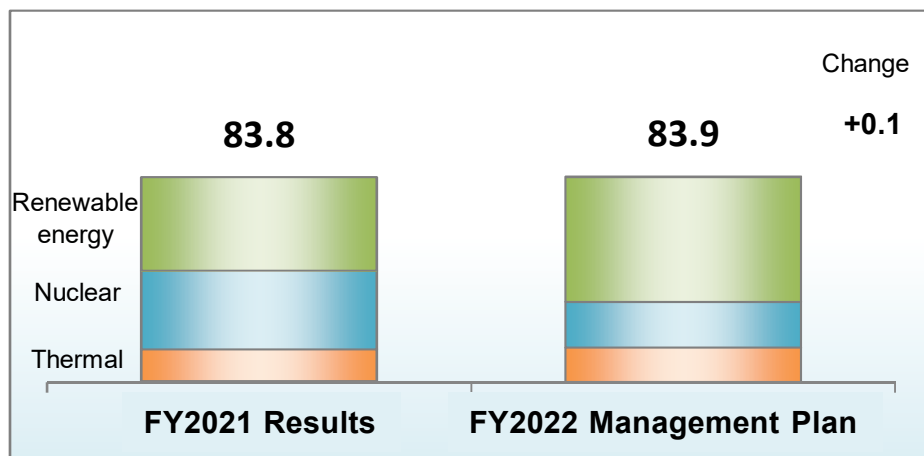
Change
(YoY)

		Change (YoY)
Renewable Energy	Geo thermal	<p>Japan: Rise in survey and development projects Concrete progress in projects with low capacities below 5 MW Overseas: Opaque outlook for business negotiations despite concrete progress</p> <p>Flat</p>
	Hydro power	<p>Consistent demand for scrap and build projects targeting aged facilities</p> <p>Flat</p>
	Solar/ Wind, etc.	<p>Japan: Gradual progress in regional microgrid projects Opportunities related to green hydrogen use Overseas: Anticipations regarding government-driven projects</p> <p>Flat</p>
	Nuclear	<p>Rise in decommissioning and waste treatment projects</p> <p>Growth</p>
	Thermal/ Geothermal After Sales Services	<p>Japan: Revision of facility operating plans in response to decarbonization trend and increasing use of renewable energy Overseas: Signs of recovery in demand for maintenance previously postponed due to COVID-19 pandemic</p> <p>Flat</p>

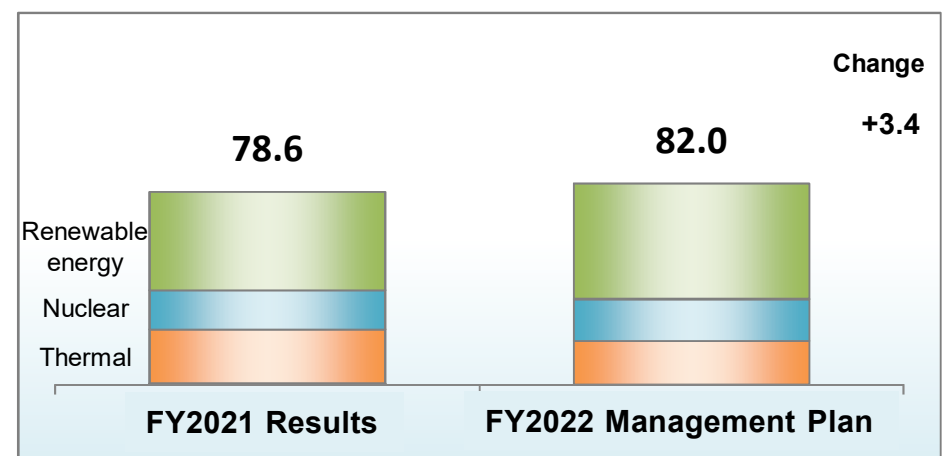
Business Policies

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

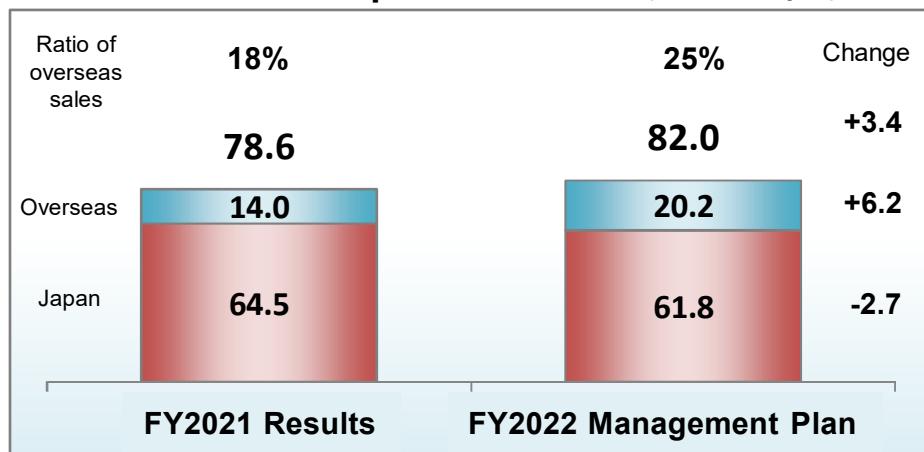
Amount of Orders Received (Billions of yen)



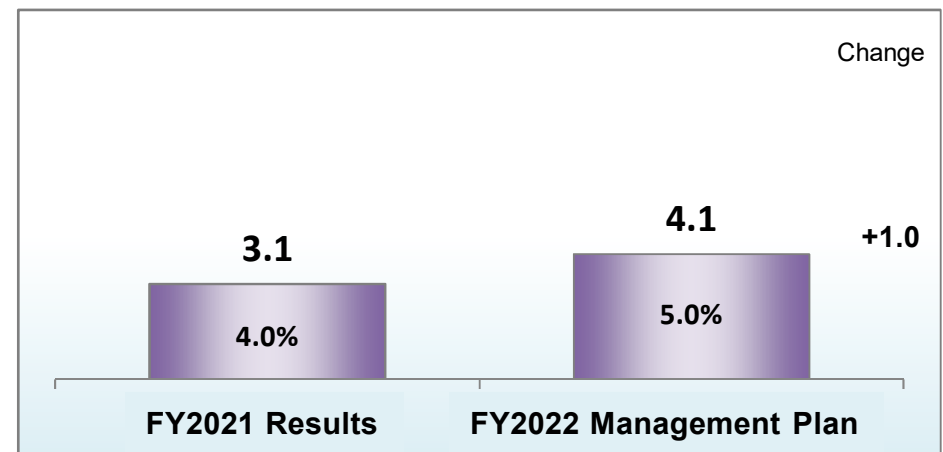
Net Sales (Billions of yen)



Net Sales in Japan / Overseas (Billions of yen)



Operating Income / Operating Margin (Billion yen)



■ Renewable energy

- Geothermal power: Enhancement of flash cycle and Organic Rankine Cycle proposal capabilities

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

- Hydropower: Steady acquisition of after sales service orders from existing power plants
- Solar power: Focus on regional microgrid projects
- Wind power: Proposals utilizing technologies in which Fuji Electric excels

■ Nuclear power

- Expansion of safe decommissioning and after sales service businesses

■ After sales services

- Enhancement of high-value-added solutions proposals



Onikobe Geothermal Power Station (under construction)
(Photograph provided by Electric Power Development Co., Ltd.)



Rantau Dedap Geothermal Power Plant
(Photograph provided by PT. Supreme Energy Rantau Dedap)

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

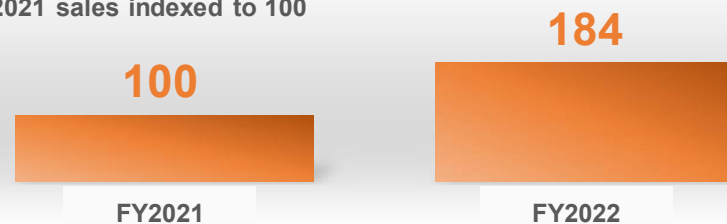
- Ongoing order acquisition activities in Asia, Africa, and other promising locations
- Improvement of profitability by developing physical and human resource supply chains related to articles other than major generators and increasing management capabilities in countries developing geothermal power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

General (Japan & Overseas)

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

Geothermal Power-Related Sales

FY2021 sales indexed to 100



Massive increases to geothermal power-related sales in FY2022 due to progress in constructing geothermal power plant with world-leading class single-unit generation capacity



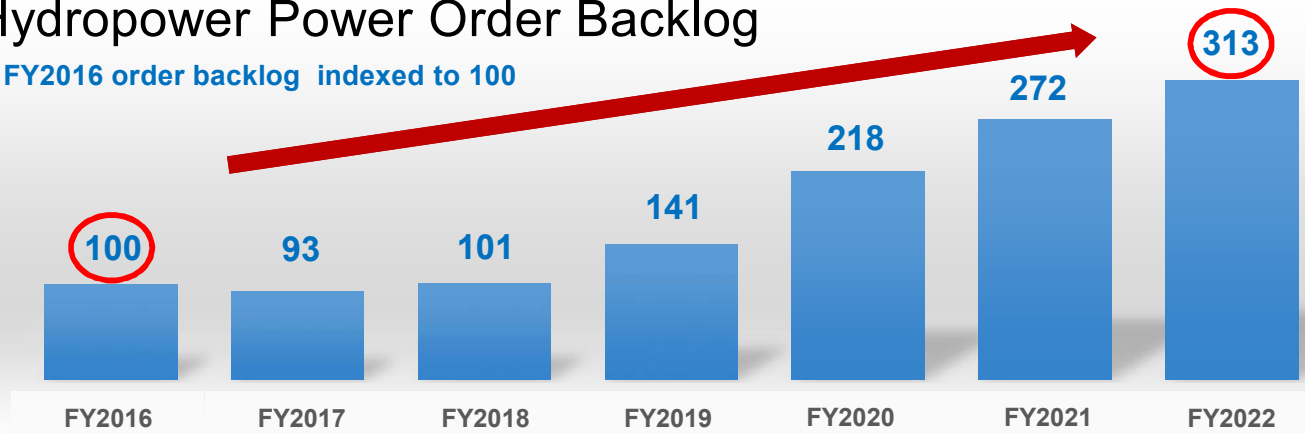
Taira Hydro Power Plant
(Photograph provided by TEPCO Renewable Power, Incorporated)

Effective incorporation of existing power plant after sales service projects (including output increases and scrap and build)

- Strengthening of project execution systems, ongoing acquisition of scrap and build projects by optimizing supply chains
- Differentiation of operations through application of new eco-friendly technologies

Hydropower Power Order Backlog

FY2016 order backlog indexed to 100



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

Solar Power

Japan

- Focus on regional microgrid projects
- Promotion of sales of stabilizers and PCSs for local consumption power generation applications

Overseas

- Ongoing growth in solar power orders in Southeast Asia



Aoki Solar Power Plant (under construction)
(Photograph provided by First Solar Japan Co., Ltd.)

■ Topics

Regional microgrid construction orders received from municipal governments in Kyushu and Chugoku in FY2021, ongoing order acquisition activities to be conducted going forward

Wind Power

Japan

- Support for swift business development
- Promotion of proposals using electricity storage and stabilization equipment and ultrahigh voltage and transformer technologies developed in solar power field and in which Fuji Electric specializes

Expansion of safe decommissioning and after sales businesses

- Expansion of decommissioning and radioactive waste treatment businesses and introduction of new products
- Advancement of spent fuel extraction initiatives

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

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

- **August 2018–July 2021: Fuel treatment (removal of attached Na and loading in water pool)**
Treatment of 406 of 530 units completed (remaining 124 units to be treated by December 2022)

- **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

→ Improvement of adjustment capabilities of existing power plants (thermal, geothermal) in response to increased use of renewable energy power supplies with variable output (solar, wind, etc.)



Provision of Diverse Technical Services

Provision of technical services matched to customer needs

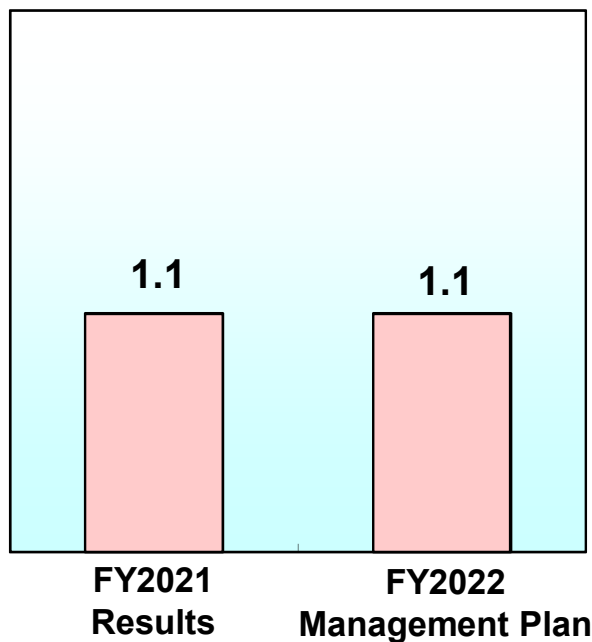
→ Supply of various services that combine engineer dispatch and remote technical support



Supply of Optimal Maintenance Services

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

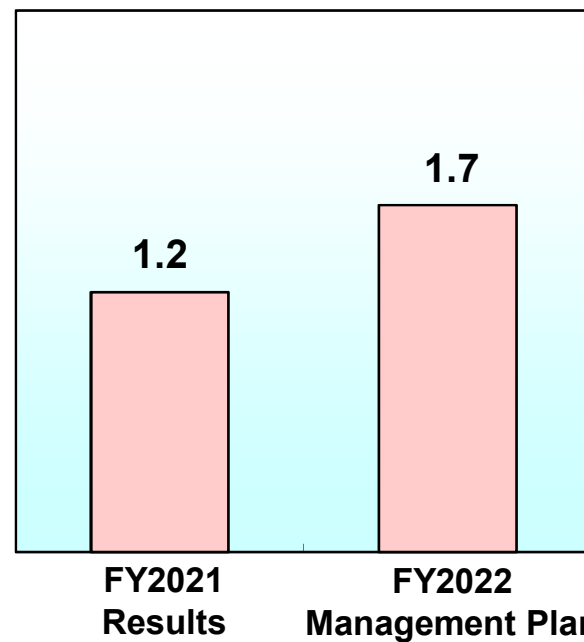
Capital Investment (Billions of yen)



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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