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# **Financial Results for FY2022 – 2nd Quarter**

**November 8th, 2022**

**Hitachi Zosen Corporation**

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# Financial Information

**Senior Managing Executive Officer  
Corporate Planning HQ  
Satoshi Kimura**

- **High level of order intake continued following the previous fiscal year**
- **Operating income turned profitable in the 2Q  
(The first time in 10 years)**

- High level of order intake continued following the previous fiscal year
- Operating income turned profitable in the 2Q (The first time in 10 years)

(Billions of JPY)

	FY2021		FY 2022				
	1-2Q	Full Year	1- 2 Q		Full Year		Progress on full Yr
	Results	Results	Results	YoY	Forecast	YoY	
<b>Order intake</b>	380.6	677.9	318.8	- 61.8	580.0	- 97.9	55.0%
<b>Net sales</b>	180.4	441.7	207.2	26.8	480.0	38.3	43.2%
<b>Operating income</b>	- 1.4	15.5	0.1	1.5	20.0	4.5	0.5%
% to net sales	-0.8%	3.5%	0.0%		4.2%		
<b>Ordinary income</b>	- 2.8	11.7	- 2.7	0.1	16.0	4.3	—
Profit attributable to shareholders of Hitachi Zosen	- 3.0	7.8	- 3.2	- 0.2	10.0	2.2	—
<b>ROE</b>	6.1%		7.4%				

Revision of full-year forecast from the initial forecast

- Order intake : JPY 500 billion to 580 billion (Environment Business + JPY 80 billion)
- Net sales : JPY 440 billion to 480 billion (Environment Business + JPY 37 billion, Machinery & Infrastructure Business + JPY 1 billion, Carbon Neutral Solution Business + JPY 2 billion)

# FY2022 2Q Results - Order Intake, Net sales, Operating Income

(Billions of JPY)

	FY 2021		FY 2022			
	1-2Q	Full Year	1- 2 Q		Full Year	
	Results	Results	Results	YoY	Forecast	Progress to full yr
<b>Order intake</b>	<b>380.6</b>	<b>677.9</b>	<b>318.8</b>	<b>-61.8</b>	<b>580.0</b>	<b>55.0%</b>
Environment	319.8	529.4	244.3	-75.5	430.0	56.8%
Machinery & Infrastructure	42.4	97.1	46.6	4.2	90.0	51.8%
Carbon Neutral Solution	14.4	43.0	23.4	9.0	52.0	45.0%
Others	4.0	8.4	4.5	0.5	8.0	56.3%
<b>Net sales</b>	<b>180.4</b>	<b>441.7</b>	<b>207.2</b>	<b>26.8</b>	<b>480.0</b>	<b>43.2%</b>
Environment	123.5	307.2	143.1	19.6	337.0	42.5%
Machinery & Infrastructure	36.7	86.3	39.1	2.4	88.0	44.4%
Carbon Neutral Solution	16.2	39.9	20.7	4.5	47.0	44.0%
Others	4.0	8.3	4.3	0.3	8.0	53.8%
<b>Operating income</b>	<b>-1.4</b>	<b>15.5</b>	<b>0.1</b>	<b>1.5</b>	<b>20.0</b>	<b>0.5%</b>
Environment	-0.7	12.4	-0.1	0.6	16.5	—
Machinery & Infrastructure	-0.6	2.2	0.3	0.9	2.8	10.7%
Carbon Neutral Solution	-0.3	0.4	-0.5	-0.2	0.3	—
Others	0.2	0.5	0.4	0.2	0.4	100.0%

(Billions of JPY)

	FY2022			
	Forecast			
	as of May (a)	as of Aug.	as of Nov. (b)	Change (b)-(a)
<b>Order Intake</b>	<b>500.0</b>	<b>500.0</b>	<b>580.0</b>	<b>80.0</b>
Environment	350.0	350.0	430.0	80.0
Machinery & Infrastructure	90.0	90.0	90.0	0.0
Carbon Neutral Solution	52.0	52.0	52.0	0.0
Other	8.0	8.0	8.0	0.0
<b>Net sales</b>	<b>440.0</b>	<b>460.0</b>	<b>480.0</b>	<b>40.0</b>
Environment	300.0	320.0	337.0	37.0
Machinery & Infrastructure	87.0	87.0	88.0	1.0
Carbon Neutral Solution	45.0	45.0	47.0	2.0
Other	8.0	8.0	8.0	0.0
<b>Operating Income</b>	<b>20.0</b>	<b>20.0</b>	<b>20.0</b>	<b>0.0</b>
Environment	16.5	16.5	16.5	0.0
Machinery & Infrastructure	2.8	2.8	2.8	0.0
Carbon Neutral Solution	0.3	0.3	0.3	0.0
Other	0.4	0.4	0.4	0.0

(Billions of JPY)

Environment Business (Consolidated)	FY2022			Comment
	Forecast			
	as of May	as of Nov.	Change	
<b>Order Intake</b>	<b>350.0</b>	<b>430.0</b>	<b>80.0</b>	See page 9.
EPC	210.0	240.0	30.0	
AOM	140.0	190.0	50.0	
<b>Net sales</b>	<b>300.0</b>	<b>337.0</b>	<b>37.0</b>	
EPC	168.0	180.0	12.0	
AOM	132.0	157.0	25.0	
<b>Operating Income</b>	<b>16.5</b>	<b>16.5</b>	<b>0.0</b>	
EPC	5.0	5.5	0.5	
AOM	11.5	11.0	-0.5	

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

# FY2022 Revision of Forecast – Environment Business (Breakdown)

(Billions of JPY)

## Environment Business (excluding Inova)

	FY2022			Comment
	Forecast			
	as of May	as of Nov.	Change	
<b>Order Intake</b>	<b>205.0</b>	<b>255.0</b>	<b>50.0</b>	
EPC	80.0	95.0	15.0	Expected to exceed the initial forecast, including these already in process.
AOM	125.0	160.0	35.0	AOM in Japan, electricity sales (fuel cost adjustment, price increase, etc.)
<b>Net sales</b>	<b>185.0</b>	<b>209.0</b>	<b>24.0</b>	
EPC	65.0	72.0	7.0	Steady progress from order backlog.
AOM	120.0	137.0	17.0	Steady orders and progress, price increase, etc. in electricity sales, JPY depreciation.
<b>Operating Income</b>	<b>11.0</b>	<b>10.5</b>	<b>-0.5</b>	
EPC	0.0	0.0	0.0	
AOM	11.0	10.5	-0.5	Cost increase in some projects.

## Inova Group

<b>Order Intake</b>	<b>145.0</b>	<b>175.0</b>	<b>30.0</b>	
EPC	130.0	145.0	15.0	Expecting 2 large orders. Risk of delay, but target is achieved even with 1 order.
AOM	15.0	30.0	15.0	Increased in Steinmüller, Schmack, etc.
<b>Net sales</b>	<b>115.0</b>	<b>128.0</b>	<b>13.0</b>	
EPC	103.0	108.0	5.0	Steady progress from order backlog.
AOM	12.0	20.0	8.0	Contribution of Steinmüller, which joined the Group in February, etc.
<b>Operating Income</b>	<b>5.5</b>	<b>6.0</b>	<b>0.5</b>	
EPC	5.0	5.5	0.5	Steady progress from order backlog.
AOM	0.5	0.5	0.0	

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

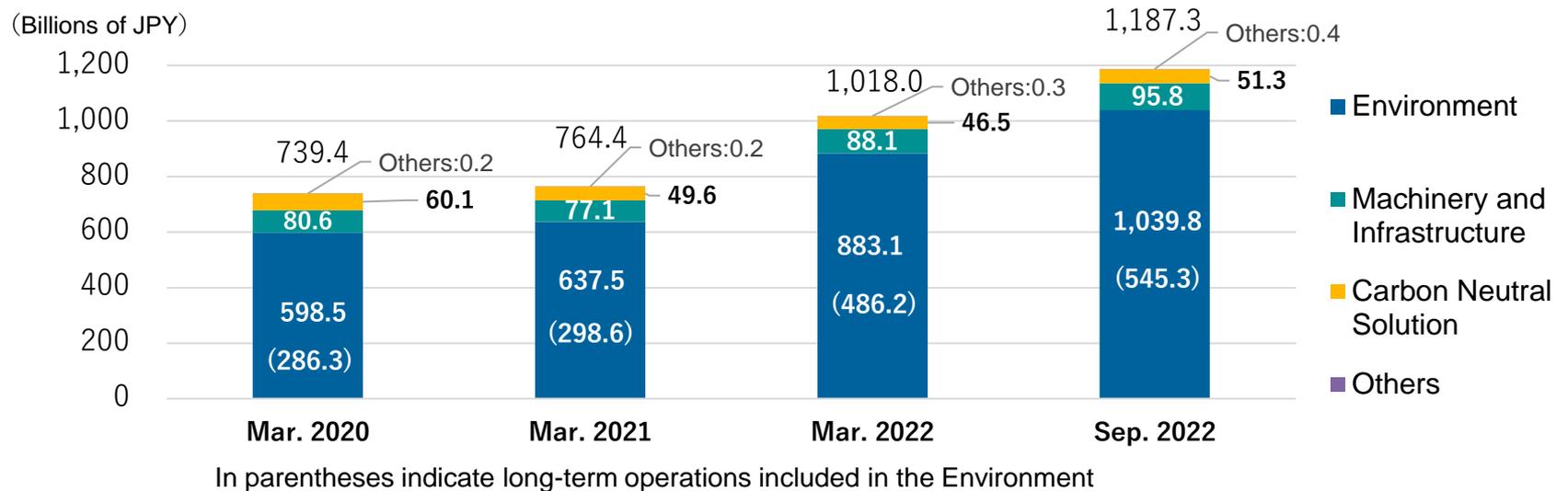
(Billions of JPY)

Machinery & Infrastructure Business	FY2022			
	Forecast			Comment
	as of May	as of Nov.	Change	
<b>Order Intake</b>	<b>90.0</b>	<b>90.0</b>	<b>0.0</b>	
Press machine	17.0	17.0	0.0	
Precision machinery	32.0	32.0	0.0	
Other machinery	15.0	15.0	0.0	
Infrastructure	26.0	26.0	0.0	
<b>Net sales</b>	<b>87.0</b>	<b>88.0</b>	<b>1.0</b>	
Press machine	15.0	15.0	0.0	
Precision machinery	32.0	33.0	1.0	Steady growth in semiconductor related business.
Other machinery	14.0	12.0	-2.0	Due to share transfer of Nippon Pusnes.
Infrastructure	26.0	28.0	2.0	Shield machine (shift from FY21). Bridges increased order intake.
<b>Operating Income</b>	<b>2.8</b>	<b>2.8</b>	<b>0.0</b>	
Press machine	0.3	0.4	0.1	Cost reduction in production, fixed cost, etc.
Precision machinery	1.5	1.6	0.1	Steady growth in semiconductor related business.
Other machinery	0.5	0.3	-0.2	Nippon Pusnes etc.
Infrastructure	0.5	0.5	0.0	

(Billions of JPY)

Carbon Neutral Solution Business	FY2022			Comment
	Forecast			
	as of May	as of Nov.	Change	
<b>Order Intake</b>	<b>52.0</b>	<b>52.0</b>	<b>0.0</b>	
Engine	20.0	20.0	0.0	
Process equipment	15.0	15.0	0.0	
PtG	3.0	3.0	0.0	
Wind power	14.0	14.0	0.0	
<b>Net sales</b>	<b>45.0</b>	<b>47.0</b>	<b>2.0</b>	
Engine	24.0	24.0	0.0	
Process equipment	18.0	20.0	2.0	Steady growth in pressure vessels, effects of JPY depreciation.
PtG	2.0	2.0	0.0	
Wind power	1.0	1.0	0.0	
<b>Operating Income</b>	<b>0.3</b>	<b>0.3</b>	<b>0.0</b>	
Engine	0.0	-0.7	-0.7	Increasing cost of materials. Improve the profitability through collaboration with Imabari Shipbuilding Co., Ltd.
Process equipment	0.2	0.9	0.7	Increase in pressure vessels oversea, etc.
PtG	0.1	0.1	0.0	
Wind power	0.0	0.0	0.0	

## Order Backlog



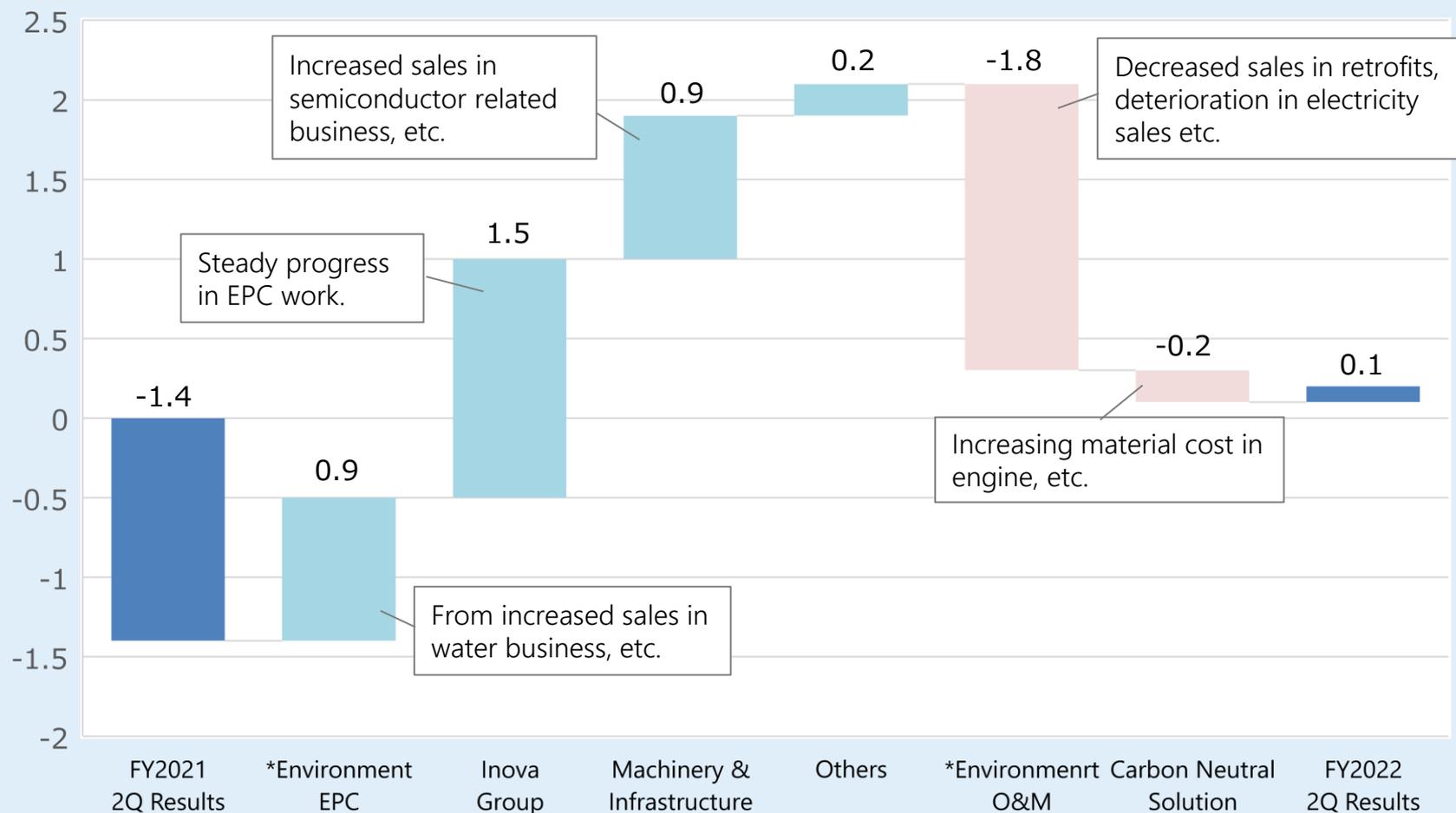
## Breakdown of Order Backlog by Sales Recognition Year

(Billions of JPY)

	Order backlog	FY2022 (FY2021)	FY2023 (FY2022)	FY2024 (FY2023)	FY2025 (FY2024)
End of Sep. 2022	1,187.3	256.9	281.3	174.9	474.2
End of Sep. 2021	968.1	(213.4)	(205.3)	(124.5)	(424.9)
Amount of increase	219.2	43.5	76.0	50.4	49.3

# FY2022 2Q Results – Breakdown of Changes in Operating Income

( Billions of JPY )



\* Excluding Inova Group

# FY2022 2Q Results – Consolidated Balance Sheet (End of September 2022)

(Billions of JPY)

	End of Mar. 2022	End of Sep. 2022	Difference
Cash and deposits (a)	67.2	89.3	22.1
Operating assets	204.3	172.1	- 32.2
Trade notes and accounts receivable	189.8	150.3	- 39.5
Inventories	14.5	21.8	7.3
Tangible & intangible fixed assets	122.0	120.0	- 2.0
Others	67.6	64.5	- 3.1
<b>Total Assets</b>	<b>461.1</b>	<b>445.9</b>	<b>- 15.2</b>
Operating liabilities	100.9	111.0	10.1
Notes and accounts payable, Electronically recorded obligations - operating	71.8	58.8	- 13.0
Advances received/ Contract assets	29.1	52.2	23.1
Interest bearing debt (b)	91.9	92.0	0.1
Bank borrowings (incl. lease obligations)	61.9	62.0	0.1
Bonds payable	30.0	30.0	0.0
Others	135.4	117.9	- 17.5
<b>Total Liabilities</b>	<b>328.2</b>	<b>320.9</b>	<b>- 7.3</b>
Shareholders' equity	131.3	123.2	- 8.1
Non-controlling interests	1.6	1.8	0.2
<b>Total Net Assets</b>	<b>132.9</b>	<b>125.0</b>	<b>- 7.9</b>
<b>Total Liabilities and Net Assets</b>	<b>461.1</b>	<b>445.9</b>	<b>- 15.2</b>
<b>Shareholders' equity ratio</b>	<b>28.5%</b>	<b>27.6%</b>	
Net interest bearing debt (b)-(a)	24.7	2.7	- 22.0

# FY2022 2Q Results – Consolidated Cash Flows

(Billions of JPY)

	FY2021-2Q (a)	FY2022-2Q (b)	Difference (b)-(a)
Cash flows from operating activities	38.6	29.6	- 9.0
Cash flows from investing activities	- 0.8	- 6.1	- 5.3
Cash flows from financing activities	- 18.0	- 3.6	14.4
Increase in cash and cash equivalents	19.9	21.9	2.0
Cash and cash equivalents at beginning	45.8	65.9	20.1
Cash and cash equivalents at end	65.7	87.8	22.1

\*Including foreign currency translation differences  
(FY2021 2Q : JPY 0.1 Billion, FY2022 2Q : JPY 2.0 Billion)

(Billions of JPY)

	FY2019 Results	FY2020 Results	FY2021 Results	FY2022 Forecast
Total assets	409.5	429.3	461.1	471.0
Cash and deposits	42.9	47.3	67.2	77.0
Equity	118.0	126.4	131.3	139.0
Equity ratio	28.8%	29.4%	28.5%	29.5%
ROE	1.9%	3.5%	6.1%	7.4%
Interest-bearing debt	99.6	98.1	91.9	87.0
R&D expenses	6.9	6.6	6.1	8.0
Capital investment	10.3	10.8	8.0	10.0
Depreciation	10.1	10.2	10.7	10.0

Balance sheet items are as of the end of each year

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# Management and Business Information

**President and CEO  
Sadao Mino**

# Major Orders received (Japan)

Order received	Project	Outline	Specifications etc.	Schedule
May	<p><b>Water treatment</b></p> <p>Sludge recycling treatment center Gobo City, Wakayama Pref.</p>	Construction of a new sludge recycling treatment center and demolition of existing aging facilities	122kl/day	Mar. 2027
September	<p><b>Energy-from-waste plant</b></p> <p>EfW plant Kuki City, Saitama Pref.</p>	Design-Build-Operate operation for 20 years after completion	155t/day (2 lines)	<p>Completion: Mar. 2029 (Including demolition of existing facilities ) Operation: 2027-2047</p>



Sludge recycling treatment center  
Gobo City, Wakayama Prefecture



Energy-from-waste plant  
Kuki City, Saitama Prefecture

# Major Orders received (overseas)

Order received	Project	Outline	Specifications etc.	Schedule
April (repost)	Energy-from-waste plant UK Main equipment (Inova)	Main equipment chute to stack Customer: Acciona Industrial UK (Ultimate customer: North London Waste Authority) Site: Enfield, North London, UK	700,000 t/year	Sep. 2026
April	Pressure vessels EO Reactor (Hitachi Zosen)	EO Reactor Customer: Shell Canada Site: Scotford, Alberta, Canada	Units: 2 Weight : 700 t/unit	2024 1Q
May	Energy-from-waste plant UK EPC (Inova)	EPC Customer: Indaver NV Site: Rivenhall, Essex, UK	595,000 t/year	2026 1Q
July	Energy-from-waste plant UK Main equipment (HZI Steinmüller)	Main equipment Customer: Fortum Glasgow Ltd. Site: Glasgow, Scotland, UK South Clyde Energy Center	350,000 t/year 45MW	2025 4Q

# Environment Business - Major Projects (excluding Inova)

Construction O&M

	Place	Order	completion	Formation	Scope	Calendar year						
						2019	2020	2021	2022	2023	2024	2025
Japan	Shiga	Mar.2017	Mar.2023*	JV	DBO	[Construction bar from 2017 to 2023, O&M bar from 2023 to 2025]						
	Shiga	Mar.2017	Jun.2022	JV	DBO	[Construction bar from 2017 to 2022, O&M bar from 2022 to 2025]						
	Gunma	Jun.2018	Jan.2025	Sole	EPC	[Construction bar from 2018 to 2025]						
	Hokkaido	Nov.2019	Jul.2024	JV	EPC	[Construction bar from 2020 to 2024]						
	Chiba	Feb.2020	Mar.2023	JV	DBO	[Construction bar from 2020 to 2023, O&M bar from 2023 to 2025]						
	Niigata	Mar.2020	Mar.2024	JV	BTO	[Construction bar from 2020 to 2024, O&M bar from 2024 to 2025]						
	Kumamoto	Jul.2020	Mar.2024	JV	DBO	[Construction bar from 2020 to 2024, O&M bar from 2024 to 2025]						
	Saga	Aug.2020	Mar.2024	Sole	DBO	[Construction bar from 2020 to 2024, O&M bar from 2024 to 2025]						
	Tokyo	Sep.2020	May.2027	JV	EPC	[Construction bar from 2020 to 2027]						
	Kagoshima	Feb.2021	Aug.2024	JV	DBO	[Construction bar from 2021 to 2024, O&M bar from 2024 to 2025]						
	Akita	Nov.2021	Mar.2026	JV	DBO	[Construction bar from 2021 to 2026]						
	Osaka	Feb.2022	Mar.2026	JV	DBO	[Construction bar from 2022 to 2026]						
	Saitama	Sep.2022	Mar.2029*	JV	DBO	[Construction bar from 2022 to 2029]						
International	Shanghai, China	Jul.2019	Jan.2023	Sole	EP+SV	[Construction bar from 2019 to 2023]						
	Bidadi, India	Dec.2020	May.2023	Consortium	EP+SV	[Construction bar from 2020 to 2023]						
	Changhua, Taiwan	Jul.2021	Jun.2024	Sole	EP+SV	[Construction bar from 2021 to 2024]						
	Moshi, India	Sep.2021	May.2023	Consortium	EP+SV	[Construction bar from 2021 to 2023]						

\*Including demolition work, etc.

# Environment Business - Major Projects (Inova)

Execution O&M

Project (country)	Order	Completion	Formation	Inova's Scope	Calendar year							
					2019	2020	2021	2022	2023	2024	2025	
Istanbul, Turkey	Sep.2017	Oct.2021	JV	EP+O&M(1-year)								
Ivery, France	Nov.2018	Apr.2024	Consortium	EP+SV								
Moscow1-4, Russia*1	Nov.2019	Jun.2023*2	Consortium	EP+SV								
Rockingham, Australia	Jan.2020	Dec.2022*2	Consortium	EP+SV+O&M(long term)								
Newhurst, UK	Feb.2020	-	Sole	EPC								
Emmenspitz, Swiss	Feb.2020	Oct.2025	Sole	EP+SV								
Slough, UK	Dec.2020	Nov.2024	Sole	EPC								
Dubai, UAE	Jun.2021	Jul.2024	Consortium	EP+SV+O&M(35-years)								
Skelton Grange, UK	Jul.2021	Jul.2025	Sole	EPC								
Westfield, UK	Dec.2021	Apr.2025	Sole	EPC+O&M(25-years)								
North London, UK	Apr.2022	Sep.2026	Sole	EP								
Revenhall, UK	May.2022	2026 1Q	Sole	EPC								

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

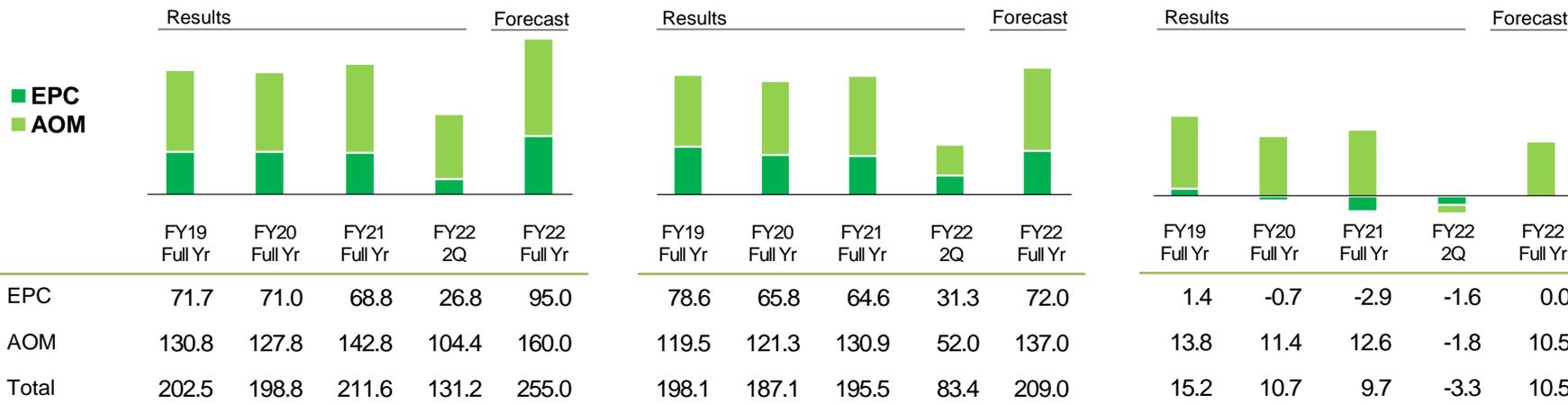
\*2 Delay expected

# Update of Business – Environment Business (excluding Inova)

(Billions of JPY) 【Order intake】

【Net sales】

【Operating income】



## EPC in Japan (Waste treatment facilities, etc.)

- Approx. 4,000 tons of orders expected in the market in FY22. (900 tons increase from the previous year.)
- Our order intake target for FY22 is approx. 1,500 tons.

## AOM in Japan (Waste treatment facilities, etc.)

- Retrofits are for facilities built by our company, the demand is peaking out.
- Due to increasing DBO (design-build-operate) projects for new orders, facilities for AOM services are decreasing. Order backlog of long-term operation steadily increasing, on the other hand.

## Water business

- Steady progress in orders in 1<sup>st</sup> half of FY22.
- Demand for new project is flat, but retrofit is increasing in Japan.

- Besides high demand especially in developing countries, most of them are stagnating due to the COVID-19.
- Osmoflo: steady progress in order intake, net sales and operating income.

## Electricity sales

- PPS (power producer and supplier) business made loss in 1<sup>st</sup> half of FY22. Sales expected to increase due to additional fuel cost adjustment, market price increase. Aiming to improve its profit in 2<sup>nd</sup> half of FY22.
- IPP (independent power producers) business expects increase in sales volume and electricity unit price.

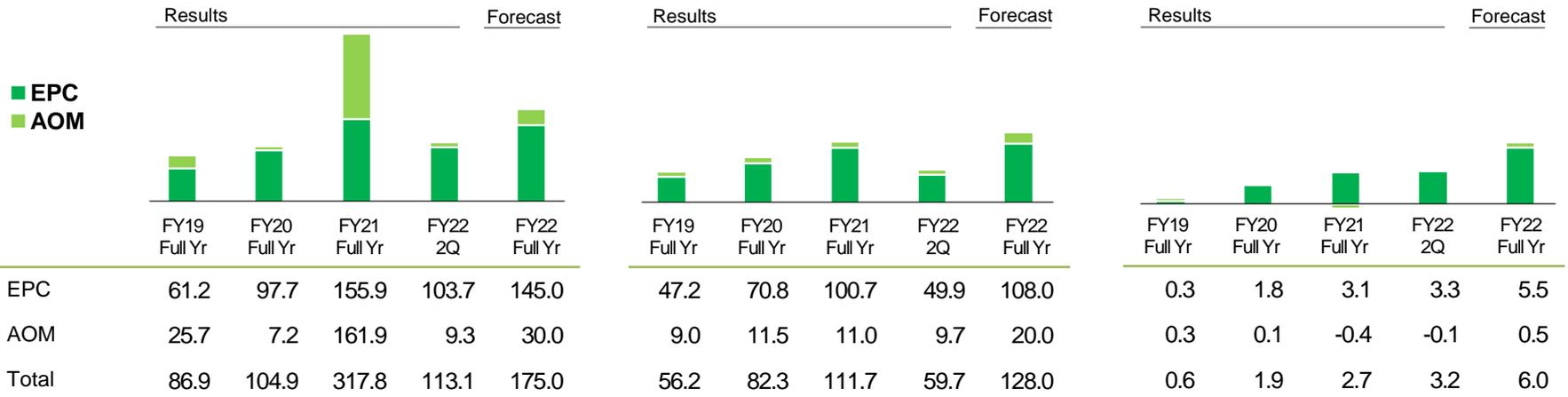
EPC: Engineering, procurement and construction AOM: After-sales services, operation and maintenance.

# Update of Business – Environment Business (Inova)

(Billions of JPY) 【Order intake】

【Net sales】

【Operating income】



## Market environment

- Continuing dominance in energy-from-waste (EfW) plant EPC market in EMEA.
- EU proposing increase renewable energy in energy consumption to 45% by 2030. EU is also planning to significant expansion of biogas plants.

## Order intake

- 2 out of 4 projects planned for FY22 were awarded in 1<sup>st</sup> half of FY22, both in UK. There is risk of delay for the remaining orders, still the impact on this FY's profit is limited.

- Steinmüller, German subsidiary, which joined the Group in Feb, 2022, resuming its orders intake. Will undertake supply of key equipment, retrofit, etc. Expected to cover fixed costs and make profit in FY23.

## AOM (Operation& Maintenance services)

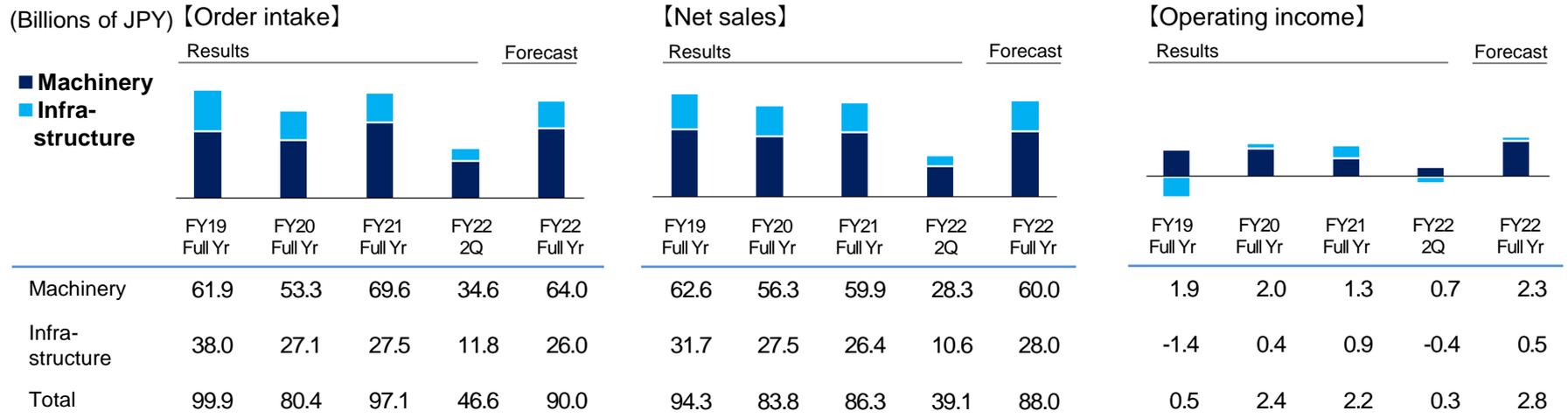
- CHF 250 million of target sales in FY25 whole Inova Group.

## Impacts of exchange rates (strong CHF/weak JPY)

- Foreign currency (Local currency, Euro currency, etc.), received from the customers temporarily in bank accounts incurring foreign exchange losses of financial closing date.

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

# Update of Business – Machinery & Infrastructure Business



## Press

- Press machine market (incl. large-sized machine) expected to recover 160 billion yen in FY22 (143.3 billion yen in the previous FY) (Source: Japan Forming Machinery Association)
- Profitability is secured through cost reduction efforts and reduced fixed cost, while increasing material price.

## Precision machinery, System machinery

- The vacuum valve market volume is expected to double by 2030 from approx. 120 billion yen in 2021.
- Our group's small valves for semiconductors remain steady. Lapping plates for semiconductors also steadily increase.

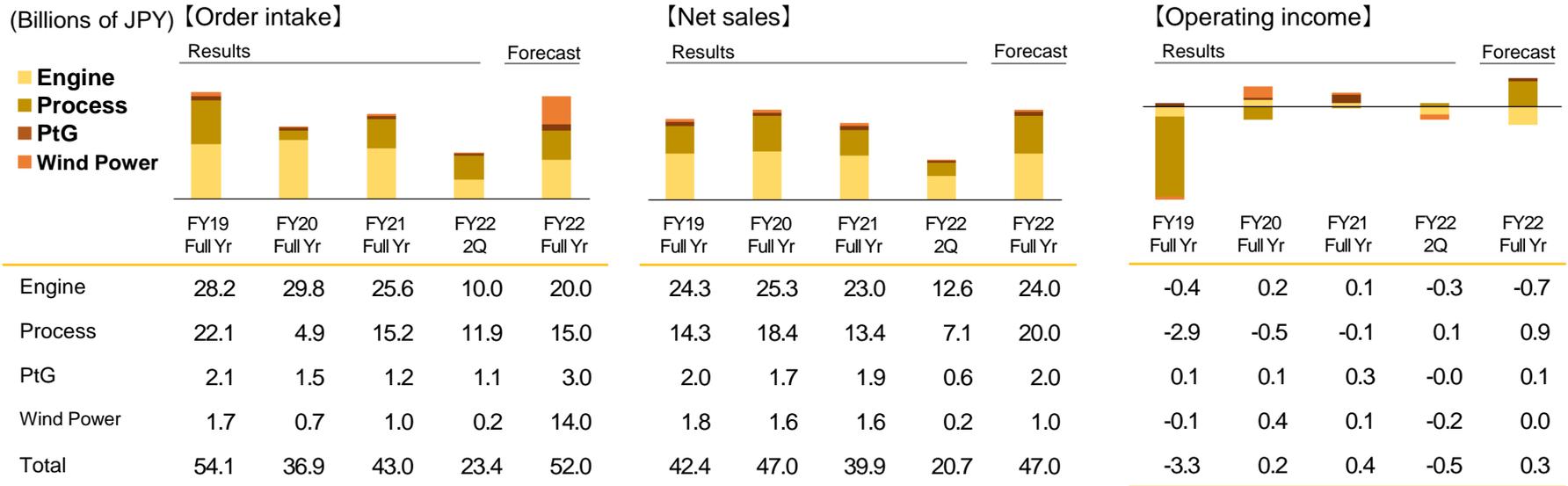
## Other machinery

- Order intake resulted in 8.9 billion yen in 1<sup>st</sup> half against 15.0 billion yen of FY22 forecast (59% progress).

## Infrastructure

- Order intake made steady progress to 11.8 billion yen in 1<sup>st</sup> half against 26.0 billion yen of FY22 full year forecast (45% progress).
- Bridge: the same level of orders as previous year (180,000 tons) expected for the Japan's Fundamental Plan for National Resilience is progressing.
- Hydraulic gates: redevelopment projects increasing. Strength in technology, monitoring/ analyzing system. Aim to enter overseas markets, mainly for ODA projects.
- Steel stacks: new construction shrinking, while demolition work increasing .

# Update of Business – Carbon Neutral Solution Business



## Engine

- High level of orders maintained, while operating income forecast revised downwards because of material price increase.
- Curve out marine engine business and accept a 35% capital participation from Imabari Shipbuilding Co., Ltd. (Scheduled in April 2023) . Improve profitability and promote development of environmentally friendly products.

## Process

- Investment in LNG, petrochemical recovering to the same level as before COVID-19 period.
- Maintenance demand increasing in Japan.

## PtG

- Orders for demonstration equipment from public and private sector customers.
- The company also participates in many demonstration projects, including Green Innovation Fund projects.

## Wind power

- Onshore wind project in Mutsu Ogawara, Aomori: Revising the costs with partner companies aiming closing within FY22.
- Offshore wind project in Aomori Northwest: Currently designated as "promising zone". Working on pricing reduction, etc.

## ■ New Company for Marine Diesel Engine

### Business Activities

Manufacture of marine diesel engines and after-sales service

### Ownership

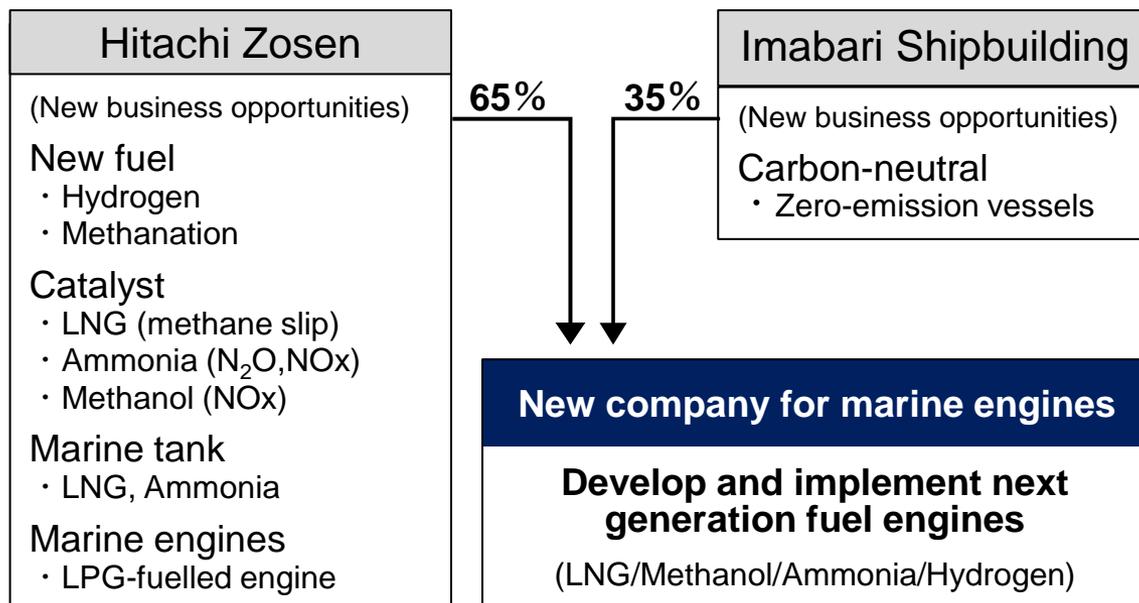
Hitachi Zosen 65%  
Imabari Shipbuilding 35%

### Start of Operation

April 2023 (Tentative)

### Aim of the cooperation

- Expand sales by strengthening the sales and supply network.
- Improve profitability of engine business (synergies in procurement and improvement of productivity)
- Contribution to greenhouse gas reduction through development and supply of next-generation fuel-compatible engines



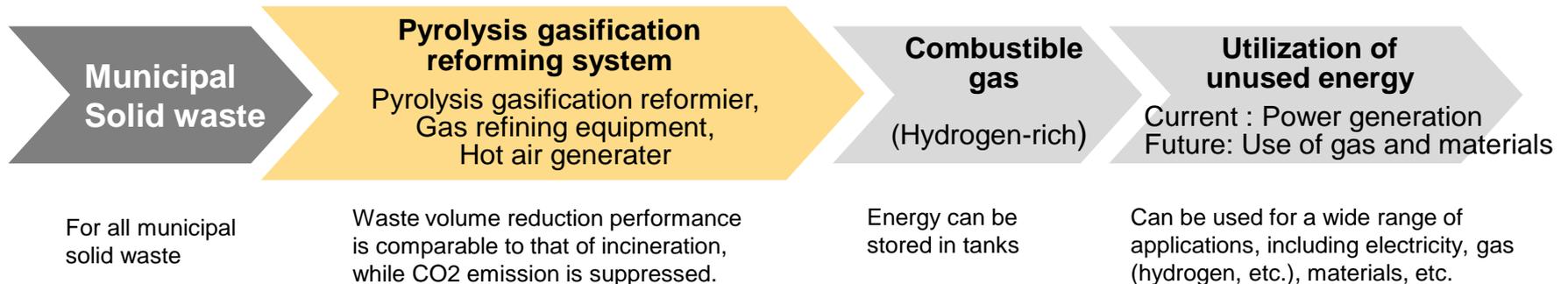
## ■ Share Transfer of Nippon Pusnes

- Transferred all shares held by the Company (90.5%) in Nippon Pusnes, a consolidated subsidiary, to Imabari Shipbuilding Co. Ltd. (October 31, 2022)

## ■ Started demonstration operation under the “Development of Next-Generation Waste Treatment System” commissioned by the Ministry of the Environment (MOE)

- Next-generation waste treatment system aimed at highly efficient energy recovery
- Waste incineration power generation facility is less efficient at smaller scales, so many of smaller facilities do not generate power  
Aiming further promotion of energy from waste by commercializing a highly efficient power generation system even on a small scale
- The system can convert combustible materials in waste into combustible gases and promote their use as energy and materials.

### Flow of Next Generation Waste Treatment System



### Outline of project commissioned by Ministry of Environment

- Project Outline : Development and demonstration of our own technology for the pyrolysis gasification reforming system, our new next-generation waste treatment system
- Site : Maishima Works, Osaka Wide Area Environmental Facilities Association
- Project term : FY2020 to FY2023 (Plan)
- Processing capacity : 2 tons/day



Demonstration plant for Next-Generation Waste Treatment System

## ■ Hitachi Zosen Inova

Awarded the 16th and 17th projects in the UK

### North London

Order received : Apr. 2022

Inova's scope : Supply of main equipment

Capacity : 700,000 tons/year

Completion : Sep. 2026

### Rivenhall

Order received : May 2022

Inova's scope : EPC (engineering,  
procurement, construction)

Capacity : 595,000 tons/year

Completion : 1<sup>st</sup> quarter of 2026



Rivenhall (Rendering)

## ■ HZI Steinmüller

Orders steadily awarded after acquisition in February 2022

### South Clyde (UK)

Order received : July 2022

Inova's scope : Supply of main equipment

Capacity : 350,000 tons/year

Completion : 4<sup>th</sup> quarter of 2025

## ■ Hitachi Zosen Group's casks and canisters for spent fuel

- With a rich track record of casks and canisters, which are containers for the transport and storage of spent fuel from nuclear power plants, mainly in the U.S. market
- Aiming to be a solution provider for transport and storage in interim storage in the future
- Aiming to providing solution for safe and secure transport and storage of spent fuel also in the Japanese market

## ■ Establishment of TOUSOU MIRAI MANUFACTURING, Inc

### Tokyo Electric Power HD (67 %)

Promoting the concentration of the decommissioning industry in the Hamadori area of Fukushima Prefecture with the aim of achieving both revival and decommissioning.

### Hitachi Zosen (33%)

Accumulating technologies and skills required for transporting and storing spent fuel, etc. in Japan and overseas.

### TOUSOU MIRAI MANUFACTURING, Inc

Established: October 20, 2022

Paid in capital: JPY1.5 billion

Business activities: Manufacture and sale of transport and storage casks, and fuel debris storage containers

- Construct a plant for decommissioning related products in Hamadori. Plan to start operations in FY 2025
- Contribute to Fukushima's revival by producing high-performance products locally over the medium to long term



# 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.



Hitachi Zosen Corporation

<https://www.hitachizosen.co.jp/english/>