

Financial Briefing Materials for FY2018

Takuma Co., Ltd.

May 24, 2019

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1. Company Overview

Company Outline



Name	Takuma Co., Ltd.
Established	June 10, 1938
Representative	Hiroaki Nanjo, President and CEO
Head office location	2-2-33 Kinrakujicho, Amagasaki-shi, Hyogo Prefecture
Capital	13.3 billion yen
Main Business	EPC and after-sales service for environmental and energy plants, including waste treatment facilities and biomass power plants
Directory	Head Office, Osaka Office, Tokyo Branch, Hokkaido Branch, Tohoku Branch, Chubu Branch, Kyushu Branch, Okinawa Branch, and Harima Factory Overseas: Taipei Branch
Employees	(Non-consolidated) 852 (Consolidated) 3,619 (as of March 31, 2019)

History

2017

Order received for a 50,000 kW biomass power plant(FIT-approved facility)

2012

Feed-in tariff (FIT) program launched.

1999

Act on Special Measures against Dioxins enacted.

1986

The first overseas delivery of a waste incineration plant completed (U.S.A.)

2000 and beyond

Takuma continues to provide technology for utilizing and rendering harmless a variety of waste and biomass energy sources through its businesses in **the renewable energy and environmental protection fields**. We established local subsidiaries overseas and continue to bring our technologies to customers not only in Japan, but also worldwide, particularly in Asia.

1972 to 1999

In 1972, Takuma **changed its name to Takuma Co., Ltd.** As it grew, the company worked to develop technologies in response to a variety of needs.

- Demand for energy savings in industry
- Accommodation of growing and diversifying municipal waste
- Improvement of water quality by water treatment equipment

1951 to 1971

Takuma established its position as a manufacturer of not only boilers, but also **environmental and hygienic equipment**.

- The company developed heat recovery boilers that use waste heat from plants.
- It also developed modern waste incineration technology.
- It entered the water treatment market.

1912 to 1950

Tsunekichi Takuma adopted the founding spirit of “**Serve society through boiler manufacturing,**” marking the birth of the stance and philosophy that would become the cornerstone of Takuma’s operations.

1963

Japan's first 24 hour operating waste incineration plant delivered

1949

Bagasse-fired boiler, the first product of its kind to be exported

Management Principles



Company Motto

Value Technology, Value People, Value the Earth

Management Principles

Takuma will strive for social contribution, corporate value enhancement, long-term corporate development and the satisfaction of all stakeholders by providing goods and services that are needed and recognized as valuable in society.

In 2006, as the management principles of Takuma and the Takuma Group, we have organized and clarified the values of “Service to the nation through boiler manufacturing,”* which is the founding spirit of our company (Takuma Boiler Manufacturing Co., Ltd. at that time). We aim to contribute to society by supplying goods and services that we provide. This spirit can also be applied to the concept of Sustainability and CSR that in recent years has become a vital issue for corporate management.

*Service to the nation through boiler manufacturing,

It was the mission statement of Takuma, then Takuma Boiler Manufacturing Co., Ltd., founded by Tsunekichi Takuma, one of the ten great inventors of Japan during the period of Meiji and Taisho (1868 - 1926).

Corporate Vision

The Group will strive to maintain its role of being an indispensable presence in society as a leading company in the field of renewable energy utilization and environmental protection and achieve 10 billion yen in ordinary profit in FY2020.

We're implementing initiatives to address the Sustainable Development Goals (SDGs) through our business activities.



Segments

Package Boiler Business

Vacuum-type hot water heaters, Once-through boilers



Equipment and Systems Business

Building equipment, Equipment for the semiconductor and electronic device industries



Net sales
FY2018

13.8%

7.2%

2.5%

76.5%

Overseas Environment and Energy Business

biomass power plants, waste treatment plants



Domestic Environment and Energy Business

municipal solid waste treatment plants, water treatment plants, energy plants



Domestic Environment and Energy Business

Municipal Solid Waste Treatment Plant Business

(Related SDGs)



**No. of waste incineration plants delivered :
Most of any manufacturer in Japan**

We supply the following products and services to local governments:

Waste incineration plants, Life extension projects, Maintenance

- Stoker-type incinerators
- Methane fermentation systems
- Crushing and sorting systems

EPC*1 and O&M*2 businesses (including DBO*2)

◇DBO business projects: 12 (FY2019, including projects under construction)

*1 EPC: Project construction contracts that include design, procurement, and construction (engineering, procurement, construction)

*2 DBO: An approach in which the public sector provides funding for a private-sector entity to design, build, and operate a facility (design, build, operate).



Waste incineration plants



Waste incineration plants(DBO)

Domestic Environment and Energy Business

Energy plants



We have extensive experience and expertise that we have accumulated since its founding.

No. of plants delivered under FIT program: **Most of any manufacturer in Japan**

We supply the following products and services to private-sector businesses:

Biomass power plants, Industrial waste treatment plants, O&M, operation management, and maintenance

- Step grate stoker
- Traveling stoker
- Bubbling fluidized bed
- Circulating fluidized bed



Biomass power plants



Industrial waste treatment plants

We propose the combustion furnace types(above four types) and plant system best suited to the fuel to be used at each facility and plant on a custom-order basis.

Domestic Environment and Energy Business

Water treatment plants



(Related SDGs)

Energy-saving/energy-creating sludge power generation systems with low greenhouse gas (N₂O) emissions

We supply the following products and services, primarily to water treatment plants operated by local governments:

- Sewage sludge power generation system EPC (Step grate stoker incinerators)
- Moving-bed sand filtration systems

We develop products with emphasis on energy saving and maintainability.



Sewage sludge power generation system



Moving-bed sand filtration systems

Other segments



■ Overseas Environment and Energy Business

Sales and after-sales service of biomass power plants, waste treatment plants



■ Package Boiler Business

Manufacturing and sales of package boiler

- Vacuum-type hot water heaters (Vacotin Heater)
- Once-through boilers (Equos)



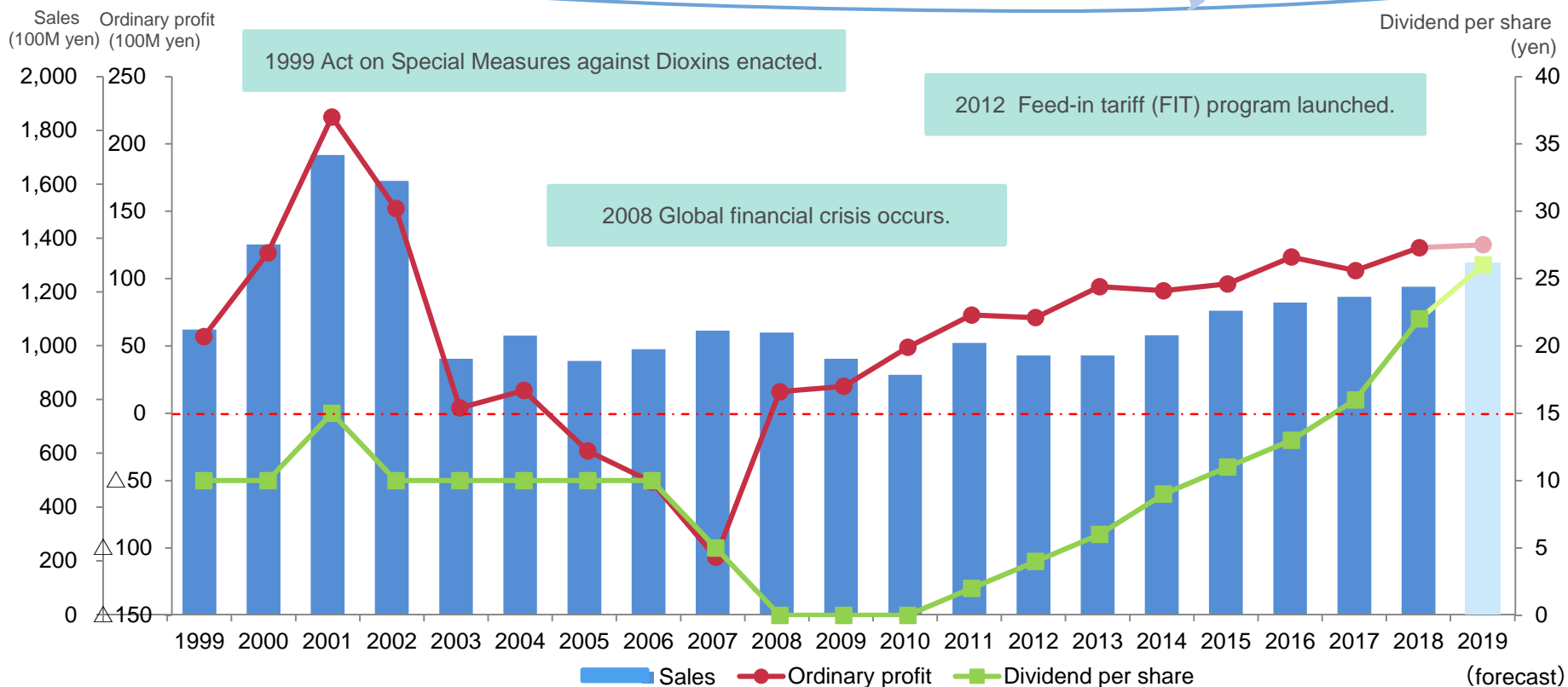
■ Equipment and Systems Business

Installation services of building equipment (Air-conditioning, water, wastewater, and hygienic equipment)

Manufacturing and sales of equipment for the semiconductor and electronic device industries



Consolidated results and dividends



FY	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Sales (100M yen)	1,060	1,376	1,709	1,612	951	1,037	943	987	1,056	1,049	951	891	1,010	963	963	1,038	1,130	1,163	1,181	1,219	1,300
Ordinary profit (100M yen)	52	119	220	152	4	17	△ 28	△ 51	△ 107	16	20	43	73	71	94	91	96	116	106	123	125
Dividend per share (yen)	10.00	10.00	15.00	10.00	10.00	10.00	10.00	10.00	5.00	0.00	0.00	0.00	2.00	4.00	6.00	9.00	11.00	13.00	16.00	22.00	26.00



2. Consolidated Results for FY2018

Consolidated Results

- Replacement and modification demand for waste treatment plants was robust.
- Orders for biomass power plants under the FIT program increased.
- We made steady progress on plant construction, and cost reductions contributed to the bottom line.

(100M yen)

	FY2017	FY2018	Change
Orders received	1,771	1,798	27
Net sales	1,181	1,219	37
Operating profit	100	116	15
Ordinary profit	106	123	16
Profit attributable to owners of parent	78	88	10
Profit per share (Yen)	94.93	107.10	12.17
Dividend per share (Yen)	16.00	22.00	6.00
Backlog	2,730	3,309	578

Consolidated Results by Segment

(100M yen)

FY2018	Orders received	Net sales	Operating profit	Backlog
Domestic Environment and Energy	1,536	937	124	3,222
Overseas Environment and Energy	7	30	1	5
Package Boiler	174	169	9	38
Equipment and Systems	85	88	3	45
Total	1,804	1,225	138	3,311
Adjustments	(6)	(6)	(22)	(2)
Total	1,798	1,219	116	3,309

Consolidated financial position

- Total assets rose due to increases in investments and other assets.
- Net assets rose as a result of profit attributable to owners of parent.
- The capital adequacy ratio rose, as did net assets per share.

(100M yen)

	FY2017	FY2018	Change
Total assets	1,514	1,559	45
Net assets	767	830	63
Capital adequacy ratio (%, points)	50.4	53.0	2.6
Net assets per share (yen)	924.25	1,000.34	76.09

Topic 1 - New TAKUMA Building

Bolstering Takuma's offices and training facility (2018 to 2020)

We will build the New TAKUMA Building next to the Head Office to address issues including insufficient office space.

- Creating a sustainable facility that makes extensive use of lumber such as cross-laminated timber (CLT)
- Developing a training floor that can accommodate large-scale training with up to 150 participants

Enhancing plant remote monitoring and operational support facility (Solution Lab)

Contributing to stable facility operation

- Providing 24-hour remote monitoring of operating conditions and operational support
- Using big data to resolve operational issues
- Using simulators to improve operational technologies



Topic 2

Long-term (20-year) O&M contracts for biomass power plants

- We began our first O&M contract for a biomass power plant (in April 2019).
- We've invested in the project with the goal of strengthening support and partnership.
- Sara Inc. (Kasaoka, Okayama Prefecture)
This venture company operates one of the world's most advanced protected horticulture businesses by combining vegetable cultivation in semi-enclosed greenhouses with a biomass power plant.
- Power, heat, and carbon dioxide from the plant are supplied to greenhouses.



Biomass power plant



Greenhouse

Topic 3

Takuma project receives the 2019 Grand Prize at the Japan Resilience Awards

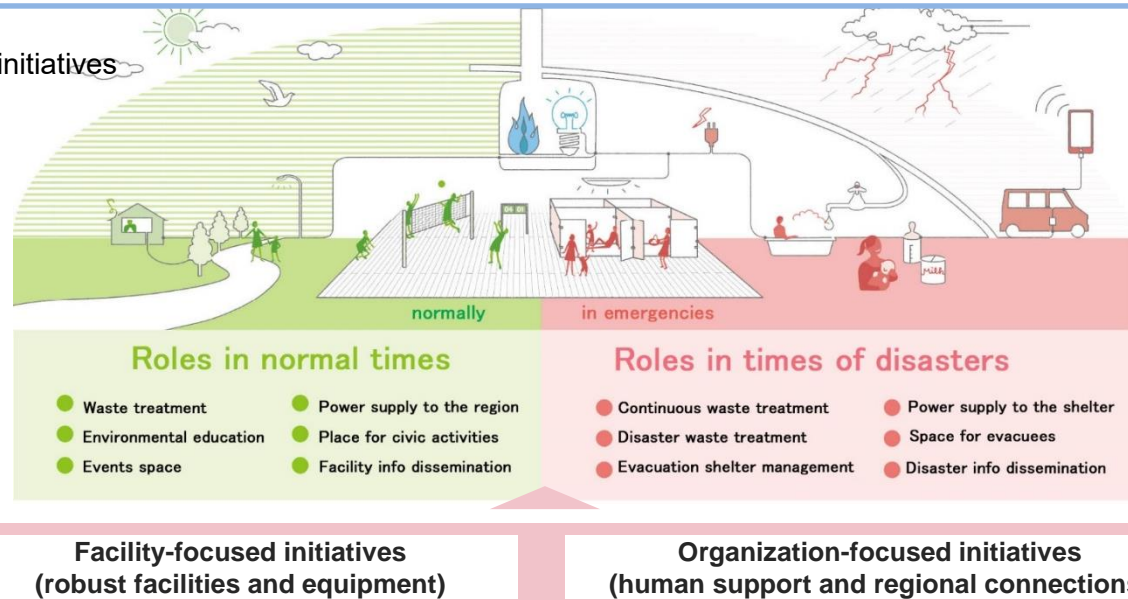
- Advanced, extensive disaster readiness initiatives at **Imabari Clean Center (completed in March 2018)** received the Grand Prize, the highest award at the Japan Resilience Awards.
- The facility became the first waste treatment plant in Japan to introduce the new concept of phase-free*, which allows facilities to leverage their disaster readiness initiatives during normal times.
- Takuma is pursuing initiatives that help harden Japanese infrastructure.
- We propose facilities that create new value for their communities.

Overview of Imabari Clean Center's initiatives



*Phase-free:

A new concept in the area of disaster readiness that does away with distinctions between “phases” (i.e., normal times and disasters) so that facilities can be used similarly during both normal times and in the event of a disaster, increasing the value they provide under both sets of conditions.



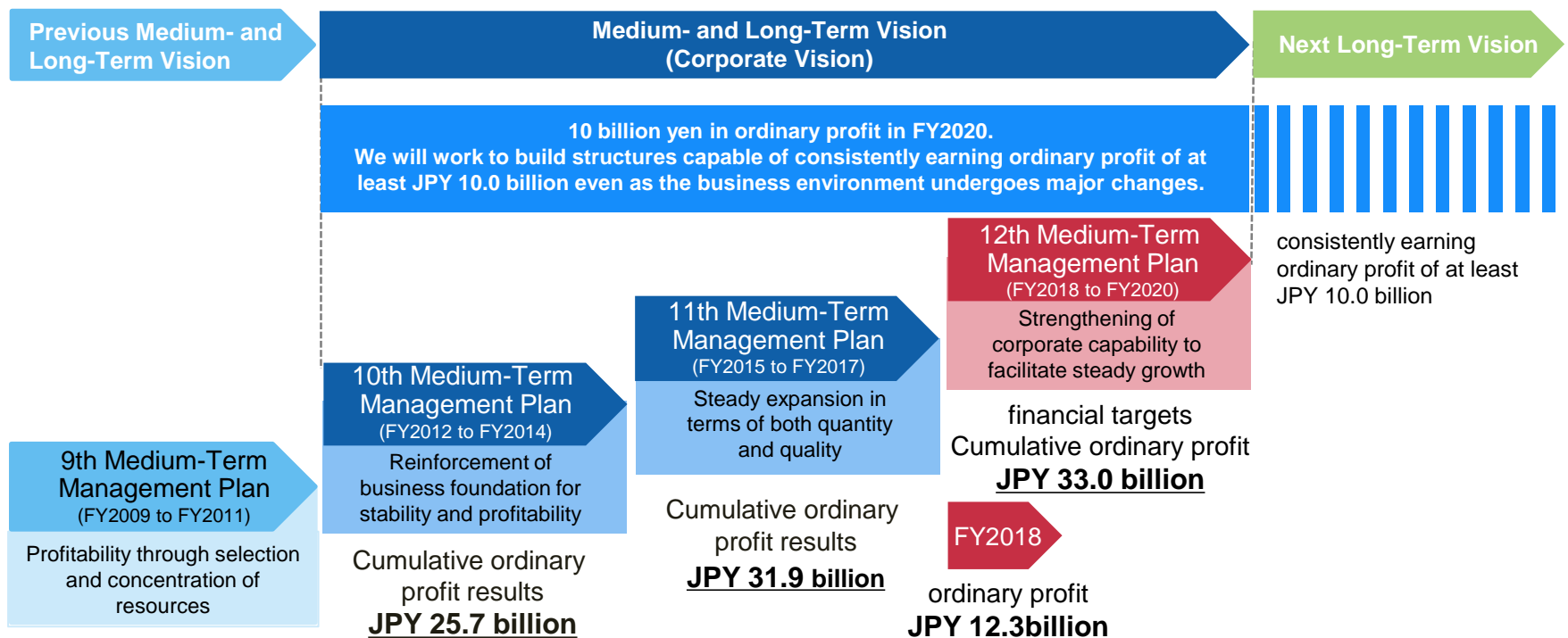


3. key initiatives of the Medium-Term Management Plan

Positioning of the 12th Medium-Term Management Plan

- Final stage of the current Medium- and Long-Term Vision
- We're working to build capabilities based on forecast changes in the business environment so that we can realize our vision and achieve steady growth afterwards.

The Group will strive to maintain its role of being an indispensable presence in society as a leading company in the field of renewable energy utilization and environmental protection



Policies of the 12th Medium-Term Management Plan



- Creating new value from the customer's perspective
- Building a business and management foundation that is resilient during change

1. Creation of customer value

Strive to create new value from the customers' perspective and avoid price competition by working closely with, and developing a deep understanding of, customers.

2. Ongoing innovation

Achieve sustained differentiation by pursuing innovation in terms of both technologies and business models, and leverage that differentiation to create the value demanded by customers.

3. Accommodation of environmental changes and risk management

Adapt to changes of the business environment in which the company operates (e.g., changes in the economic climate, revisions to applicable laws, and changes in customer needs) and strengthen initiatives to treat such changes as business opportunities.

1. Strengthening and expanding our revenue foundation

2. Achieving sustained growth

3. Increasing productivity, for example by reforming business processes

4. Using human resources effectively

5. Continuing to pursue compliance management



Emphasis of Future Activities

■ Domestic Environment and Energy Business

Municipal Solid Waste Treatment Plant Business

Business Environment

- As facilities age, there is ongoing robust demand for renewal and service life elongation.
- Volume is growing for DBO projects as well as O&M services for existing facilities.



Waste-to-Energy Plant
DBO Project

Emphasis of Future Activities

- Strengthen the profitability of our plant operation business.
- Further strengthen initiatives to prolong the service life of facilities.



Waste-to-Energy Plant
Primary equipment
improvement project

Emphasis of Future Activities

■ Domestic Environment and Energy Business

Energy Plant Business

Business Environment

- FIT demand remains robust.
- The number of plants targeted for maintenance is increasing as facilities are completed and transferred to customers.
- There is growing demand for plant operational management and O&M.



Biomass Power Plant

Emphasis of Future Activities

- Capture new orders for FIT biomass plants.
- Strengthen our maintenance structures.
- Scale our waste management expertise horizontally to other businesses.



Biomass Power Plant

Emphasis of Future Activities

■ Domestic Environment and Energy Business

Water Treatment Plant Business

Business Environment

- There is growing demand for sludge incineration plants that conserve and create energy.
- There is increasing use of PPP/PFI arrangements in the sewer business.



Sludge-Fueled Power System
Demonstration Plant

Emphasis of Future Activities

- Strengthen the competitiveness of our sludge-fueled power system.
- Scale our waste management expertise horizontally to other businesses.



Moving bed upflow continuous
sand filtration system
(high-speed)

Emphasis of Future Activities

■ Overseas Environment and Energy Business

Biomass power plants

Business Environment

- Demand for biomass power plants in Southeast Asia remains robust.

Emphasis of Future Activities

- Strengthen the ability of our local subsidiary (SIAM TAKUMA) to carry out its business operations.



Bagasse Fired Boiler Plant
(Thailand)

Waste treatment plants

Business Environment

- There is a growing need for proper waste management and energy utilization against a backdrop of growing urbanization, increase of waste volume, and diversification of waste characteristics.

Emphasis of Future Activities

- Build structures to facilitate collaboration with partner companies.
- Build schemes for entering new markets.



Waste-to-Energy Plant
(Taiwan)



4. Consolidated Earnings Forecast for FY2019

Consolidated Earnings Forecast for FY2019

- We expect to see continued robust demand for waste incineration plants and biomass power plants.
- Sales and profit will rise thanks to progress on plant construction.
- We plan to increase the dividend per share.

(100M yen)

	FY2018 Results	FY2019 Forecast	Change
Orders received	1,798	1,400	(398)
Net sales	1,219	1,300	80
Operating profit	116	118	1
Ordinary profit	123	125	1
Profit attributable to owners of parent	88	90	1
Profit per share (Yen)	107.10	108.87	1.77
Dividend per share (Yen)	22.00	26.00	4.00
Backlog	3,309	3,409	100

Supplementary Material

(Millions of yen)

Capital investment & Research and development expenses	FY2018 Results	FY2019 Forecast	Change
Capital investment	638	1,600	961
Depreciation	797	850	52
Research and development expenses	960	1,300	339

Forecast by Segment for FY2019	Orders received	Net sales	Backlog
Domestic Environment and Energy	109,000	104,000	327,292
Overseas Environment and Energy	6,000	1,000	5,525
Package Boiler	17,500	17,500	3,872
Equipment and Systems	8,000	8,000	4,502
Total	140,500	130,500	341,192
Adjustments	(500)	(500)	(252)
Total	140,000	130,000	340,939

Conclusion

Reflecting its goal of maintaining its role of being an indispensable presence in society as a leading company in the field of renewable energy utilization and environmental protection, the Takuma Group will continue to contribute to the resolution of social issues and the realization of a sustainable society by providing new value in the world.

技術を大切に 人を大切に 地球を大切に



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