



JFE Group

**Financial Results for First Quarter of
Fiscal Year 2023 ending March 31, 2024**

JFE Holdings, Inc.

August 3, 2023

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This presentation material is for the purpose of publicizing the status of our company's financial results for the first quarter of FY2023. It is not a disclosure material under the Financial Instruments and Exchange Act and does not guarantee the accuracy or completeness of the information. It does not constitute a solicitation to invest in securities in Japan, the United States or any other countries. The forecasts presented are based on information received at the time of the briefing and include uncertainties. Therefore, please refrain from making investment decisions based solely on this document. Our company shall not be liable for any damages arising as a result of the use of this document.



Financial Highlights

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Results for 1Q of FY2023

Business Profit ¥84.8bn.

(decreased by ¥31.8bn. year-on-year)

**[Excluding Inventory
Valuation etc.] [¥75.8bn.]**

(Increased by ¥75.2bn. year-on-year)

- **Business profit decreased year-on-year** due to negative inventory valuation differences due to a decline in main raw material prices.
- Business profit excluding Inventory valuation etc. improved significantly due to sales price improvement, etc.

Forecast of FY2023

Business Profit ¥290.0bn.

(As previous announced)

**[Excluding Inventory
Valuation etc.] [¥315.0bn.]**

(Increased by ¥35.0bn.
from previous forecast)

Steel business profit per ton* :

10,000yen/t (Increased by 1,000yen
from previous forecast)

Crude Steel Production(Standalone) :

approx. 24.60Mt (Decreased by 0.40Mt
from previous forecast)

Dividend 100yen (Interim dividend 50yen)

- **Business profit is unchanged from the previous forecast.**
(Business profit Excluding Inventory Valuation, etc. improve)
- While the recovery of overseas steel market and demand has been delayed from the initial forecast, **profit and profit per ton excluding inventory valuation etc. is expected to improve** from previous forecast by promoting sales price improvement.
- Annual dividend is as previously announced. JFE Holdings agreed to pay an interim dividend of 50 yen.

Progress of the 7th Medium- Term Business Plan

Structural reform: Shutdown of upstream facilities and hot rolling facilities in Keihin is scheduled for September 16, 2023

Overseas strategy: Establish a joint venture company in India of grain-oriented electrical steel sheet with JSW (released on August 3, 2023)

Carbon neutral: Green steel [JGreeX™] has been selected for large cargo ships (released on June 20, 2023)

Consolidated Results for First Quarter of Fiscal Year 2023 (April 1 to June 30, 2023)



Financial Results for 1Q of Fiscal Year 2023

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➤ Business profit in 1Q of FY2023 was ¥84.8bn.

(decreased by ¥31.8bn. year-on-year)

(billion yen)	FY2022 Actual 1Q (Apr-Jun)	FY2023 Actual 1Q (Apr-Jun)	Change
Revenue	1,253.6	1,262.0	8.4
Business Profit [Excluding Inventory Valuation etc.]	116.6 [0.6]	84.8 [75.8]	(31.8) [75.2]
Finance Income/Costs	(3.2)	(4.9)	(1.7)
Segment Profit	113.4	79.8	(33.6)
Exceptional Items	—	—	0.0
Profit before Tax	113.4	79.8	(33.6)
Tax Expense and Profit (Loss) Attributable to Non-Controlling Interests	(29.5)	(20.2)	9.3
Profit Attributable to Owners of Parent	83.8	59.6	(24.2)

Business profit is profit before tax excluding financial income and one-time items of a materially significant value.

Inventory Valuation etc. is inventory valuation, carry over and foreign exchange valuation in steel business.

Segment profit is profit including financial income in business profit.



Financial Results for 1Q of Fiscal Year 2023 (by Segment)

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(billion yen)		FY2022 Actual 1Q (Apr-Jun)	FY2023 Actual 1Q (Apr-Jun)	Change	Contents
	Steel Business	932.6	917.2	(15.4)	
	Engineering Business	98.2	111.1	12.9	
	Trading Business	379.5	370.3	(9.2)	
	Adjustments	(156.8)	(136.7)	20.1	
Revenue		1,253.6	1,262.0	8.4	
Business Profit (A)		116.6	84.8	(31.8)	
Finance Income/Costs (B)		(3.2)	(4.9)	(1.7)	
	Steel Business	93.0	68.1	(24.9)	Explanation on the next page
	Engineering Business	(1.2)	(0.1)	1.1	Increase in sales revenue and cost reduction
	Trading Business	21.1	14.7	(6.4)	Spread narrowing mainly in North America
	Adjustments	0.4	(2.9)	(3.3)	
Segment Profit (A+B)		113.4	79.8	(33.6)	

Business profit is profit before tax excluding financial income and one-time items of a materially significant value.

Segment profit is profit including financial income in business profit.

24.9bn. Decrease in JFE Steel's Segment Profit (FY2022.1Q (Actual) vs. FY2023.1Q (Actual))

				(billion yen)			
	Unit	FY2022 1Q	FY2023 1Q	JFE Steel	FY2022 1Q	FY2023 1Q	Change
Crude Steel (Standalone)	Mt	6.43	6.05	Segment Profit	93.0	68.1	(24.9)
Shipment (Standalone)	Mt	5.54	5.23				
Average Sales Price (Standalone)	000yen /t	126.7	128.5	Excluding Inventory Valuation etc.	(23.0)	59.1	82.1
Exchange Rate	Yen/\$	126.5	135.8				

1. Cost

+5.0

- Operational improvement

2. Volume and Mix

(10.0)

- Crude Steel Production 6.43Mt⇒6.05Mt

3. Sales and Raw materials

+120.0

- Improved spreads due to the reflection of high prices of main raw materials, metals, and other commodities in selling prices

4. Inventory valuation

(107.0)

- Inventory valuation -66.0 (+61.0→-5.0)
- Carry over -32.0 (+37.0→+5.0)
- Foreign exchange valuation-9.0 (+18.0→+9.0)

5. Others

(32.9)

- Group companies -7.0
- Foreign exchange effects on trade -5.0
- Depreciation cost -4.0 etc.

Financial Forecastsfor Fiscal Year 2023 (April 1, 2023, to March 31, 2024)



Financial Forecast for Fiscal Year 2023

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- **Full-year business profit is expected to be ¥290.0bn.**
(as previous forecast, increased by ¥54.2bn. year-on-year)
- **Full-year profit attributable to owners of parent is expected to be ¥190.0bn.**
(as previous forecast, increased by ¥27.4bn. year-on-year)

(billion yen)	FY2022 Actual		FY2023 Forecast (Previous)	FY2023 Forecast(Updated)		Change FY2022 →FY2023	Change Previous →Updated
	1H	Full year	Full year	1H	Full year	Full year	Full year
Revenue	2,564.3	5,268.7	5,540.0	2,610.0	5,380.0	111.3	(160.0)
Business Profit [Excluding Inventory Valuation etc.]	187.9 [71.9]	235.8 [162.8]	290.0 [280.0]	125.0 [141.0]	290.0 [315.0]	54.2 [152.2]	0.0 [35.0]
Finance Income/Costs	(6.6)	(14.8)	(20.0)	(10.0)	(20.0)	(5.2)	0.0
Segment Profit	181.2	221.0	270.0	115.0	270.0	49.0	0.0
Exceptional Items	-	(10.7)	-	-	-	10.7	0.0
Profit before Tax	181.2	210.2	270.0	115.0	270.0	59.8	0.0
Tax Expense and Profit (Loss) Attributable to Non-Controlling Interests	(57.9)	(47.6)	(80.0)	(30.0)	(80.0)	(32.4)	0.0
Profit Attributable to Owners of Parent	123.2	162.6	190.0	85.0	190.0	27.4	0.0

Business profit is profit before tax excluding financial income and one-time items of a materially significant value.

Inventory valuation etc. is inventory valuation, carry over and foreign exchange valuation in steel business.

Segment profit is profit including financial income in business profit.



Financial Forecast for Fiscal Year 2023 (by Segment)

JFE

(billion yen)		FY2022 Actual		FY2023 Forecast (Previous)	FY2023 Forecast(Updated)		Change FY2022 →FY2023	Change Previous →Updated
		1H	Full year	Full year	1H	Full year	Full year	Full year
	Steel Business	1,918.9	3,881.1	4,000.0	1,880.0	3,770.0	(111.1)	(230.0)
	Engineering Business	219.0	512.5	550.0	230.0	550.0	37.5	0.0
	Trading Business	750.2	1,514.1	1,620.0	780.0	1,620.0	105.9	0.0
	Adjustments	(323.9)	(638.9)	(630.0)	(280.0)	(560.0)	78.9	70.0
Revenue		2,564.3	5,268.7	5,540.0	2,610.0	5,380.0	111.3	(160.0)
Business Profit (A)		187.9	235.8	290.0	125.0	290.0	54.2	0.0
Finance Income/Costs (B)		(6.6)	(14.8)	(20.0)	(10.0)	(20.0)	(5.2)	0.0
	Steel Business	148.2	146.8	200.0	87.0	200.0	53.2	0.0
	Engineering Business	(3.9)	13.4	25.0	5.0	25.0	11.6	0.0
	Trading Business	40.6	65.1	48.0	26.0	48.0	(17.1)	0.0
	Adjustments	(3.6)	(4.3)	(3.0)	(3.0)	(3.0)	1.3	0.0
Segment Profit (A+B)		181.2	221.0	270.0	115.0	270.0	49.0	0.0

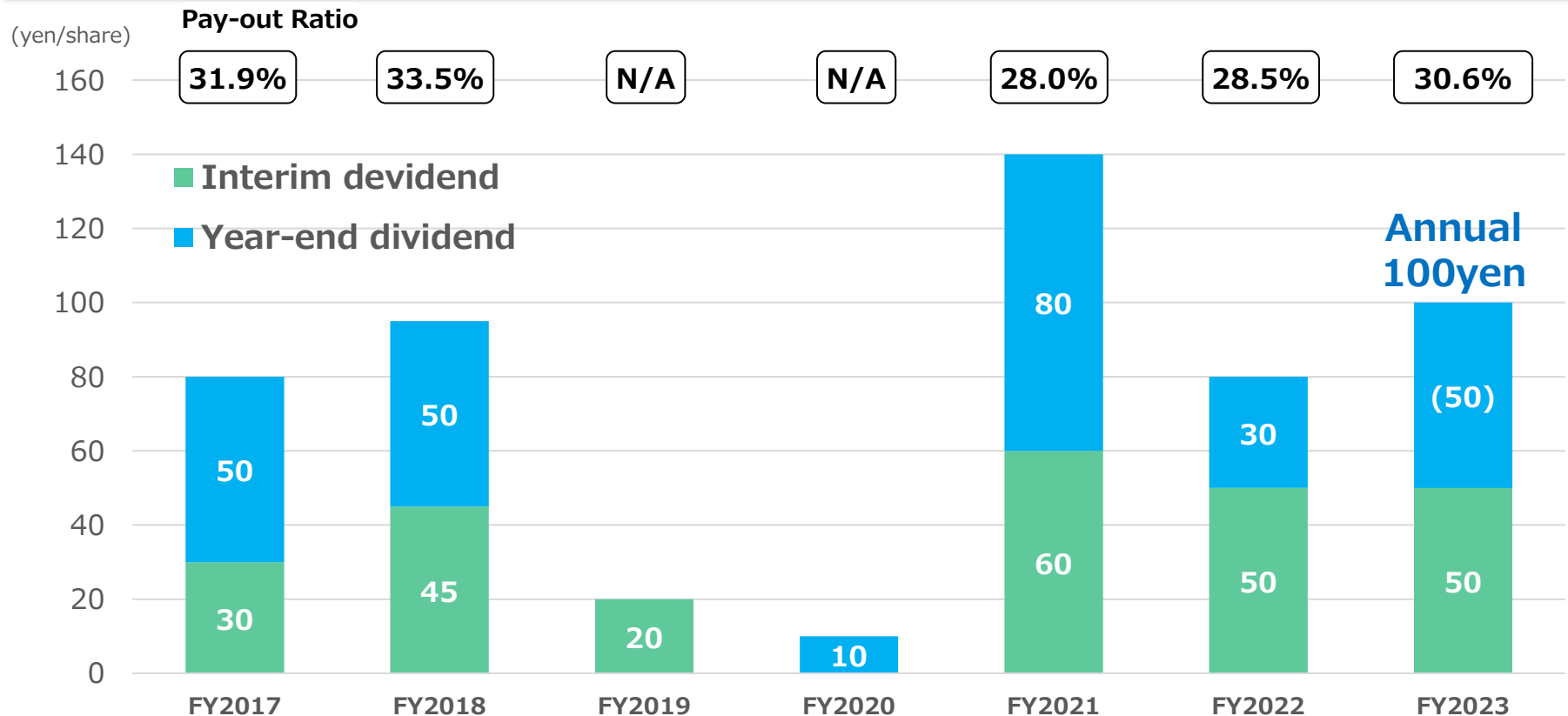
Business profit is profit before tax excluding financial income and one-time items of a materially significant value.

Segment profit is profit including financial income in business profit.



Dividend

- JFE Holdings agreed to pay an interim dividend of **50 yen per share** at its Board of Directors.
- The annual dividend for FY2023 is expected to be **100 yen per share**, based on our payout ratio policy of approximately 30%.
(As previous announced)



JFE Steel

Financial Forecast for Fiscal Year 2023

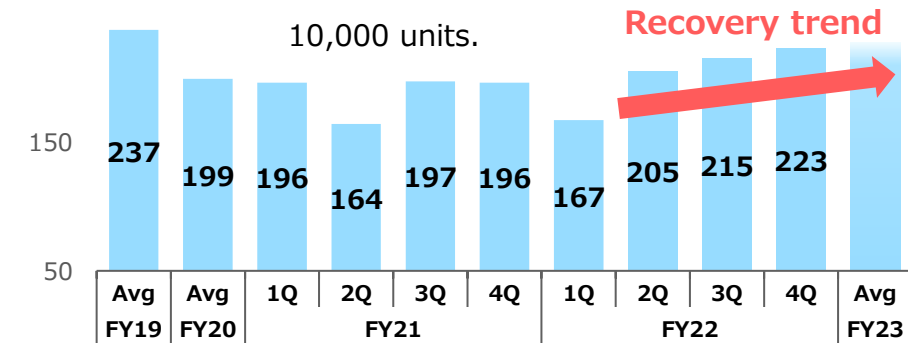


Business environment (Domestic)

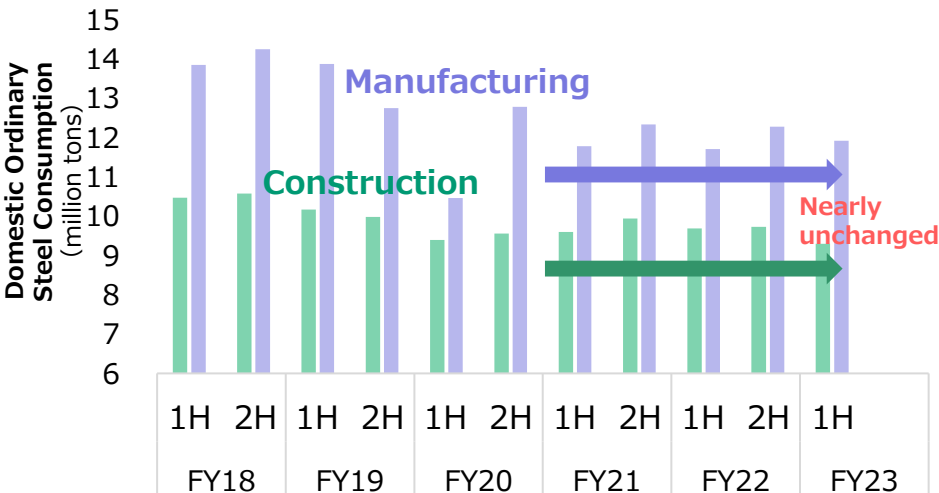
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- Although the level of activity in the automotive sector is improving, **demand continues to be postponed** due to labor shortages and the impact of soaring materials prices, **particularly in the civil engineering and construction sectors.**
- Demand for steel products is expected to be flat** from the first half to the second half of the year.

Outlook for Domestic Auto Production



Outlook for Domestic Ordinary Steel Consumption



Source: Ministry of Economy, Trade and Industry, "Outlook for Steel Consumption" 7 July 2023. (FY2022, 2H and after is estimated results)

Trend by Sector

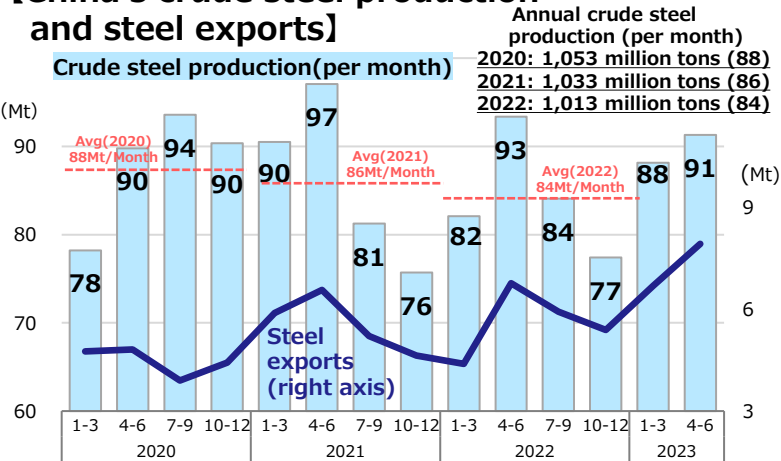
Auto-mobile	<ul style="list-style-type: none"> Each company has a backlog of orders and is highly motivated to produce. Semiconductor supply risks are gradually improving, and production levels are expected to recover moderately.
Ship-building	<ul style="list-style-type: none"> Despite the effects of soaring materials prices and labor shortages, the company has secured a two-year backlog of orders, which is the standard for stable workload. The current level is expected to remain stable over the next two to three years.
Other manufacturing	<ul style="list-style-type: none"> Demand for construction machinery remains strong due to high resources prices, despite the impact of a slowdown in housing construction in the United States. Industrial machinery should be closely watched as it is increasingly cautious about investment due to rising interest rates and other economic uncertainties.
Construction	<ul style="list-style-type: none"> In the non-housing sector, demand is strong as redevelopment projects such as the Tokyo metropolitan area are on the horizon. Due to soaring materials prices and labor shortages, the number of new housing starts has stagnated, and the number of small and medium-sized projects has continued to be low level.
Civil engineering	<ul style="list-style-type: none"> Although budget measures continue to be implemented at a high level, it is expected to be affected by soaring materials prices and labor shortages.

Business environment (Overseas)

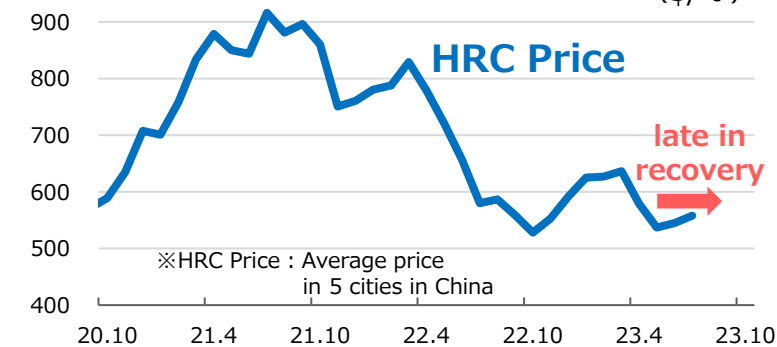
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- Overall, **steel demand is expected to recover moderately**.
- While China has increased crude steel production, domestic demand has been weak, including a slump in the real estate industry, and **the market recovery is slower than expected**.
- The Chinese government's economic stimulus measures and curbs on crude steel are **expected to improve steel supply and demand and market conditions** from the beginning of the next year.

【China's crude steel production and steel exports】



【 China : Steel market price 】 (\$/ t)



【Real GDP Growth Forecast in 2023】

(Arrows indicate changes from the previous forecast)

	World	US	China	India	ASEAN-5
2022 Estimate	3.5%	2.1%	3.0%	7.2%	4.5%
Apr. 2023 Forecast	2.8%	1.6%	5.2%	5.9%	5.3%
Jul. 2023 Forecast	3.0% ➡	1.8% ➡	5.2% ➡	6.1% ➡	5.3% ➡

Source : IMF World Economic Outlook Update April 11 and July 25, 2023

*ASEAN-5 :
Thailand, Malaysia, Indonesia,
Philippine, and Singapore

【Trend by Sector】

Thin Sheet	<ul style="list-style-type: none"> • Demand in China is expected to recover moderately, thanks in part to governmental support for the real estate sector. • In Southeast Asia, there has been some postponement of purchases due to currency depreciation and budget shortfalls, but we expect moderate improvement in demand in the future.
Auto-mobile	<ul style="list-style-type: none"> • Demand is firm and production levels are expected to recover gradually. • However, the recovery is expected to be moderate compared to the previous year due to the prolonged crisis in Ukraine, rising prices and interest rate hikes mainly in the United States, as well as a slowdown in growth in China.
Ship-building	<ul style="list-style-type: none"> • China and South Korea shipbuilders are increasing orders for new construction and securing stable contracts. • Despite the impact of the labor shortage, it is expected to be firm as the labor shortage is gradually being resolved.
Energy	<ul style="list-style-type: none"> • While oil and gas prices has fallen temporarily due to fears of a slowdown in the economy, investment in projects to develop oil and natural gas plants is expected to remain strong.



Raw materials market trends

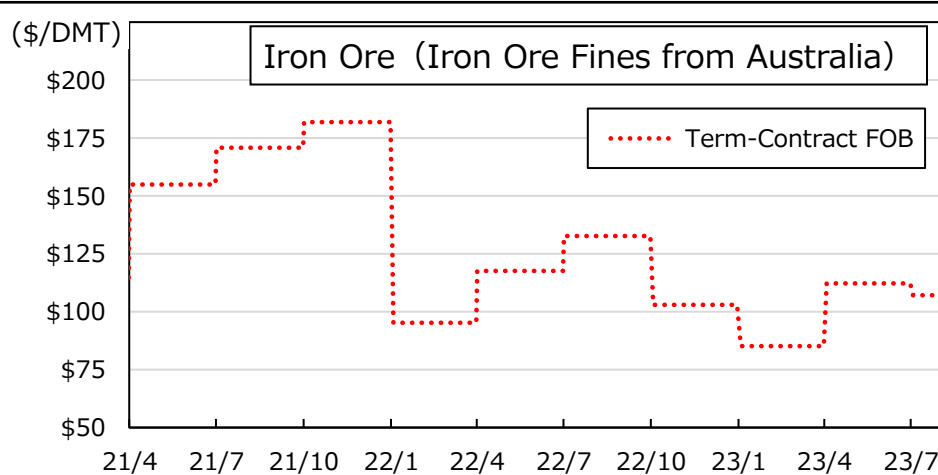
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■ Key raw materials

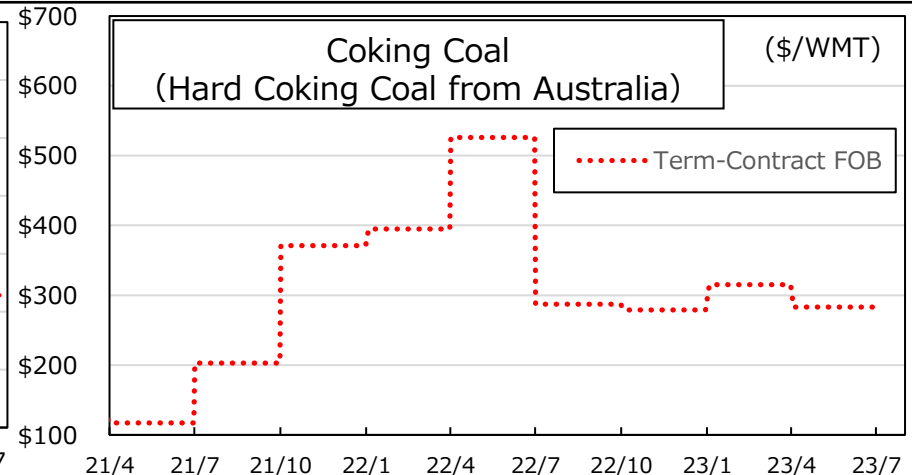
- Iron ore prices rose from late last year to early this year due to expectations of a recovery in steel demand following the easing of China's zero coronavirus policy, however, **fell around March due to a slower recovery in the steel market**. The prices are currently hovering around FOB\$100.
- Coal prices fluctuated wildly last year due to the situation in Ukraine and the weather, but they are now moving calmly.
- **Both iron ore and coking coal are expected to remain at current levels.**

■ Metals

- Metals prices remain weak due to the sluggish European economy and the slower recovery in China's economy and steel demand, however, are still high relative to historical levels.



Term-Contract FOB	FY2022				FY2023	
	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep
\$/DMT	118	133	103	85	112	107



Term-Contract FOB	FY2022				FY2023	
	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep
\$/WMT	526	287	279	315	283	-

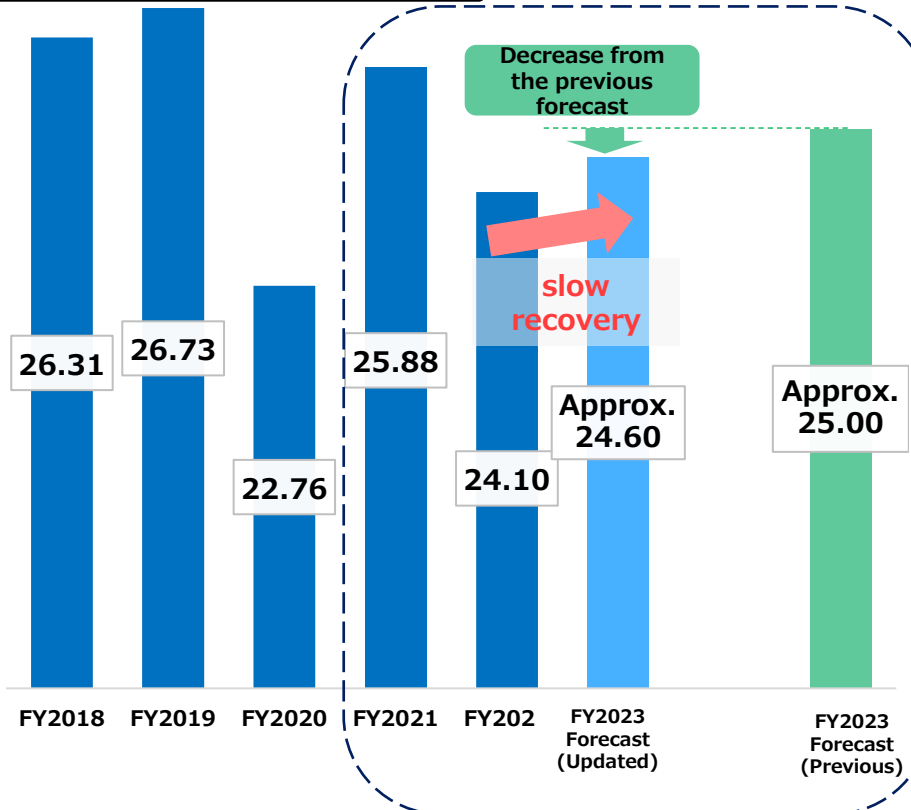
Crude steel production

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- Although there is a recovery trend in some sectors (such as for domestic automobiles), the overall recovery has been slower than previous forecast, so **standalone crude steel production is expected to be approx. 24.60Mt per year.**
(down 0.40Mt from the previous forecast)
- After Shut down of upstream facilities and hot rolling facilities in Keihin on September 16, 23, The number of blast furnaces in Japan decrease to seven, and the operation rate improves.

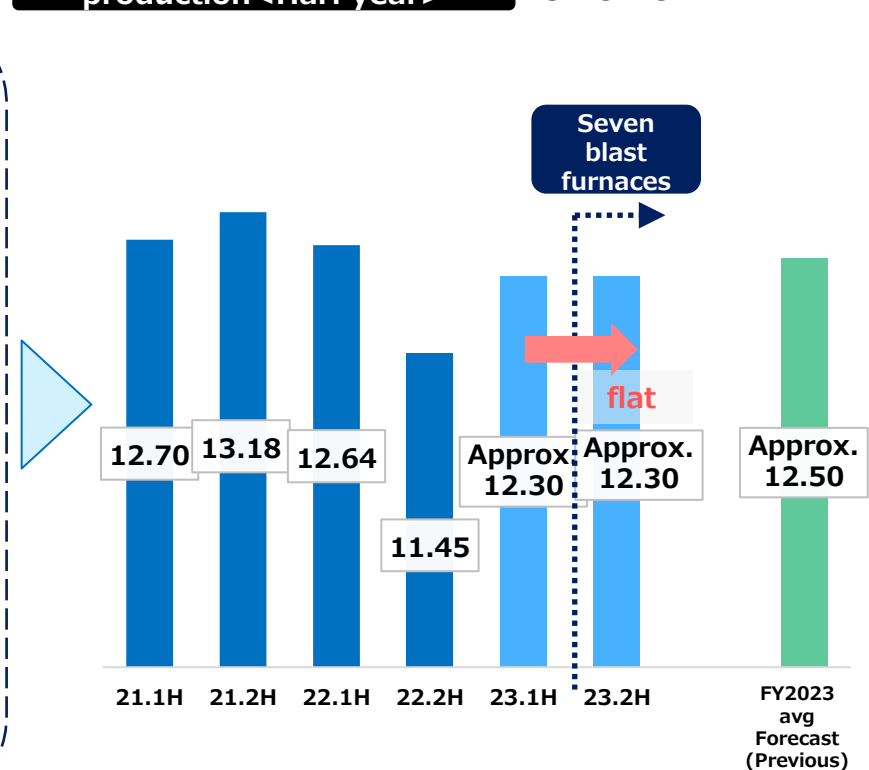
standalone crude steel production<Full ear>

Unit : Mt



standalone crude steel production<Half year>

Unit: Mt

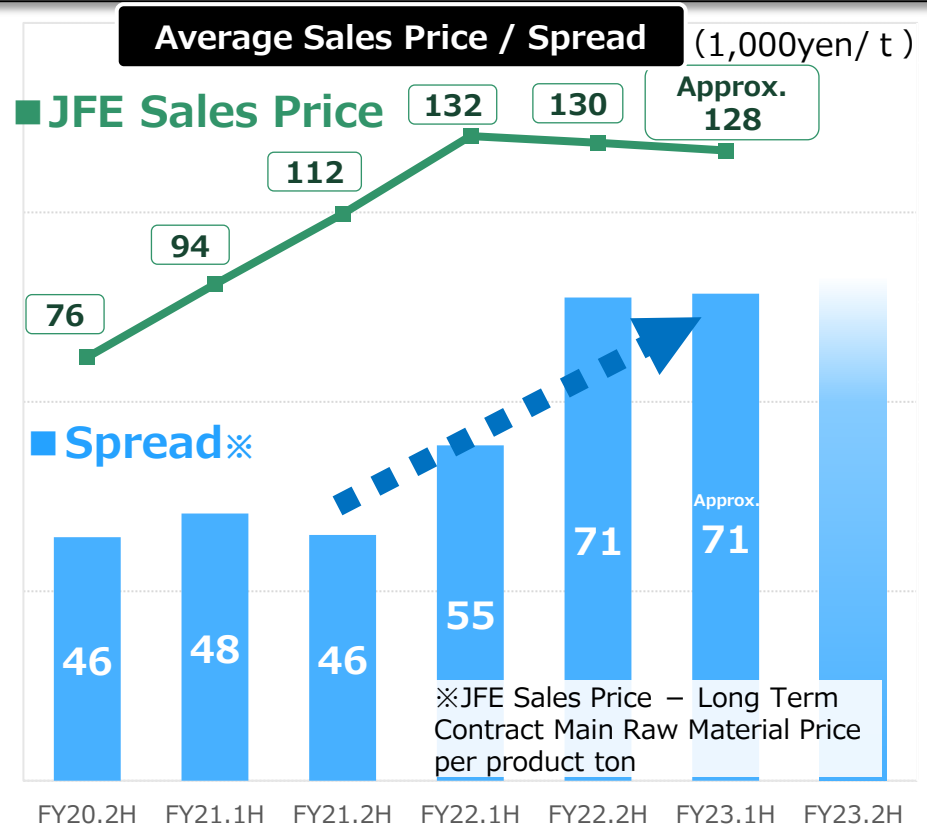
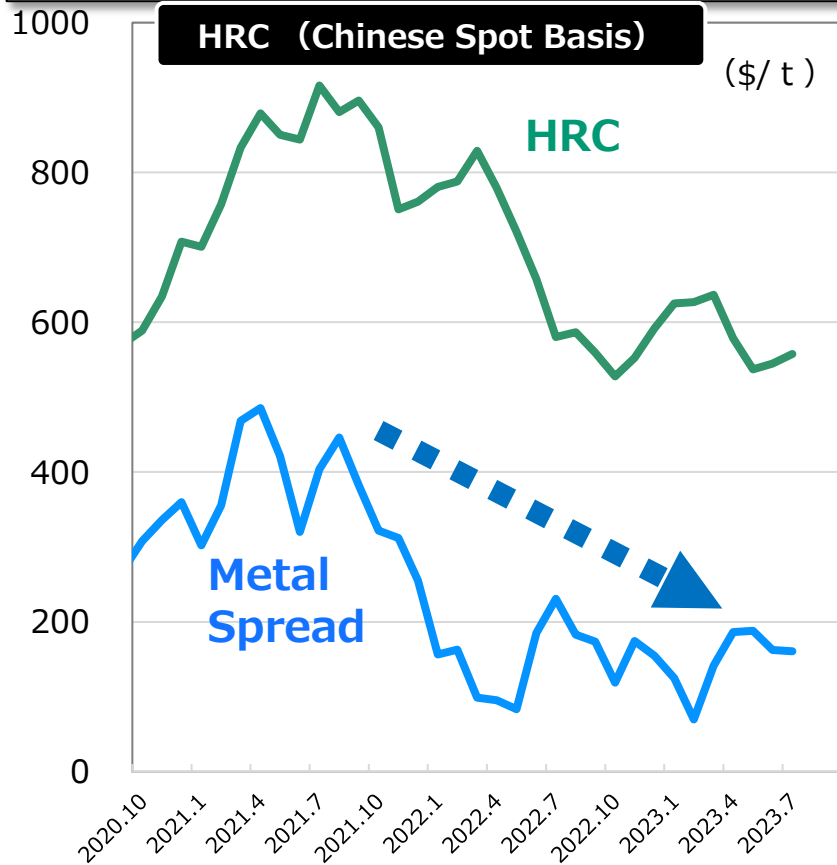


Improving of sales price

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- In 1H of FY2023, despite the impact of the decline in main raw material prices and overseas steel market, we continue **the reflections of metal and commodity costs***, **overhaul of extra pricing**, and **enhancing sales price**, and are expected to maintain sales prices generally.
- The spread of FY2023 is expected to **increase by ¥144.0bn. (+7,000yen/t)** from FY2022 and **increase by ¥64.0bn.(+3,000yen/t)** from the previous forecast.

*Including foreign exchange effect, scrap, metal, fare, energy, etc.



Financial Forecast for Fiscal Year 2023

JFE

	Unit	FY2022					FY2023(updated)					FY2023 Previous Forecast
						Full Year					Full Year	
		1Q	2Q	1H	2H		1Q	2Q	1H	2H		
Revenue	billion yen	932.6	986.3	1,918.9	1,962.2	3,881.1	917.2	970.8	1,888.0	1,882.0	3,770.0	4,000.0
Segment Profit	billion yen	93.0	55.2	148.2	(1.4)	146.8	68.1	18.9	87.0	113.0	200.0	200.0
Excluding Inventory Valuation etc.*	billion yen	(23.0)	55.2	32.2	41.6	73.8	59.1	43.9	103.0	122.0	225.0	190.0
Crude Steel (Standalone)	Mt	64.3	62.1	126.4	114.5	241.0	60.5	Approx. 63.0	Approx. 123.0	Approx. 123.0	Approx. 246.0	Approx. 250.0
Crude Steel (Consolidated)	Mt	67.7	65.9	133.7	121.1	254.8	63.8	Approx. 67.0	Approx. 131.0			
Shipment (Standalone)	Mt	55.4	53.2	108.6	108.8	217.4	52.3	Approx. 57.0	Approx. 109.0			
Export Ratio on Value Basis (Standalone)	%	48.5	45.0	46.7	42.2	44.5	44.2	Approx. 44	Approx. 44			
Average Sales Price (Standalone)	000 yen/ t	126.7	136.7	131.6	129.9	130.8	128.5	Approx. 127	Approx. 128			
Exchange Rate	¥/\$	126.5	136.6	131.6	138.6	135.1	135.8	Approx. 142	Approx. 139	Approx. 140	Approx. 139	Approx. 130
Exchange Rate (End of Term)	¥/\$	136.7	144.8	144.8	133.5	133.5	145.0	Approx. 140	Approx. 140	Approx. 140	Approx. 140	Approx. 130

* Excluding inventory valuation, carry over and foreign exchange valuation from segment profit

0.0bn. Increase in JFE Steel's Segment Profit (FY2023 (Previous Forecast) vs. FY2023(Updated Forecast))

(billion yen)

JFE Steel	FY2023 Previous Forecast	FY2023 Updated Forecast	Change
Segment Profit	200.0	200.0	0.0
Excluding Inventory Valuation etc.	190.0	225.0	35.0

1. Cost

±0.0

2. Volume and Mix

(8.0)

- Crude Steel Production approx.25.00Mt⇒approx.24.60Mt

3. Sales and Raw materials

+70.0

- Improved spreads due to the reflection of high prices of main raw materials, metals, and other commodities in selling prices

4. Inventory valuation

(35.0)

- Inventory valuation -9.0 (-3.0→-12.0)
- Carry over -36.0 (+17.0→-19.0)
- Foreign exchange valuation+10.0 (-4.0→+6.0)

5. Others

(27.0)

- Foreign exchange effects on trade -21.0 etc.

53.2Bn. Increase in JFE Steel's Segment Profit (FY2022 (Actual) vs. FY2023 (Forecast))

JFE Steel		FY2021 Actual	FY2022 Forecast	(billion yen) Change
Segment Profit		146.8	200.0	53.2
Excluding Inventory Valuation etc.		73.8	225.0	151.2

1. Cost

+63.0

- Structural reforms effect +20.0
- Operational improvement +20.0
- Disappearance of blast furnace refurbishment impact and production reduction impact +23.0

2. Volume and Mix

+10.0

- Increased volume due to gradual recovered steel demand (Crude Steel Production 24.10Mt⇒approx. 24.60Mt)

3. Sales and Raw materials

+145.0

- Improved spreads due to the reflection of high prices of main raw materials, metals, and other commodities in selling prices

4. Inventory valuation

(98.0)

- Inventory valuation -91.0 (+79.0→-12.0)
- Carry over +4.0 (-23.0→-19.0)
- Foreign exchange valuation-11.0 (+17.0→-6.0)

5. Others

(66.8)

- Depreciation cost -12.0
- Foreign exchange effects on trade -10.0 etc.

26.0Bn. Yen Increase in JFE Steel's Segment Profit (FY2023.1H vs. FY2023.2H)

(billion yen)

JFE Steel		FY2023 Forecast			Change
		1H Forecast	2H Forecast	Full Year	
Segment Profit		87.0	113.0	200.0	26.0
Excluding Inventory Valuation etc.		103.0	122.0	225.0	19.0

1. Cost

+33.0

- Structural reforms effect +20.0
- Operational improvement +13.0

2. Volume and Mix

±0.0

3. Sales and Raw materials

±0.0

4. Inventory valuation

+7.0

- Inventory valuation -6.0 (-3.0→-9.0)
- Carry over+19.0 (-19.0→±0.0)
- Foreign exchange valuation -6.0(+6.0→±0.0)

5. Others

(14.0)

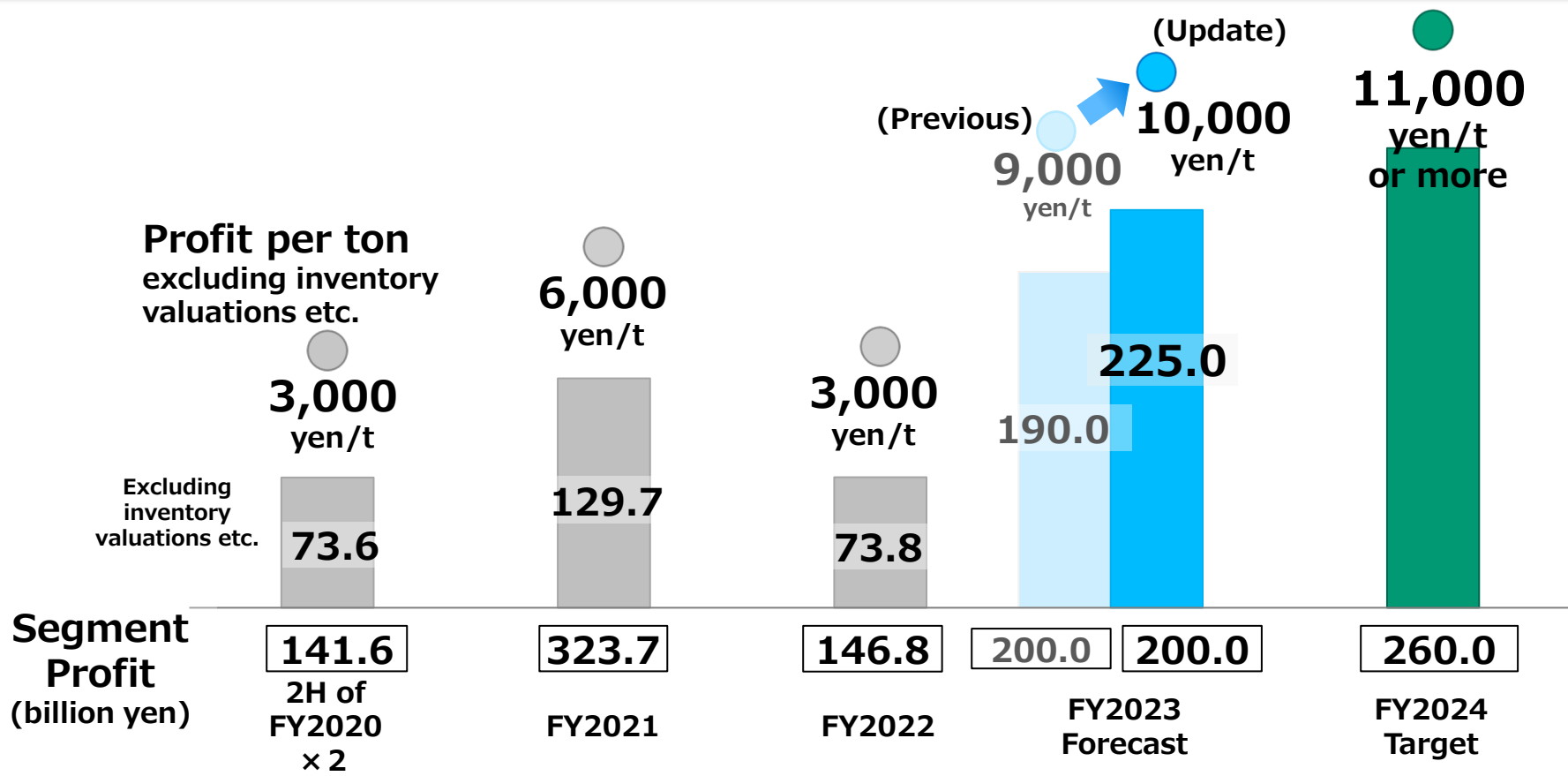
- Increase other expenses etc.



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Profit in the steel business

- While raw material prices are lower than the previous forecast, maintaining sales prices will **improve profitability.**
- **In FY2023, profit per ton excluding inventory valuations etc. is expected to be 10,000yen/t.** (increased by 1,000yen/t from previous forecast)

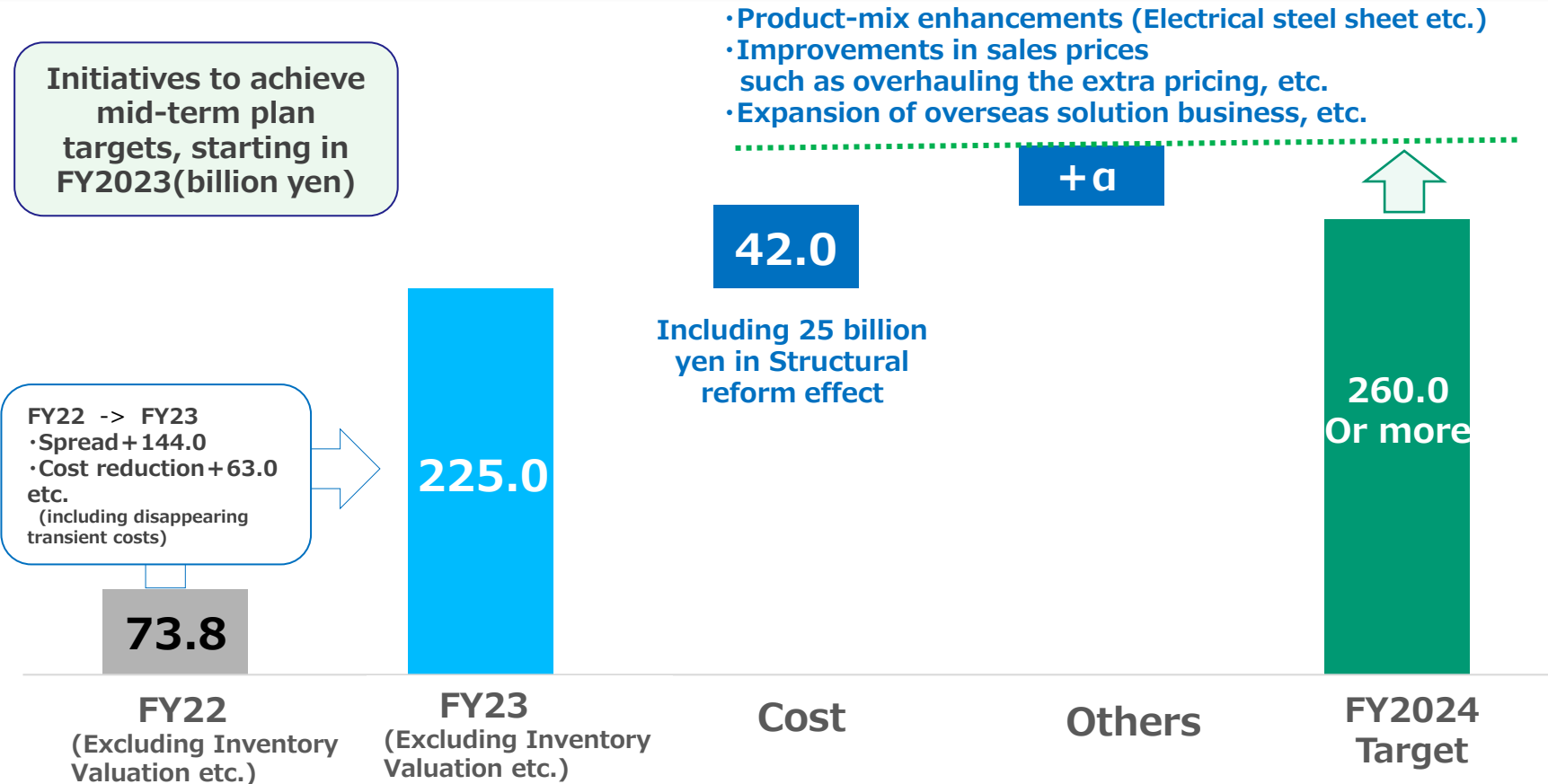




Paths toward achieving the Seventh Medium-Term Plan

JFE

- In FY2023, segment profit excluding Inventory Valuation etc. in the steel business is expected to be **225 billion yen**.
- In FY2024, due to steadily implementing various measures, including structural reforms, sales price improvements, and an increase in the ratio of high-value-added products, **we aim to achieve 260 billion yen or more**.



JFE Engineering

Financial Forecast for Fiscal Year 2023



Financial Forecast for Fiscal Year 2023

JFE

■ Current Business Environment/Overview of Financial Status

- Expect to increase orders in the field of **“Waste to Resource”** and **“Carbon neutral”**.
- **Due to the increase in sales by the progress of ordered projects and the impact of soaring prices on materials and equipment,**
Segment profit is expected to be as follows;
1H : **¥5.0 billion, up ¥8.9 billion from 1H of previous year,**
Full year : **¥25 billion*, up ¥11.6 billion from the previous year.**

*No change from the previous forecast

■ Financial Forecast

	FY2022 Actual		FY2023 Forecast		Change	
(billion yen)	1H	Full Year	1H	Full Year	1H	Full Year
Orders	286.0	564.9	280.0	580.0	(6.0)	15.1
Revenue	219.0	512.5	230.0	550.0	11.0	37.5
Segment Profit	(3.9)	13.4	5.0	25.0	8.9	11.6

JFE Shoji

Financial Forecast for Fiscal Year 2023



Financial Forecast for Fiscal Year 2023

JFE

■ Current Business Environment/Overview of Financial Status

- Compared to the previous fiscal year, despite a recovery in automobile production, **segment profit are expected to decline** due to a delay in demand recovery from the initial expectations in other sectors and a narrowing of spreads, particularly in North America.
- **1H segment profit is expected to be ¥26 billion**, down ¥14.6 billion from the same period of the previous year.
- **Full year segment profit is expected to be ¥48 billion** as previously forecast (Down ¥17.1 billion from the previous year and up ¥8 billion from the mid-term plan).

■ Financial Forecast

(billion yen)	FY2022 Actual		FY2023 Forecast		Change	
	1H	Full Year	1H	Full Year	1H	Full Year
Revenue	750.2	1,514.1	780.0	1,620.0	29.8	105.9
Segment Profit	40.6	65.1	26.0	48.0	(14.6)	(17.1)

Progress of the 7th Medium-Term Business Plan (Main initiatives of Steel Business)

Progress of main initiatives of the 7th mid-term business plan (Steel Business)

1. Shifting focus from quantity to quality

- Upstream facilities in Keihin will be suspended in September as planned. (released on 3rd Aug. 2023) **P30**
- Large and heavy steel plate for wind power generation has been selected (released on 3rd Aug. 2023) **P34**

2. Expand and accelerate overseas business

- Signed a joint venture agreement to establish a joint venture company in India to manufacture GO electrical steel sheets with JSW (released on 3rd Aug. 2023) **P32**

3. Use digital technology to strengthen production base

- Transition to the open environment of the core system for the first time in a large-scale integrated steel mill, Kurashiki. (released on 7th Jul. 2023)

4. Achieving carbon neutrality

- Agreed on joint evaluation to establish CCS value chain originated from Japan aligned with CCS study in Malaysia. (released on 19th Jun. 2023)
- Large cargo ships to be made exclusively with JGreeX™. (released on 20th Jun. 2023) **P33**
- Signed MOU to establish a supply chain of ferrous raw material for green ironmaking. (released on 18th Jul. 2023)

Progress on Structural Reform

- **Shutdown of upstream facilities and hot rolling facilities in Keihin is scheduled for September 16, 2023.** We are steadily implementing product transfers, building production systems, and dealing with employees and partner companies.
- Complete the structural reforms and promote shifting focus from quantity to quality. **The fixed cost reduction effect (45 billion yen) will be realized by FY2024**, aiming to significantly lower the break-even point.

	FY21	FY22	FY23	FY24~
Shutdown of Tin Mills in Chiba Consolidation in Fukuyama	Shutdown(Aug. 2022) (No.2 Tandem Mill, No.4 CAL, TFL)			
Refit of Blast Furnace	Kurashiki Refit No.4 BF (~Dec.2021) ★	Chiba Refit No.6 BF (Sep.22~Jan.23) ★		
Shut down of upstream facilities and hot rolling facilities in Keihin		To be shut down (September 16, 2023) ★		
Development plans for the land of Keihin	Selection of a Business Partner for the north side of the north district in the Minami-Watarida Area (Mar. 2023) ★	Disclose development plans in Ogishima (Sep. 2023) ★	To Sell Ogimachi land (Dec. 2024) ★	

Progress shut down Keihin upstream facilities

- **Approval** to switch to manufacturing at other iron works has **progressed smoothly**.
- **Capital investment** in logistics and other activities to establish a new production system was **generally completed**.
- With regard to employees engaged in suspended equipment, confirm their intentions on the premise of securing employment and **reassign them to other offices** including other districts.
- Partner companies are also being **dealt with in cooperation with local governments**.

Effect of Structural Reform

- Standalone crude steel production capacity: approx. **Down 4Mt/year** (approx. -13% reduction)
- The fixed cost reduction effect after FY2023 : **45billion yen**
(20 billion yen in FY2023 and 25 billion yen in FY2024)

Progress in a land reuse project in Keihin District

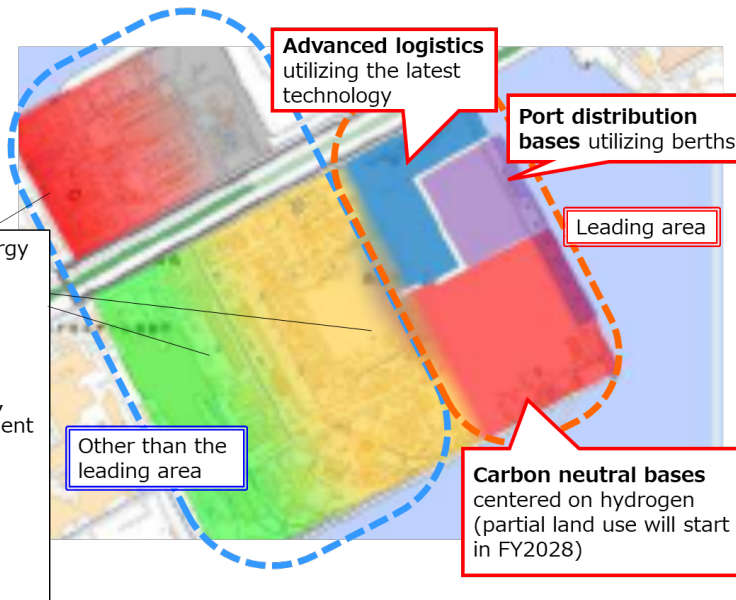
JFE

- Land reuse project in Keihin is making steady progress. (Decided to sell some land in Ogimachi and selected business partners in the northern part of Minamiwatarida-Kita area.)
- **In June 2023, Kawasaki City announced the Ogishima Land Use Plan (draft).**
Our company's land development Plan is scheduled to be announced in September 2023
 based on the city's plan.

■ Kawasaki City land use plan (draft) (announced on 2nd June 2023)

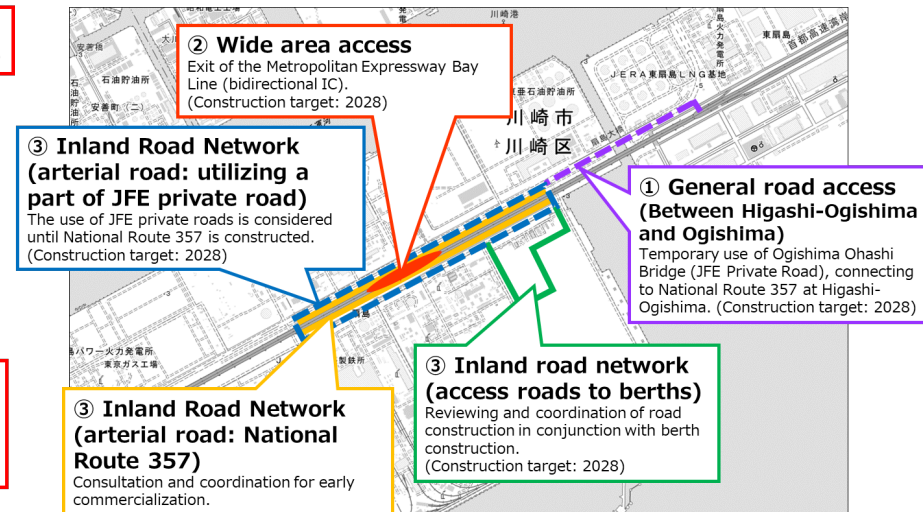
【Zoning】

Specific use is described in the leading area, and the area other than the leading area (hinterland) can be used widely.



【Infrastructure Development】

Necessity of (1) general road access (between Higashi-Ogishima and Ogishima), (2) wide area access (entrance/exit of Metropolitan Expressway Bay Line), (3) island road network for the partial land use start from FY2028, is presented.



*JFE created the above maps based on the Kawasaki City land use plan (draft).

Establish a joint venture company in India of grain-oriented electrical steel sheet with JSW

Released on 3rd August 2023

Singed a joint venture agreement with JSW for the establishment of a joint venture company for Grain-Oriented (GO) electrical steel sheets in India.

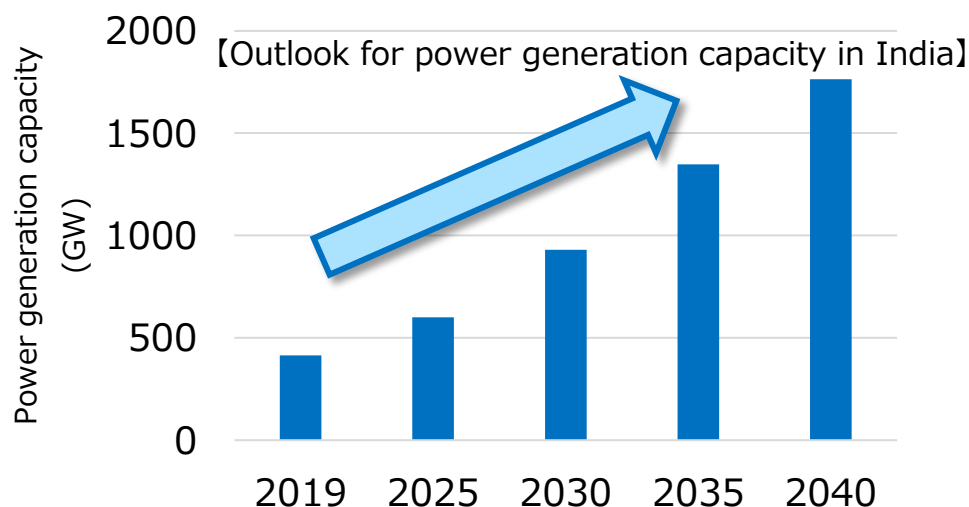
Company name: JSW JFE Electrical Steel Private Limited, Investment ratio: 50:50.

■ Demand outlook for GO electrical steel sheets in India

- India's power generation capacity will grow at 7% per year. **Demand for GO electrical steel sheets used in transformers is expected to grow equally.**
- Governmental PJ transformers mainly use high-grade GO electrical steel sheets** due to the government's regulation on higher efficiency.

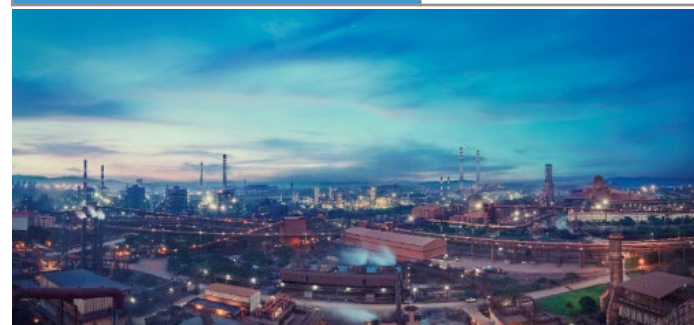


- ✓ Through the alliance with JSW, we capture the rapidly growing demand for high-end GO in India.
- ✓ **Establish India's first integrated GO manufacturing company.** The company plans to expand its production capacity in line with the growing Indian GO market.



Source: IEA India Energy Outlook 2021

Total investment	670 MUSD
Start of production (Plan)	full operation from 2027



JSW Steel Limited: Vijayanagar facility



Green steel products “JGreeX” have been selected

Released on 20th June 2023

JFE

- JGreeX™ has been selected for **four large cargo ships (dry bulk ships)**. About 14,000 tons of JGreeX™ are scheduled to be delivered.
- Collaborate with eight domestic shippers, **we have created the world's first sustainable framework** where costs of CO₂ reduction are shared across the entire supply chain.
- As a CO₂ reduction value (premium), in this case, JGreeX™ is sold at a price about 40% higher than that of ordinary steels.

 **NYK BULK & PROJECTS**

MOL 商船三井ドライバルク株式会社

TOKO LINE
東興海運株式会社

K“K” LINE
川崎汽船株式会社

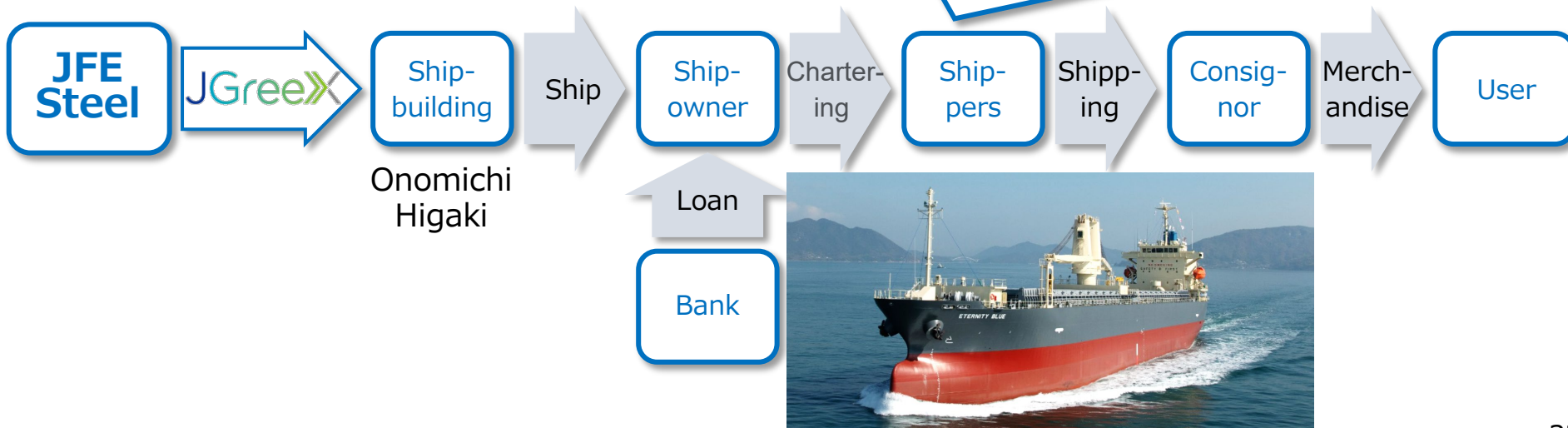


第一中央汽船株式会社
第一中央近海株式会社

K 川崎近海汽船株式会社
KAWASAKI KINKAI KISEN KAISHA, LTD.



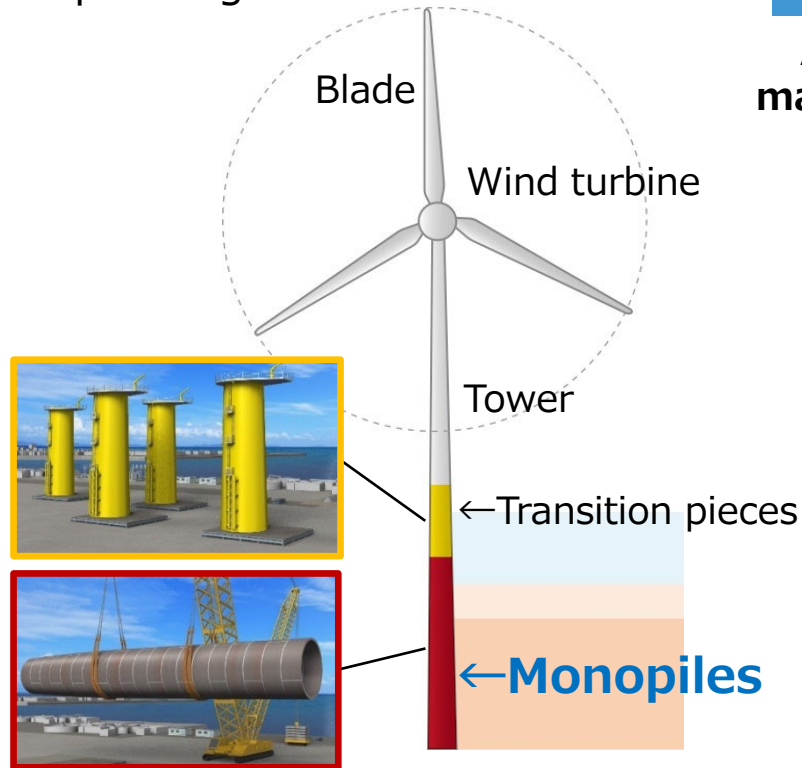
イスタンカーライナー株式会社





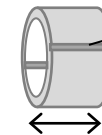
Large and heavy steel plate “J-TerraPlate™” for wind power generation produced with Kurashiki No. 7 continuous caster has been selected for the first time for the foundation structure (monopiles) of offshore wind power generation.

【Image of bottom-fixed offshore wind power generation】



Advantages of large and heavy steel plate in monopile manufacture

A tube for monopiles made with “J-TerraPlate”



Less welds

Longer tube length

A tube made with conventional-size plates



- Multiple welds
- Shorter tube length



- Reduction of welding
- Reduction of assembly man-hours

Lower production cost

- Shorter production lead time
- Increase in production volume

Promote introduction of offshore wind power

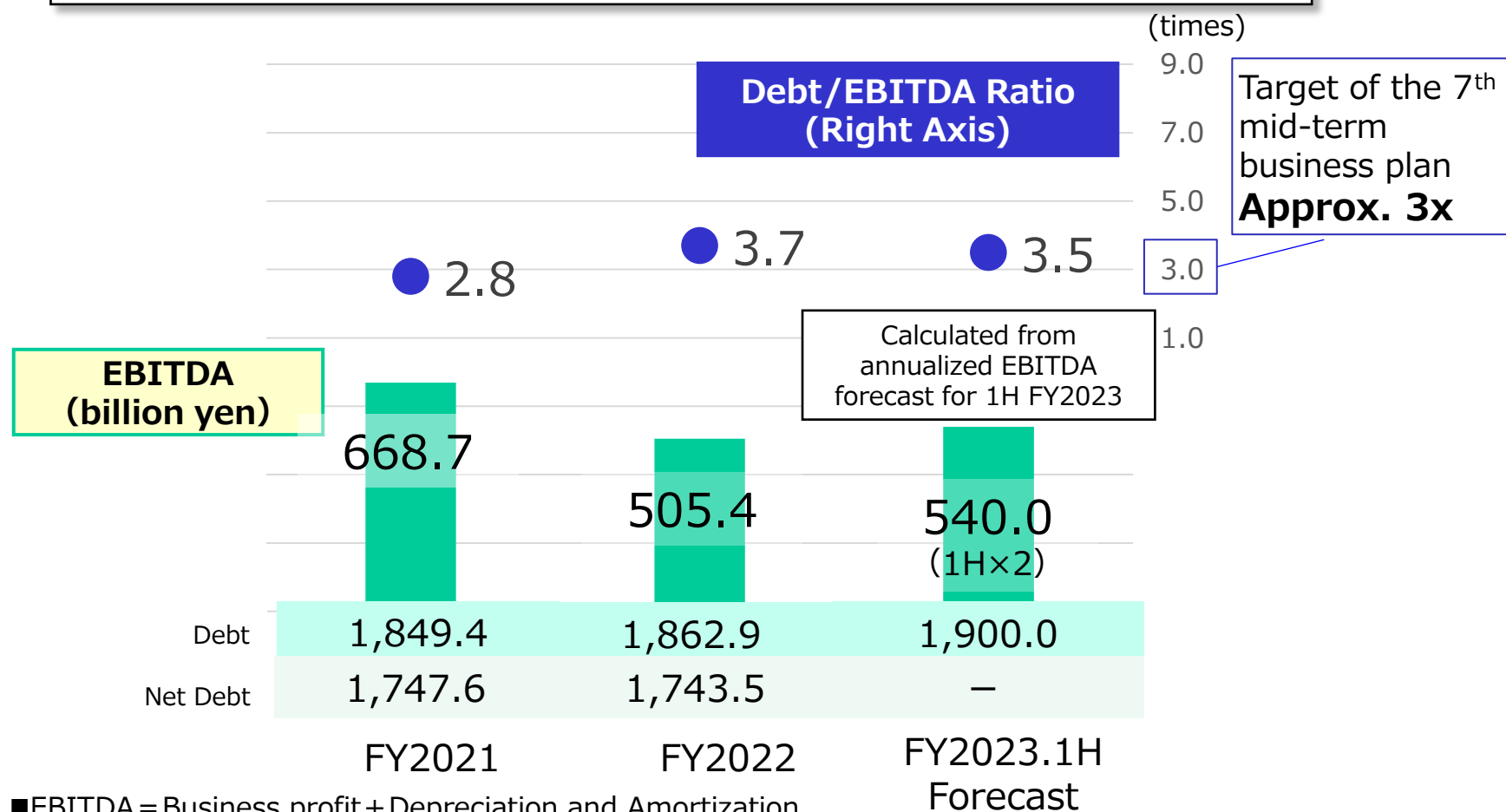
Construction of JFE Engineering's **Kasaoka monopile plant is progressing as planned** (scheduled to start operation in April 2024).

Appendix(1)

Profit/Loss Analysis

Debt/EBITDA Ratio

- Debt/EBITDA ratio in 1H of FY2023 is 3.5x.



■ EBITDA = Business profit + Depreciation and Amortization
 ■ Debt/EBITDA Ratio = Interest-bearing debt outstanding / EBITDA

Main Performance & Profitability Targets and Results

JFE

		The 7 th mid-term business plan FY2024	FY2021 Actual	FY2022 Actual	FY2023 Forecast
Consolidated	Business Profit [Excluding Inventory Valuation etc.]	¥320.0 bn.	¥ 416.4Bn. [¥2,224bn.]	¥ 235.8bn. [¥162.8bn.]	¥290.0bn. [¥315.0bn.]
	Profit attributable to owners of the parent	¥ 220.0 bn.	¥ 288.0bn.	¥162.6bn.	¥190.0bn.
	ROE	10%	15.7%	7.9%	8.7%
Operating companies	Steel Business Profit per ton* [Excluding Inventory Valuation etc.]	10,000 yen/t	14,000yen/t [6,000yen/t]	7,000yen/t [3,000yen/t]	9,000yen/t [10,000yen/t]
	Segment profit [Excluding Inventory Valuation etc.]	¥ 230.0bn.	¥323.7bn. [¥129.7bn.]	¥146.8bn. [¥73.8bn.]	¥200.0bn. [¥190.0bn.]
	Engineering Business Segment profit	¥35.0bn.	¥26.0bn.	¥13.4bn.	¥25.0bn.
	Trading Business Segment profit	¥40.0bn.	¥55.9bn.	¥65.1bn.	¥48.0bn.

* Steel business profit per ton
(consolidated segment profit / non-consolidated sales volume)



Main Financial Data

JFE
JAAP

IFRS

	FY14	FY15	FY16	FY17	FY18
(bn. Yen, times)					
Ordinary Income	231.0	64.2	84.7	216.3	221.1
EBITDA	421.5	254.4	279.9	388.8	405.9
ROS	6.0%	1.9%	2.6%	5.9%	5.6%
ROE	7.7%	1.8%	3.7%	7.6%	8.3%
ROA	5.5%	1.7%	2.3%	5.2%	5.1%
Debt Outstanding	1,501	1,379	1,375	1,331	1,450
Debt/EBITDA Ratio	x3.6	x5.4	x4.9	x3.4	x3.6
D/E Ratio	59.0%	56.9%	51.4%	58.1%	62.0%
Profit attributable to owners of parent (yen/share)	241.6	58.4	117.8	250.8	285.0
Dividend (yen/share)	60	30	30	80	95
Pay-out Ratio	24.8%	51.4%	25.5%	31.9%	33.3%

	FY18	FY19	FY20	FY21	'22
(bn. Yen, times)					
Business profit	232.0	37.8	-12.9	416.4	235.8
EBITDA * 1	428.2	269.4	223.4	668.7	505.4
ROS * 2	6.0%	1.0%	-0.4%	9.5%	4.5%
ROE * 3	8.6%	-11.1%	-1.3%	15.7%	7.9%
ROA * 4	5.0%	0.8%	-0.3%	8.4%	4.4%
Interest-bearing debt outstanding	1,524	1,814	1,806	1,849	1,863
Debt/EBITDA multiple * 5	x3.6	x6.7	x8.1	x2.8	x3.7
D/E Ratio * 6	68.2%	96.4%	93.2%	80.8%	67.8%
Profit attributable to owners of parent (yen/share)	283.8	-343.4	-38.0	500.1	280.7
Dividend (yen/share)	95	20	10	140	80
Pay-out Ratio	33.5%	—	—	28.0%	28.5%

Notes
[IFRS]

* 1 EBITDA = Business profit + Depreciation and Amortization

* 2 ROS = Business profit / Revenue

* 3 ROE = Profit attributable to owners of parent company / Equity

* 4 ROA = Business profit / Total assets

* 5 Debt/EBITDA ratio = Interest-bearing debt outstanding / EBITDA

* 6 D/E ratio = Interest-bearing debt outstanding / Equity attributable to owners of parent

For debt having a capital component, a portion of its issue price is deemed to be capital, as assessed by rating agencies.

Financial Results for First Quarter of Fiscal Year 2023

JFE

	Unit	FY2021					FY2022					FY 2023
		1Q	2Q	3Q	4Q	Full Year	1Q	2Q	3Q	4Q	Full Year	1Q
Revenue	billion yen	638.5	771.9	832.8	930.2	3,173.4	932.6	986.3	986.9	975.3	3,881.1	917.2
Segment Profit	billion yen	69.7	88.8	93.5	71.7	323.7	93.0	55.2	21.8	(23.2)	146.8	68.1
Excluding Inventory Valuation etc.*	billion yen	25.7	42.8	(3.5)	64.7	129.7	(23.0)	55.2	22.8	18.8	73.8	59.1
Crude Steel (Standalone)	Mt	6.25	6.45	6.49	6.69	25.88	6.43	6.21	5.48	5.97	24.10	6.05
Crude Steel (Consolidated)	Mt	6.59	6.80	6.85	7.02	27.26	6.77	6.59	5.81	6.29	25.48	6.38
Shipment (Standalone)	Mt	5.26	5.56	5.63	5.92	22.38	5.54	5.32	5.25	5.64	21.74	5.23
Export Ratio on Value Basis (Standalone)	%	43.2	49.3	45.9	43.6	45.5	48.5	45.0	41.0	43.6	44.5	44.2
Average Sales Price (Standalone)	000 yen/ t	87.6	101.0	107.6	116.7	103.7	126.7	136.7	136.3	124.0	130.8	128.5
Exchange Rate	¥/\$	109.8	110.0	113.1	115.3	112.1	126.5	136.6	144.0	133.2	135.1	135.8
Exchange Rate (End of Term)	¥/\$	110.6	111.9	115.0	122.4	122.4	136.7	144.8	132.7	133.5	133.5	145.0

* Excluding inventory valuation, carry over and foreign exchange valuation from segment profit

91.3bn. Increase in JFE Steel's Segment Profit (FY2022.4Q (Actual) vs. FY2023.1Q (Actual))

(billion yen)

JFE Steel	FY2022					FY2023	Change
	1Q	2Q	3Q	4Q	Full year	1Q	
Segment Profit	93.0	55.2	21.8	(23.2)	146.8	68.1	91.3
Excluding Inventory Valuation etc.	(23.0)	55.2	22.8	18.8	73.8	59.1	40.3

1. Cost

+ 10.0

- Operational improvement
- Disappearance of blast furnace refurbishment impact

2. Volume and Mix

+ 1.0

- Crude Steel Production 5.97Mt⇒6.05Mt

3. Sales and Raw materials

+ 10.0

- Improved spreads due to the reflection of high prices of main raw materials, metals, and other commodities in selling prices

4. Inventory valuation

+ 51.0

- Inventory valuation +13.0 (-18.0→-5.0)
- Carry over+29.0 (-24.0→+5.0)
- Foreign exchange valuation+9.0 (±0.0→+9.0)

5. Others

+ 19.3

- Group companies +7.0
- Disposal of fixed assets+6.0 etc.

49.2bn. Decrease in JFE Steel's Segment Profit (FY2023.1Q (Actual) vs. FY2023.2Q (Forecast))

(billion yen)

JFE Steel	FY2023 Forecast			Change
	1Q(Actual)	2Q(Forecast)	1H	
Segment Profit	68.1	18.9	87.0	(49.2)
Excluding Inventory Valuation etc.	59.1	43.9	103.0	(15.2)

1. Cost

±0.0

2. Volume and Mix

+5.0

- Crude Steel Production 6.05Mt⇒approx.6.30Mt

3. Sales and Raw materials

±0.0

4. Inventory valuation

(34.0)

- Inventory valuation +7.0 (-5.0+2.0)
- Carry over-29.0 (+5.0→-24.0)
- Foreign exchange valuation-12.0 (+9.0→-3.0)

5. Others

(20.2)

- Group companies -11.0
- Disposal of fixed assets -5.0
- Foreign exchange effects on trade -4.0 etc.

88.4bn. Increase in JFE Steel's Segment Profit (FY2022.2H (Actual) vs. FY2023.1H (Forecast))

JFE Steel	FY2022 2H(Actual)	FY2023 1H(Forecast)	Change (billion yen)
Segment Profit	(1.4)	87.0	88.4
Excluding Inventory Valuation etc.	41.6	103.0	61.4

1. Cost

+20.0

- Disappearance of blast furnace refurbishment impact and production reduction impact

2. Volume and Mix

+16.0

- Increased volume due to gradual recovered steel demand (Crude Steel Production 11.45Mt⇒approx. 12.30Mt)

3. Sales and Raw materials

+15.0

- Improved spreads due to the reflection of high prices of main raw materials, metals, and other commodities in selling prices

4. Inventory valuation

+27.0

- Inventory valuation ±0.0 (-3.0→-3.0)
- Carry over+9.0 (-28.0→-19.0)
- Foreign exchange valuation +18.0 (-12.0→+6.0)

5. Others

+10.4

- Group companies +10.0 etc.

61.2bn. Decrease in JFE Steel's Segment Profit (FY2022.1H (Actual) vs. FY2023.1H (Forecast))

JFE Steel	FY2022 1H(Actual)	FY2023 1H(Forecast)	Change (billion yen)
Segment Profit	148.2	87.0	(61.2)
Excluding Inventory Valuation etc.	32.2	103.0	70.8

1. Cost

+ 10.0

- Operational improvement
- Disappearance of blast furnace refurbishment impact

2. Volume and Mix

(7.0)

- Crude Steel Production 12.64Mt⇒approx. 12.3Mt

3. Sales and Raw materials

+ 132.0

- Improved spreads due to the reflection of high prices of main raw materials, metals, and other commodities in selling prices

4. Inventory valuation

(132.0)

- Inventory valuation -85.0 (+82.0→-3.0)
- Carry over-24.0 (+5.0→-19.0)
- Foreign exchange valuation-23.0 (+29.0→+6.0)

5. Others

(64.2)

- Group companies -13.0
- Depreciation cost -10.0
- Foreign exchange effects on trade -9.0 etc.

Appendix(2) Business Environmental Indicators, etc.

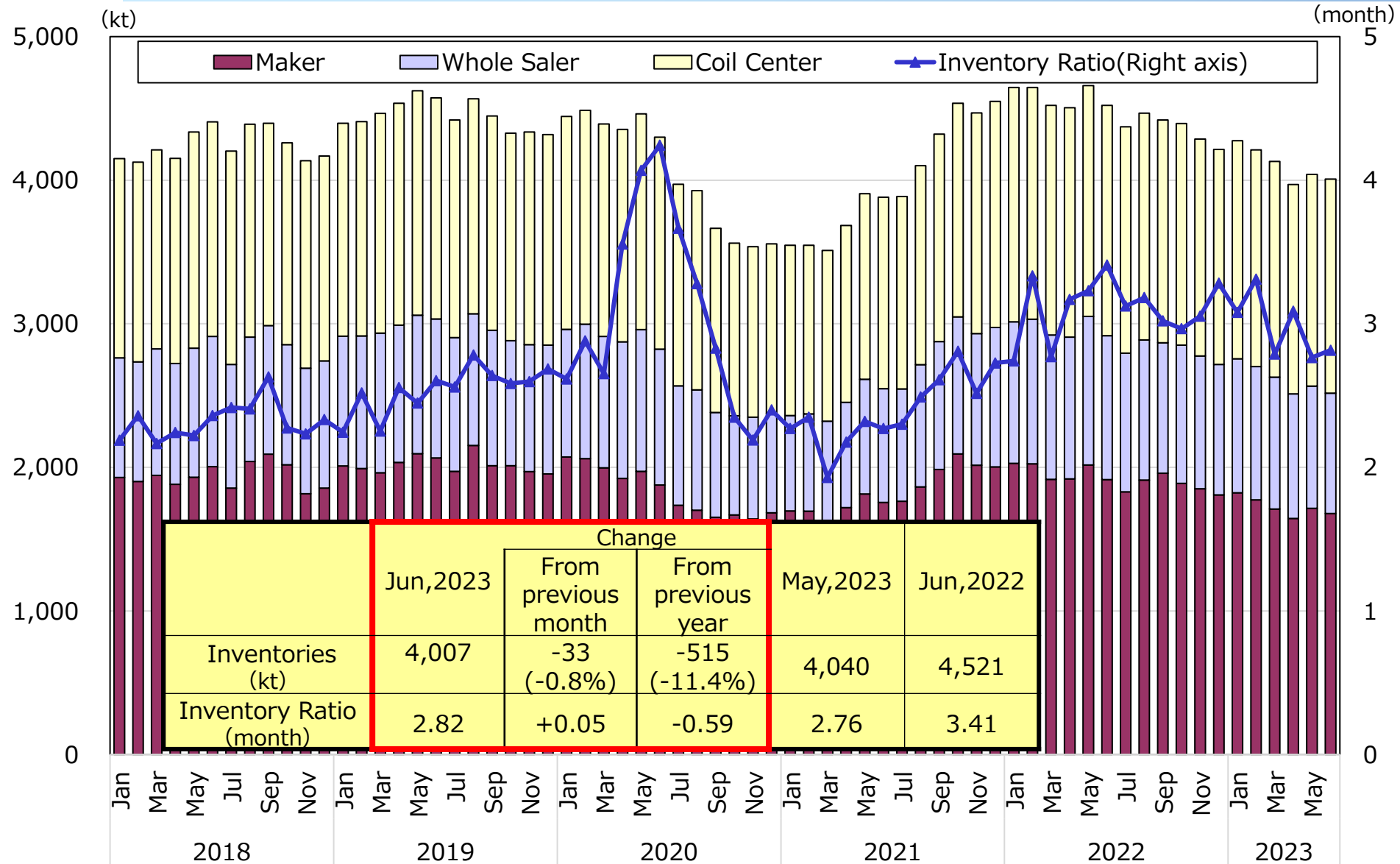


Domestic Market Environment

Combined Inventories of HR, CR and Coated Steel Sheet

JFE Steel

JFE



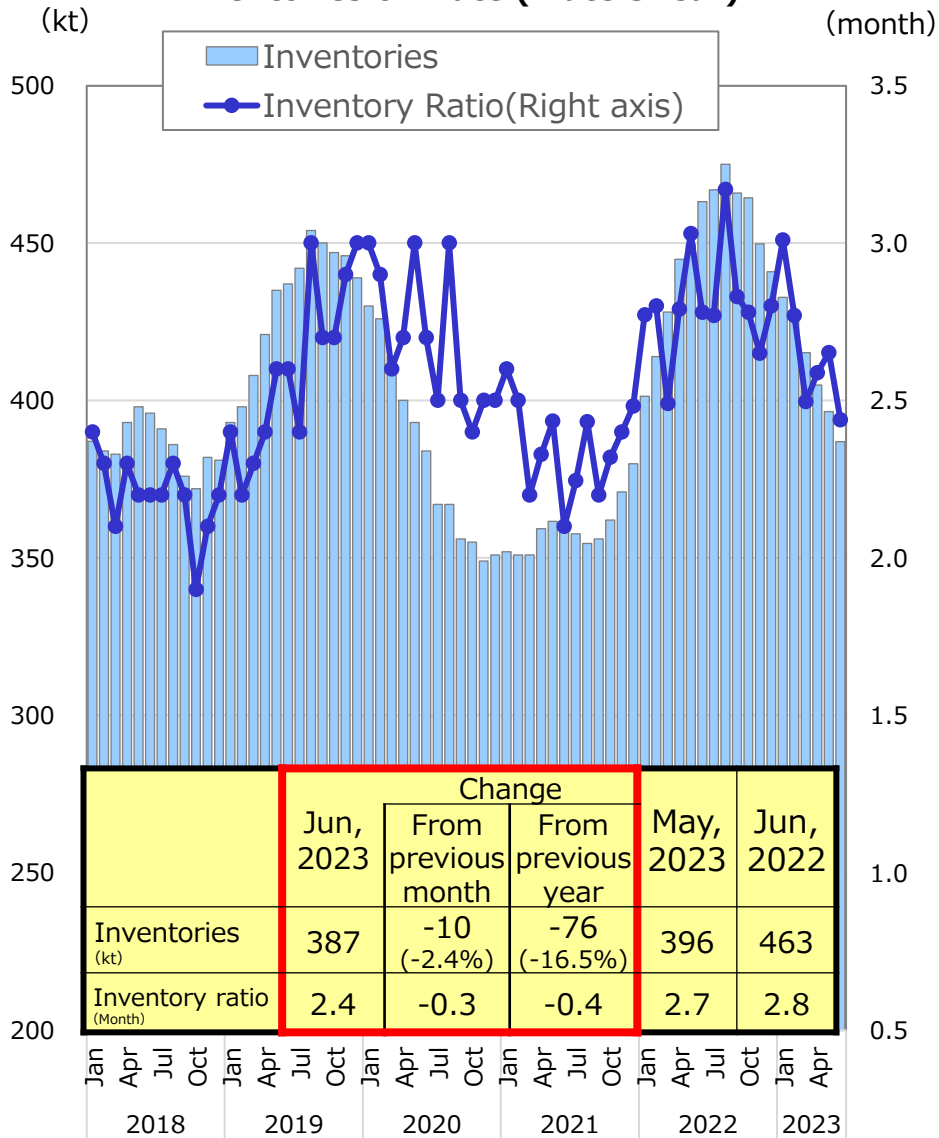


Domestic Market Environment

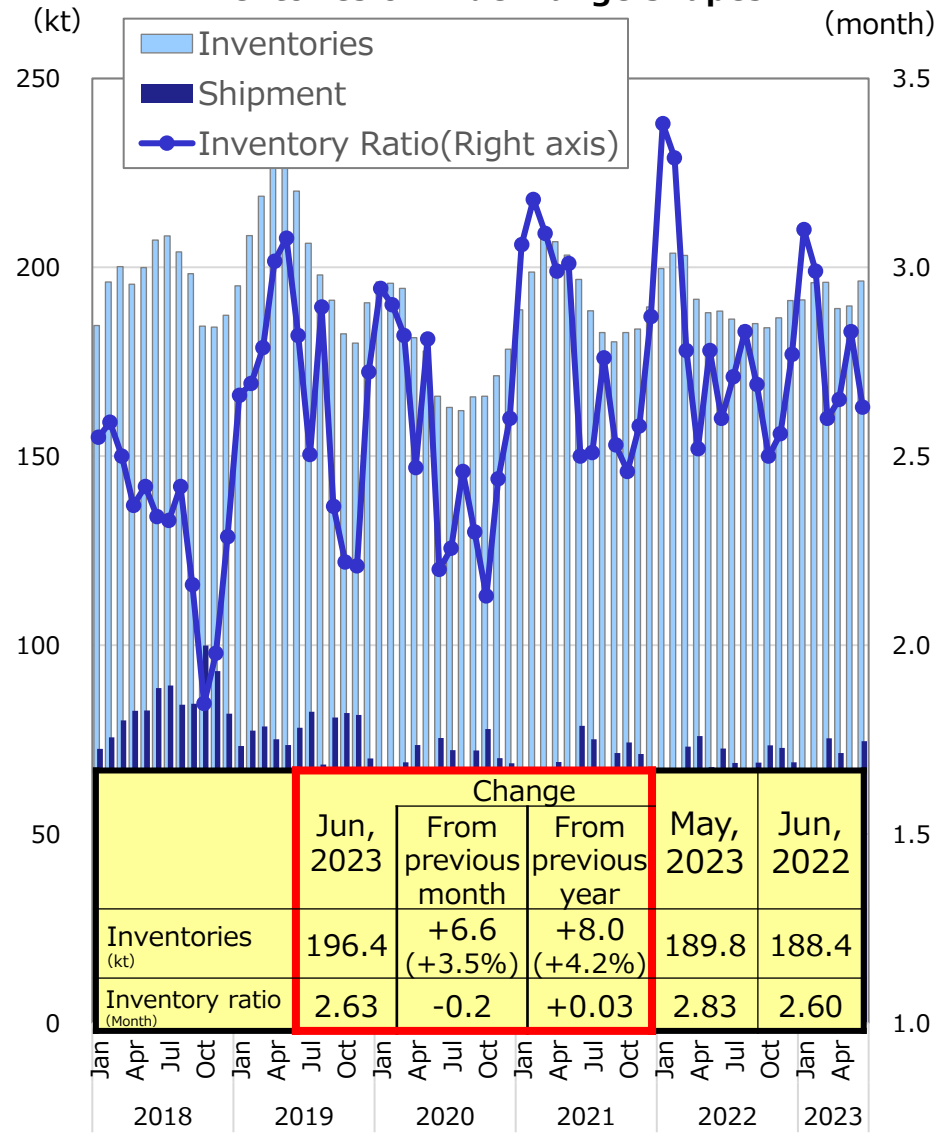
Inventories of Plate (Plate Shear) and Wide Flange Shapes

JFE

Inventories of Plate (Plate Shear)



Inventories of Wide Flange Shapes





JFE

Domestic Market Environment

Trend of Import Steel (Ordinary Steel)

(kt)

600

500

400

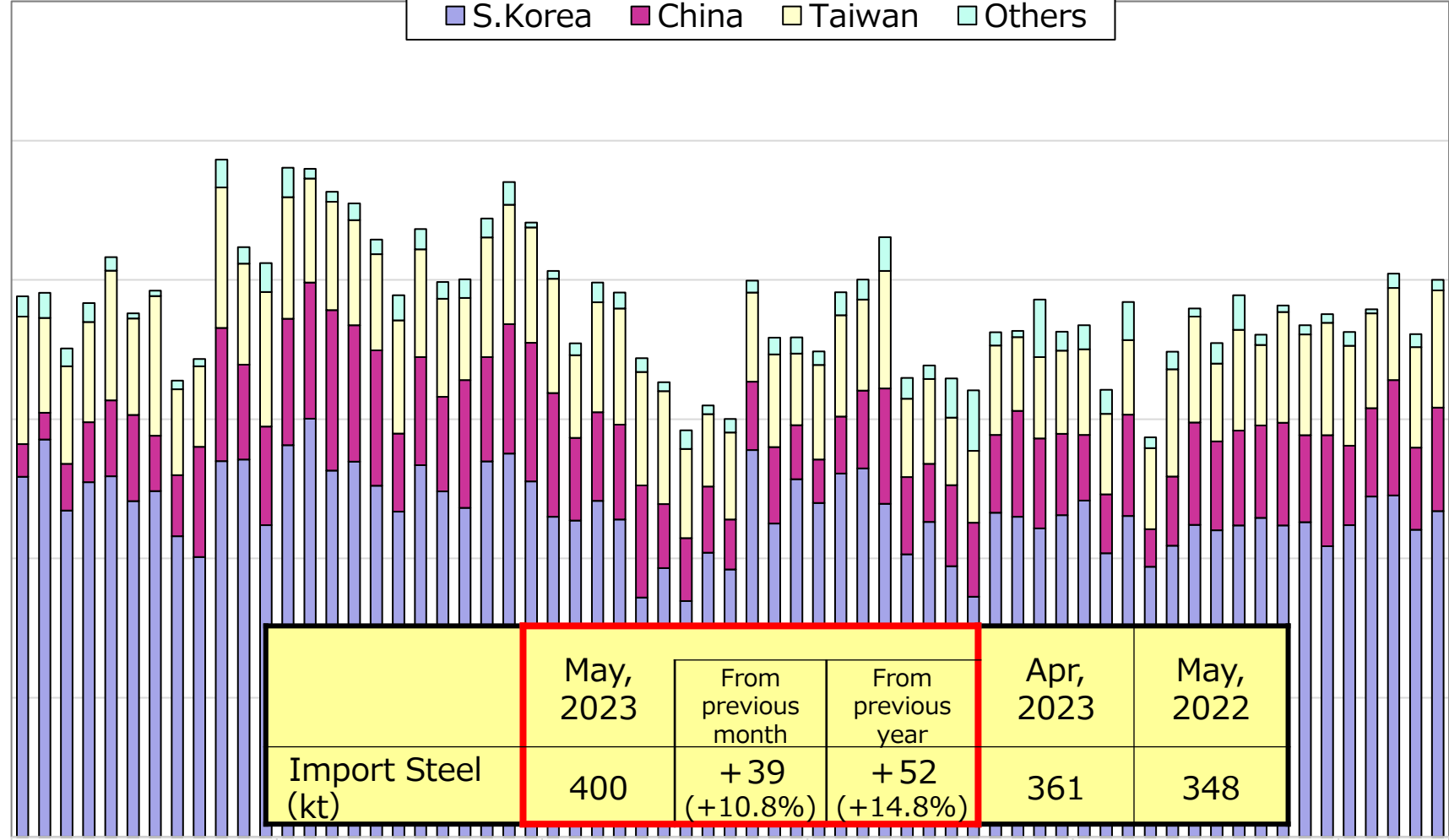
300

200

100

0

■ S.Korea ■ China ■ Taiwan ■ Others



	May, 2023	From previous month	From previous year	Apr, 2023	May, 2022
Import Steel (kt)	400	+ 39 (+10.8%)	+ 52 (+14.8%)	361	348

Jan Mar May Jul Sep Nov Jan Mar May Jul Sep Nov Jan Mar May Jul Sep Nov Jan Mar May Jul Sep Nov Jan Mar May
2018 2019 2020 2021 2022 2023

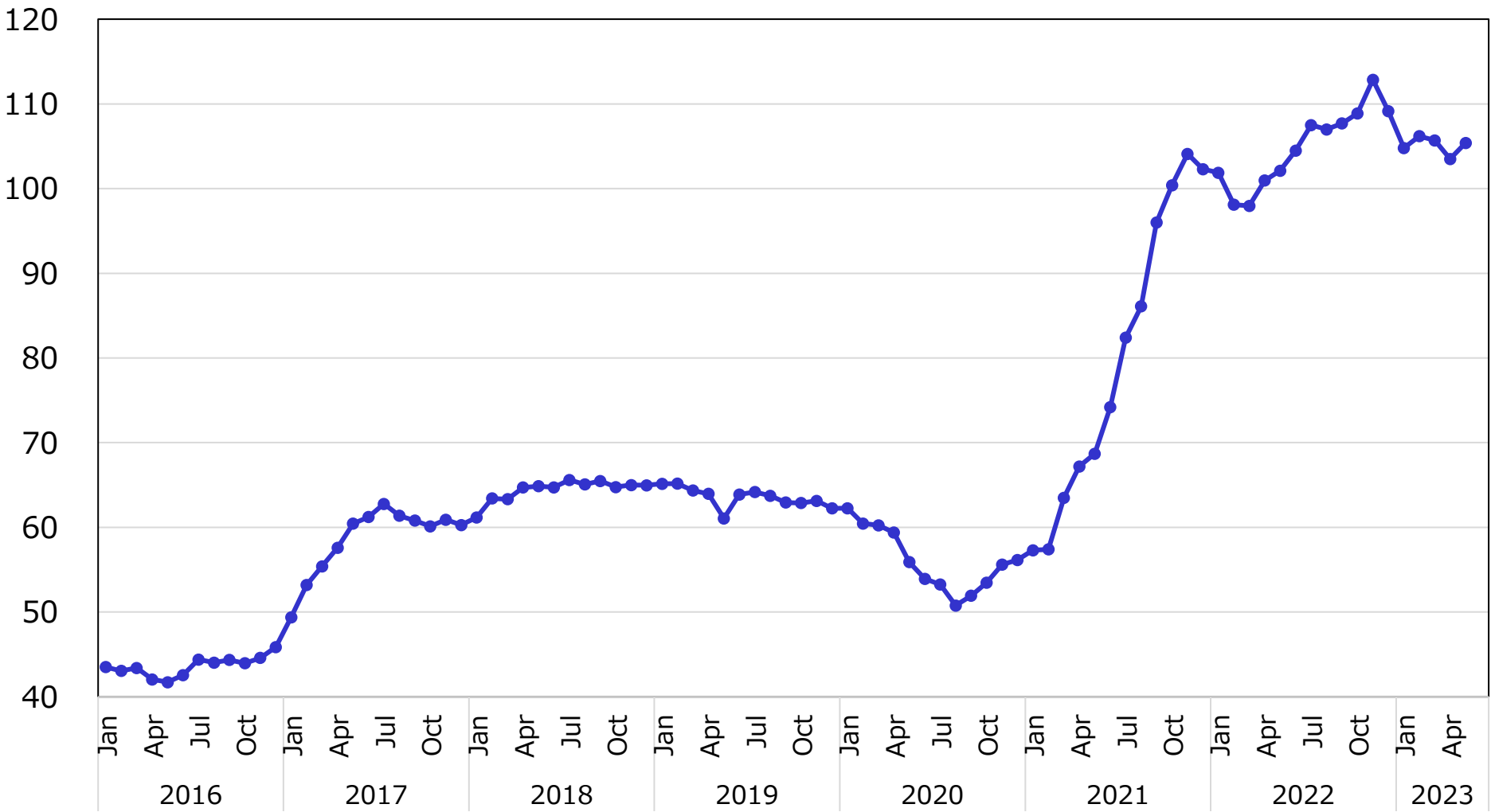


Domestic
Market Environment

Price Trend of Import Steel

JFE

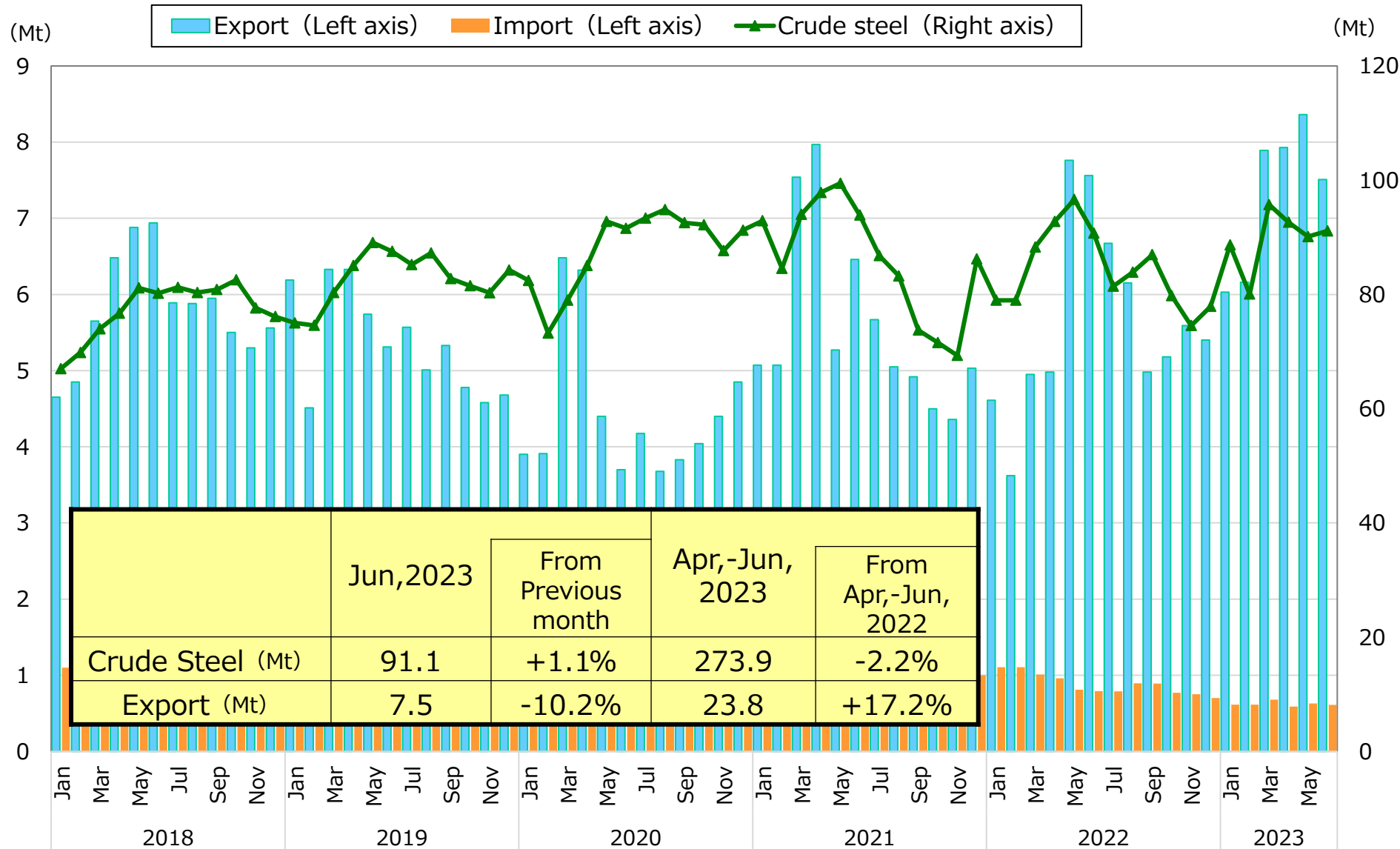
(k yen / t)



Overseas
Market Environment

Crude Steel & Im/Export, China

JFE

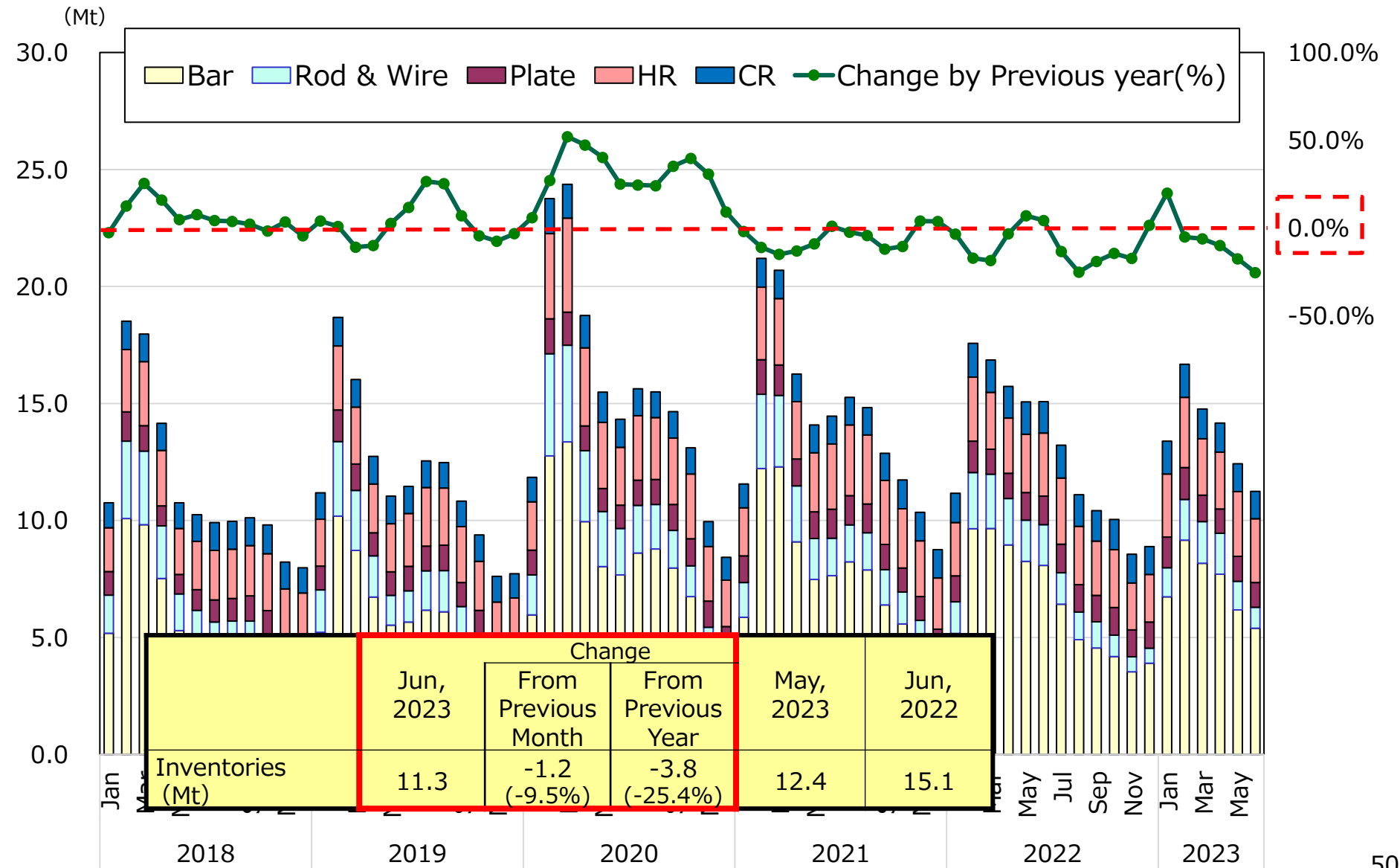


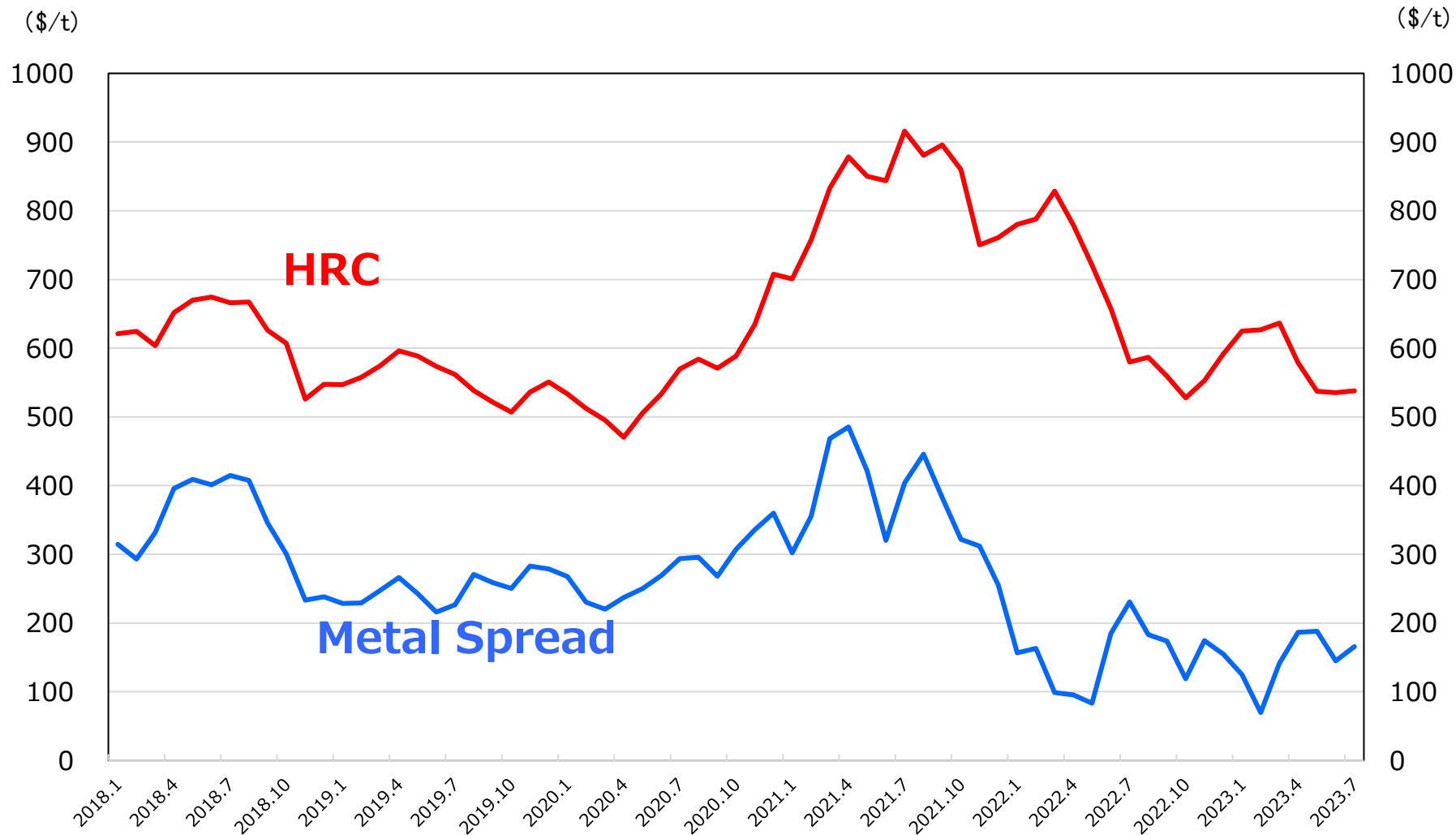


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Overseas
Market Environment

Crude Steel & Im/Export, China





Metal Spread = HRC Price – Raw Materials Cost

*HRC Price : Chinese Spot basis

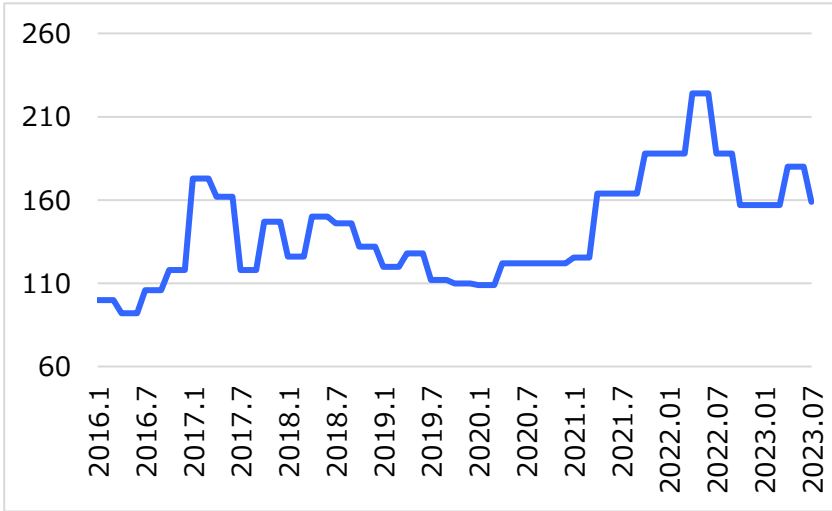
Raw Materials Cost : Calculated from market price of Iron Ore and Hard Coking Coal



Raw Materials

Trend of Sub Material's Market Price

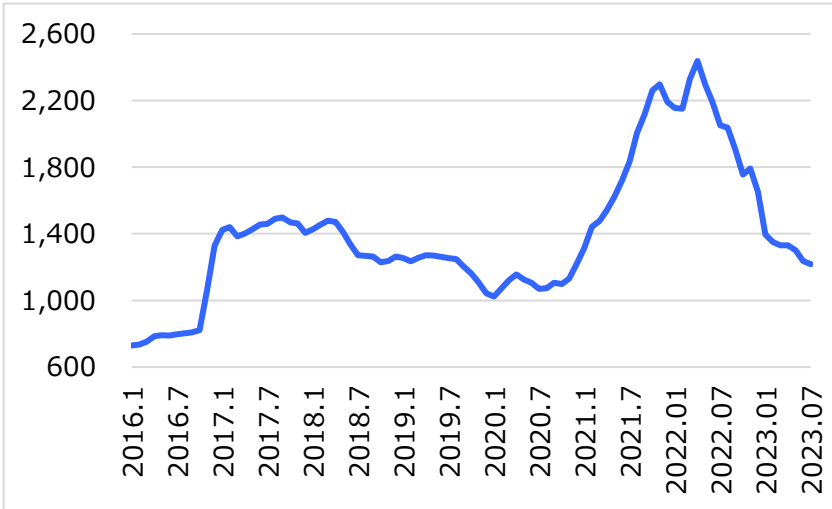
(¢ /lb) FeCr



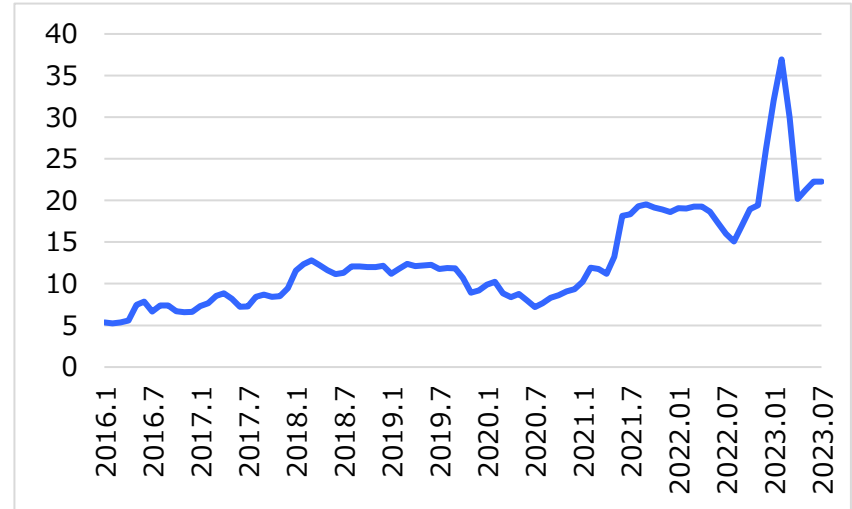
(US\$/t) Zn



(US\$/t) FeMn



(US\$/lb) Mo



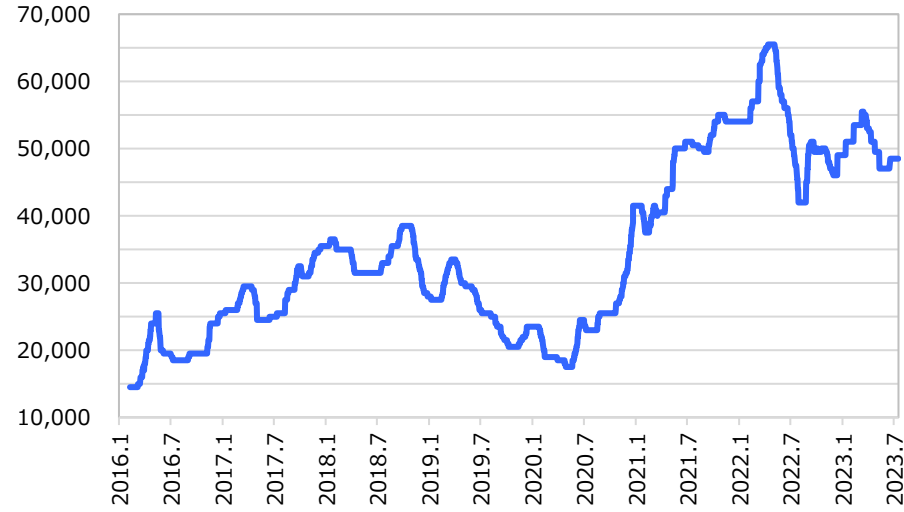


JFE

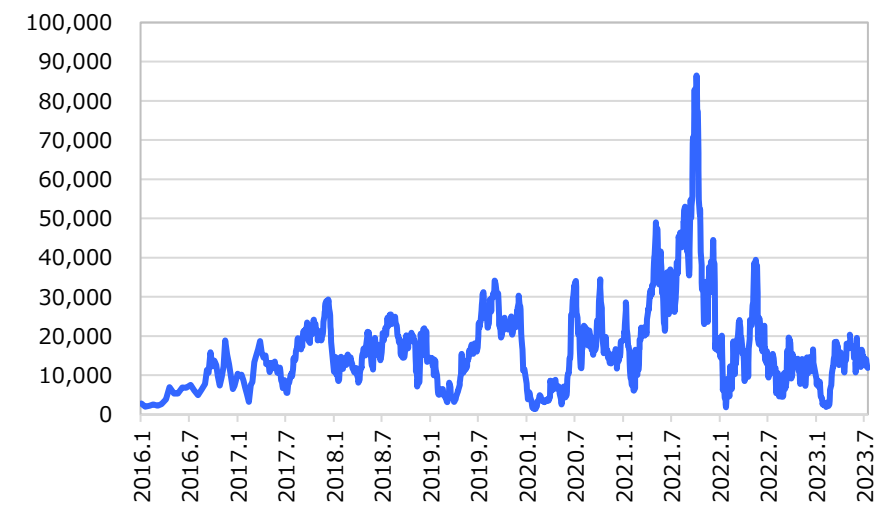
Raw Materials

Trend of Sub Material's Market Price

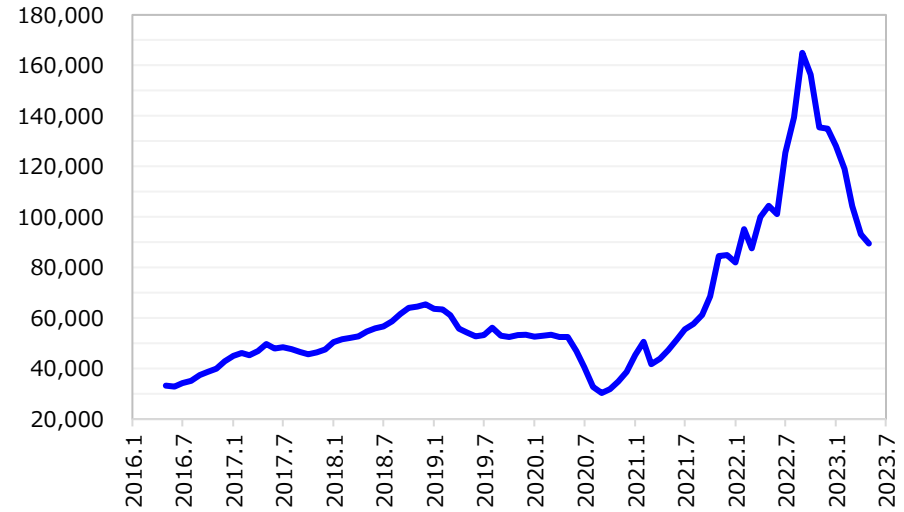
(yen / t) Scrap



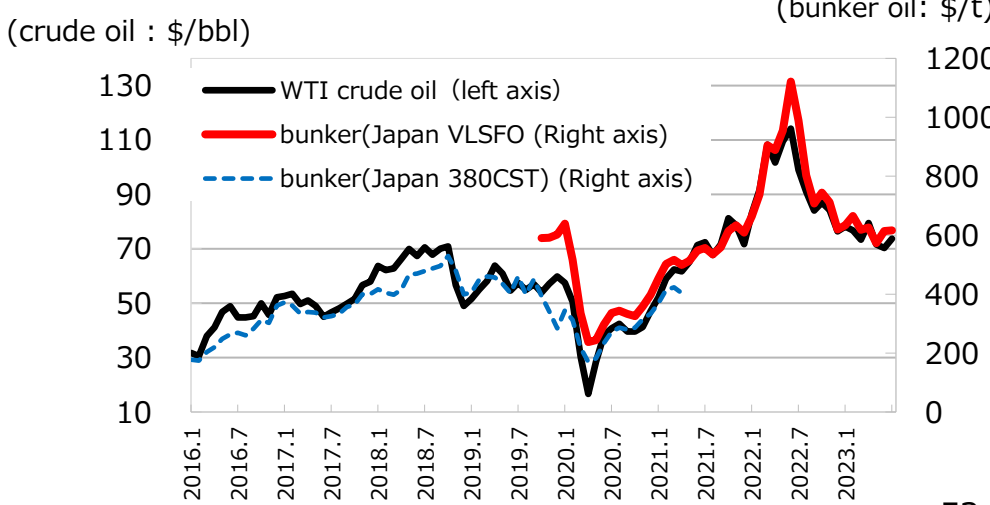
(\$/B) Spot Bulker



(yen / t) LNG



Crude oil, Bunker oil





Orders by Business Field





JFE

(billion yen)

Business Field	FY2022 Actual	FY2023 Outlook	Change	Main orders received in FY2023 First-Quarter
Waste to Resource	216.9	224.0	7.1	Renewal work of domestic waste treatment facility [Saitama]
Carbon Neutral	57.6	81.0	23.4	
Combined Utility Service	21.1	17.0	(4.1)	
Core Infrastructure	269.3	258.0	(11.3)	Reinforcement work of cable tunnel for domestic telecommunications facilities [Osaka]
Total	564.9	580.0	15.1	



Links to the reports published during FY2022

資料名	URL	QRコード
JFE Group REPORT 2022	https://www.jfe-holdings.co.jp/investor/library/group-report/index.html	
JFE Group CSR REPORT 2022	https://www.jfe-holdings.co.jp/csr/data/index.html	
JFE Group CSR REPORT 2022 ESG Data	https://www.jfe-holdings.co.jp/csr/pdf/2022/2022_09.pdf	
DX REPORT 2022	https://www.jfe-holdings.co.jp/investor/library/dxreport/index.html	

Appendix(3) The 7th Medium-Term Business Plan



Mid/long-term directions

Biggest transformation in company's history aimed at achieving global success

JFE

JFE's corporate vision

Contributing to society with the world's most innovative technology

JFE's mission

To be essential to society's sustainable development
and to create safe, comfortable lives for people everywhere

**Environmental & Social
sustainability**
(helping to solve critical issues)



Economic sustainability
(stable earnings power)

Ensuring **environmental & social sustainability** and establishing **economic sustainability** will enable to ensure the **resiliency of JFE's operational foundations** and allow the company to achieve **sustainable growth** and **increased value** over the mid/long-term.



Initiatives to achieve environmental and social sustainability (helping to solve critical issues)

E JFE Group Environmental Vision for 2050

- Aim to realize carbon neutral by 2050, taking climate change as an extremely important business concern for JFE
- Accelerate R&D in new technologies and strive to create super-innovative technologies
- Contribute to the reduction of CO₂ emissions in society and use this as a business opportunity to increase corporate value
- Work systematically to combat climate change under TCFD philosophy

S **Solve issues impacting society**

1. **Safety/health management**
2. **Facilitate employee participation**
(Diversity & Inclusion, Personnel development, Workstyle reforms)
3. **Contribute to regional societies through engineering**
4. **Respect human rights throughout supply chain**
(Conduct human-rights due diligence from FY2021)

G **Enhance corporate governance**

Consider how to apply non-financial metrics in terms of director compensation and investment decisions etc.

JFE Group Environmental Vision for 2050

Toward Carbon Neutrality by 2050 JFE Group Environmental Vision for 2050

(GX Investment during 7th mid-term business plan : 340 billion yen)

GX : Green transformation

1. Key environmental initiative under 7th mid-term business plan

- Steel business : Reduction of CO₂ emissions by 18% by the end of FY2024 (vs. FY2013)

2. Carbon Neutrality by 2050

① Reduce CO₂ emissions at JFE Steel

- Pursue super-innovative technology for carbon-recycling blast furnaces and CCU
- Develop hydrogen-based ironmaking (direct reduction) technology etc.

② Expand contributions to CO₂ emissions reduction in society

- Engineering business : Expand & develop renewable-energy power generation and carbon-recycling technologies.
 → Targets to contributions to CO₂ emissions reduction

FY2024	12 Mt
FY2030	25 Mt
- Steel business : Develop & market eco-products and eco-solutions.
- Trading business : Increase trading in biomass fuels, steel scrap, etc. and strengthen business in SCM for eco products.

SCM : Supply Chain Management

③ Groupwide commercialization of offshore wind-power business

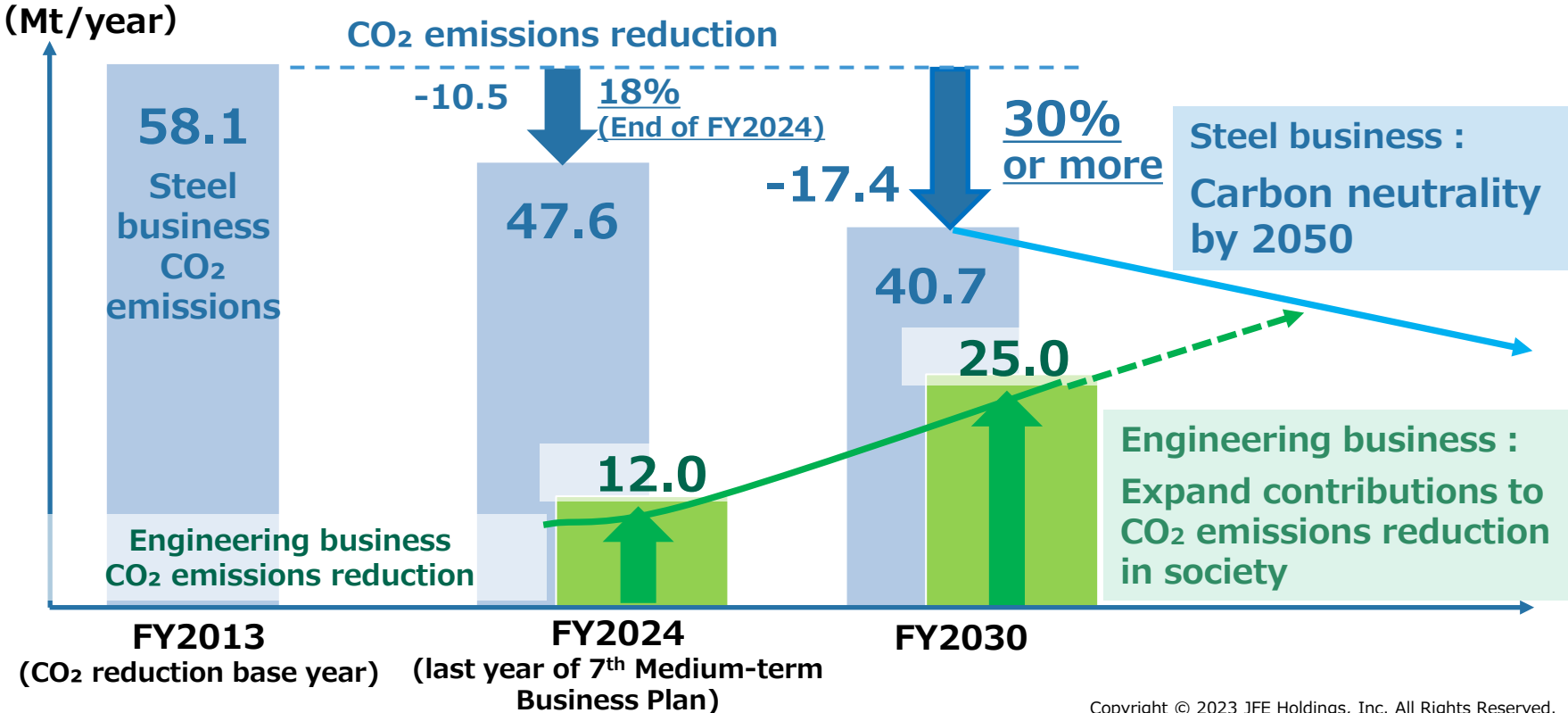


JFE

JFE Group's activities for Carbon neutrality

Steel Business: CO₂ emission reduction by 18% at the end of FY2024 (vs. FY2013)
 Through [decarbonization in steel manufacturing processes](#) etc., JFE Group aims to be carbon neutral.

Engineering Business: Contribute to carbon neutrality in society on the whole by [expanding JFE Engineering's contributions to CO₂ emissions reduction resulting from its business](#) such as development of renewable-energy generation and carbon recycling technologies.



[Steel Business] Roadmap for Carbon Neutrality

JFE

Revised our roadmap for realizing carbon neutrality in 2050, considering installing the technologies below in the concrete:

- Carbon recycling blast furnace: **Each established technology to be installed in order** (late 2030s)
- Hydrogen-based ironmaking:
 - Small-scale pilot furnace demo** (2024~25), **middle-scale direct reduction furnace demo** (~2040)
- EAF: **Install pilot EAF in Chiba** (demo to be started from 2024) → **Install highly efficient large scale EAF** (2027~30)

JFE Group's CO₂
reduction targets

**18% reduction compared
to FY2013** (Steel Business)

**30% or more reduction compared
to FY2013** (Steel Business)

Released in Feb, 2022

**Carbon neutrality
by 2050**

Technology

2021 ~ 24 25 26 27 28 29 30 2031~2040 2041~2050

Carbon
recycling
blast
furnace

Blast
Furnace

CCU

Small-scale demo (2025-2026)
Large-scale development
Small-scale demo
Each established technology to be installed in order
• LNG injection
• Oxygen Blast Furnace
• CCU
Implementation

Hydrogen-based
ironmaking
(Direct reduction)

Small-scale pilot furnace demo (2024~2025)
Middle-scale direct reduction furnace demo (~2040)
Implementation

Development of
other technologies

Ferro-coke (300t/day → 1500t/day)
COURSE50
Super-COURSE50

Electric Arc
Furnace

<GI Fund> Pilot EAF
Expand scrap use in converters (Pretreating in converter etc.)
Install highly-efficient large-scale EAF
<GI Fund> Implement burner lance (Burner to melt scraps)
HBI use
Items newly released this time are colored green

Technologies to be
installed to the
existing facilities

Currently executing R&D expenses on schedule for technology development above

R&D expenses

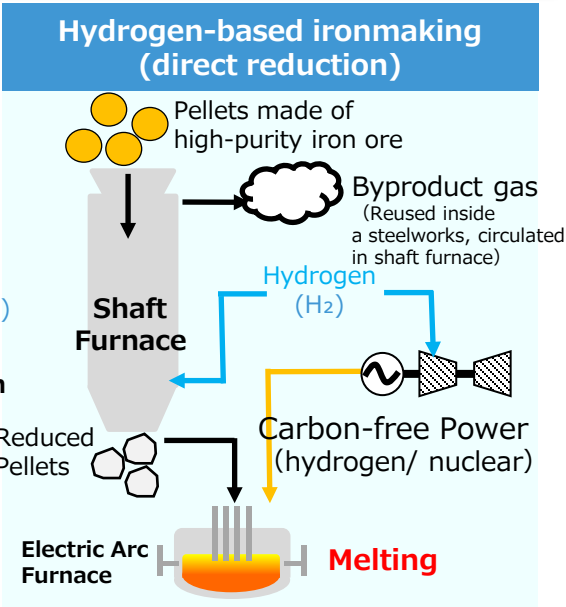
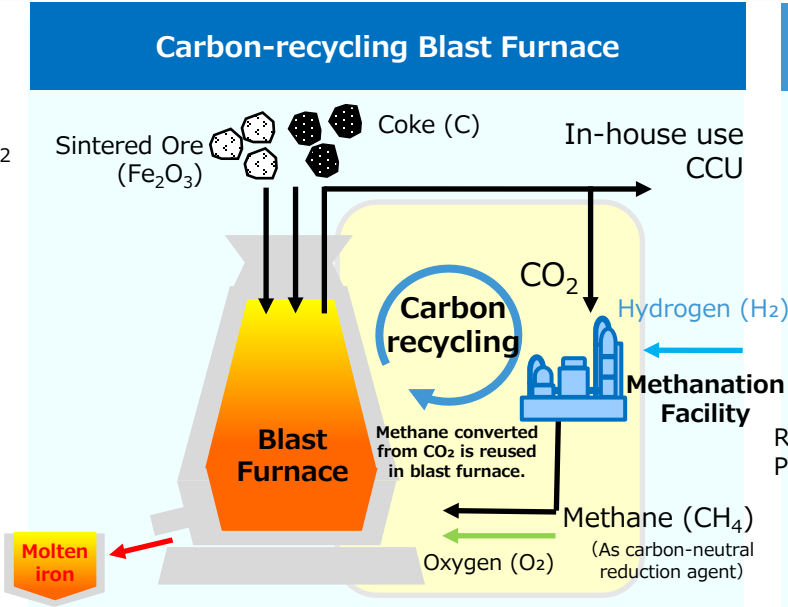
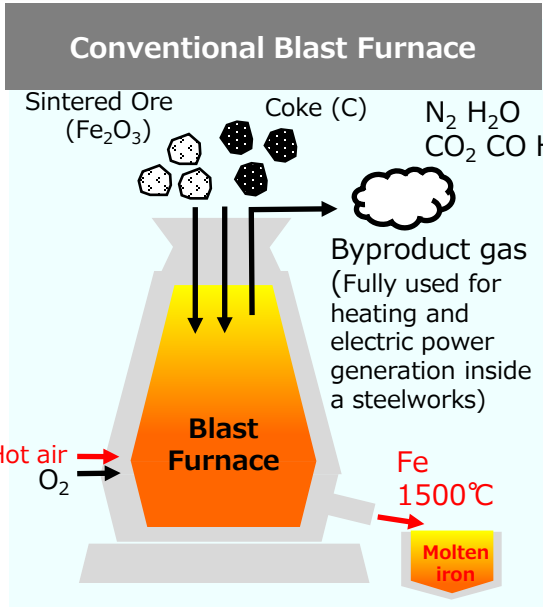
¥100bn. R&D expenses for 10 years

Carbon-recycle Blast Furnace



JFE

- Technologies for reducing CO₂ emissions from blast furnaces are necessary to maximize blast furnaces' advantages such as mass production, high-efficiency production, and high-grade steel production
- Combining carbon-recycling blast furnace with CCU enables to reuse CO₂ inside a steelworks by using raw materials of the same grade as those used in conventional blast furnaces. By doing so, JFE aims to achieve net zero carbon emissions.



	Conventional Blast Furnace	Carbon-recycling Blast Furnace	Hydrogen-based ironmaking (direct reduction)
Capacity	4M t / BF-year	4M t / BF-year (on par with Conventional BF)	2M t/ Shaft Furnace-year (current direct reduction ironmaking basis)
Reducing Agent	Coke + Pulverized Coal	Coke + Recycled methane (CH ₄)	Hydrogen (H ₂)
Raw Materials	Low-grade raw materials possible.	Low-grade raw materials possible.	Limited (High-grade iron ore)
CO ₂ Emissions	2/t-CO ₂ /1-ton of pig iron	Target: Zero (CO ₂ reduction in BF + CCUS)	Target: Zero (Carbon-free method)

Groupwide commercialization of offshore wind-power business (Study feasibility)

JFE

- Become a pioneer in offshore wind-power generation business by commercializing manufacture of monopile and other seabed-fixed structures.
- Establish groupwide supply-chain such as monopile-structure manufacturing and O&M
- Aim to expand renewable energy business by leveraging group synergy effect, taking JFE Engineering as a main driver.

O&M: Operation and Maintenance. Apply expertise of maintenance and analysis technologies.



JFE Engineering

Manufacture and market monopile and other seabed-fixed structures for offshore wind-power generation

JFE Steel

Increase capacity for heavy, extra-thick steel plate for offshore wind-power applications

Utilizing NO.7 new continuous-casting equipment in Kurashiki district (Start operating in FY2021)

Provide steel products

Provide steel products

Carry out SCM
Provide steel products

Carry out SCM

JFE Shoji

Contribute to groupwide cooperation by carrying out SCM of steel materials and processed products for offshore wind-power generation

Subsidiaries/ Affiliates

JMU : manufacture power-generation floating structures and construct work vessels. **Groupwide**: O&M making maximum use of group resource

Social sustainability : Safety management, HR issues

JFE

Safety management

Further increase efforts to prevent accidents not only by using facilities but also through safety education and obedience of rules, in order to achieve top-priority goal of zero major accidents.

Groupwide investment for safety issues : Approx. 10 billion yen/year

Implement multifaceted health/safety management using advanced IT (monitoring, detection, etc.).

Facilitate employee participation

Proceed following initiatives in order to allow employees to maximize performance and enhance groupwide competitive advantages

Diversity & Inclusion	Maximize capabilities of employees with diverse background
Personnel development	Improve individual abilities and develop skills for global competence
Workstyle reforms	Create workplaces and internal structures to maximize employees potential and enable them to work safely and confidently

Social sustainability : Contribution to Regional Societies through Engineering Business

JFE

- Expand bases of local production and local consumption business (Food-recycling business and regional PPS business)
- Contribute to the regional society considering to expand combined utility service business in the future.
- Realize circular economy by developing this business

(Example) Local PPS Business : Smart Energy Kumamoto

Points

1. Local production of energy for local consumption (Local generation of renewable-energy power to be consumed in the regional societies)
2. Return economic merits to the city fund. (Investment for renewable energy and energy saving by citizen)
3. Strengthen disaster prevention and energy saving (Establishing self-supporting energy supply line**, using storage battery)

Electricity supply through self-supporting energy supply line



Disaster Prevention Bases (local parks)



Western waste disposal factory
(built by JFE Engineering)



Business support



EMS (Energy Management System)

Electric power

Smart Energy Kumamoto

Electric power



Eastern waste disposal factory

Electric power



Public Facilities



- Demand: 226 public facilities in the city
- Energy source
Western waste disposal factory : 5,980kw
Eastern waste disposal factory : 10,500kw

Charge/Discharge (optimized control)



Storage battery

Establish economic sustainability (stable earnings power)

Establish sufficient profitability and stable financial base for proactive business operation for the mid/long-term growth

- 1. Shift focus of domestic steel business from quantity to quality** –Pursue world-class earnings power
 - Achieve world-class cost and quality competitiveness
 - Expand margins and achieve stable profit
- 2. Promote growth strategies**
- 3. Significantly enhance competitiveness through DX**
- 4. Balance financial soundness with effective investment based on a “select and concentrate” approach**



7th mid-term business plan <Steel Business>

JFE

Aim to achieve world-class per-ton profit and enhance strategies for global growth
Promote innovation for carbon neutrality

Main initiatives

1. Transition to a lean, robust business structure by **shifting focus from quantity to quality**
2. Expand and accelerate overseas business via **solutions based on knowledge, skills, and data**
3. Use **digital technology** to strengthen production base and strategies for new growth
4. Pursue innovation aimed at achieving **carbon neutrality**

**Targets
FY2024**

Per-ton profit 10,000yen/ton*
(Segment profit ¥230.0bn.)

*Segment profit / unconsolidated sales volume in tons

Cf. 2H of FY2020 (actual)

- Per-ton profit 6,000 yen/ton
- Segment profit ¥70.8bn.

Equipment & Business Investment :
1,080bn. over 4 years

- **40% for GX, DX, equipment modernization and profitability improvements** (6th mid-term actual:20%)
- **30% for maintenance investments** (6th mid-term actual:50%)



Transition to a lean, robust business structure by shifting focus from quantity to quality

Improve per-ton profit by both fixed cost reduction and increase of high value-added products ratio, and enhance earning base.

Achieve world-class cost and quality competitiveness

- Cost reductions: ¥120bn. over 4 years
- Labor productivity: + 20%
(13% via structural reform +
1,670→2,000t/person/year via DX etc.
Number of employees: 16,000→13,000)
- Establish profit base that is resilient to changes in economic conditions by completing structural reforms
 - Greatly reducing fixed costs
 - Lowering breakeven points
- Introduce new technologies through DX
 - Improve production efficiency and yields
 - Greatly improve labor productivity
- Ensure quality competitiveness by improving product quality, production efficiency and our delivery

Expand margins and achieve stable profit

- Increase mix of highly value-added products* to an unprecedented 50%
*Products that offer technological advantages, are recognized by customers for their value added and have greater earnings power than commodity products.
- Product-mix enhancements by focusing on selective concentration in priority fields
 - Increase non-oriented electrical steel sheet production capacity
 - Increase capacity for heavy, extra-thick steel plate for offshore wind-power applications
 - Production of high-tensile steel sheet for automotive
- Fully overhaul our sales pricing
Ensure that products offering the type of high value that customers seek are suitably recognized in the market, based on which we aim to fully overhaul our sales pricing



Expand and Accelerate Overseas Business

JFE

- Expand returns from 1. vertical specialization business such as steel production applied for automobiles
- Further deepen integrated production in high-demand market (2. "Insider" business)
- Expand 3. solution business, in which we provide cutting-edge technologies, operations and research knowhow (aim to triple earnings in FY2024 compared to FY2020)

India

JSW

- Investment in 2009 (current equity ratio 15%)
- Further deepen direct participation such as beginning FS of establishing a grain-oriented electrical steel sheet manufacturing company

1. Vertical specialization business

2. "Insider" business

3. Solution business

china

GJSS started renewal construction [FY2020]

Started JV of production of iron powder (BJCMX) [FY2018]

Started JV of production and sales of specialty bar steel (BJSS)[FY2019]

JFE Chemical Established JV of anode materials [FY2019]

UAE

Started commercial production of large-diameter welded pipe (AGPC) [FY2019]

Mexico

NUCOR-JFE STEEL MEXICO Began Operating Hot-dip Galvanized Steel Sheet Production Facility for Automotive Applications[FY2019]

Vietnam

FHS

- Investment in 2015 (current equity ratio 4%)

ASEAN

JSGI (Indonesia) · JSGT (Thailand)

production and sales of galvanized steel sheet and cold-rolled steel sheet for automotive

Examples of Steel Business's Critical Initiatives: Strategy to Capture Growing Demand for Electrical Steel Sheet



JFE



To expand non-oriented electrical steel sheet (N/O) production capacity

Released April 1, 2021

JFE Steel decided that it would expand the electrical steel sheet production capacity of its West Japan Works (Kurashiki District) amid increasing demand for high-grade N/O applied for EV and HEV motors.

<Demand forecast of high-grade N/O>

The global movement to tighten and accelerate environmental regulations will rapidly increase demand for high-grade N/O, which are essential for production of motors that drive electric vehicles.

CAPEX	Approx. 49.0bn.
Expected time to start production	1H of FY2024
Expected capacity	Doubling the facility's existing capacity for producing high-grade non-oriented electrical steel sheet
CO ₂ reductions	Approx. 1.5Mt-CO ₂ /Year*

*CO₂ reductions effect resulting from expanding EV/HEV



To conduct FS of grain-oriented electrical-steel-sheet JV with JSW in India

Released May 7, 2021

JFE Steel signed a memorandum of understanding to conduct a feasibility study with JSW, JFE's strategic alliance-partner in India, regarding establishing a G/O manufacturing and sales joint-venture-company in India.

<Demand forecast of G/O>

Demand for G/O, which are used for the iron cores of power transform, is expected to grow globally amid continuous increase in demand for electric power and expansion of reusable energy. (Economic growth in India is estimated to boost its local demand for electric power.)





JFE Group-wide Strategy to Capture Growing Demand for Electrical Steel Sheet (Steel Business and Trading Business)

JFE

JFE Steel

Production of
electrical steel
sheets

**Expand production and supply
function of high value-added
electrical steel sheets**

JFE Shoji

Processing and
distribution of
electric cores

**World's No.1 global distribution
and processing system**

Domestic

**Increase electrical
steel sheet
production capacity**

Overseas

**Production & sales JV
with India's JSW for
electrical steel sheets**

**Sharing
Strategies**

Synergy

**Expand collaboration
with alliance partners**

**Establish SCM in
new regions**

**Expand processing
functions in coil centers**

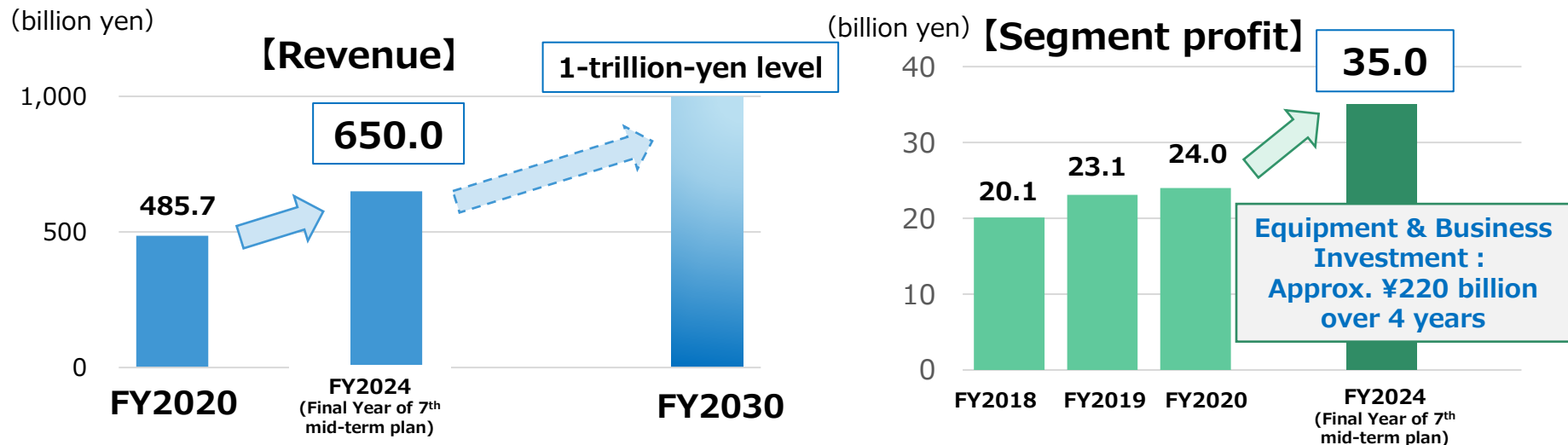
**Groupwide Strategy: Capture increasing demand for high value-added
electrical steel sheets both in domestic and overseas market**

7th mid-term business plan <Engineering Business>

Expand sales revenue to 1-trillion-yen level in FY2030

Targets FY2024

- Revenue **650.0 billion yen**
- Segment Profit **35.0 billion yen**



Main initiatives

1. **Enhance mid/long-term priority areas** (See next page)
Waste to Resources, Carbon-neutral business,
Combined utility service, Core infrastructure
2. **Expand overseas business** enhance EPC competitiveness, engage in
ODA, pursue M&A synergies in chemical plant field, participation in local
business in environmental, water and recycling fields
3. **Promote DX initiatives**

Engineering Business's Main initiatives

—Enhancing mid/long-term priority areas—

- Expand engineering business as a growth sector by helping to solve pressing issues in global society, in view of increasing importance of the environmental, recycling and renewable-energy fields.
- Expand revenue and profit by setting the following **four priority areas**:

Waste to Resource

FY2024 revenue target
¥290 billion

- Establish stable profit base in domestic environment business
- Priority investment and expansion of domestic market in recycling business*

*Food, Plastic, Incineration and Power generation



Carbon Neutral

FY2024 revenue target
¥80 billion

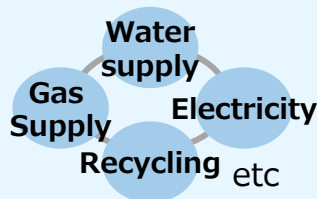
- Put priority in renewable energy (offshore wind-power generation, biomass power plant, solar power plant, geothermal power plant etc.)
- Develop carbon neutral technologies.



Combined utility services

FY2024 revenue target
¥20 billion

- Shift to comprehensive business model, including for efficient operation of facilities to contribute to energy savings and decarbonization



Core infrastructure

FY2024 revenue target
¥260 billion

- New technologies to address newly arising needs for strengthening and improving life of infrastructure
 - Strengthening of existing infrastructure → install new product and method for construction
 - Improving life of existing infrastructure → install new materials and new products

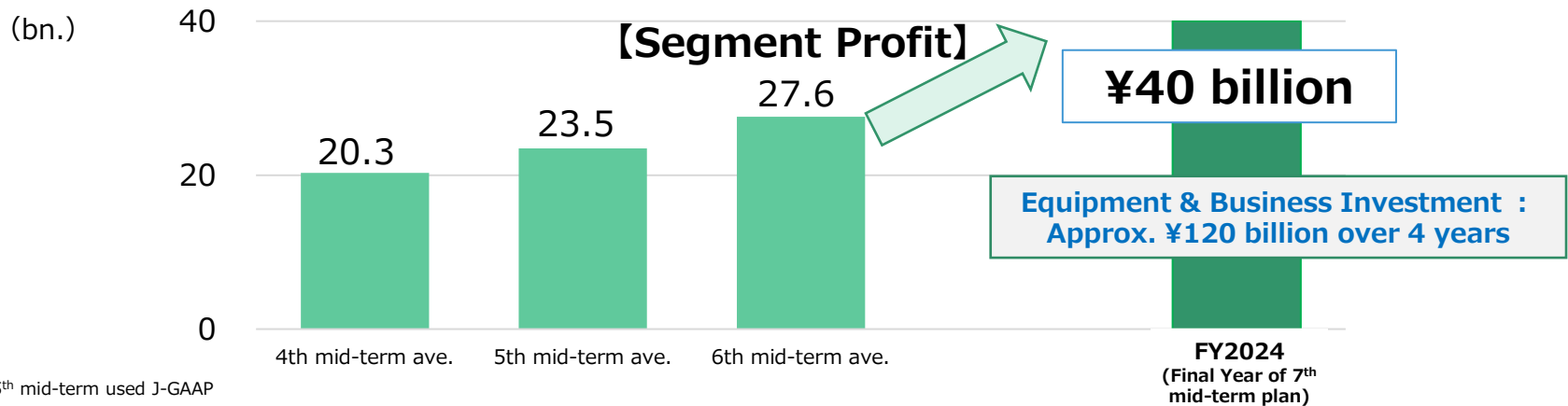
1. **Waste to Resource** : Recycling and waste-to-power generation etc. 2. **Carbon neutral** : Renewable energy, carbon recycling etc.
 3. **Combines utility services**: contribute to the local-production and local-consumption (circular economy) by mutual combination among various operation and maintenance business such as water, gas, electricity supply and recycling business/
 4. **Core infrastructure** : infrastructure business to establish social foundation such as bridge and pipeline

7th mid-term business plan <Trading Business>

Establish growth foundation by enhancing SCM

Target
FY2024

Segment profit **40bn.**



Main initiatives

- 1. Proceed key strategies for growth**
Establish No.1 position in global processing & distribution of electrical steel sheet, Strengthen SCM of automotive steel composite materials, Accelerate efforts in overseas construction materials business, Fully capture steel demand in Japan
- 2. Strengthen purchasing & sales capabilities** (expand non-JFE Steel business)
Increase sales of both JFE group products and alliance-partner products as well as actively expand business with other suppliers' products
- 3. Seize new business opportunities**
Expand environmental-solutions business, DX initiatives

Trading Business's Main initiatives

—Key Strategies for growth, Strengthen purchasing and sales capabilities—

Strengthen SCM of Automotive steel

Enhance SCM for high-tensile steel both in overseas and domestic market to increase sales of JFE's strategic products

Further collaboration with JFE Steel both in domestic and overseas market

- Along with the EV and HEV promotion and increasing needs for lighter body of automobiles, application volume of high-tensile steel for automotive is expected to increase because of its characteristics and environmental-friendly advantages.



Fully Capture steel demand in Japan

Increase earnings by enhancing JFE Group's presence through expansion of function (quality) and additional trading (quantity)

Strengthen processing and distribution in domestic steel business

- Strengthen SCM** continue to strengthen collaboration beyond group boundaries and establish optimum processing and distribution system
- Widen processing functions to expand business** expand capabilities including secondary and tertiary processing to build strong foundation to meet various types of clients' needs

Pursue the best sales structure by sharing strategies with JFE Steel in the domestic market, which is the most critical

Accelerate efforts in overseas construction materials business

- In ASEAN and North American regions, **expand trading** in this sector and **collaborate with local companies** to strengthen business foundations.

Expand non-JFE Steel business

- Aim to expand business to meet clients' needs.** Increase sales of both JFE group products and alliance-partner products as well as actively expand business with other suppliers' products



JFE Group's DX strategies

JFE

- Promote DX in every business area such as [advancing productivity through innovation](#), [transforming exiting businesses](#) and [creating new businesses](#).
- Proactively invest money and human resource necessary for DX :
[DX investment approx. 120 billion yen over 4 years](#)

JFE Steel

Use digital technology to streamline production operations and implement new growth strategies

Target

Labor productivity: 20% improve*

*FY2024 structural reform 13%+ DX effects etc.

Investment

**115 billion yen
over 4 years**

JFE Engineering

Digitalize entire business and provide new digital services to customers.

Target

**Design efficiency: 20% increase
in FY2024**

JFE Shoji

Improve customer service, pursue new businesses by leveraging DX

<JFE Steel's initiatives>

- [Enhance competitiveness](#) by introducing cyber-physical systems on all production lines
 - Improve production efficiency, labor productivity and yield ratio etc.
- Utilize digital technologies to [raise customer satisfaction](#) through [quality enhancements and better delivery services](#).
- Actively expand [solutions businesses](#)



Balance Financial Soundness with Effective Investment based on a “select and concentrate” approach

JFE

- Selective maintenance investment, focusing on investments for enhancing competitiveness and establishing stable profit base
- Ensure earning source by asset compression

1. Equipment & Business Investment about **1,450 billion yen** over 4 years

- Equipment investment : Approx. **1,200 billion yen** over 4 years
GX : About ¥340 billion over 4 years*, **DX : About ¥120 billion 4 years**

Execute maintenance investment carefully selected from the perspectives of effectiveness and necessity
 Shift focus on investment for improving profitability and cutting-edge facilities

- Business investment : About **250 billion yen** over 4 years

Steel business : expand overseas insider businesses, Engineering business : expand operation & maintenance business and overseas business

Trading business : business investment including M&A for increasing earnings from processing and distribution business

*Steel Business : ¥160 billion
 Engineering Business : ¥130 billion
 Trading Business : ¥50 billion

2. Ensuring earning source

- Generate cash by asset compression : Approx. **200 billion yen** over 4 years

Assets that contribute little to earnings or are tied to unprofitable businesses**

3. Returns to shareholders

- Dividend payout ratio: Around 30% on par with the target during 6th mid-term business plan

**Regarding development plans for partial area of Keihin district resulting from structural reform (Ogishima area):
 We will disclose development plans in FY2023, and strive to see some properties put to new use by FY2030.



JFE

Main Financial Data and Performance & Profitability Targets

		7 th mid-term business plan FY2024	FY2020 Actual
Consolidated	Business profit	¥ 320.0 billion	¥ -12.9 billion
	Profit attributable to owners of the parent	¥ 220.0 billion	¥ -21.8 billion
	ROE	10%	-1.3%
	Debt/EBITDA	About 3x	8.1x
	D/E ^{*1}	About 70%	93.2%
Operating companies	Steel business Profit per ton ^{*2} Segment profit	10,000 yen/ton ¥ 230.0 billion	-3,000 yen/ ton ¥ -65.4 billion
	Engineering business Segment profit Revenue	¥ 35.0 billion ¥ 650.0 billion	¥ 24.0 billion ¥ 485.7 billion
	Trading Business Segment profit	¥ 40.0 billion	¥ 20.0 billion
	Payout ratio	7 th mid-term business plan Around 30%	6 th mid-term business plan Around 30%

*1 For liabilities with equity subject to credit ratings, these equities reflect the evaluations of rating agencies

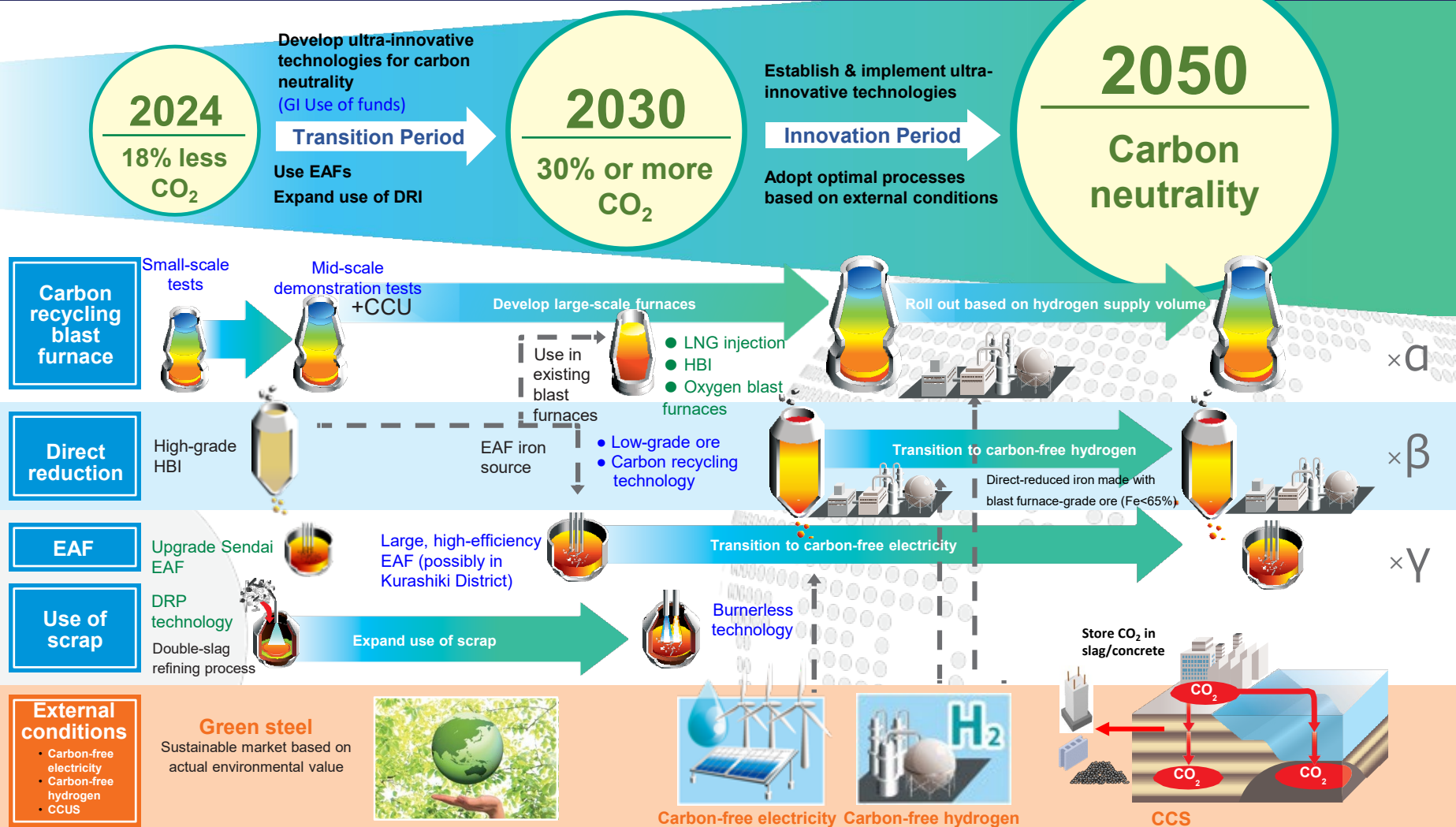
*2 Steel business profit per ton (consolidated segment profit / non-consolidated sales volume)
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Appendix(4)

JFE Steel Carbon Neutral Strategy Briefing

JFE Steel's Transition to Low-carbon Processes

Environmental
Vision 2050



Pursue multilayered technology development, via GI Fund projects, etc., to discover the most proven technologies and then achieve carbon neutrality by deploying the most optimized configuration of green steelmaking processes.



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JFE's Carbon Neutrality Action Plan

Environmental
Vision 2050



- ▶ JFE Steel is introducing low-carbon steel processes during its “transition period” to 2030.
- ▶ In its “innovation period” from 2030 to 2050, JFE Steel aims to develop and implement ultra-innovative technologies for carbon neutrality.

Transition period

- Increasingly deploy low-carbon technologies through capital investment to achieve targets such as cutting 2013-level CO₂ emissions by 30% or more by 2030
- Accelerate multitrack R&D targeting ultra-innovative technologies for innovation period
- Create markets for renewable green-steel materials based on actual environmental value
→ Create initial demand

Stimulate demand through government policy

Innovation period

- Swiftly establish and deploy ultra-innovative technologies
- Collaborate with communities and industrial complexes toward carbon neutrality
- Grow markets for sustainable green steel based on actual environmental value
→ Grow demand leading to virtuous cycles

Maintain the competitiveness of Japanese steel through plentiful, low-cost, stable supplies of carbon-free hydrogen and electricity

Behavior must be shifted on both supply and demand sides to create markets for green steel

Transition to Low-carbon Processes



- ▶ Continue to develop ultra-innovative technologies for decarbonized steel processes by 2030
- ▶ Increasingly use low-carbon technologies to cut CO₂ by 30% or more by FY2030

Energy savings and high efficiency	Low-carbon feedstock & fuel	Low-carbon processes
Upgrade to high-efficiency coke ovens Fukuyama District (2025)	Expand use of scrap in converters Use direct-reduced iron (HBI) All districts (under way)	Upgrade existing EAFs Sendai Works (2024)
Improve efficiency of power-demand facilities (Electrify blast-furnace blowers, raise efficiency of oxygen plants, etc.) All districts (under way)	Securing Scrap and HBI Reinforcing storage depots All districts (under way)	Introduce large, high-efficiency EAFs Kurashiki District (2027-2030)
Leverage AI & DS (companywide CPS, etc.) for energy savings All districts (under way)	Bolster LNG supply network	Use ferro-coke for commercial production Fukuyama District (TBD)

- ✓ To reduce CO₂ emissions by 30% or more by 2030, 1 trillion yen in capital investment will be needed for low-carbon initiatives (large electric furnaces, ferro coke, scrap and reduced iron, LNG, etc.).
- ✓ A market that reflects the actual environmental value of green steel must be created to support capital investment in decarbonization technologies.

Development Project Supported by Green Innovation Fund

Environmental
Vision 2050



- ▶ This project, targeted at using hydrogen in ironmaking and commissioned and subsidized by NEDO*, was selected in December 2021 to receive support from the Green Innovation Fund.
- ▶ The fund is helping to accelerate the development of technologies for achieving carbon neutrality.
- ▶ Formed a consortium with three steel companies and JRCM** and held the first meeting of the Hydrogen Iron and Steel Committee in June 2022.

*New Energy and Industrial Technology Development Organization

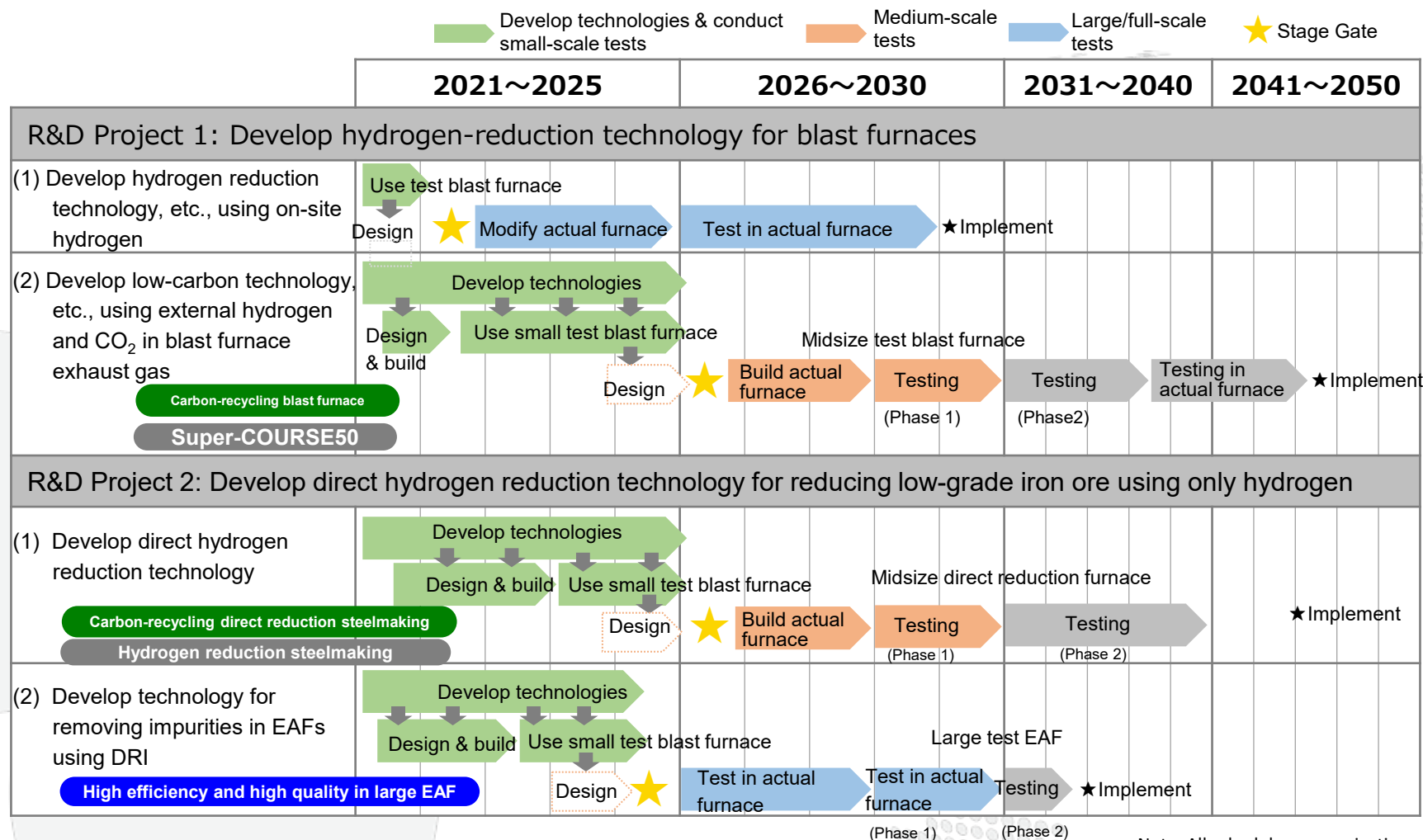
**Japan Research and Development Center for Metals

	Carbon-recycling blast furnace	Direct-reduction steelmaking	Large, high-efficiency EAF
Development project			
Summary	Build a small test blast furnace (150m ³) in Chiba District Prefecture to develop a process for converting CO ₂ by-product into methane for reuse as a reductant, aiming to cut CO ₂ emissions by 50% or more.	Build a small test reduction furnace in Chiba District Prefecture to develop a direct-reduction ironmaking process for reduced iron that uses hydrogen to remove oxygen from low-grade iron ore, aiming to cut CO ₂ emissions by 50% or more vs. blast furnaces.	Build a small test EAF in Chiba District Prefecture to develop a high-quality steel manufacturing method incorporating high-efficiency melting of scrap and reduced iron, reduction of impurities, etc.

Overall Scale of GI Fund Projects



- ▶ Development toward Stage Gate Reviews scheduled mainly in FY2025–2026
- ▶ Studies also underway with a view to actual implementation in 2030–2040s



Source: METI

(https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/pdf/gif_05_randd.pdf)

Note: All schedules are projections



- ▶ In the EU, green steel is branded and sold using a mass balance approach.
- ▶ Achieving 30% CO₂ reduction by FY2030 will enable JFE Steel to supply up to 5M tons of green steel per year using the same approach.
- ▶ To create a carbon-neutral world, government policies need to encourage behavioral changes in both the supply and demand sides in order to drive changes in society and spark innovation for new industrial competitiveness.

Supply side

- Huge capital investment is needed to introduce low-carbon & ultra-innovative technologies. (1 trillion yen in low-carbon investments by 2030)
- While JFE Steel will strive to minimize R&D cost increases, some increase will be inevitable in the effort to create new environmental value.
- Prospects for appropriate returns on such investments also will be needed.

Demand side

- Green steel products do not directly benefit consumers in terms of better quality, performance, convenience, etc.
- Ethical consumption appears to be on the rise, but in Japan awareness of environmental value is low.
- Incentives are needed to encourage the recognition of environmental value and the purchase of products that significantly reduce carbon.

To support investment in low-carbon technology during the transition period until 2030 and to prepare for further large-scale investment during the innovation period, a green steel market must be created at an early stage (transition period) and government policies must raise the public's awareness as well as encourage steel consumers to change their behavior.



- Realizing carbon-neutral steelmaking is a top priority for JFE Steel, but generating environmental value will involve large cost increases, so there are limits on what a single company can do.
- Mechanisms are needed so that society, as the beneficiary of green steel, helps to cover the associated cost increases through government support, collaborative initiatives, etc.

Huge R&D and facility installation costs

- Achieving CN by 2050 will be a major technological challenge requiring huge R&D outlays.
- Transitioning steelworks to carbon-neutral processes will require even greater capital investment.
- Long-term government support will be needed to shoulder the financial costs of achieving carbon neutrality.

Deliver environmental value and create markets during transition

- Government support is needed for capital investment in low-carbon technologies by 2030
- A mechanism is needed to create a market where costs commensurate with green steel's environmental value can be shared with customers and society

Develop infrastructure for carbon-neutral steelmaking and fuel inter-company collaboration

- Develop infrastructure for the low-cost, stable, large-scale supply of carbon-free hydrogen and electricity needed for carbon-neutral steelmaking
- Develop an execution platform for CCUS and green infrastructure implementation through collaboration with industrial complexes, corporations, etc.

Economic policies targeting green-transformation investment and international competitiveness

- Ensure international competitiveness of industrial electricity prices
- Introduce tax system that encourages implementation of ultra-innovative technologies, such as the abolition of depreciable asset taxation and the avoidance of a carbon tax before the establishment of decarbonizing technologies
- Carbon Border Adjustment Measure (CBAM) should be consistent with WTO rules. Ensure a level playing field in cooperation with other countries



JFE