



Details by Segment

- Energy Solution & Marine Engineering -


FY2023.Q2 (vs. FY2022.Q2)

Orders received  -¥20.0 bil.

Decreased due to a decrease in orders for domestic municipal waste incineration plants and LPG/LAG carriers despite orders for naval equipment for MOD.


Revenue  +¥13.3 bil.

Increased due to an increase in Energy business and construction work for LPG/LAG carriers


Business profit  +¥5.4 bil.

Improved due to revenue increase and an improved equity in gains


FY2023 forecast (vs. Forecast in August)

Orders received  +¥10.0 bil.

Revised up mainly due to increase in for naval equipment for MOD

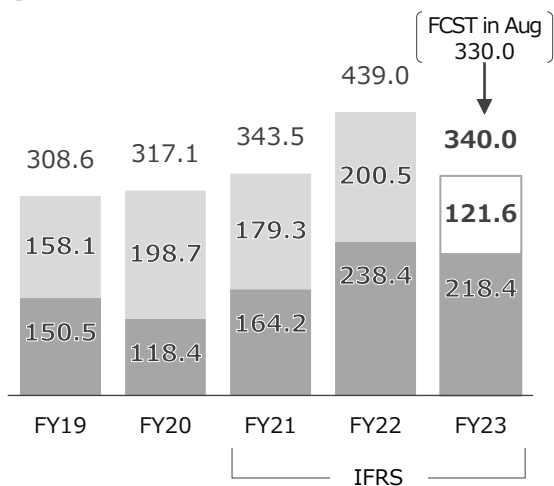
Revenue  ±¥0.0 bil.

Expected to remain at the same level

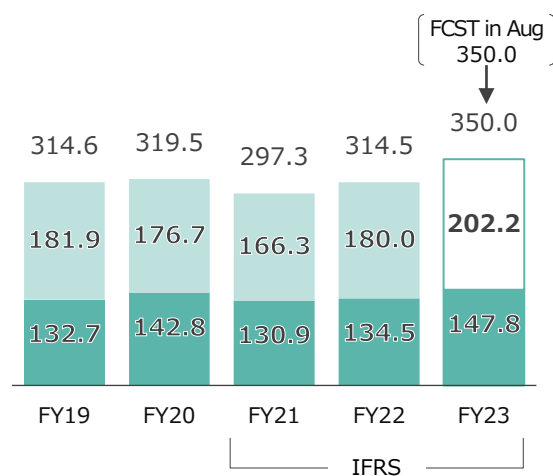
Business profit  +¥11.0 bil.

Revised up due to profitability improvement and an improved equity in gains

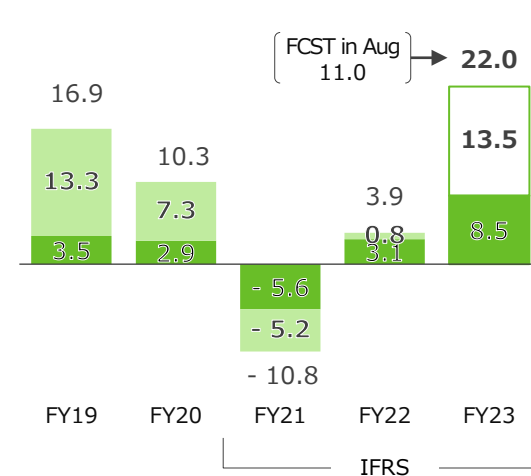
Orders received (billion yen)



Net Sales or Revenue (billion yen)



Operating Profit or Business Profit (billion yen)

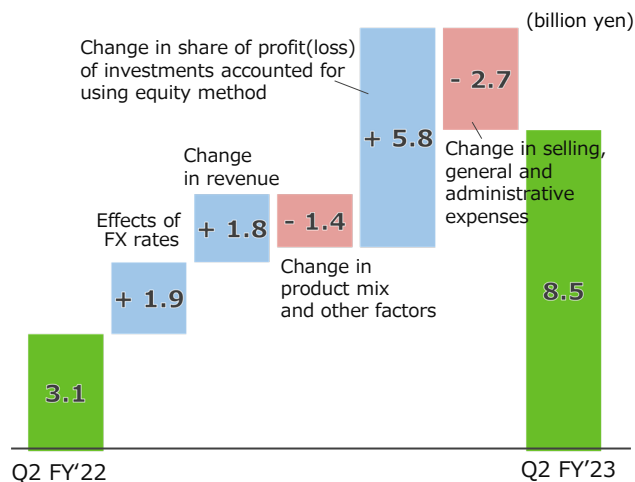


Details by Segment - Energy Solution & Marine Engineering -

(Billion Yen)

	FY2022	FY2023		FY2022	FY2023 Forecast				
	Q2 Actual	Q2 Actual	Change	Actual	Old FCST	New FCST	Chg. Vs. FY22	Chg. Vs. Old FCST	Q3-4 FCST
Orders Received	238.4	218.4	- 20.0	439.0	330.0	340.0	- 99.0	+ 10.0	121.6
<i>Energy, Plant & Marine Machinery</i>	191.0	188.0	- 2.9	292.6	290.0	300.0	+ 7.4	+ 10.0	112.0
<i>Ship & Offshore Structure</i>	47.3	30.3	- 17.0	146.3	40.0	40.0	- 106.3	-	9.7
Revenue	134.5	147.8	+ 13.3	314.5	350.0	350.0	+ 35.5	-	202.2
<i>Energy, Plant & Marine Machinery</i>	96.3	103.8	+ 7.5	234.4	260.0	260.0	+ 25.6	-	156.2
<i>Ship & Offshore Structure</i>	38.2	44.0	+ 5.7	80.0	90.0	90.0	+ 10.0	-	46.0
Business Profit	3.1	8.5	+ 5.4	3.9	11.0	22.0	+ 18.1	+ 11.0	13.5
<i>[Margin]</i>	<i>[2.3%]</i>	<i>[5.8%]</i>	<i>[+ 3.4pt]</i>	<i>[1.2%]</i>	<i>[3.1%]</i>	<i>[6.3%]</i>	<i>[+ 5.0pt]</i>	<i>[+ 3.1pt]</i>	<i>[6.7%]</i>
Share of profit (loss) of investments accounted for using equity method	2.2	8.0	+ 5.8	6.0	7.5	11.5	+ 5.5	+ 4.0	3.5

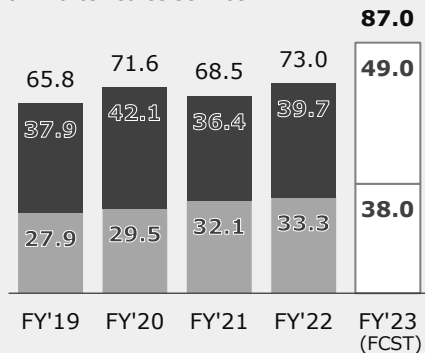
Details of change in Business Profit(Loss)



Appendix

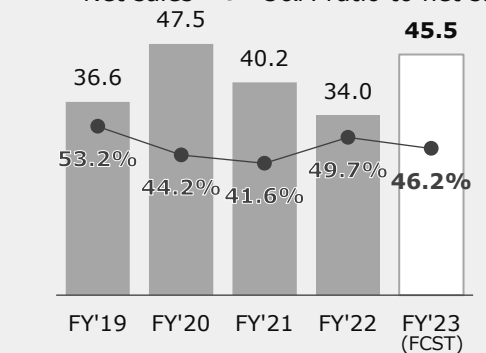
Revenue of major products in the energy business

(billion yen)
above : components
below : after-sales service



Revenue of municipal waste incineration plants

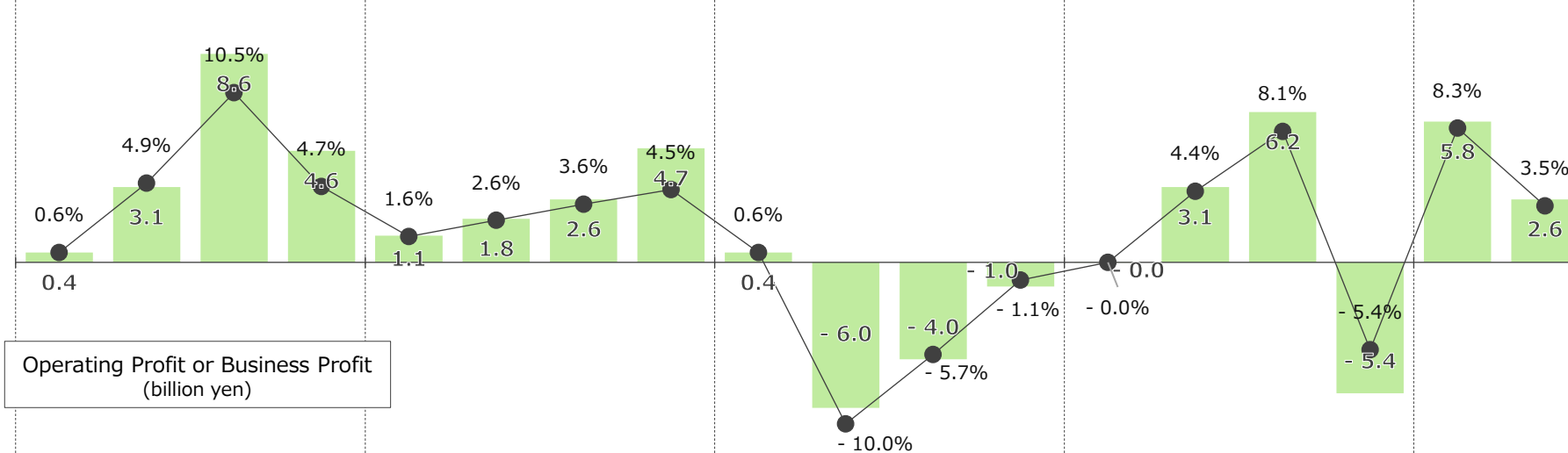
(billion yen)
■ Net sales ● O&M ratio to net sales



Details by Segment - Energy Solution & Marine Engineering -

Net Sales or Revenue
(billion yen)

(Note) The prior results of previous segment have been reclassified to current segment



Operating Profit or Business Profit
(billion yen)

Market Overview

● Energy system & Plant Engineering

Domestic	Emerging Markets
Steady demand for distributed power plants and municipal waste incineration plants is expected to continue	Steady demand for distributed power plants and other energy infrastructure is expected to remain solid

● Ship & Offshore Structure

Commercial ships	Submarines and others
<ul style="list-style-type: none"> - Ship prices continue to be high, affected by the soaring cost of materials and equipment - Demand for LPG/ammonia carriers remains strong, in line with the carbon neutral trend 	Stable orders for submarines are expected

● Entire segment

COVID-19 and other risks	Carbon neutrality
<ul style="list-style-type: none"> - Gas fuel supply for power plants is in short - Rising raw materials prices and logistics costs, and parts supply shortage are concerned 	Inquiries and requests for cooperation are increasing regarding decarbonization solutions, including hydrogen products

Specific Efforts



Providing products and services that enable a seamless transition from low carbon to decarbonization

- Expand gas turbines (GT) that can handle all stages of natural gas, hydrogen co-firing, and pure firing, while utilizing customers' existing facilities

Topic (FY' 23 Q2)

Received order for 8MW-class GT cogeneration system with hydrogen co-firing using DLE^{※1} combustor

Commenced sales of the world's first 1.8MW-class GT cogeneration system dedicated to hydrogen combustion using a micromix^{※2} combustor

MOU signed with a major petrochemical company in Thailand to study the development, construction, and operation of a hydrogen GT power generation facility

※1 Dry Low Emission

※2 A combustion method developed by KHI that can keep NOx emissions stable and low by injecting fuel in small portions through injection holes of 1 mm or less in diameter



「M7A-03D」
With
DLE combustor



Micromix
combustor



Efforts to provide decarbonization solutions

Topic **Japan's first** demonstration of CO₂ capture from exhaust gas of a thermal power plant

- Adoption of the solid absorption method significantly reduces the energy required for CO₂ separation and recovery compared to conventional methods.
- In-house Development of Compact and Efficient Mobile Bed System for CO₂ Separation and Recovery
- **World's first** application of amine solid absorber to a mobile bed system



Demonstration facility
in Maizuru Power Station,
The Kansai Electric Power Co., Inc.