Financial Briefing Materials for FY2020

Takuma Co., Ltd. | May 26, 2021

TAKUMA

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Consolidated Results

- The Group realized **sales and profit growth**.
- It achieved its ordinary profit target of at least 10 billion yen.
- **The backlog remained high** thanks to robust orders.

		FY2019	FY2020	FY2020	Change
		Results	Initial outlook	Results	vs. FY2019
Orders received	100M yen	1,488	1,800	**1,885**	397
Backlog	100M yen	3,453	3,793	3,871	418
Net sales	100M yen	1,344	1,350	**1,467**	123
Operating profit	100M yen	96	108	104	8
Ordinary profit	100M yen	103	115	**110**	7
Profit attributable to owners of parent	100M yen	74	84	**75**	1
Profit per share	Yen	90.36	103.52	92.73	2.37
Dividend per share	Yen	31.00	36.00	36.00	5.00
Capital adequacy ratio		51.8%		50.7%	(1.1pt)

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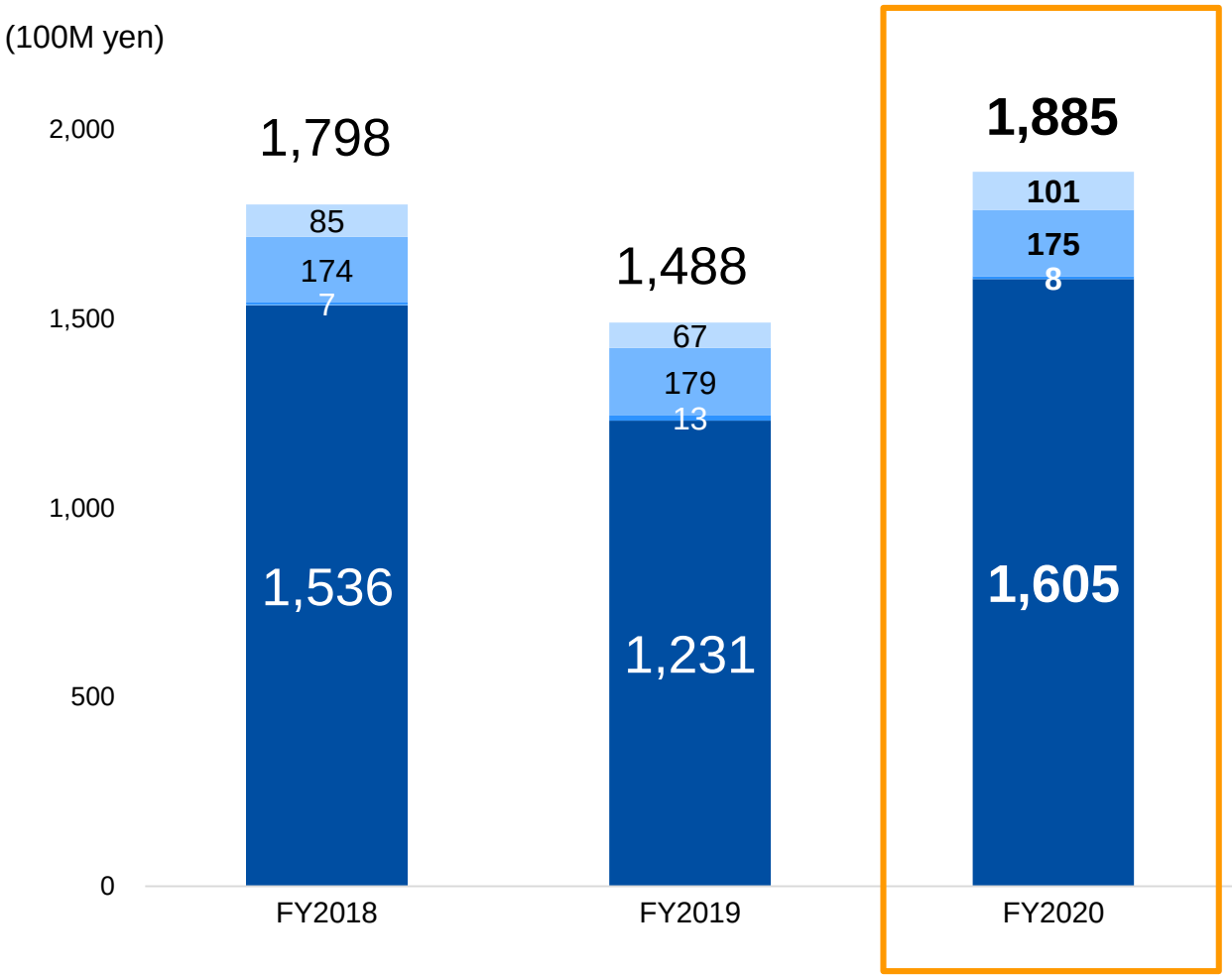
Orders received

Orders received remained high because we steadily captured orders for robust demand, primarily from municipal solid waste treatment plants.



vs. FY2019	+ 397
Domestic Environment and Energy	+ 374
Overseas Environment and Energy	(4)
Package Boiler	(4)
Equipment and Systems	+ 33

* Totals and broken-out figures may differ due to inter-segment eliminations and consolidated adjustments.

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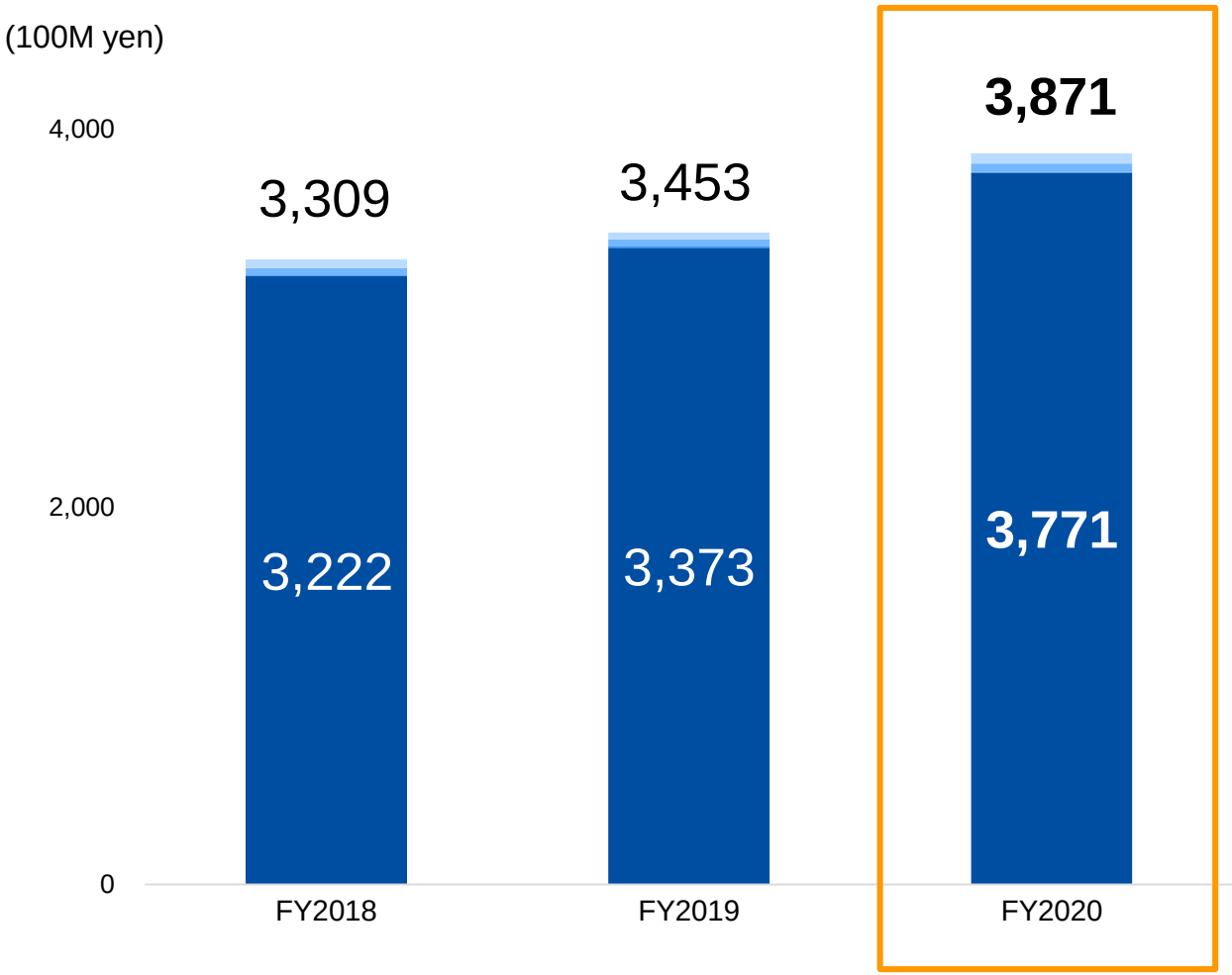
Backlog

The backlog remained high thanks to robust orders in our municipal solid waste treatment plant EPC and DBO businesses.



vs. FY2019	**+ 418**
Domestic Environment and Energy	+ 398
Overseas Environment and Energy	(3)
Package Boiler	+ 5
Equipment and Systems	+ 18

* Totals and broken-out figures may differ due to inter-segment eliminations and consolidated adjustments.

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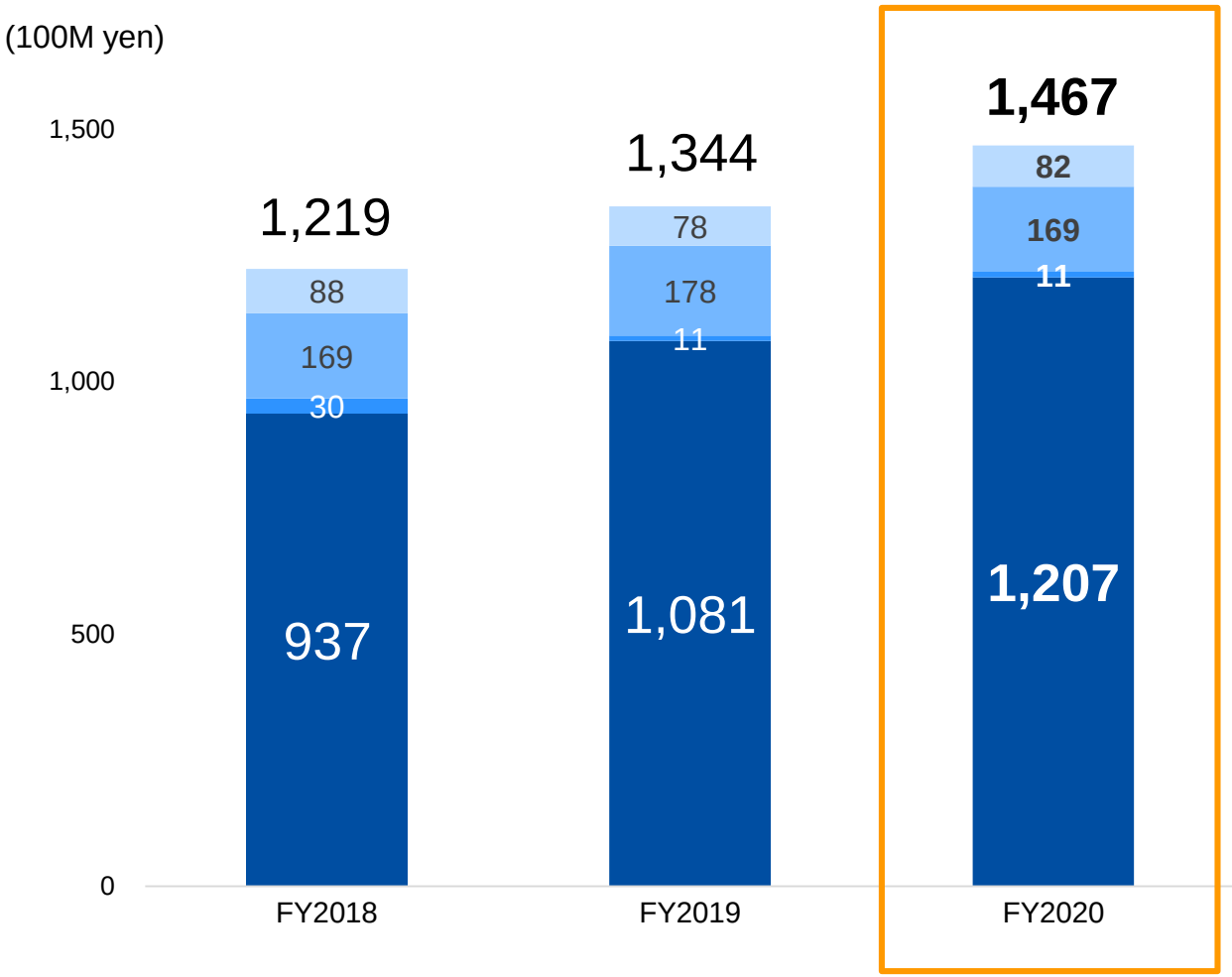
Net sales

Net sales rose thanks to steady progress in the construction of previously ordered plants, primarily municipal solid waste treatment plants.



vs. FY2019	+ 123
Domestic Environment and Energy	+ 126
Overseas Environment and Energy	+ 0
Package Boiler	(9)
Equipment and Systems	+ 4

* Totals and broken-out figures may differ due to inter-segment eliminations and consolidated adjustments.

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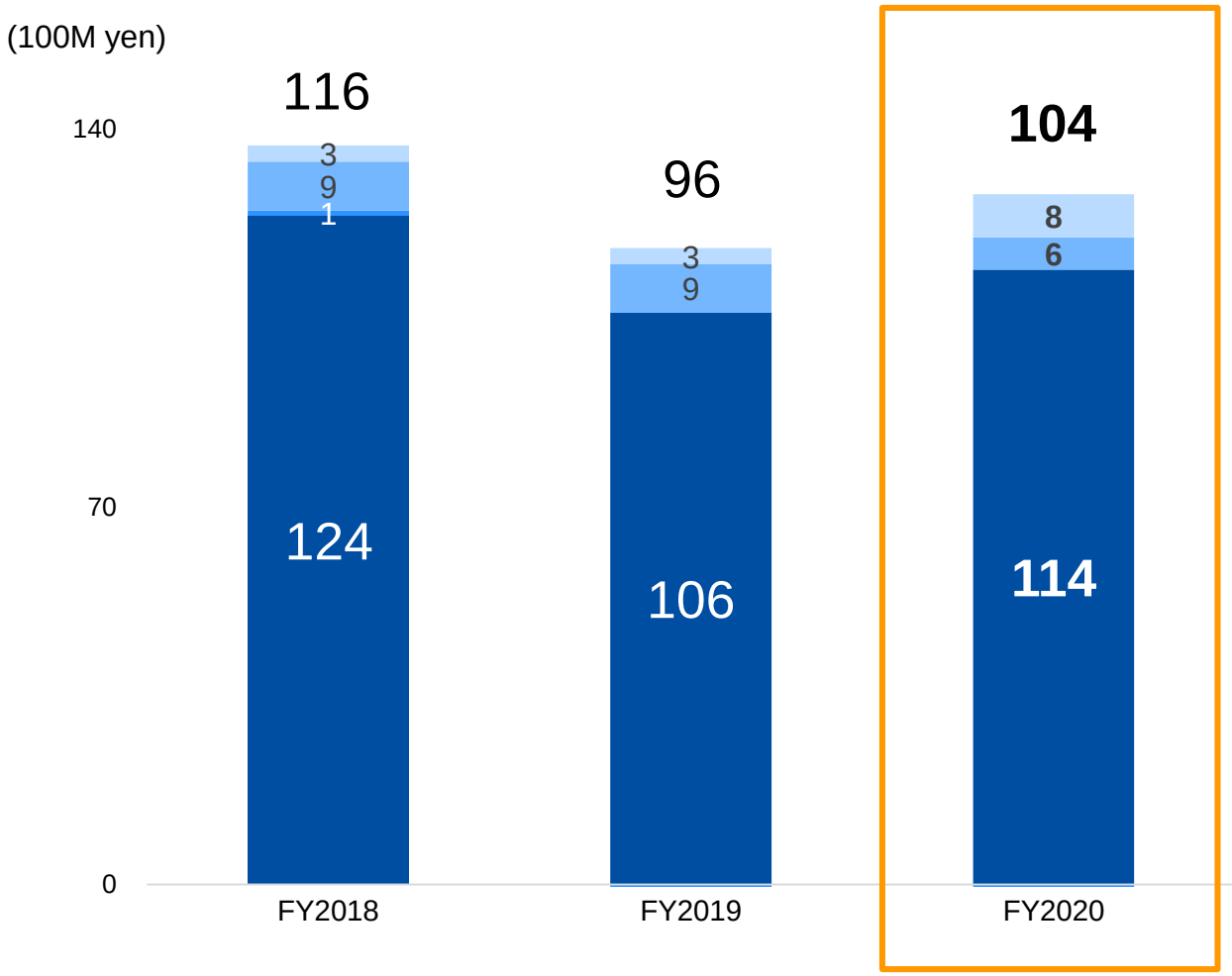
Operating profit

Operating profit rose thanks to sales growth and cost reductions.
That said, we posted provision for loss on construction contracts for some projects.



vs. FY2019	+ 8
Domestic Environment and Energy	+ 8
Overseas Environment and Energy	+ 0
Package Boiler	(3)
Equipment and Systems	+ 4

* Totals and broken-out figures may differ due to inter-segment eliminations and consolidated adjustments.

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Medium- and Long-Term Vision and Medium-Term Management Plans to Date

In order to achieve our vision of JPY 10.0 billion yen in ordinary profit in FY2020, we have worked to build structures capable of consistently earning ordinary profit of at least JPY 10.0 billion through three Medium-Term Management Plans even as the business environment undergoes major changes.

Medium- and Long-Term Vision Through FY2011

Previous Medium- and Long-Term Vision (Corporate Vision) FY2012 to FY2020

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 will work to build structures capable of consistently earning ordinary profit of at least JPY 10.0 billion even as the business environment undergoes major changes

New Long-Term Vision FY2021 to FY2030

9th Medium-Term Management Plan (FY2009 to FY2011)	10th Medium-Term Management Plan (FY2012 to FY2014)	11th Medium-Term Management Plan (FY2015 to FY2017)	12th Medium-Term Management Plan (FY2018 to FY2020)	13th Medium-Term Management Plan (FY2021 to FY2023)
Profitability through selection and concentration of resources	Reinforcement of business foundation for stability and profitability	Steady expansion in terms of both quantity and quality	Strengthening of corporate capability to facilitate steady growth	Laying the foundations for additional growth
Cumulative ordinary profit results	Cumulative ordinary profit results	Cumulative ordinary profit results	Cumulative ordinary profit results	
JPY 13.7 billion	**JPY 25.7 billion**	**JPY 31.9 billion**	**JPY 33.6 billion**	

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Reflections on the 12th Medium-Term Management Plan (1 of 3)

■ Positioning of the 12th Medium-Term Management Plan

- Final stage of the medium- to long-term vision that began in FY2012.
- Strive to build a resilient business and management foundation enabling Takuma to respond to future changes in the business environment.

■ Policies & key initiatives

1. Strengthening and expanding our revenue foundation

- Strengthening our boiler maintenance business and enhancing our ability to propose solutions
- Strengthening the profitability of our waste treatment facility operations business and applying operational expertise to our boiler and water treatment businesses (in order to expand the business domain of Takuma Technos)
- Maximizing profits by supplying optimal solutions to existing waste treatment facility customers
- Increasing package boiler and equipment & systems business profits

2. Achieving sustained growth

- Maintaining and expanding our market position in the EPC business
- Creating competitive advantages in the overseas boiler business
- Refining core technologies and developing proprietary technologies and services

3. Increasing productivity, for example by reforming business processes

- Reviewing and rebuilding our business processes
- Outsourcing non-core operations
- Actively utilizing information and communications technologies

4. Using human resources effectively

- Hiring human resources via a variety of methods
- Fostering human resources development (skill-building)
- Reviewing programs that encourage human resources to prosper and putting in place an environment conducive to the same

5. Continuing to pursue compliance management

Financial targets **ordinary profit of JPY 33.0 billion (3-year cumulative targets)**

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Reflections on the 12th Medium-Term Management Plan (2 of 3)

12th Medium-Term Management Plan results and issues

- We implemented our business strategies in accordance with our basic policies and priority measures.
- We achieved a certain measure of success, despite the fact that some issues remain, as we built a tenacious business and management foundation.

Results and issues

1. Strengthening and expanding our revenue foundation

- Orders increased as we proposed solutions based on customers' needs through recurring revenue model businesses (equipment improvements and service life extensions).
- Progress was made in initiatives designed to reduce Life Cycle Costs (LCC), for example by using POCSYS.
- We received multiple orders in our O&M business, including from the private-sector for the first time; began operations and broadened the range of services we offer.
- Firm orders secured for package boilers as well as equipment and systems helped to contribute to stable consolidated-basis profits.

2. Achieving sustainable growth

- In the EPC business, we maintained our market position thanks to an increase in orders for domestic waste treatment and energy plants.
- Initiatives to improve our position in sludge incineration and expand the overseas business are ongoing.
- Progress in efforts to refine core technologies and development of proprietary technologies has generally been smooth.

3. Increasing productivity, for example by reforming business processes

- Initiatives to improve productivity, for example by utilizing ICT, have delivered results but remain ongoing.

4. Promoting activities of human resources

- The workforce situation remains tight despite significant expansion in the number of hires as we work to secure the necessary human resources we need.

5. Continuing to pursue compliance management

- Awareness of the importance of compliance has permeated the Group thanks to ongoing educational activities. Developing even more effective measures remains an issue.

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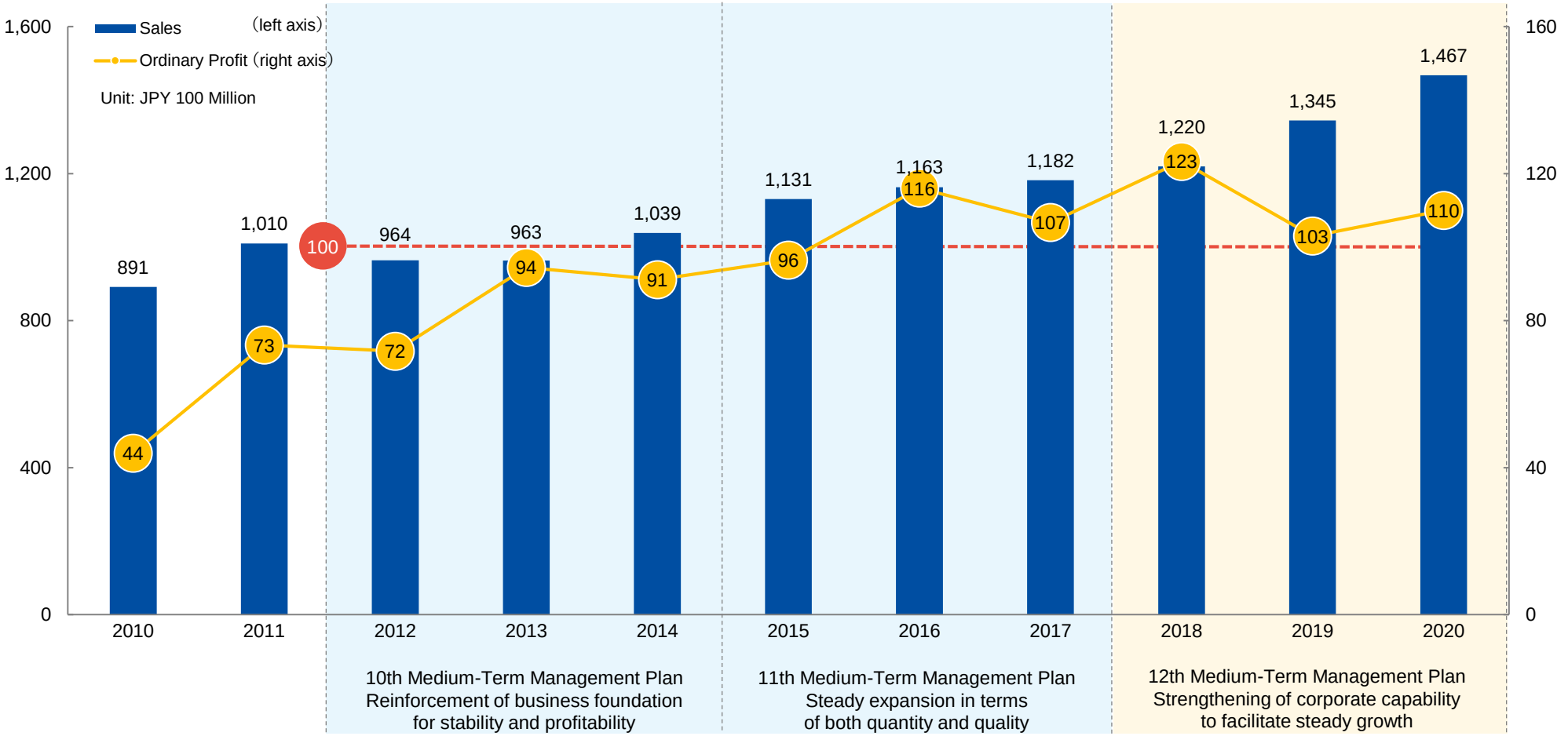
Reflections on the 12th Medium-Term Management Plan (3 of 3)

■ Financial targets and results under the previous Corporate Vision and the 12th Medium-Term Management Plan

- Previous Corporate Vision : FY2020 ordinary profit **JPY10.0 billion** → **JPY11.0 billion**
- 12th Medium-Term Management Plan : Total three-year ordinary profit **JPY33.0 billion** → **JPY33.6 billion**



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Long-term Vision “Vision 2030” (1 of 2)

Sustainable growth by implementing ESG management

Resolving challenges faced by customers and society, with a focus on renewable energy utilization and environmental protection

Technologies and services

- Expanding clean energy
- Reducing greenhouse gases
- Saving energy
- Improving energy efficiency

- Realizing stable treatment of waste
- Utilizing unused resources
- Capturing and effectively utilizing CO2
- Providing decarbonization technologies

- Realizing local production and consumption of energy
- Reducing power and manpower requirements of plant facilities while making them more resilient

Takuma Group business

EPC	Recurring revenue model businesses	Overseas businesses
Engineering, Procurement, and Construction (EPC) of a variety of plants Maintenance and expansion of position as a leading company	**Maintenance, operation management, O&M, energy services, etc.** Additional expansion as a core driver of growth	**EPC and after-sales service for Energy from Waste plants and biomass power plants** Expansion with a focus on developing nations in Asia and its development into a core business for the Group
Package boiler business	**Equipment and systems business**	**New businesses**
Expanding business domain as a manufacturer specializing in heating systems	Aim for steady growth by strengthening corporate strength	Creating new business opportunities centered on the renewable energy and environmental fields

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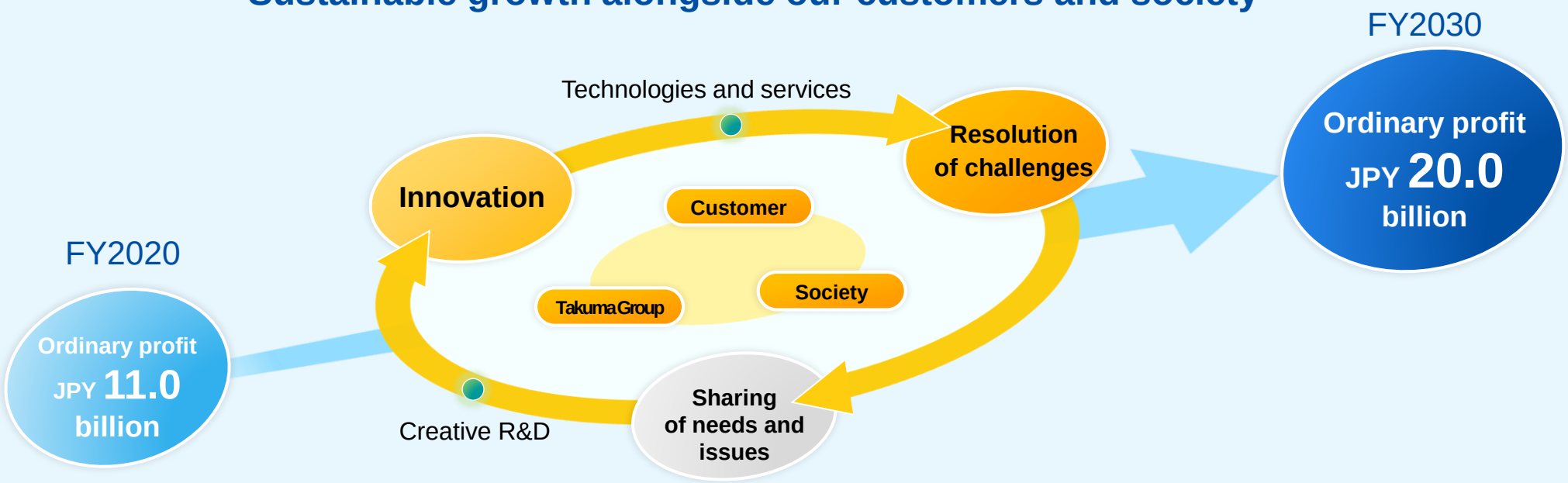
Long-term Vision “Vision 2030” (2 of 2)

Aim to maintain our role of being an indispensable presence in society as a leading company in the field of renewable energy utilization and environmental protection.

Sustainable growth alongside our customers and society



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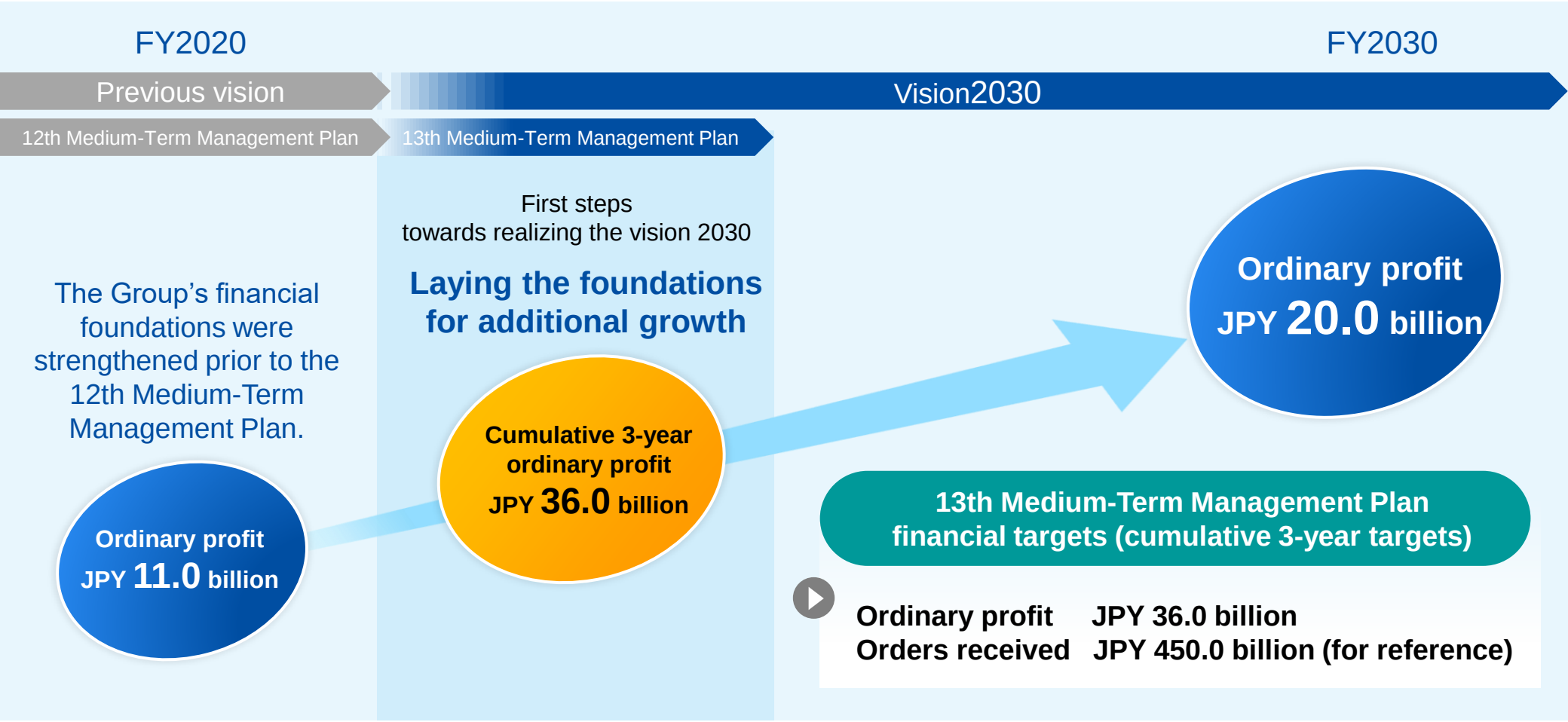
Financial Targets of the 13th Medium-Term Management Plan

Lay the foundations for additional growth and take the first steps under the 13th Medium-Term Management Plan as we prepare to realize the Vision 2030 target of ordinary profit of JPY 20.0 billion.



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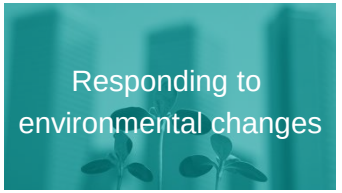
Policies of the 13th Medium-Term Management Plan

Strengthening conventional businesses by reinforcing the Group's management foundation and at the same time accelerating its response to future environmental changes.
Strive to realize sustainable growth alongside customers and society by implementing ESG management through these business activities.

Implementing ESG management

Pursuit of business activities that resolve challenges faced by customers and society

1. Municipal solid waste treatment plants
2. Water treatment plants
3. Energy plants
4. Power retail business
5. Overseas businesses
6. New businesses
7. Package boilers
8. Equipment and systems



Strengthening the management foundation

Human resources	Digital technologies	R&D, Manufacturing and engineering capabilities
Partnerships	Capital investment	Compliance

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Implementing ESG Management

Striving to satisfy all stakeholders and realize the Group's sustainable growth while strengthening ESG initiatives through business activities

■ Takuma Group Materiality ※

E Environment

- Helping combat climate change
- Conserving resources and protecting the environment

S Social

- Strengthening relationships of trust with customers and communities
- Pursuing partnerships and innovation
- Promoting activities of human resources
- Ensuring safety and health

G Governance

- Strengthening corporate governance

Realization of a sustainable society

※Medium- to long-term ESG issues identified as priority issues for the Takuma Group.
We sorted out them from the perspectives of both importance to stakeholders and importance to us.

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Strategies by Business (1 of 4)

Provide products and services that resolve challenges faced by customers and society in every business.

1 Municipal solid waste treatment plants

- Improving quality and strengthening profitability in the plant operation business and after-sales service business
- Maximizing profitability by extending the service life of existing facilities
- Ensuring a sustained flow of orders by creating customer value

- Developing structures that will allow us to provide new services, for example private sector outsourcing, private sector partnerships and Regional Circular and Ecological Sphere (Regional CES) businesses

2 Water treatment plants

- Ensuring a sustained flow of orders for sludge incineration plants
- Expanding the after-sales service business
- Accommodating replacement demand from existing facilities

- Developing structures that will allow us to accept long-term comprehensive contracts

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Strategies by Business (2 of 4)

3 Energy plants

- Expanding our market presence through steady orders for biomass power plants
- Expanding our business through additional proposals of after-sales service solutions

- Capturing demand for fuel conversions in industrial boilers

4 Power retail business

- Expanding the scale of the business by enhancing products in areas such as renewable energy and CO2-free power and developing new sales channels
- Realizing additional expansion in the local production and consumption of power

- Examining expansion of our service menu to provide the power demanded by communities and customers

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Strategies by Business (3 of 4)

5 Overseas businesses

- Ensuring a sustained flow of orders for biomass power plants
- Expanding the flow of orders for maintenance

- Capturing orders for Energy from Waste plants and developing associated structures
- Implementing global procurement

6 New businesses

- Developing businesses that help enhance the Group's services in order to realize a decarbonized, carbon-neutral society
- Investing in renewable energy businesses

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Strategies by Business (4 of 4)

7 Package boilers

- Maintaining and expanding the scale of orders in the existing domestic package boiler market
- Expanding overseas businesses

- Building and expanding a basis for profit by developing a new market for heating systems based on a decarbonized society

8 Equipment and systems

- Expanding the flow of orders by improving sales and construction capability (equipment)
- Expanding market share by improving products' competitiveness (systems)

- Improving functionality and expanding business opportunities through alliances (systems)

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Consolidated Earnings Forecast for FY2021

- **We expect to see continued robust demand** for waste incineration plants and biomass power plants.
- We will strive to secure profits on par with FY2020, even as revenue declines due to changes in the mix of projects in the EPC business.

*The forecast does not take into consideration effects of the COVID-19 pandemic.

		FY2020	FY2021	Change
		Results	Forecast	vs. FY2020
Orders received	100M yen	1,885	**1,800**	(85)
Backlog	100M yen	3,871	4,301	430
Net sales	100M yen	1,467	**1,370**	(97)
Operating profit	100M yen	104	104	0
Ordinary profit	100M yen	110	**110**	0
Profit attributable to owners of parent	100M yen	75	**76**	1
Profit per share	Yen	92.73	93.57	0.84
Dividend per share	Yen	36.00	36.00	0

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Anticipated Effects of the COVID-19 Pandemic during FY2021

While the pandemic impacted some businesses during FY2020, **the impact on overall operations during FY2021 will be slight.**

All businesses

- We will reduce the impact of the pandemic on orders and sales by switching to remote work, shift work, or smaller teams for sales activities and operations at ordered projects.

Package Boiler Business

- Sales will decline as capital investment and maintenance demand fall, primarily in the hotel industry.

Equipment and Systems Business

- Increased demand for air purification systems, which we began selling in 2016, will help bolster sales.

■ Impact on results during FY2021

We have not incorporated the effects of the pandemic into our forecast at the present time, although we continue to monitor the risks it poses.
Should the effects of the COVID-19 pandemic broaden or last longer than anticipated, our performance could be affected, for example in the form of a decline in new orders due to contracting demand or delayed orders or a slowdown in sales as a result of delays in deliveries of previously ordered projects.
In the event it becomes necessary to revise the earnings forecast, we will make that information available in a timely and appropriate manner.

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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.

Going forward, we will work to realize sustained growth together with customers and society by becoming an even better partner for our customers, thinking creatively, and actively pursuing initiatives that go beyond the conventional wisdom as a leading company while taking pride in our ability to contribute to the protection of the Earth’s environment.

Thank you for your attention.

技術を大切に
人を大切に
地球を大切に

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Supplementary Materials

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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) 894 (Consolidated) 3,925 (as of March 31, 2021)

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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.

Our Founder
Tsunekichi Takuma

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 ESG 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).

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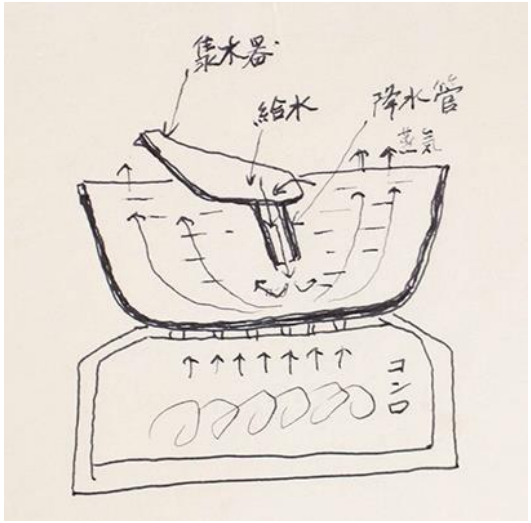
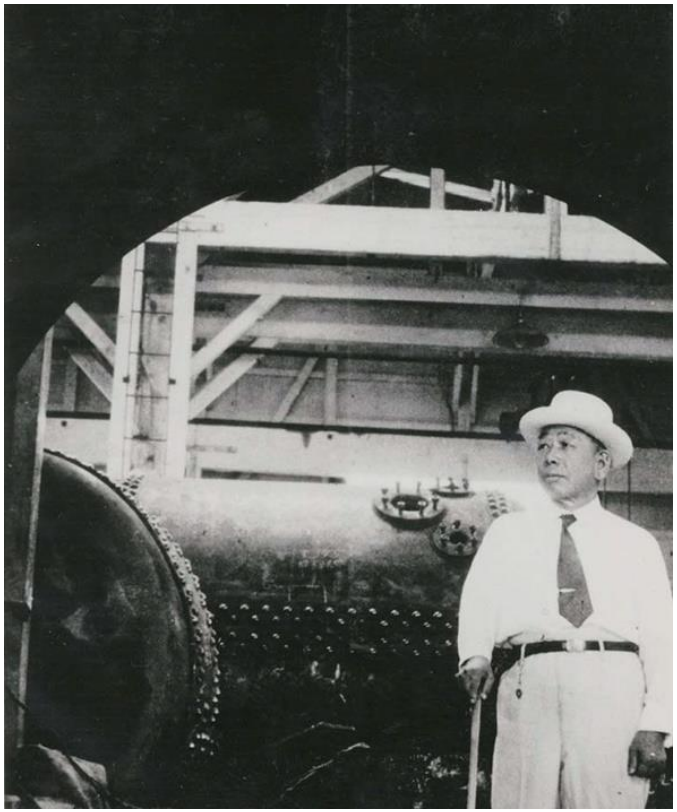
Takuma's Origins

Founder Tsunekichi Takuma invented the Takuma boiler in 1912 based on a unique design following a period of painstaking research, making a significant contribution to the development of Japanese industry through its performance that overwhelmed the foreign technologies that dominated the field at the time. Tsunekichi founded Takuma Co., Ltd in 1938 with the philosophy of **"Serve society through boiler manufacturing"** in an effort to spur the further development of boiler technology through an approach based solely on domestic manufacturing.

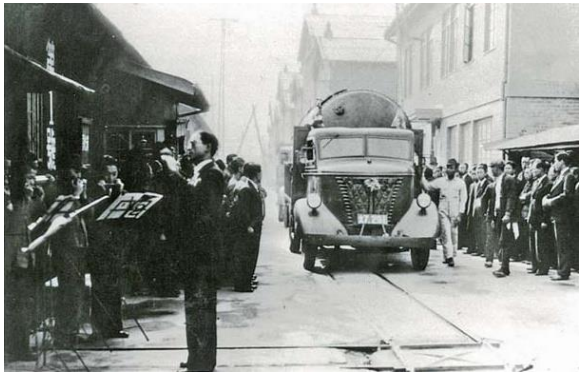


Houroku (unglazed pot)
used in boiler water circulation experiments
along with a corresponding sketch



Tsunekichi posing with his boiler

Harima Factory under construction



Band performance celebrating the first shipment
of the Tsunekichi Model A boiler

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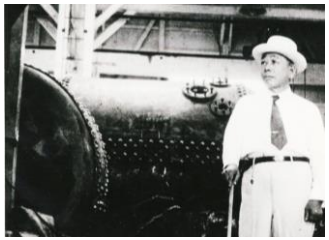
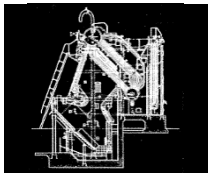
History



1912
The Takuma boiler was launched by Tsunekichi Takuma.

1938
Takuma Boiler Manufacturing Co., Ltd., was founded



1949
Bagasse-fired boiler, the first product of its kind to be exported

1963
Japan's first 24 hour operating waste incineration plant delivered

1975
Mass production began on “Vacotin Heater” the world’s first vacuum-type hot water heater
Supply to hotels and hospitals nationwide

1986
The first overseas delivery of a waste incineration plant completed (U.S.A.)

1998
Japan’s largest waste incineration plant delivered

1999
Act on Special Measures against Dioxins enacted.

2010
Energy from Waste plant delivered in Europe (U.K.)

2012
Feed-in tariff (FIT) program launched.

2014

Takuma's first biomass power plant under Japan’s FIT program was launched. Thereafter, many more plants were delivered.

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.

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.

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

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.

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Takuma Group Strengths

Along with **the technologies and expertise** that the Takuma Group has improved and accumulated since its founding, **the relationships of trust that the Group has developed with longstanding customers** by providing after-sales service and solutions are its greatest strengths and the source of its ability to compete successfully.

Municipal solid waste treatment plants

- Waste incineration plants
  360+ facilities

Water treatment plants

- Uniflow sand filters: **2,700+** units
- Sludge incinerators: **20+** facilities

Energy plants

- Boilers: **3,200+** units
  Of which, biomass boilers: **620+** units
- Industrial waste treatment plants: **120+** facilities

Package boilers

- Vacuum-type Hot Water Heaters (Vacotin Heater)
- Once-through Boilers (Equos)
- Heat-transfer Boilers (Thermoheater)

Building equipment and equipment for the semiconductor industries

- Air-conditioning, water, wastewater, and hygienic equipment installation services
- Equipment for the semiconductor and electronic device industries

Takuma Group Strengths

Technology and expertise

Relationships of trust with customers

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Segments

Domestic Environment and Energy Business

- **Municipal Solid Waste Treatment Plant**
  Waste incineration plants
  Biogas recovery plants
  Recycling plants
- **Water treatment plants**
  Sewage sludge power plants
  Sand filtration systems
- **Energy plants**
  Biomass power plants
  Industrial waste treatment plants

Overseas Environment and Energy Business

- **Waste treatment plants**
  Energy from Waste plants.
- **Energy plants**
  Biomass power plants

Package Boiler Business

- **Vacuum-type Hot Water Heaters**
  Vacotin Heater
- **Once-through Boilers**
  Equos
- **Heat-transfer Boilers**
  Thermoheater
- **Hybrid hot water systems**
  Qpit

Equipment and Systems Business

- **Building equipment**
  Air-conditioning, water, wastewater,
  and hygienic equipment installation services
- **Equipment for the semiconductor industries**
  Clean system etc.

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Municipal Solid Waste Treatment Plant Business

(Related SDGs)

We supply the following products and services to local governments:

- EPC*1 and DBO*2 businesses for waste treatment facilities
  Stoker-type incinerators (waste incineration plants)
  Methane fermentation systems (biogas recovery plants)
  Crushing and sorting systems (recycling plants)
- Primary equipment improvement projects and service life extension projects
- O&M, operation management, and maintenance

We supply products and services that meet the needs of various communities based on the technology and expertise we've accumulated through the construction and provision of after-sales service for numerous plants over more than half a century.

*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).

No. of waste incineration plants delivered: More than 360
(Most of any manufacturer in Japan)
DBO business projects: 15 (FY2020, including projects under construction)

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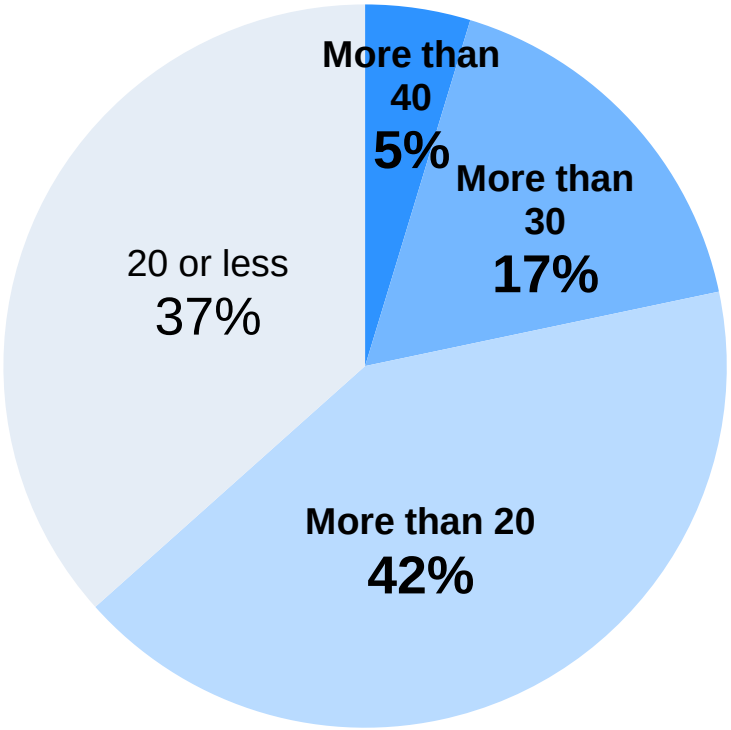
Market Environment - Municipal solid waste treatment plants

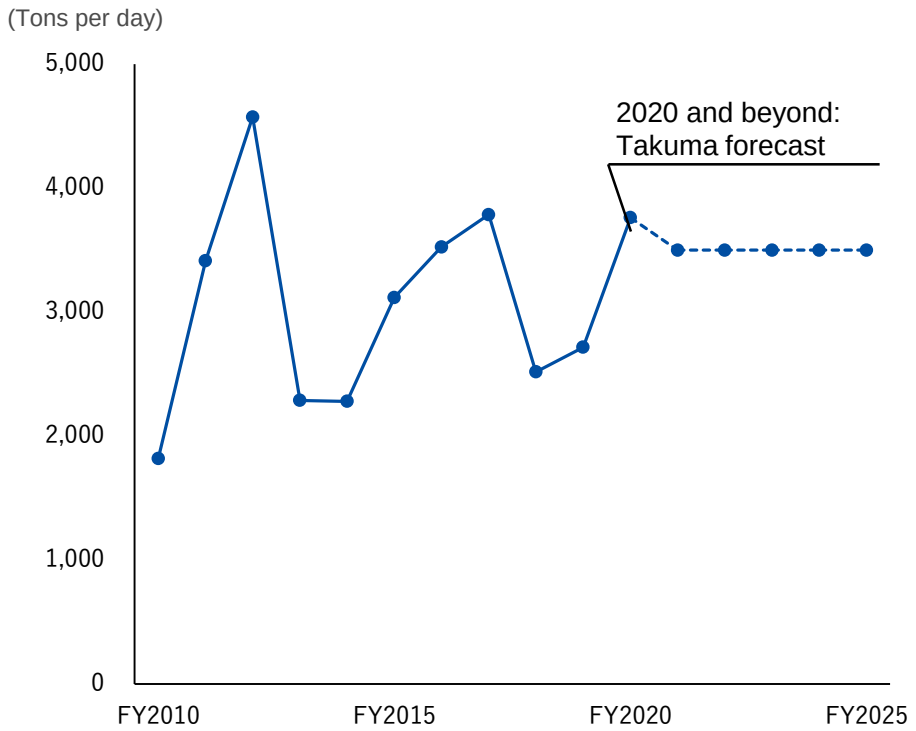
Replacement and service life extension demand continues due to aging.

■ Facility age



Percentage of facilities

■ Market size



Treatment capacity of total order in the market

Source: Compiled by Takuma based on “Municipal Solid Waste Treatment Survey Results, FY2019” (Ministry of the Environment).

Based on a study by Takuma.

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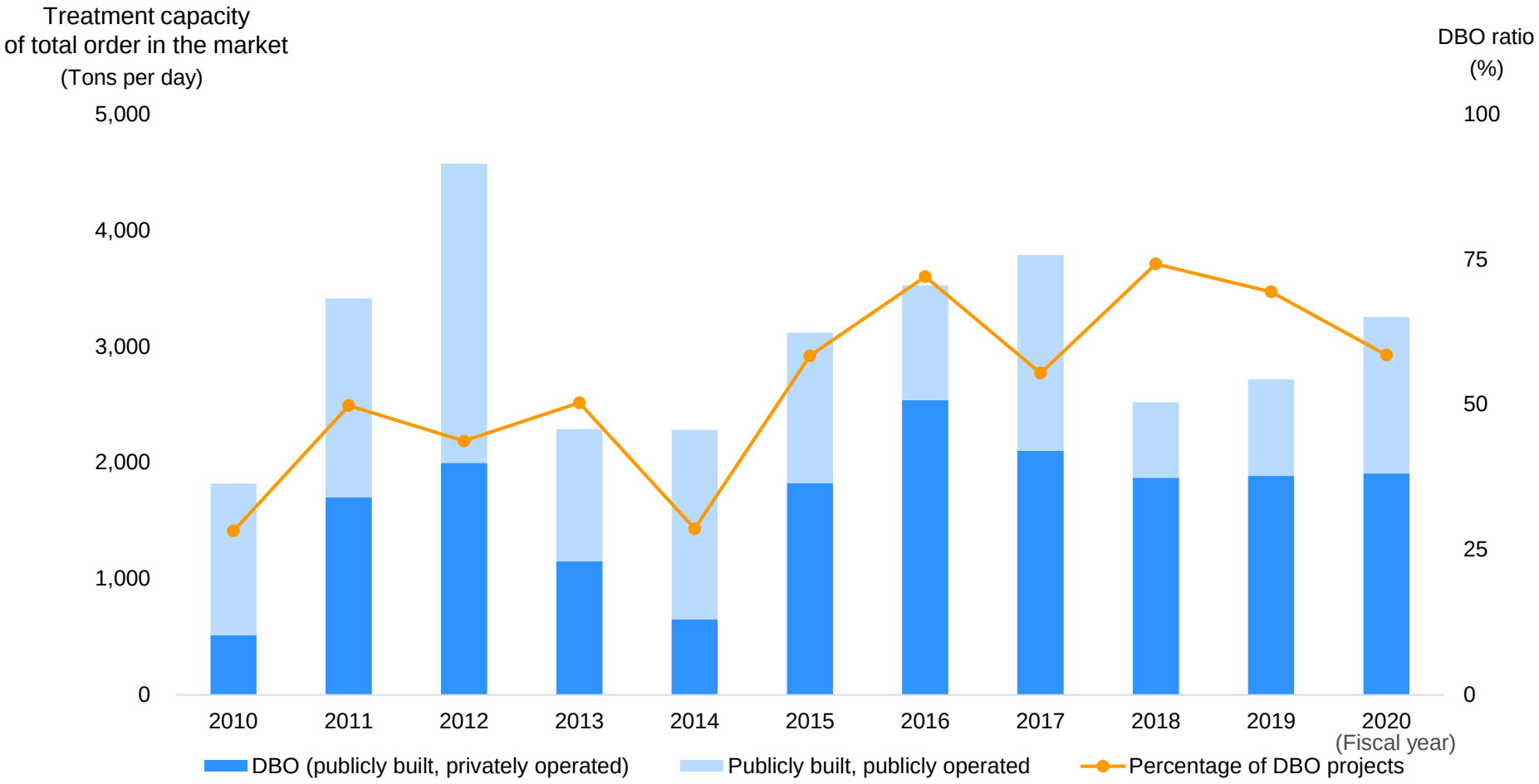
The DBO approach is gaining traction in bidding for facility construction.



* 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).

Based on a study by Takuma.

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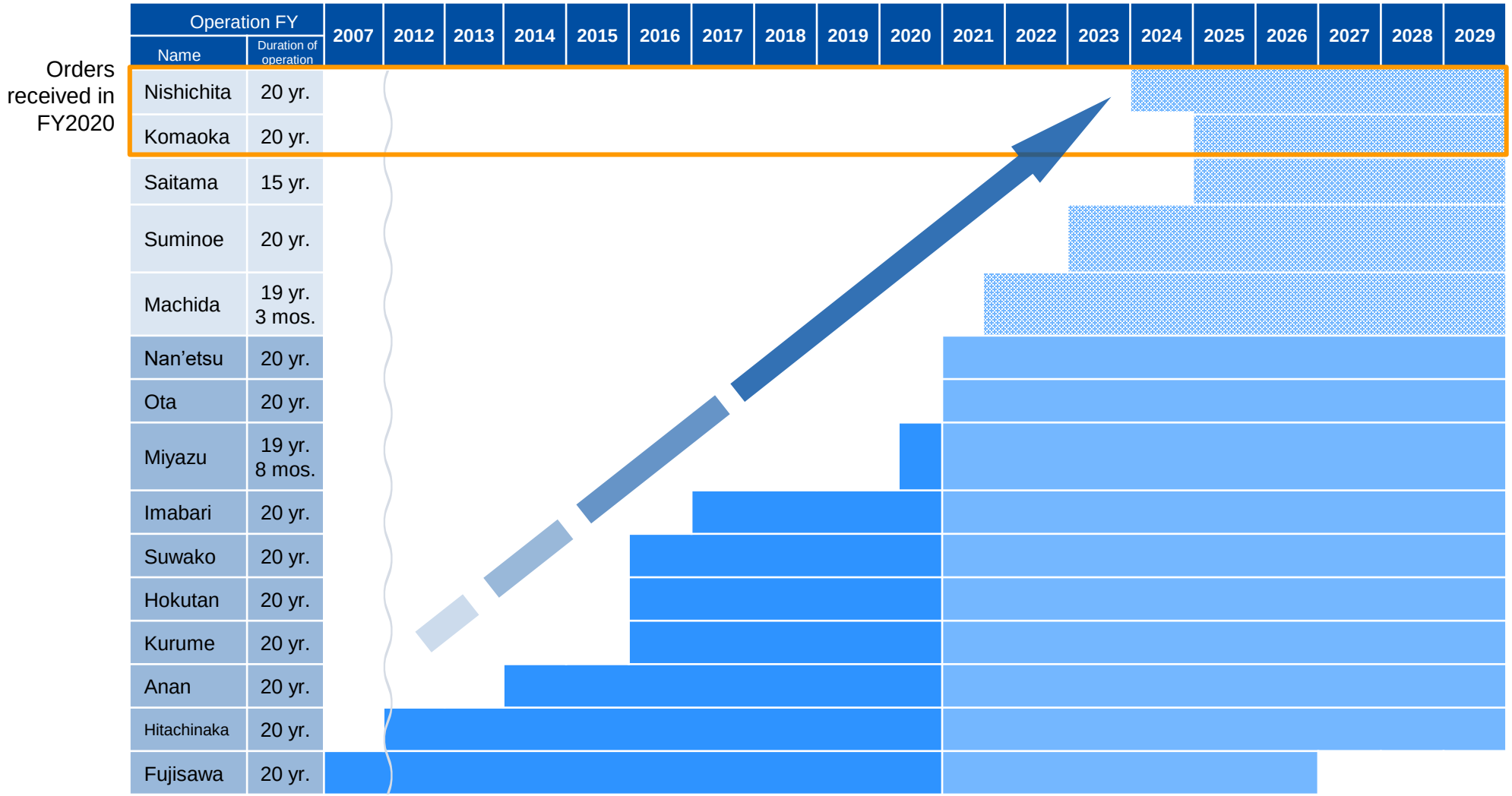
Market Environment - Municipal solid waste treatment plants

The number of DBO projects which Takuma received is rising steadily.



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Takuma received a DBO project order for Komaoka Incineration Plant from the City of Sapporo.

Contributing to sustainable community development through a DBO project designed to realize Sapporo's concept of the SDG-compliant city of the future

- Stable waste treatment using state-of-the-art technology (high-performance stoker incinerators, advanced exhaust gas treatment technology, and remote monitoring operational support from Solution Lab, etc.)
- Reduced CO_2 emissions through high-efficiency generation of electricity and supply of heat to the surrounding area
- A phase-free facility that serves as both a base for community activities involving residents during normal times and as a disaster prevention base in times of emergency

Treatment capacity:	600 tons per day (300 tons per day × 2 incinerators)
Power output:	16,550 kW
Contract value:	60,716,000,000 yen (excluding consumption tax)
Scheduled completion:	March 2025
Operation period:	April 2025 to March 2045

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Energy plants

(Related SDGs)

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

- Biomass power plant EPC*1
- Industrial waste treatment plant EPC
- O&M, operation management, and maintenance

We have extensive experience in constructing plants using various types of fuel. We propose the combustion furnace types*2 and plant system best suited to the fuel to be used at each facility and plant on a custom-order basis.

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

*2 Primarily the following four methods: Step grate stoker, traveling stoker, bubbling fluidized bed (BFB), and circulating fluidized bed (CFB).

No. of boilers delivered: More than 3,200, of which more than 620 are biomass-fueled

*Including overseas projects.

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

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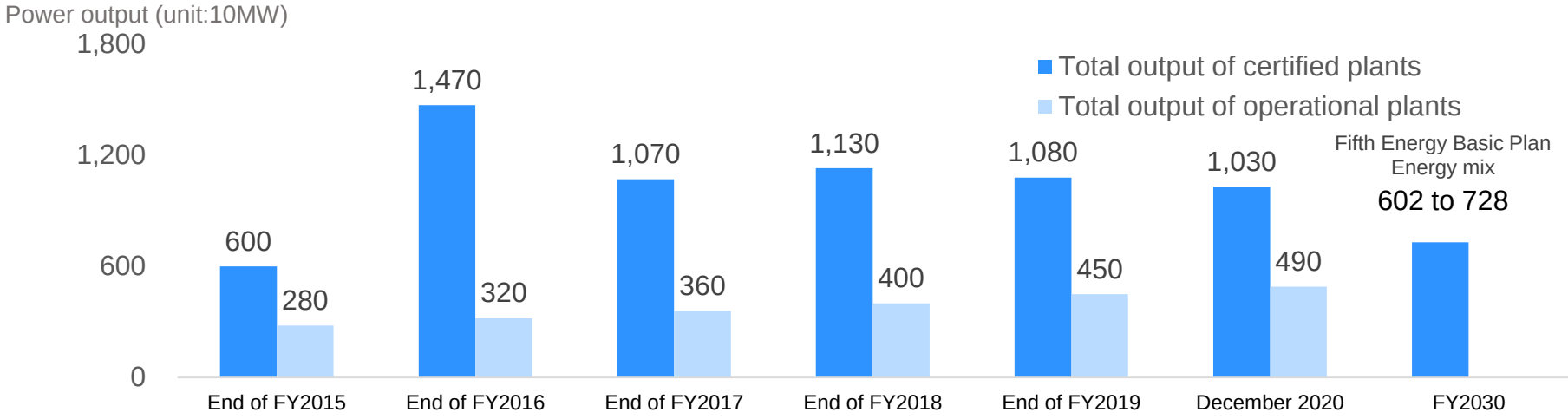
Market Environment - Biomass power plants

Trends in biomass power generation under the FIT program

- In FY2016, the government adopted a purchase price reduction (from 24 yen to 21 yen) for the category of plants using general wood fuel with output of at least 20,000 kW for FY2017. The number of facilities being certified under the FIT program grew rapidly as numerous businesses obtained certification in that category during FY2016. At the same time, some projects failed despite having passed the certification and contract stages when favorable conditions, for example concerning fuel procurement, failed to materialize.
- As of December 2020, operational facilities had a combined output of about 4.9 million kilowatts. Numerous certified projects are currently in the design or construction phase. The workload on equipment manufacturers and contractors is high, and costs remain high.

Growth in the combined output of biomass power plants certified and brought online under the FIT program (cumulative totals)



(1) If an order cannot be placed within 2 years of certification
→ Loss of certification
(2) If the facility is not operational by November 30, 2024
→ Shorter power purchase period

(1) If the facility is not operational within 4 years of certification
→ Shorter power purchase period
(2) If the facility is not operational within 1 year of the operational start deadline and satisfies certain conditions
→ Loss of certification

Source: Compiled by Takuma based on the website of the Agency for Natural Resources and Energy (Ministry of Economy, Trade and Industry). Figures in graph have been rounded. Figures reflect biomass ratios. Figures include 2.30 million kW of plants brought online prior to the introduction of the FIT program.

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Transition of some plants from the FIT program to the FIP program

- During FY2022, biomass power plants with output of 10,000 kW or greater will transition from the FIT program to a feed-in premium (FIP) program. The program, which reflects a midpoint in the drive to establish independent renewable energy power sources, will implement market and arm's-length transactions, rather than purchases at fixed prices. It will serve as a mechanism to offer subsidies to power producers by allocating premium prices that are calculated on the basis of factors such as average market prices.
- The FIP program will target biomass power plants with output of 50 kW or greater. Since biomass power plants with output of less than 10,000 kW will be able to obtain FIT certification if they satisfy certain regional activity requirements, demand under the FIT program is expected to continue. Takuma continues to observe trends in program changes.

Procurement pricing under the FIT program

<table>
<tr><th colspan="2">FY</th><th>2015</th><th>2016</th><th>2017</th><th>2018</th><th>2019</th><th>2020</th><th>2021</th><th>2022</th></tr>
<tr><td rowspan="2">Timber from thinning, etc.</td><td>Less than 2,000 kW</td><td colspan="7">40 yen</td><td>40 yen, subject to regional activity requirements</td></tr>
<tr><td>2,000 kW or greater</td><td colspan="7">32 yen</td><td>32 yen, subject to regional activity requirements
*Plants with output of 10,000 kW or greater will migrate to the FIP program.</td></tr>
<tr><td rowspan="2">General timber</td><td>Less than 10,000 kW</td><td colspan="7">24 yen</td><td>24 yen, subject to regional activity requirements</td></tr>
<tr><td>10,000 kW or greater</td><td colspan="2">24 yen</td><td>24 yen
(less than 20,000 kW)
21 yen
(20,000 kW or greater)</td><td colspan="4">As bid</td><td>Plants will transition to the FIP program.</td></tr>
</table>

Source: Compiled by Takuma based on the website of the Agency for Natural Resources and Energy (Ministry of Economy, Trade and Industry)

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Water treatment plants

(Related SDGs)

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
- Maintenance and operation management

Helping solve customers' issues with unique technologies

- Energy-saving/energy-creating sludge power generation systems with low greenhouse gas (N_2O) emissions
- Moving-bed sand filtration systems (Uniflow Sand Filter), etc., of which we've delivered about 2,700 systems.

A sewage sludge power plant

Sand filtration systems

Sewage sludge incinerator deliveries More than 20 facilities
Moving-bed sand filtration system deliveries More than 2,700 systems

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Takuma received a biomass power plant EPC order from SGET Toki Biomass Godo Kaisha.

The customer made a favorable evaluation of Takuma based on our extensive experience in delivering more than 620 systems, our products' ability to accommodate a diverse range of fuels, and the operational performance of a biomass power plant we delivered to SGET Green Power Sanjo Godo Kaisha.

Power output: 7,100kW

Scheduled completion: December 2022

Takuma received a sewage sludge power generation system EPC order from the City of Sapporo.

The system combines a stoker furnace, which is a type of energy-saving incinerator, with a generating facility that will create energy. The project will help save energy, make effective use of sewage sludge, and reduce greenhouse gas (N_2O) emissions.

Treatment capacity:	100 tons per day × 1 incinerator (power output: about 200 kW)
Order value:	4.38 billion yen
Scheduled completion:	March 2024

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CO_2 supply system (t-CarVe®) delivered to Sara Inc. received the Japan Machinery Federation's Chairman's Award

Takuma's system supplies large volumes of safe, economical CO_2 by removing hazardous components from the combustion gases from a biomass power plant.

- The technology comprises a biomass tri-generation system that uses heat, electricity, and CO_2 to cultivate vegetables.
- The carbon-negative system helps reduce CO_2 emissions.

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Other segments

(Related SDGs)

■ 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)
- Heat-transfer Boilers (Thermoheater)

■ Equipment and Systems Business

- Air-conditioning, water, wastewater, and hygienic equipment installation services
- Equipment for the semiconductor and electronic device industries

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Topic Capital investment - New TAKUMA Building [Training Center]

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

We built 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

Total investment **About 2 billion yen**

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Topic Capital investment - New Harima Factory

Increasing production capacity

Accommodating a diverse range of needs against the backdrop of increasing use of renewable energy

- High boiler demand
- Larger boiler size
- Higher-temperature, higher-pressure (higher-efficiency) designs, etc.

Purpose

- Passing down our commitment to high-quality manufacturing
- A sustainable factory designed to effectively eliminate CO_2 emissions

Establishing an after-sales service facility (Supply Chain Lab)

Contributing to stable facility operation

- Plant component inventory
- Utilizing information and communication technologies (ICT)
- Collaborating with the Solution Lab

Planned completion **December 2022**

Total investment **About 13 billion yen**

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Acquisition of Techno Links Inc.

Techno Links is a manufacturer whose operations encompass the design, manufacture, installation, and after-sales service of environmental recycling equipment*. We're striving to build sorting systems that can achieve a higher recycling rate by adding the company's ability to design custom-made equipment based on the properties of the waste being recycled with Takuma's overall plant design capabilities.

*Equipment that makes up the recycling plants that Takuma builds as part of its EPC business.

- Equipment for crushing, sorting, compacting, and transporting beverage containers like bottles, cans, and plastic bottles
- Equipment for manufacturing and transporting RPF
- Equipment for sorting and compacting other plastics
- Belt conveyors and other equipment

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- Breakdown of Consolidated Results for Domestic Environment and Energy Business

(100M yen)

FY2020	Orders received	Net sales	Backlog
Municipal Solid Waste Treatment Plant	1,414	911	2,928
Energy Plant	54	208	730
Water Treatment Plant, others	136	87	112
Total	1,605	1,207	3,771

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