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# Financial Results for FY2023

May 13, 2024

Hitachi Zosen Corporation

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# Financial Information

**Due to the high level of order backlog and growth in overseas business, net sales and operating income increased for the sixth consecutive year.**

Order intake:	JPY 715.1 billion (YoY - 3.0%)
Net sales:	JPY 555.8 billion (YoY + 12.8%)
Operating income:	JPY 24.3 billion (YoY + 21.3%)

**Exceeded targets for the first year of the medium-term management plan (2023-2025).**

**Dividends per share increased to JPY23 (+ JPY5) for fiscal year ended March 2024.**

Due to the high level of order backlog and growth in overseas business, net sales and operating income increased for the sixth consecutive year.

Exceeded targets for the first year of the medium-term management plan (2023-2025).

Dividends per share increased to JPY23 (+JPY5) for fiscal year ended March 2024.

(Billions of JPY)

	FY2022	FY2023					
	Results (a)	Forecast		Results (c)	Difference		
		Initial (b)	as of Feb.		(c)-(a)	(c)-(b)	
Order intake	737.5	530.0	620.0	715.1	-22.4	-3.0%	185.1
Net sales	492.6	520.0	540.0	555.8	63.2	+12.8%	35.8
Operating income	20.0	22.0	23.0	24.3	4.3	+21.3%	2.3
% to net sales	4.1%	4.2%	4.3%	4.4%			
Ordinary income	17.8	18.0	20.0	25.6	7.8	+43.8%	7.6
Profit attributable to shareholders of Hitachi Zosen	15.5	12.0	15.0	18.9	3.4	+22.0%	6.9
ROE	11.5%	8.3%	10.3%	12.6%			
ROIC	6.2%	—	—	7.4%			
Dividends per share (JPY)	18	18	—	23			

# FY2023 Results - Order Intake, Net sales, Operating income

(Billions of JPY)

	FY2022	FY2023					
	Results (a)	Forecast		Results (c)	Difference		
		Initial (b)	as of Feb.		(c)-(a)	(c)-(b)	
<b>Order intake</b>	737.5	530.0	620.0	715.1	-22.4	-3.0%	185.1
Environment	561.2	391.0	460.0	558.8	-2.4		167.8
Machinery & Infrastructure	90.2	86.0	83.0	80.8	-9.4		-5.2
Carbon Neutral Solution	76.2	51.5	75.0	72.6	-3.6		21.1
Others	9.9	1.5	2.0	2.9	-7.0		1.4
<b>Net sales</b>	492.6	520.0	540.0	555.8	63.2	+12.8%	35.8
Environment	348.1	376.5	396.0	407.3	59.2		30.8
Machinery & Infrastructure	88.2	85.0	89.0	91.0	2.8		6.0
Carbon Neutral Solution	46.6	57.0	53.0	55.2	8.6		-1.8
Others	9.7	1.5	2.0	2.3	-7.4		0.8
<b>Operating income</b>	20.0	22.0	23.0	24.3	4.3	+21.3%	2.3
Environment	15.0	18.0	18.5	19.1	4.1		1.1
Machinery & Infrastructure	3.4	2.6	2.3	3.0	-0.4		0.4
Carbon Neutral Solution	0.4	1.2	1.9	1.8	1.4		0.6
Others	1.2	0.2	0.3	0.4	-0.8		0.2

# FY2023 Results - Environment Business (Consolidated)

(Billions of JPY)

Environment Business (Consolidated)	FY2022	FY2023					
	Results (a)	Forecast		Results (c)	Difference		
		Initial (b)	as of Feb.				
					(c)-(a)	(c)-(b)	
<b>Order intake</b>	561.2	391.0	460.0	558.8	-2.4	-0.4%	167.8
EPC	317.9	229.0	146.0	194.8	-123.1		-34.2
AOM	243.3	162.0	314.0	364.0	120.7		202.0
<b>Net sales</b>	348.1	376.5	396.0	407.3	59.2	+17.0%	30.8
EPC	183.5	212.5	224.0	232.5	49.0		20.0
AOM	164.5	164.0	172.0	174.8	10.3		10.8
<b>Operating income</b>	15.0	18.0	18.5	19.1	4.1	+27.3%	1.1
EPC	2.2	4.85	2.5	1.5	-0.7		-3.35
AOM	12.8	13.15	16.0	17.6	4.8		4.45

EPC : Engineering, procurement and construction

AOM : After-sales services, operation and maintenance

# FY2023 Results - Environment Business (Breakdown)

(Billions of JPY)

## Environment Business (excluding Inova)

	FY2022		FY2023				
	Results (a)	Forecast		Results (c)	Difference		
		Initial (b)	as of Feb.				
					(c)-(a)	(c)-(b)	
<b>Order intake</b>	316.8	199.0	211.0	237.0	-79.8	-25.2%	38.0
EPC	115.0	67.0	36.0	38.6	-76.4		-28.4
AOM	201.7	132.0	175.0	198.4	-3.3		66.4
<b>Net sales</b>	208.6	208.5	209.5	209.0	0.4	+0.2%	0.5
EPC	65.1	72.5	69.5	67.1	2.0		-5.4
AOM	143.4	136.0	140.0	141.9	-1.5		5.9
<b>Operating income</b>	8.0	8.8	8.0	9.2	1.2	+15.0%	0.4
EPC	-3.8	-1.65	-5.4	-6.4	-2.6		-4.75
AOM	11.8	10.45	13.4	15.6	3.8		5.15

## Inova Group

<b>Order intake</b>	244.3	192.0	249.0	321.8	77.5	+31.7%	129.8
EPC	202.8	162.0	110.0	156.2	-46.6		-5.8
AOM	41.5	30.0	139.0	165.6	124.1		135.6
<b>Net sales</b>	139.4	168.0	186.5	198.3	58.9	+42.3%	30.3
EPC	118.4	140.0	154.5	165.4	47.0		25.4
AOM	21.0	28.0	32.0	32.9	11.9		4.9
<b>Operating income</b>	7.0	9.2	10.5	9.9	2.9	+41.4%	0.7
EPC	6.0	6.5	7.9	7.9	1.9		1.4
AOM	1.0	2.7	2.6	2.0	1.0		-0.7

Swiss franc conversion rate: CHF = 130 yen in May, CHF = 155 yen in Feb., CHF = 163.47 yen in Results



(Billions of JPY)

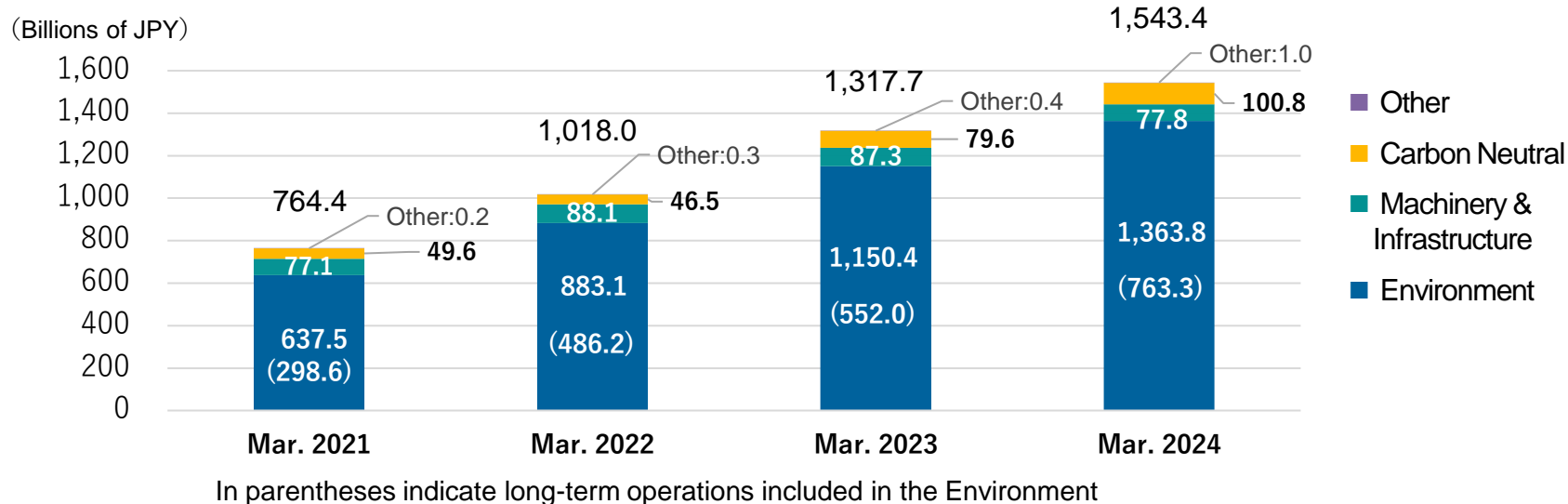
Machinery & Infrastructure Business	FY2022	FY2023					
	Results (a)	Forecast		Results (c)	Difference		
		Initial (b)	as of Feb.		(c)-(a)	(c)-(b)	
<b>Order intake</b>	90.2	86.0	83.0	80.8	-9.4	-10.4%	-5.2
Press machine	21.6	19.0	20.0	22.0	0.4		3.0
Precision machinery	30.4	32.0	26.0	23.7	-6.7		-8.3
Other machinery	11.6	9.0	9.0	9.1	-2.5		0.1
Infrastructure	26.4	26.0	28.0	26.0	-0.4		0.0
<b>Net sales</b>	88.2	85.0	89.0	91.0	2.8	+3.2%	6.0
Press machine	15.6	18.0	19.0	19.5	3.9		1.5
Precision machinery	32.5	30.0	31.0	28.0	-4.5		-2.0
Other machinery	13.8	11.0	12.0	12.9	-0.9		1.9
Infrastructure	26.2	26.0	27.0	30.6	4.4		4.6
<b>Operating income</b>	3.4	2.6	2.3	3.0	-0.4	-11.8%	0.4
Press machine	0.5	0.35	0.6	0.8	0.3		0.45
Precision machinery	2.2	1.2	0.8	1.3	-0.9		0.1
Other machinery	0.3	0.6	0.45	0.5	0.2		-0.1
Infrastructure	0.4	0.45	0.45	0.4	0.0		-0.05

# FY2023 Results - Carbon Neutral Solution Business

(Billions of JPY)

Carbon Neutral Solution Business	FY2022	FY2023					
	Results  (a)	Forecast		Results  (c)	Difference		
		Initial  (b)	as of Feb.				
					(c)-(a)	(c)-(b)	
<b>Order intake</b>	76.2	51.5	75.0	72.6	-3.6	-4.7%	21.1
Engine	23.8	22.0	35.0	37.0	13.2		15.0
Process equipment	23.7	24.0	24.0	20.7	-3.0		-3.3
Decarbonization Systems	3.3	5.0	5.0	3.8	0.5		-1.2
Wind power	25.4	0.5	11.0	11.1	-14.3		10.6
<b>Net sales</b>	46.6	57.0	53.0	55.2	8.6	+18.5%	-1.8
Engine	24.7	23.5	22.0	24.2	-0.5		0.7
Process equipment	18.8	21.0	22.0	21.8	3.0		0.8
Decarbonization Systems	2.0	4.5	5.0	4.4	2.4		-0.1
Wind power	1.0	8.0	4.0	4.8	3.8		-3.2
<b>Operating income</b>	0.4	1.2	1.9	1.8	1.4	+350.0%	0.6
Engine	-0.7	0.2	-0.2	-0.3	0.4		-0.5
Process equipment	1.0	0.7	1.5	2.0	1.0		1.3
Decarbonization Systems	0.2	0.3	0.5	0.4	0.2		0.1
Wind power	-0.1	0.0	0.1	-0.3	-0.2		-0.3

## Order Backlog

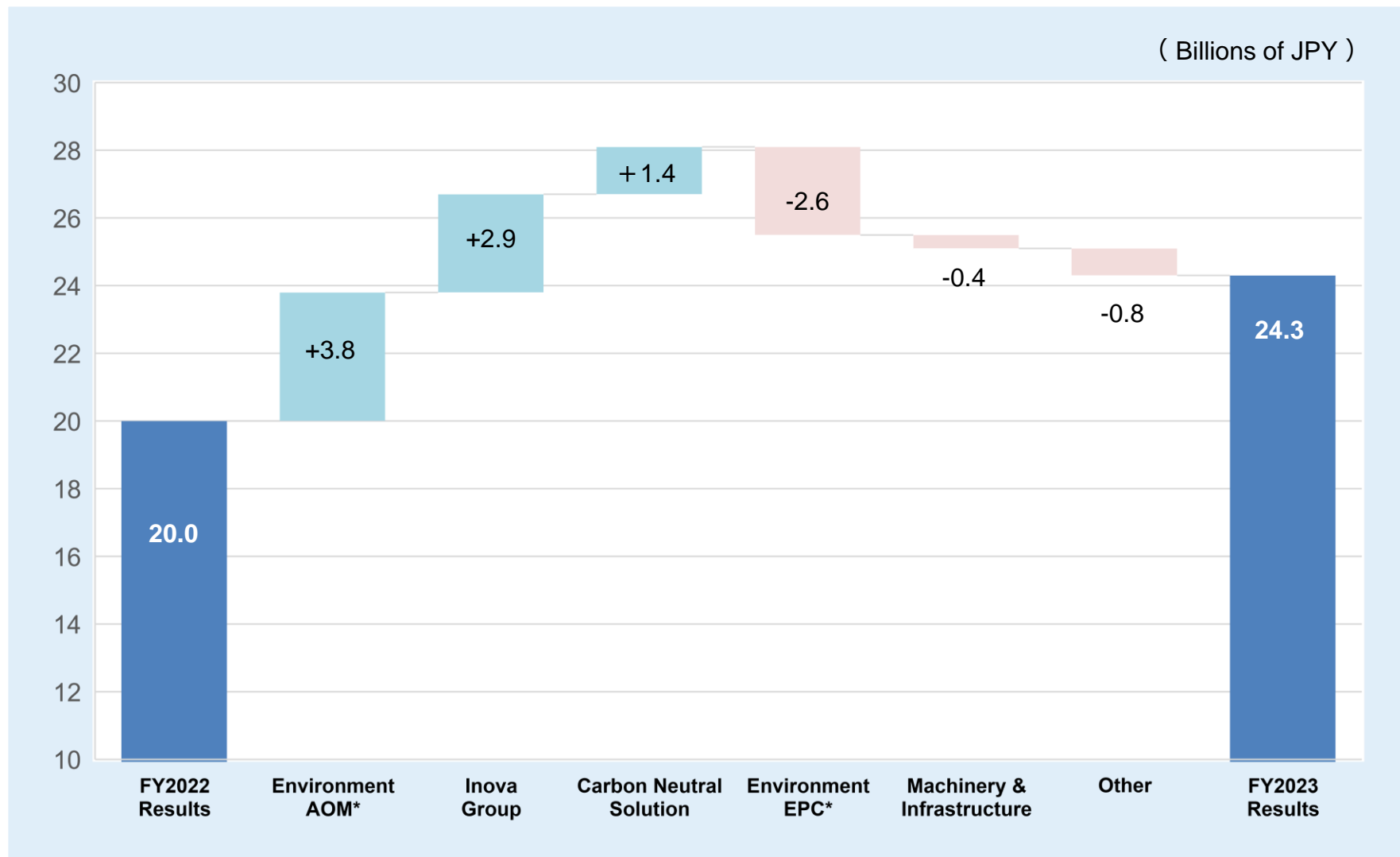


## Breakdown of Order Backlog by Sales Recognition Year

(Billions of JPY)

	Order backlog	FY2024 (FY2023)	FY2025 (FY2024)	FY2026 (FY2025)	FY2027- (FY2026-)
End of Mar. 2024	1,543.4	407.8	275.8	139.6	720.2
End of Mar. 2023	1,317.7	(405.5)	(252.9)	(114.9)	(544.4)
Amount of increase	225.7	2.3	22.9	24.7	175.8

# FY2023 Results - Breakdown of Changes in Operating income



\* Excluding Inova Group

# FY2023 Results - Non-Operating Income and Expense Extraordinary Income and Loss

( Billions of JPY )

		FY2022	FY2023	Difference
Non-operating income and expense	Net interest income / expense, etc.	-0.3	0.1	0.4
	Gain and loss on investment by equity method	0.4	1.7	1.3
	Foreign exchange gain and loss	-0.1	1.3	1.4
	Others	-2.2	-1.8	0.4
	Total	-2.2	1.3	3.5

( Billions of JPY )

		FY2022	FY2023	Difference
Extraordinary income and loss	Extraordinary income	4.2	-	-4.2
	Extraordinary loss	-3.5	-1.6	1.9
	Total	0.7	-1.6	-2.3

# FY2023 Results - Consolidated Balance Sheet

(Billions of JPY)

	End of Mar. 2023	End of Mar. 2024	Difference
Cash and deposits (a)	86.4	71.6	- 14.8
Operating assets	215.5	254.7	39.2
Trade notes and accounts receivable	198.3	234.8	36.5
Inventories	17.2	19.9	2.7
Tangible & intangible fixed assets	109.4	123.7	14.3
Others	68.3	83.5	15.2
<b>Total Assets</b>	<b>479.6</b>	<b>533.5</b>	<b>53.9</b>
Operating liabilities	114.6	106.6	- 8.0
Notes and accounts payable, Electronically recorded obligations - operating	73.2	57.9	- 15.3
Advances received/ Contract assets	41.4	48.7	7.3
Interest bearing debt (b)	86.5	91.4	4.9
Bank borrowings (incl. lease obligations)	56.5	61.4	4.9
Bonds payable	30.0	30.0	0.0
Others	137.2	166.5	29.3
<b>Total Liabilities</b>	<b>338.3</b>	<b>364.5</b>	<b>26.2</b>
Shareholders' equity	139.6	162.7	23.1
Non-controlling interests	1.7	6.3	4.6
<b>Total Net Assets</b>	<b>141.3</b>	<b>169.0</b>	<b>27.7</b>
<b>Total Liabilities and Net Assets</b>	<b>479.6</b>	<b>533.5</b>	<b>53.9</b>
<b>Shareholders' equity ratio</b>	<b>29.1%</b>	<b>30.5%</b>	<b>1.4pt</b>
<b>Net interest bearing debt (b)-(a)</b>	<b>0.1</b>	<b>19.8</b>	<b>19.7</b>

(Billions of JPY)

	FY2022	FY2023	Difference
Cash flows from operating activities	28.0	0.5	- 27.5
Cash flows from investing activities	- 2.5	- 21.5	- 19.0
Cash flows from financing activities	- 7.8	- 2.6	5.2
Foreign exchange translation	1.2	5.0	3.8
Increase/ decrease in cash & cash equivalents	18.9	- 18.6	- 37.5
Cash & cash equivalents at beginning of period	65.9	84.8	18.9
Other increase/decrease*	-	3.5	3.5
Cash & cash equivalents at end of period	84.8	69.7	- 15.1

\*Increase in cash & cash equivalents resulting from inclusion of subsidiaries in consolidation.

(Billions of JPY)

	FY2021	FY2022	FY2023	FY2024	
	Results	Results	Results (a)	Forecast (b)	Difference (b)-(a)
Order intake	677.9	737.5	715.1	620.0	-95.1 -13.3%
Net sales	441.7	492.6	555.8	570.0	14.2 +2.5%
Operating income	15.5	20.0	24.3	26.0	1.7 +6.9%
% to net sales	3.5%	4.1%	4.4%	4.6%	
Ordinary income	11.7	17.8	25.6	22.0	-3.6 -14.2%
Profit attributable to shareholders of Hitachi Zosen	7.8	15.5	18.9	16.0	-2.9 -15.8%
ROE	6.1%	11.5%	12.6%	9.5%	
ROIC	4.8%	6.2%	7.4%	7.0%	
Dividends per share(JPY)	12	18	23	23	



# FY2024 Forecast - Order intake, Net sales, Operating income

(Billions of JPY)

	FY2021	FY2022	FY2023	FY2024	
	Results	Results	Results (a)	Forecast (b)	Difference (b)-(a)
<b>Order intake</b>	677.9	737.5	715.1	620.0	-95.1 -13.3%
Environment	529.4	561.2	558.8	470.0	-88.8
Machinery & Infrastructure	97.1	90.2	80.8	84.0	3.2
Carbon Neutral Solution	43.0	76.2	72.6	63.5	-9.1
Others	8.4	9.9	2.9	2.5	-0.4
<b>Net sales</b>	441.7	492.6	555.8	570.0	14.2 +2.5%
Environment	307.2	348.1	407.3	410.0	2.7
Machinery & Infrastructure	86.3	88.2	91.0	83.0	-8.0
Carbon Neutral Solution	39.9	46.6	55.2	75.0	19.8
Others	8.3	9.7	2.3	2.0	-0.3
<b>Operating income</b>	15.5	20.0	24.3	26.0	1.7 +6.9%
Environment	12.4	15.0	19.1	22.0	2.9
Machinery & Infrastructure	2.2	3.4	3.0	2.4	-0.6
Carbon Neutral Solution	0.4	0.4	1.8	1.3	-0.5
Others	0.5	1.2	0.4	0.3	-0.1

# FY2024 Forecast - Environment Business (Consolidated)

(Billions of JPY)

Environment Business (Consolidated)	FY2021	FY2022	FY2023	FY2024	
	Results	Results	Results (a)	Forecast (b)	Difference (b)-(a)
<b>Order intake</b>	529.4	561.2	558.8	470.0	-88.8 -15.9%
EPC	224.7	317.9	194.8	251.0	56.2
AOM	304.7	243.3	364.0	219.0	-145.0
<b>Net sales</b>	307.2	348.1	407.3	410.0	2.7 +0.7%
EPC	165.3	183.5	232.5	215.0	-17.5
AOM	141.9	164.5	174.8	195.0	20.2
<b>Operating income</b>	12.4	15.0	19.1	22.0	2.9 +15.2%
EPC	0.2	2.2	1.5	3.9	2.4
AOM	12.2	12.8	17.6	18.1	0.5

EPC : Engineering, procurement and construction

AOM : After-sales services, operation and maintenance

# FY2024 Forecast - Environment Business (Breakdown)

(Billions of JPY)

Environment Business (excluding Inova)	FY2021	FY2022	FY2023	FY2024	
	Results	Results	Results (a)	Forecast (b)	Difference (b)-(a)
<b>Order intake</b>	211.6	316.8	237.0	191.0	-46.0 -19.4%
EPC	68.8	115.0	38.6	64.0	25.4
AOM	142.8	201.7	198.4	127.0	-71.4
<b>Net sales</b>	195.5	208.6	209.0	209.0	0.0 ±0.0%
EPC	64.6	65.1	67.1	59.0	-8.1
AOM	130.9	143.4	141.9	150.0	8.1
<b>Operating income</b>	9.7	8.0	9.2	9.2	0.0 ±0.0%
EPC	- 2.9	- 3.8	- 6.4	- 3.4	3.0
AOM	12.6	11.8	15.6	12.60	-3.0

## Inova Group

<b>Order intake</b>	317.8	244.3	321.8	279.0	-42.8 -13.3%
EPC	155.9	202.8	156.2	187.0	30.8
AOM	161.9	41.5	165.6	92.0	-73.6
<b>Net sales</b>	111.7	139.4	198.3	201.0	2.7 +1.4%
EPC	100.7	118.4	165.4	156.0	-9.4
AOM	11.0	21.0	32.9	45.0	12.1
<b>Operating income</b>	2.7	7.0	9.9	12.8	2.9 +29.3%
EPC	3.1	6.0	7.9	7.3	-0.6
AOM	- 0.4	1.0	2.0	5.5	3.5

EPC : Engineering, procurement and construction  
AOM : After-sales services, operation and maintenance

# FY2024 Forecast - Machinery & Infrastructure Business

(Billions of JPY)

Machinery & Infrastructure Business	FY2021	FY2022	FY2023	FY2024	
	Results	Results	Results (a)	Forecast (b)	Difference (b)-(a)
<b>Order intake</b>	97.1	90.2	80.8	84.0	3.2 +4.0%
Press machine	17.6	21.6	22.0	21.0	-1.0
Precision machinery	35.1	30.4	23.7	27.0	3.3
Other machinery	16.9	11.6	9.1	8.0	-1.1
Infrastructure	27.5	26.4	26.0	28.0	2.0
<b>Net sales</b>	86.3	88.2	91.0	83.0	-8.0 -8.8%
Press machine	14.5	15.6	19.5	19.0	-0.5
Precision machinery	31.5	32.5	28.0	29.0	1.0
Other machinery	13.9	13.8	12.9	8.0	-4.9
Infrastructure	26.4	26.2	30.6	27.0	-3.6
<b>Operating income</b>	2.2	3.4	3.0	2.4	-0.6 -20.0%
Press machine	- 0.0	0.5	0.8	0.7	- 0.1
Precision machinery	1.4	2.2	1.3	1.0	-0.3
Other machinery	- 0.1	0.3	0.5	0.5	0.0
Infrastructure	0.9	0.4	0.4	0.2	- 0.2

# FY2024 Forecast - Carbon Neutral Solution Business

(Billions of JPY)

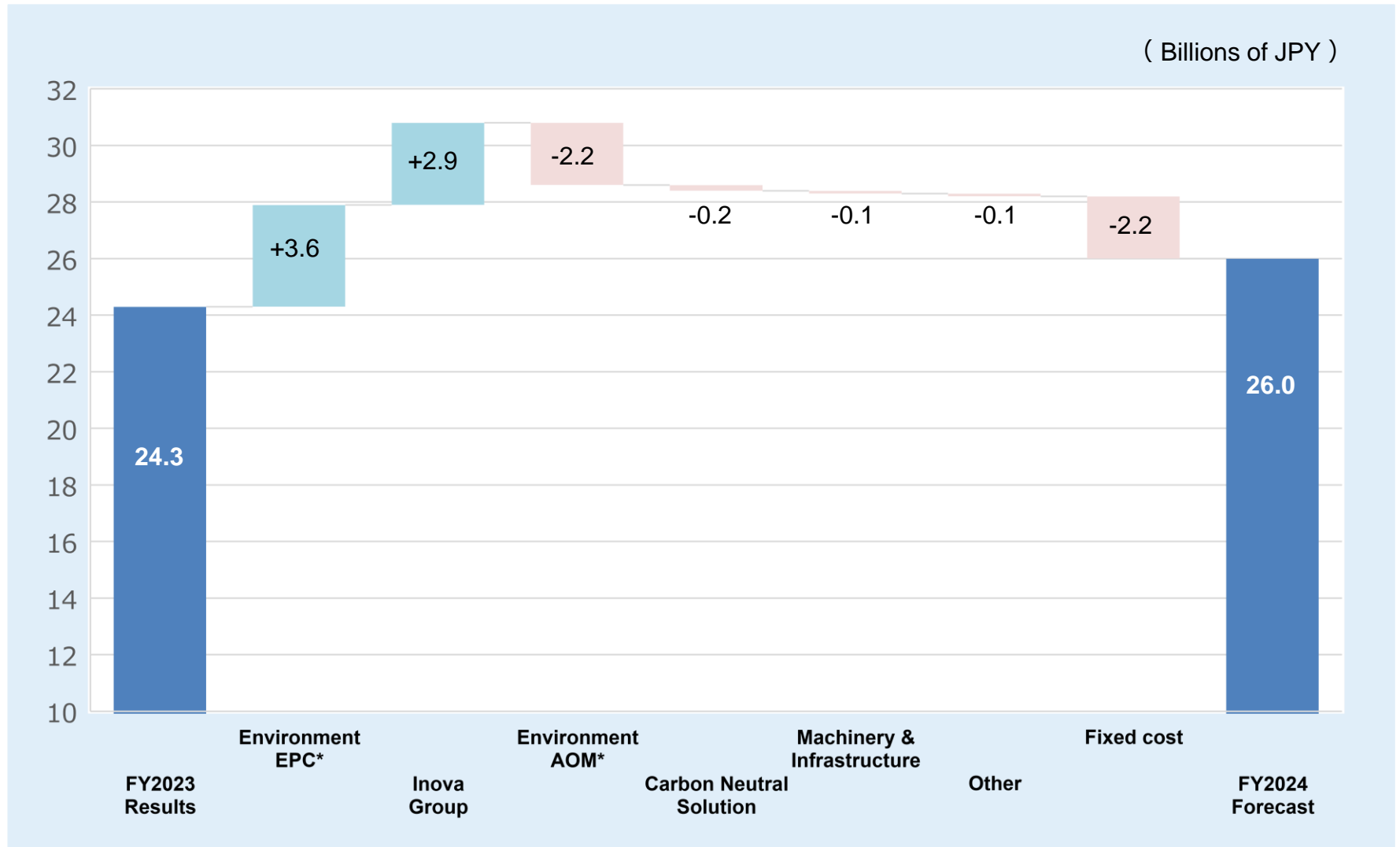
Carbon Neutral Solution Business	FY2021	FY2022	FY2023	FY2024	
	Results	Results	Results (a)	Forecast (b)	Difference (b)-(a)
<b>Order intake</b>	43.0	76.2	72.6	63.5	-9.1 -12.5%
Engine (Note)	24.6	22.9	37.0	29.0	-8.0
Process equipment	15.2	23.7	20.7	28.0	7.3
Decarbonization Systems	2.2	4.2	3.8	6.0	2.2
Wind power	1.0	25.4	11.1	0.5	-10.6
<b>Net sales</b>	39.9	46.6	55.2	75.0	19.8 +35.9%
Engine (Note)	22.1	23.5	24.2	27.0	2.8
Process equipment	13.4	18.8	21.8	28.0	6.2
Decarbonization Systems	2.8	3.2	4.4	5.0	0.6
Wind power	1.6	1.0	4.8	15.0	10.2
<b>Operating income</b>	0.4	0.4	1.8	1.3	-0.5 -27.8%
Engine (Note)	- 0.1	- 0.9	- 0.3	0.1	0.4
Process equipment	- 0.1	1.0	2.0	1.5	-0.5
Decarbonization Systems	0.5	0.4	0.4	0.3	-0.1
Wind power	0.1	- 0.1	- 0.3	- 0.6	-0.3

Note: Changed the segment name from 'Electrolysis and PtG' to "Decarbonization system".

Some products (SCR NOx Removal System) included in "Engine" have been transferred to "Decarbonization systems (former: PtG)" from FY2023.

The figures for the past years above are reference on such basis. See the Fact sheet (Excel) for details.

# FY2024 Forecast - Breakdown of Changes in Operating Income



\* Excluding Inova Group

(Billions of JPY)

	FY2021 Results	FY2022 Results	FY2023 Results	FY2024 Forecast
Total assets	461.1	479.6	533.5	586.0
Cash and deposits	67.2	86.4	71.6	60.0
Equity	131.3	139.6	162.7	174.7
Equity ratio	28.5%	29.1%	30.5%	29.8%
ROE	6.1%	11.5%	12.6%	9.5%
Interest-bearing debt	91.9	86.5	91.4	120.0
R&D expenses	6.1	8.6	11.2	12.0
Capital investment	8.0	7.9	9.6	13.0
Depreciation	10.7	10.5	11.1	11.5

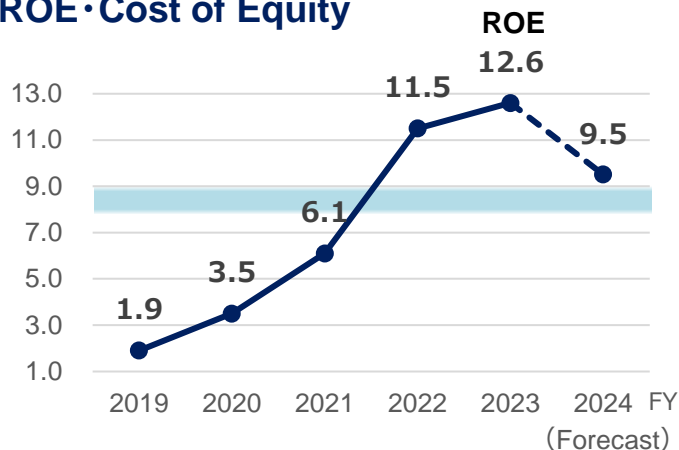
Balance sheet items are as of the end of each year

Our Cost of Equity based on the CAPM is considered as around 8%, but it varies depending on the movements of the financial markets. Based on the concept that Cost of Equity = investors' expected rate of return, we recognize, through dialogue with investors, their expectation is around 8% to 9% level. We focus on the market's view of cost of capital and aim to meet the expectations of shareholders and investors to a high level.

In addition to the purpose of managing the return on capital of a business, WACC is also used as a hurdle rate base for business investment decisions. (WACC is operated by setting detailed conditions depending on target countries, target businesses, etc.).

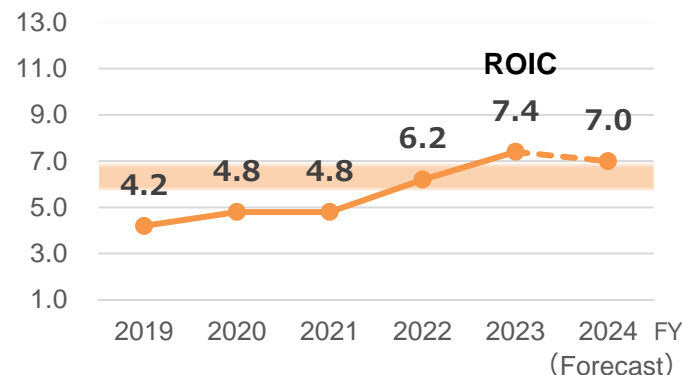
We will further utilize ROIC to strengthen our business portfolio management.

## ROE・Cost of Equity



- ROE for FY2023 was high due to an increase in operating income, as well as contributions from non-operating income such as equity in earnings of affiliates and foreign exchange gains.
- Although ROE will decline in FY2024, we will continue to work to improve it to meet the expectations of our shareholders and investors.

## ROIC・WACC



- WACC is assumed to be around 6% to 7%.
- ROIC is expected to decline to 7.0% in FY2024 due to strategic business investments in the current medium-term management plan.
- We will continue our efforts to improve profitability as well as balance sheet.



With the aim of increasing shareholder value over the medium to long term, the Company will focus on investment for future business growth over the next three years.

## Shareholder Return Policy

The Company intends to continuously and stably distribute dividends, while working to strengthen financial position and the management base through growth investment, R&D investment and capital investment in order to enhance the long-term shareholder's value.

	Net profit per share	Dividend per share	Payout Ratio
<b>FY2022</b>	<b>JPY92.4</b>	<b>JPY18</b>	<b>19.5%</b>
<b>FY2023</b>	<b>JPY112.7</b>	<b>JPY23</b>	<b>20.4%</b>
		<b>(Initial plan:JPY18)</b>	
<b>FY2024 (Expected)</b>	<b>JPY94.9</b>	<b>JPY23</b>	<b>24.2%</b>

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# Management and Business Information

# Major Orders received during FY2023 (Japan)

Project	Order received	Outline	Specifications etc.	Schedule
Waste to Energy plant Kanoya City, Kagoshima Pref.	Apr. 2023	Operation for 15 years	128t/day Units:2	Operation Apr. 2023 - Mar. 2038
Waste to Energy plant Jo-yo City, Kyoto Pref.	Jun. 2023	Maintenance and retrofit of core facilities (Combustion, combustion gas cooling, and exhaust gas treatment, etc.)	240t/day Units: 2	Completion Feb. 2028
Wind power Mutsu-Ogawara wind farm Aomori Pref.	Jun. 2023	Operation for 20 years	57,000kW Units: 15 Max 64,500kW	Operation Apr. 2026 - Mar. 2046
Waste to Energy plant Otaru City, Hokkaido Pref.	Jul. 2023	Retrofit of facilities and equipment throughout the facility to reduce CO <sub>2</sub> emissions	197t/day Units: 2	Completion Feb. 2027
Waste to Energy plant Nara City, Nara Pref.	Dec. 2023	Major refurbishment of existing incinerators	480t/day Units:2 out of 4	Completion Mar. 2027
Water treatment Nose Cho, Osaka Pref.	Mar. 2024	(A) Sludge reclamation center Retrofit and operate from manure treatment facility (B) Septic center Operation for 15 years	A : 19kL/day B : 2,430m <sup>3</sup> /day	Completion Feb. 2026 Operation Apr. 2025 – Mar. 2040
Waste to Energy plant Hokota City / Oarai Machi, Ibaraki Pref.	Mar. 2024	Design, Build, and Operation(by SPC) for 20 years	70t/day Units:2	Completion Mar. 2028 Operation Apr. 2028 – Mar. 2048



From the left :  
Waste to Energy plant, Jo-yo City,  
Waste to Energy plant, Otaru City, and  
Waste to Energy plant, Hokota City / Oarai  
Machi (Completion image)

# Major Orders received during FY2023 (Global)

Project	Order received	Outline	Specifications etc.	Schedule
Waste to Energy plant Slough, UK (Inova)	Jun. 2023	Scope: Operation for 25 years Customer: SSE Slough Multifuel Limited Site: Slough, Berkshire, UK	480,000t/year 49.9MW	Operation Jul. 2024 - Jun. 2049
Waste to Energy plant Earls Gate, UK (Inova)	Jun. 2023	Scope: Operation for 25 years Customer: Earls Gate Energy Centre Ltd Site: Grangemouth, Scotland, UK	216,000t/year 22MW	Operation Dec. 2023 - Nov. 2048
Biogas Blankenhain, Germany (Inova)	Jun.2023	Scope: Supply of equipment for joint venture with biogeen of Germany to purify and liquefy biogas Site: Blankenhain, Thuringia, Germany	LBG 3,700t/year Liquefied CO <sub>2</sub> 7,500t/year	Completion Around the end of 2024 (scheduled)
Desalination plant Dampier, Australia (Osmoflo)	Nov.2023	Scope: Design, procure, fabricate, oversee site installation and commissioning, and operational support. Customer: Rio Tinto	4billionL/year	Start of production 2026 (scheduled)
Waste to Energy plant Abu Dhabi, UAE (Inova)	Mar.2024	Scope: Engineering and Procurement Customer: Emirates Water and Electricity Company, Tadweer Groupe	900,000t/year 80MW	Start of operation 2027 (scheduled)



From the left :  
Waste to Energy plant, Earls Gate, UK,  
Desalination plant site, Dampier,  
Australia, and Waste to Energy plant,  
Abu Dhabi, UAE (Completion image)

# Environment Business - Major Projects (excluding Inova)

	Place	Order	Completion	Formation	Scope	Calendar year					
						2022	2023	2024	2025	2026	2027
J a p a n	Gunma	Jun. 2018	Jan. 2025	Sole	EPC						
	Tokushima	Feb. 2019	Dec. 2023	JV	EPC+O						
	Ibaraki	Oct. 2019	Sep. 2023	JV	EPC						
	Hokkaido	Nov. 2019	Jul. 2024	JV/Sole	EPC/O&M*1						
	Niigata	Mar. 2020	Mar. 2024	JV	BTO						
	Kumamoto	Jul. 2020	Mar. 2024	JV	DBO						
	Saga	Aug. 2020	Mar. 2024	Sole	DBO						
	Tokyo	Sep. 2020	May. 2027	JV	EPC						
	Kagoshima	Feb. 2021	Aug. 2024	JV	DBO						
	Akita	Nov. 2021	Mar. 2026	JV	DBO						
	Osaka	Feb. 2022	Mar. 2026	JV	DBO						
	Hiroshima	Feb. 2022	Apr. 2025	JV	EPC+O						
	Saitama	Sep. 2022	Mar. 2029 * 2	JV	DBO						
	Hiroshima	Dec. 2022	Sep. 2028	JV	DBO						
	Osaka	Feb. 2023	Mar. 2029	JV	EPC+O						
	Osaka	Feb. 2023	Mar. 2031	JV	EPC						
	Gifu	Mar. 2023	Mar. 2027	JV	DBO						
	Ibaraki	Mar. 2024	Mar. 2028	JV	DBO						
O v e r s e a	Shanghai, China	Jul. 2019	Apr. 2024 * 3	Sole	EP+SV						
	Bidadi, India	Dec. 2020	Jul. 2024	Consortium	EP+SV						
	Changhua, Taiwan	Jul. 2021	Jun. 2024 * 3	Sole	EP+SV						
	Moshi, India	Sep. 2021	Jun. 2024	Consortium	EP+SV						
	Tainan, Taiwan	Feb. 2023	Feb. 2026	Sole	EP+SV						

\*1 JV received EPC, Hitachi Zosen received O&M

\*2 Construction period, including dismantling of existing incinerators

\*3 Delay expected

# Environment Business - Major Projects (Inova)

Project (country)	Order	Completion	Formation	Inova's Scope	曆年					
					2022	2023	2024	2025	2026	2027
Istanbul, Turkey	Sep. 2017	Oct. 2021	JV	EP+O&M(1 yr)						
Ivery, France	Nov. 2018	May. 2024	Consortium	EP+SV						
Moscow1-4, Russia	Nov.2019 *1	Jun.2023 *2	Consortium	EP+SV						
Rockingham, Australia	Jan. 2020	*3	Consortium	EP+SV+O&M(20 yrs)						
Newhurst, UK	Feb. 2020	May 2023	Sole	EPC						
Emmenspitz, Swiss	Feb. 2020	Oct. 2025	Sole	EP+SV						
Slough, UK	Dec. 2020	Nov. 2024	Sole	EPC+O&M(25 yrs)*4						
Dubai, UAE	Jun. 2021	Jul. 2024	Consortium	EP+SV+O&M(35 yrs)						
Skelton Grange, UK	Jul. 2021	Jul. 2025	Sole	EPC						
Westfield, UK	Dec. 2021	Apr. 2025	Sole	EPC+O&M(25 yrs)						
North London, UK	Apr. 2022	Oct. 2026	Sole	EP						
Rivenhall, UK	May. 2022	Mar. 2026	Sole	EPC						
Riverside2, UK	Jan. 2023	Aug. 2026	Sole	EPC						
Earls Gate, UK	Jun. 2023	-	Solo	O&M(25 yrs)*5						
Walsall, UK	Dec. 2023	Oct. 2027	Solo	EPC						
Abu Dhabi, UAE *6	Mar. 2024	Jun. 2027	Consortium	EP+SV+O&M(30 yrs)						

\*1 Order for Moscow 1 received in 2019, Moscow 2-4 in 2020

\*2 Significant delay expected

\*3 Under adjustment with the customers due to local works delayed by the impact of Covid-19

\*4 Received 25 years of O&M after completion of construction

\*5 25 years O&M from Dec. 2023 (EPC is within the responsibility of other companies)

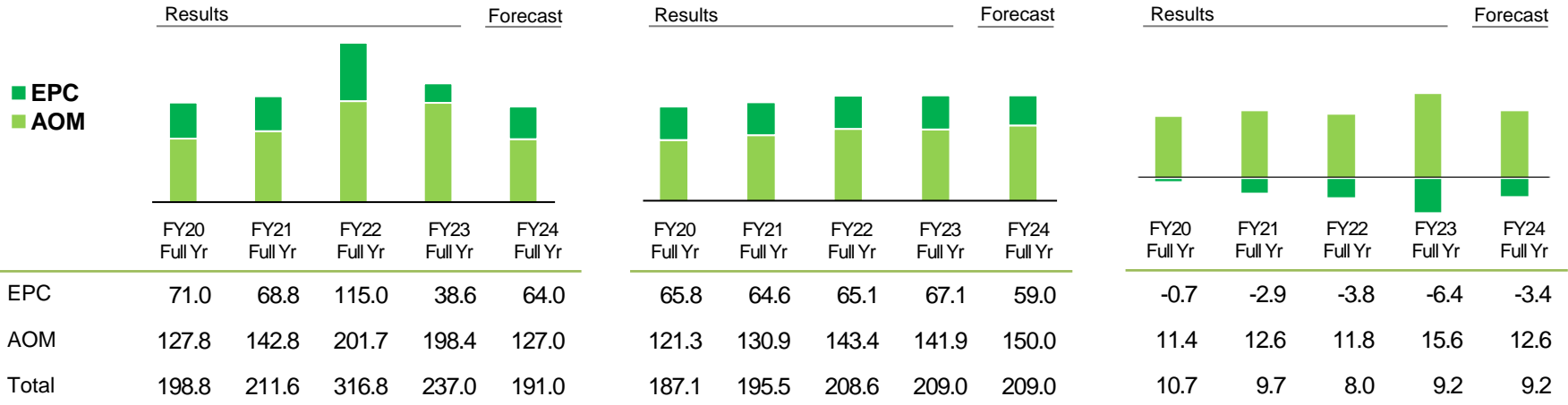
\*6 O&M order is expected in June 2024

# Update of Business - Environment Business (excluding Inova)

(Billions of JPY) 【Order intake】

【Net sales】

【Operating income】



## EPC in Japan (Waste-to-Energy facilities, etc.)

- Market size (order volume) has been 2,500-5,000 t/day per year, with actual results in FY23 at approx. 2,500 t/day, and is expected to recover to over 3,000 t/day in FY24 (mainly DBO projects).
- Aiming to improve profitability by reducing trouble costs.

## AOM in Japan (Waste-to-Energy facilities, etc.)

- Demand for retrofit works has peaked.
- DBO (Design-Build-Operate) orders increase in reconstruction and renewal of existing facilities.

## Water business

- Domestic market is flat, with a gradual slowdown in the long term.
- Global water/wastewater treatment markets are expected to keep high demand.
- Strategies for global expansion, including Osmoflo, are under review.

## Electricity sales

- In PPS business, profit increased due to progress in balancing procurement and sales, as well as a tailwind from lower JEPX market prices in FY23.
- Aiming for stable business operations while meeting electricity demand by maintaining a balance between sales and procurement.

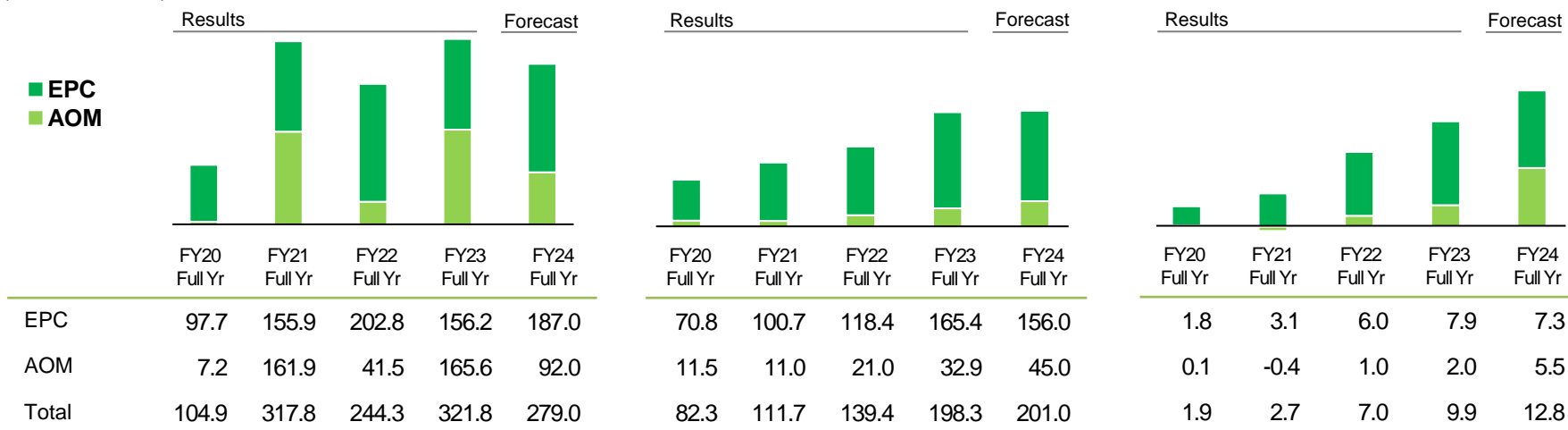
EPC: Engineering, procurement and construction AOM: After-sales services, operation and maintenance.

# Update of Business - Environment Business (Inova Group)

(Billions of JPY) 【Order intake】

【Net sales】

【Operating income】



- **Expansion of new markets outside UK and EU**
- **Diversification of revenue sources (O&M, biogas)**
- **Transform from an EPC company to a vertically integrated greentech company**

## Waste-to-Energy facilities

- In the medium to long term, the potential market is expected to expand globally
- Aiming to receive 3 large EPC projects in FY24
- For AOM business, operation will start in several WtE plants and will contribute to full-scale earnings. (Dubai, Slough and Earls gate)

## Renewable gas business

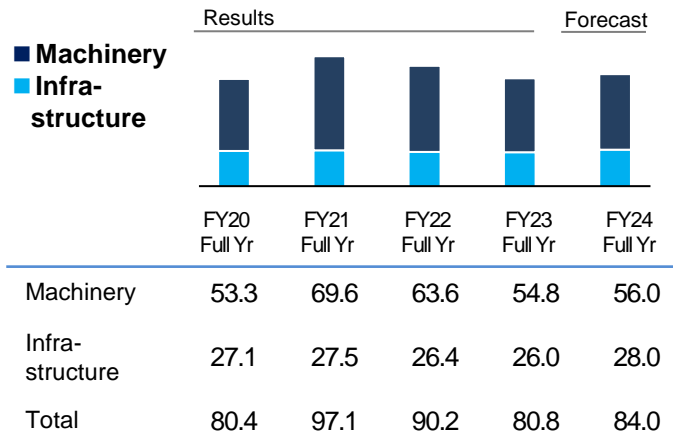
- In response to EU's "REPowerEU" plan for huge increase of the number of biogas facilities, Inova will expand its own ownership and operation of biogas plants.
- Peripheral facilities and businesses have also been expanding. (Liquefied biogas and CO<sub>2</sub>, Biomethanation)

EPC: Engineering, procurement and construction AOM: After-sales services, operation and maintenance.

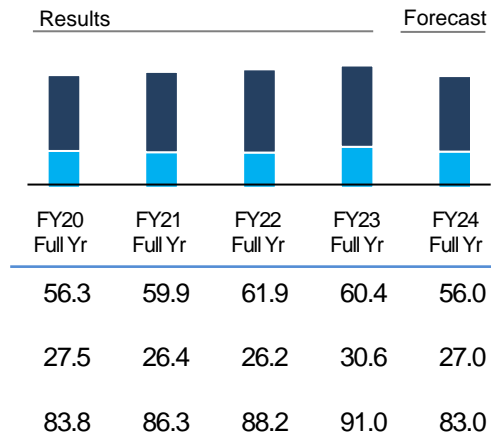


# Update of Business - Machinery & Infrastructure Business

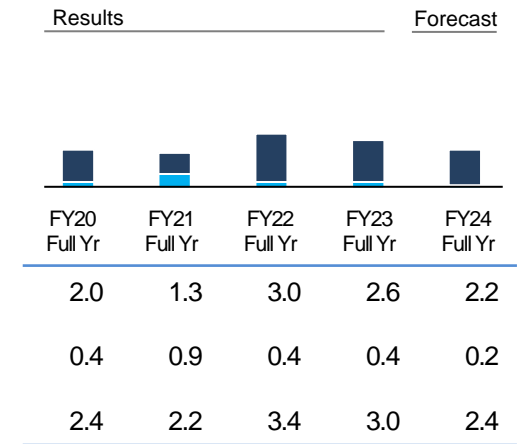
(Billions of JPY) 【Order intake】



【Net sales】



【Operating income】



## Press machine

- Market orders, incl. large machine: JPY155 billion expected in FY24, same level as the previous year. (Source: Japan Forming Machinery Association)
- Customer needs change. Demand for after-sales services: extending the life of existing products.
- Challenge: price pass-on of cost increases, and response to the shift to EVs..

## Precision machinery, System machinery

- Industrial machinery is expected to increase in energy-saving and resource recovery equipment.
- Demand for small valves and lapping plates is expected to recover from FY24/2H onwards due to sluggish demand for semiconductors.

## Infrastructure

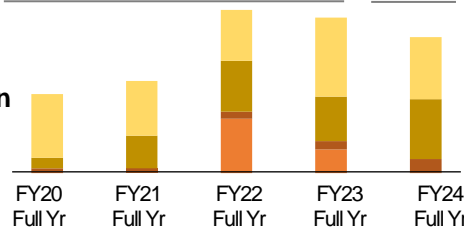
- Bridges: Market order volume in FY23 remained flat from the previous fiscal year, but we successfully received more orders than in the previous fiscal year.
- Water gate: Market growth will continue due to an increase in replacement projects for hydroelectric power plants in response to heavy rain disaster and trend toward decarbonization, and orders received by the Company are also expected to remain strong. TANGENT (Thailand) started operation in Oct.2023, to expand overseas with a focus on ODA projects in Southeast Asia.
- Steel stacks: Demand for maintenance and earthquake resistance of existing facilities though new construction is scaled back.

# Update of Business - Carbon Neutral Solution Business

(Billions of JPY) 【Order intake】

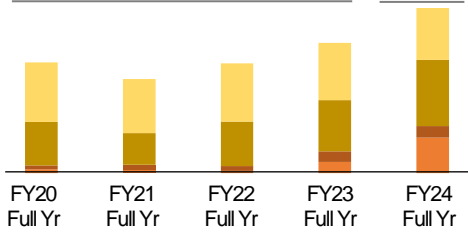
Results Forecast

■ Engine  
■ Process  
■ Decarbonization systems  
■ Wind Power



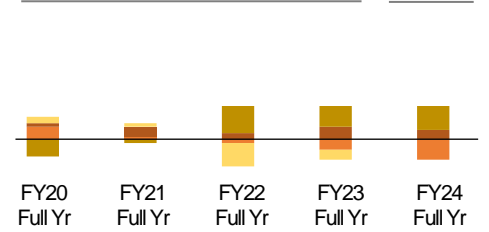
【Net sales】

Results Forecast



【Operating income】

Results Forecast



	FY20 Full Yr	FY21 Full Yr	FY22 Full Yr	FY23 Full Yr	FY24 Full Yr	FY20 Full Yr	FY21 Full Yr	FY22 Full Yr	FY23 Full Yr	FY24 Full Yr	FY20 Full Yr	FY21 Full Yr	FY22 Full Yr	FY23 Full Yr	FY24 Full Yr
Engine (Note)	29.8	25.6	23.8	37.0	29.0	25.3	23.0	24.7	24.2	27.0	0.2	0.1	-0.7	-0.3	0.1
Process	4.9	15.2	23.7	20.7	28.0	18.4	13.4	18.8	21.8	28.0	-0.5	-0.1	1.0	2.0	1.5
Decarbonization systems (Note)	1.5	1.2	3.3	3.8	6.0	1.7	1.9	2.0	4.4	5.0	0.1	0.3	0.2	0.4	0.3
Wind Power	0.7	1.0	25.4	11.1	0.5	1.6	1.6	1.0	4.8	15.0	0.4	0.1	-0.1	-0.3	-0.6
Total	36.9	43.0	76.2	72.6	63.5	47.0	39.9	46.6	55.2	75.0	0.2	0.4	0.4	1.8	1.3

Note: Figures for FY23 include some products (SCR NOx Removal System) which were included in "Engine" and have been replaced with "Decarbonization systems". See factsheet (Excel) for details.

## Engine

- Projected fuel mix in 2050: ammonia 35%, methanol 26%, LNG 16%, various oils 22%, others 1%.
- Dual-fuel test engine order for green methanol.
- Decided to invest in methanol feeder and other facilities

## Process equipment

- In Japan, storage and transportation for alternative fuels and CCS are being considered.
- Strong demand for dry storage casks in the US.
- In June 2023, NAC acquired the Canadian spent fuel storage container manufacturing and sales business, entering the Canadian market.

## Decarbonization systems

- In March 2024, a memorandum of cooperation was signed for the commercialisation of methanation in Oman, with the aim of implementing methanation equipment in LNG plants and turning CO<sub>2</sub> into a resource.

## Wind power

- Onshore wind project in Mutsu Ogawara, Aomori Pref., in which we are participating, is progressing well towards its start-up in April 2026.
- Tailwind conditions for offshore wind commercialization continue with additional GI Fund project applications and investment promotion measures, such as GX Economy Transition Bonds, to promote offshore wind power.

## Financial Results

	(Billions of JPY)		(Billions of JPY)
	FY2023 Results	FY2024 Forecast	M/T Plan FY2025
Order intake	715.1	620.0	600.0
Net sales	555.8	570.0	560.0
Operating income (% to net sales)	24.3 (4.4%)	26.0 (4.6%)	28.0 (5.0%)
ROE	12.6%	9.5%	9.5%

## Basic Policies and Priority Measures

### 1 Sustainable growth of existing businesses

#### Priority measures

- ① Expanding overseas businesses
- ② Promoting structural reform
- ③ Expanding O&M/Service, improving profitability of EPC/New production

### 2 Creation and expansion of growth businesses

#### Priority measures

- ① Promoting investment strategies (Business, R&D)
- ② Promoting investment in priority areas

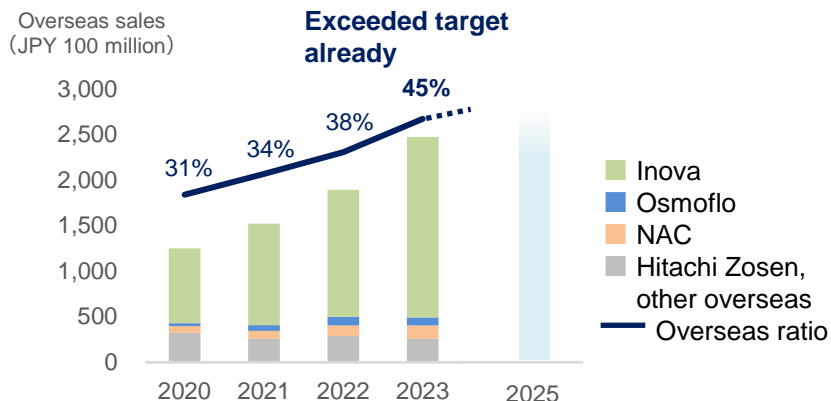
### 3 Promoting sustainable management (Enhancement of corporate value)

#### Priority measures

- ① Strengthening human capital
- ② Decarbonization in business activities
- ③ Promoting DX Strategies
- ④ Thorough risk management

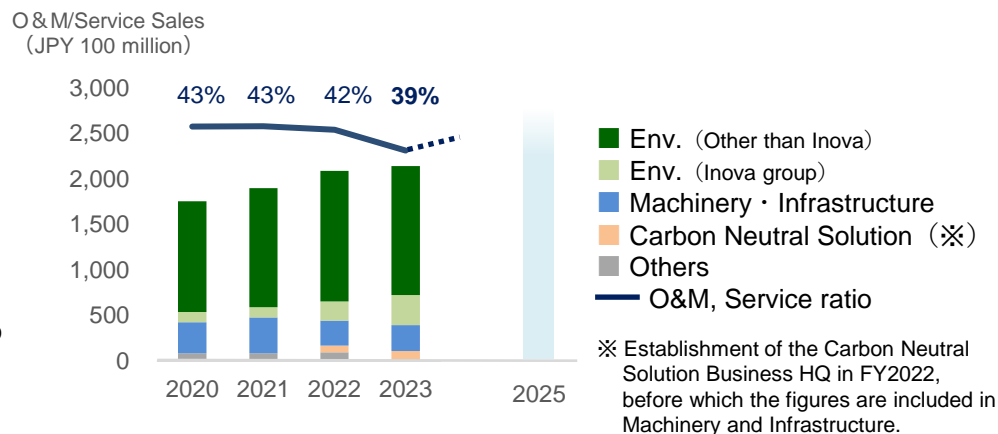
## Expanding overseas businesses

**KPI (2025)** Overseas sales 40%



## Expanding O&M/Service

**KPI (2025)** O&M/Service in sales 50%



## Promoting structural reform (Initiatives in FY2023)

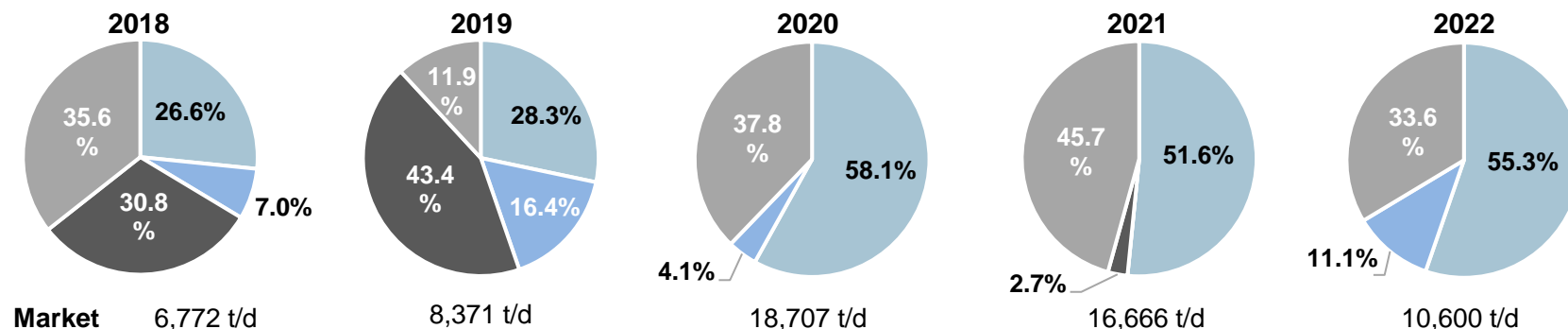
	Initiatives	M&A	Alliance	Sold/Dissolved
APR. 2023	Spun off marine engine business and established Hitachi Zosen Marine Engine Corporation with Imabari Shipbuilding Co. Ltd.		○	
MAY 2023	Business alliance agreement with industrial waste operator TRE Holdings Corporation		○	
JUN. 2023	NAC's acquisition of Canadian spent fuel storage container manufacturing and sales business	○		
OCT. 2023	Establishment of joint venture TANGENT HITZ in Thailand for the fabrication of steel structures such as sluice gates (asset purchase).	○		
MAR. 2024	Inova's acquisition of Schmack Biogas, a biogas business mainly in Italy.	○		
MAR. 2024	Dissolution of subsidiaries engaged in manufacturing of SMC production machines (*).			○

※ SMC : Sheet Molding Compound

## Expanding overseas businesses : Waste-to-Energy Business in Overseas Markets

### Order Market Share (EMEA Markets, Facility Capacity Base)

■ Hitachi Zosen Inova ■ HZI Steinmüller ■ CNIM ■ Others



Source : A. Vaccani & Partner's survey

## Expansion of Value Chain (Hitachi Zosen Inova)



## Expanding Overseas Business

### Topics Abu Dhabi's First Waste-to-Energy Project (Hitachi Zosen Inova)

- HZI, together with Marubeni Corporation and JOIN, signed concession agreement with Tadweer (Abu Dhabi Waste Management Corporation and Emirates Water and Electricity Corporation under the government of Abu Dhabi).
- Plant construction / plant operation and power sale for 30 years.
- Waste processing capacity 900k t/a , Generating capacity 80MW.
- Two new Superheaters reduce CAPEX and OPEX while maintaining power generation.
- Reduction of methane gas generated from landfills (1.1 million tons of CO2 equivalent per year)



### Topics Memorandum of Understanding for Methanation Demonstration in Oman

- Hitachi Zosen and Inova signed a MOU with Oman LNG LLC, in which the Government of Oman and Japanese trading firms invest, for the commercialization of methanation. (March 2024)
- Oman LNG aims to build a pilot plant (methanation and water electrolysis units) and produce 1,200 Nm<sup>3</sup>/h of synthetic methane.
- Oman has the potential to become a global hydrogen exporter and also a promising market for the methanation.
- Hitachi Zosen, Inova and Osmoflo to develop business together as a Group in the Middle East (water electrolysis, methanation and seawater desalination).



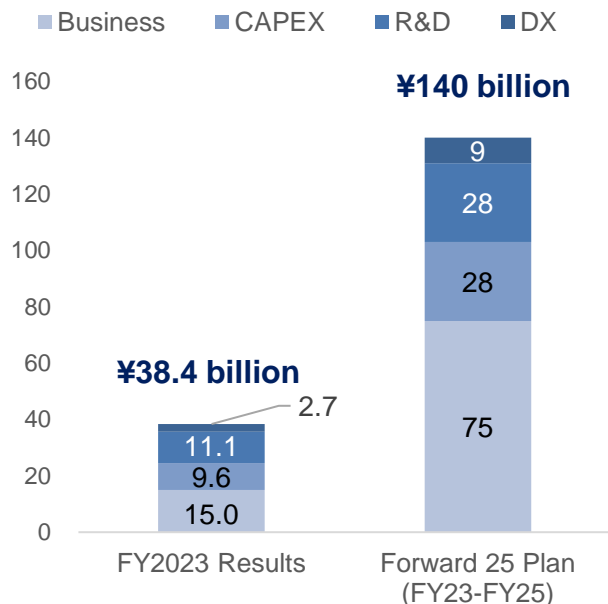
Investment Policy	Investment Scale
<ul style="list-style-type: none"> <li>Promote investment in priority areas in the three years to FY2025</li> <li>Proactively invest in promising projects while paying attention to profitability and risks</li> <li>Increase CAPEX and other investments in R&amp;D and DX.</li> </ul>	<b>Total investment of 140 billion yen over the three years FY2023-FY2025</b>

### Investment Priority Areas

- Decarbonization (CN/Carbon Neutral) business: wind power generation, nuclear power/ CN-related equipment, hydrogen and power-to-gas (PtG), fuel conversion, CCUS
- Resource circulation (CE/Circular Economy) business: Waste to X\* and carbon credits, renewable gas production and sales, industrial waste treatment business
- Water business: industrial water treatment, waste treatment, water supply and sewerage
- Life science related business: Various devices for drug discovery, regenerative medicine, and next-generation medicine
- Inspection, measurement, monitoring and remote support related business

\* X means Energy, material, chemical, fuel, hydrogen, carbon storage, phosphorus recovery, etc.

### Status of Investment



### Major Business Investments in FY2023

- Made decision to invest in a biogas plant (own and operate) and 2 other renewable gas-related businesses in Europe  
 ➔ **See details in the following page**
- Concession agreement, EPC order and investment in the waste-to-energy project in Abu Dhabi

We consider making partial investments in waste-to-energy projects in Asia and other regions, in addition to Europe, in the future.

## Renewable gas own business initiatives in Europe and the USA (Hitachi Zosen Inova)

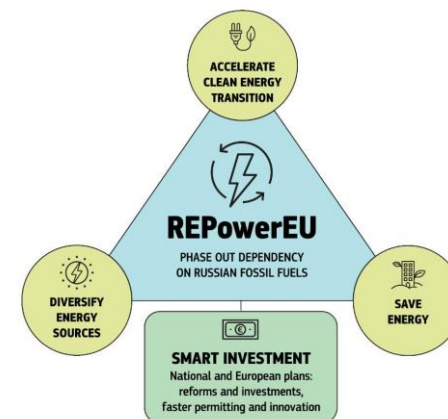
Expansion of business areas including higher value-added business development, investment, operation, and sales

Project (Country)	Business	Investment decision	Operation start	Operation duration	Total invest. (※)	E-IRR
San Luis Obispo (USA)	<ul style="list-style-type: none"> <li>Biogas operations</li> <li>Sales of power, fertilizers</li> </ul>	MAR. 2017	NOV. 2018	20 years	USD 26.6m (JPY3.59b)	Low 10% range
Jönköping (Sweden)	<ul style="list-style-type: none"> <li>Biogas operations</li> <li>Biomethane sales (bus and garbage truck fuel)</li> </ul>	MAR. 2019	DEC. 2020	20 years	SEK 345.3m (JPY4.83b)	
Apensen (Germany)	<ul style="list-style-type: none"> <li>Production/sale of liquefied biogas and liquefied CO2</li> </ul>	OCT. 2022	AUG. 2024	10 years	CHF 11.3m (JPY1.81b)	High 10% range
Blankenheim (Germany)	<ul style="list-style-type: none"> <li>Production/sale of liquefied biogas and liquefied CO2</li> </ul>	JUL. 2023	JAN. 2025	10 years	CHF 19.0m (JPY3.04b)	
Pianfei (Italy)	<ul style="list-style-type: none"> <li>Biogas operations</li> <li>Biomethane sales</li> </ul>	AUG. 2023	JUL. 2025	20 years	EUR 15.0m (JPY2.33b)	Around 8%

※ Japanese yen is a reference amount converted at the following rates : USD=135、SEK=14、CHF=160、EUR=155

## REPowerEU (Published May 2022)

- European Commission's roadmap to strengthen energy security and accelerate the transition to renewable energy.
- Renewable energy utilization target for 2030: 45%.
- Production of 35 billion m<sup>3</sup> of biomethane by 2030.  
(Existing facilities: 3 billion m<sup>3</sup> at the announcement in 2022)
- To meet the demand, 5,000 new biomethane production facilities need to be built (Estimation by the European Biogas Association)





	KPI (FY2025)	FY2022	FY2023
Human Capital	Women in new graduate hires: 50% in administrative jobs 10% in technical jobs	Admi : 28.6% Tech : 13.2%	Admi : 50.0% Tech : 6.9%
	Employee engagement index 70%	55.9% (FY2021)	42.0% ※1
	Parental leave, childcare leave by male employees 100%	49.5%	91.2%
	Prevalence of lifestyle disease 21%	26.6%	27.2%
Environment	CO2 emission (Scope 1+2) 34% reduction from FY2013	- 39.3%	TBA※2
DX	Product IoT conversion: 60%	34.6%	40.4%
	DX personnel development: 500 employees	56 (cumulative)	158 (cumulative)
Risk management	Number of accidents resulting in lost work time: Zero	12	12
	Defective cost ratio to sales: 0.5% or less	1.2%	1.3%

※1 Survey tool changed from FY2023 (more detailed analysis possible).

※2 To be disclosed in Integrated Report 2024.

## Strengthening Human Capital

- Priority : Recruiting and securing human resources, Appropriate allocation and strategic development, Retention
- Reform of the HR system, development of management, global and DX human resources, and promotion of brand strength
- Selected as Certified Health & Productivity Management Outstanding Organization (White 500)
- Challenge: Employee engagement index improvement

## Decarbonization in business activities

- Disclosure of Scope 1.2 emissions from FY23 (FY22 results).
- Scope 3 under preparation (partial disclosure planned for FY24)
- Reduction of fossil energy in manufacturing processes and switch to renewable energy sources
- Promoting fuel switching throughout the supply chain

## Promoting DX Strategies

- DX human resources development: Grand design that outlines the overall image of human resources and skills. Expand the scope of training from FY2024 to increase DX human resources.
- Product IoT conversion: 21 out of 52 targeted products have been converted to IoT (FY2023)

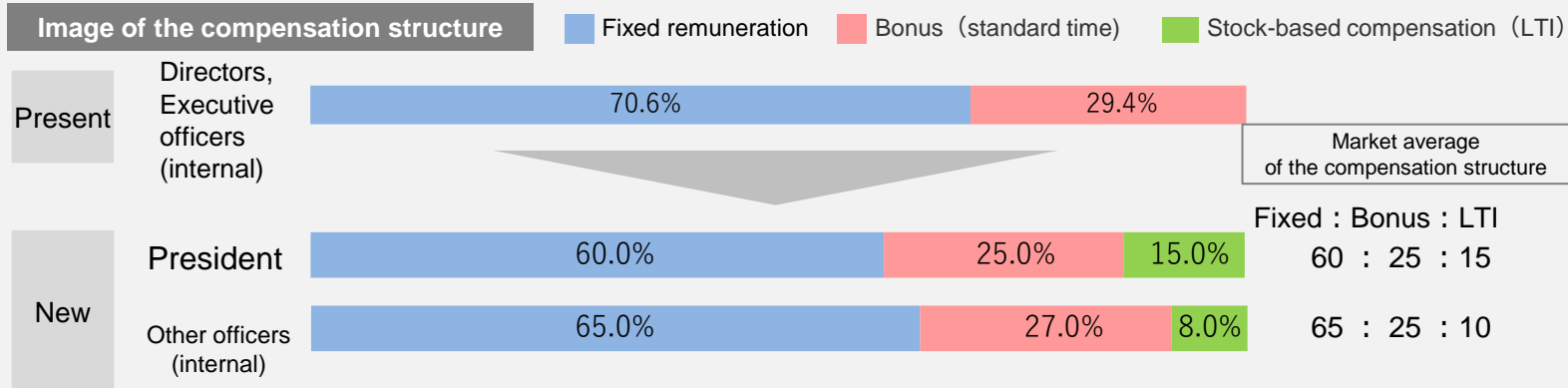
## Thorough risk management

- Investment Committee established to strengthen risk management, including investment decisions, post-investment monitoring and clarification of exit strategies
- Establishment of a company-wide Health and Safety Committee to promote top-down safety priorities

## Strengthening Human Capital : Personnel System Reforms

Implement personnel system reforms with the aim of raising awareness of contribution to mid- to long-term performance improvement and maximization of corporate value.

### Review of the executive remuneration system (Plan)



- Introduce performance-based stock compensation, increase incentive ratio (bonus and stock compensation)
- Introduce employee engagement index for evaluation indicator

### Review of the managerial personnel system

- Revise the system from an ability-based grade system to a role-based grade system.
- Abolish qualification (except associate executive officer) and introduce a system of three job groups (management, expert and specialist), each with five grades, will be established according to role.
- Review the remuneration system, with the aim of creating a personnel system in which each member understands the role required, can maximise his or her abilities and is properly evaluated.



# Technology for People, the Earth, and the Future

**Hitachi Zosen creates links between mother nature and our future**

**Cautionary Statement**

Forward-looking statements are based on information currently available to Hitachi Zosen Corporation. Therefore those forward-looking statements include unknown risks and uncertainties. Accordingly, you should note that the actual results could differ materially from those forward-looking statements. Risks and uncertainties that could influence the ultimate outcome include, but are not limited to, the economic conditions surrounding Hitachi Zosen Corporation and/or exchange rate fluctuation.



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