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JFE Group

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

JFE Holdings, Inc.

November 6, 2023



JFE

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This presentation material is for the purpose of publicizing the status of our company's financial results for the first half 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 1H of FY2023

Business Profit ¥164.3bn.

(Increased by **¥39.3bn.** from previous forecast,
decreased by ¥23.6bn. year-on-year)

[Excluding Inventory
Valuation etc.] **¥165.3bn.**

(Increased by ¥24.3bn. from previous forecast,
increased by **¥93.4bn.** year-on-year)

- From previous forecast: **Profit increased by 39.3bn.** due to initiatives such as sales price improvement.
- Year-on-year: Profit decreased by ¥23.6bn. due to the loss of inventory valuation gains, but **profit excluding inventory valuation increased sharply by ¥93.4bn.**

Forecast of FY2023

Business Profit ¥290.0bn.

(As previous announced)

[Excluding Inventory
Valuation etc.] **¥290.0bn.**

(Decreased by ¥25.0bn. from previous forecast)

Steel business profit per ton* :

10,000yen/t (As previous announced)

Crude Steel Production(Standalone) :

approx. 23.80Mt

(Decreased by 0.80Mt from previous forecast)

Dividend 100yen (Interim dividend **50yen**)

- **Business profit is unchanged from the previous forecast.**
- **Excluding inventory valuation differences, profit is expected to fall by ¥25.0bn. from the previous forecast** due to a delay in the recovery of overseas steel markets, soaring coking coal prices and a decline in crude steel production.
- The Board of Directors resolved to pay an interim dividend of 50 yen (As previously announced). Annual dividend as previously announced.

Topics

- Shutdown of upstream and hot rolling facilities in Keihin district and its land utilization
- JGreeX™ adoption expansion
- Issuance of new shares and convertible bonds

**Consolidated Results for First Half of
Fiscal Year 2023
(April 1 to September 30, 2023)**



Financial Results for 1H of Fiscal Year 2023

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- **Business profit for the first half of the year was ¥164.3bn.**
(increased by ¥39.3bn. from the previous forecast, decreased by ¥23.6bn. year-on-year.)
- Excluding inventory valuation differences, business profit increased by ¥24.3bn. from the previous forecast and by ¥93.4bn. from the same period last year.

(billion yen)	FY2022 1H Actual (Apr-Sep)	FY2023 1H Forecast (Previous) (Apr-Sep)	FY2023 1H Actual (Apr-Sep)	Change (FY2022 →FY2023)	Change (Previous →Actual)
Revenue	2,564.3	2,610.0	2,576.5	12.2	(33.5)
Business Profit [Excluding Inventory Valuation etc.]	187.9 [71.9]	125.0 [141.0]	164.3 [165.3]	(23.6) [93.4]	39.3 [24.3]
Finance Income/Costs	(6.6)	(10.0)	(8.9)	(2.3)	1.1
Segment Profit	181.2	115.0	155.3	(25.9)	40.3
Exceptional Items	–	–	–	0.0	0.0
Profit before Tax	181.2	115.0	155.3	(25.9)	40.3
Tax Expense and Profit (Loss) Attributable to Non-Controlling Interests	(57.9)	(30.0)	(45.2)	12.7	(15.2)
Profit Attributable to Owners of Parent	123.2	85.0	110.0	(13.2)	25.0

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 Results for 1H of Fiscal Year 2023 (by Segment)

(billion yen)	FY2022 1H Actual (Apr-Sep)	FY2023 1H Forecast (Previous) (Apr-Sep)	FY2023 1H Actual (Apr-Sep)	Change (FY2022 →FY2023)	Change (Previous →Actual)
Steel Business	1,918.9	1,880.0	1,865.8	(53.1)	(14.2)
Engineering Business	219.0	230.0	248.4	29.4	18.4
Trading Business	750.2	780.0	742.0	(8.2)	(38.0)
Adjustments	(323.9)	(280.0)	(279.7)	44.2	0.3
Revenue	2,564.3	2,610.0	2,576.5	12.2	(33.5)
Business Profit (A)	187.9	125.0	164.3	(23.6)	39.3
Finance Income/Costs (B)	(6.6)	(10.0)	(8.9)	(2.3)	1.1
Steel Business	148.2	87.0	122.8	(25.4)	35.8
Engineering Business	(3.9)	5.0	8.7	12.6	3.7
Trading Business	40.6	26.0	26.8	(13.8)	0.8
Adjustments	(3.6)	(3.0)	(3.1)	0.5	(0.1)
Segment Profit (A+B)	181.2	115.0	155.3	(25.9)	40.3

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.

¥35.8bn. Increase in JFE Steel's Segment Profit (FY2023.1H (Forecast) vs. FY2023.1H(Actual))

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	Unit	FY2023 1H(forecast)	FY2023 1H(Actual)
Crude Steel (Standalone)	Mt	Approx. 12.30	12.16
Shipment (Standalone)	Mt	-	10.65
Average Sales Price (Standalone)	000 yen/t	Approx. 128	129.3
Exchange Rate	Yen/\$	Approx. 139	139.9

JFE Steel	FY2023 1H(forecast)	FY2023 1H(Actual)	(billion yen) Change
Segment Profit	87.0	122.8	35.8
Excluding Inventory Valuation etc.	103.0	123.8	20.8

- | | | |
|-----------------------------------|--------------|--|
| 1. Cost | +5.0 | <ul style="list-style-type: none"> Operational improvement |
| 2. Volume and Mix | (3.0) | <ul style="list-style-type: none"> Crude Steel Production approx.12.30Mt⇒12.16Mt |
| 3. Sales and Raw materials | +12.0 | <ul style="list-style-type: none"> Improved spreads due continued sales price improvement efforts |
| 4. Inventory valuation | +15.0 | <ul style="list-style-type: none"> Inventory valuation +4.0 (-3.0→+1.0) Carry over +2.0 (-19.0→-17.0) Foreign exchange valuation+9.0 (+6.0→+15.0) |
| 5. Others | +6.8 | <ul style="list-style-type: none"> Group companies +6.0 etc. |

¥25.4bn. Decrease in JFE Steel's Segment Profit (FY2022.1H (Actual) vs. FY2023.1H (Actual))

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(billion yen)

	Unit	FY2022 1H	FY2023 1H
Crude Steel (Standalone)	Mt	12.64	12.16
Shipment (Standalone)	Mt	10.86	10.65
Average Sales Price (Standalone)	000yen/ t	131.6	129.3
Exchange Rate	Yen/\$	131.6	139.9

JFE Steel	FY2022 1H	FY2023 1H	Change
Segment Profit	148.2	122.8	(25.4)
Excluding Inventory Valuation etc.	32.2	123.8	91.6

1. Cost	+15.0	<ul style="list-style-type: none"> Operational improvement
2. Volume and Mix	(10.0)	<ul style="list-style-type: none"> Crude Steel Production 12.64Mt⇒12.16Mt
3. Sales and Raw materials	+144.0	<ul style="list-style-type: none"> Improved spreads due continued sales price improvement efforts
4. Inventory valuation	(117.0)	<ul style="list-style-type: none"> Inventory valuation -81.0 (+82.0→+1.0) Carry over -22.0 (+5.0→-17.0) Foreign exchange valuation-14.0 (+29.0→+15.0)
5. Others	(57.4)	<ul style="list-style-type: none"> Group companies -8.0 Foreign exchange effects on trade -11.0 Depreciation cost -10.0 etc.

Financial Forecasts for 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	5,380.0	2,576.5	5,360.0	91.3	(20.0)
Business Profit [Excluding Inventory Valuation etc.]	187.9 [71.9]	235.8 [162.8]	290.0 [315.0]	164.3 [165.3]	290.0 [290.0]	54.2 [127.2]	0.0 [(25.0)]
Finance Income/Costs	(6.6)	(14.8)	(20.0)	(8.9)	(20.0)	(5.2)	0.0
Segment Profit	181.2	221.0	270.0	155.3	270.0	49.0	0.0
Exceptional Items	–	(10.7)	–	–	–	10.7	0.0
Profit before Tax	181.2	210.2	270.0	155.3	270.0	59.8	0.0
Tax Expense and Profit (Loss) Attributable to Non-Controlling Interests	(57.9)	(47.6)	(80.0)	(45.2)	(80.0)	(32.4)	0.0
Profit Attributable to Owners of Parent	123.2	162.6	190.0	110.0	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)

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(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	3,770.0	1,865.8	3,800.0	(81.1)	30.0
	Engineering Business	219.0	512.5	550.0	248.4	550.0	37.5	0.0
	Trading Business	750.2	1,514.1	1,620.0	742.0	1,580.0	65.9	(40.0)
	Adjustments	(323.9)	(638.9)	(560.0)	(279.7)	(570.0)	68.9	(10.0)
	Revenue	2,564.3	5,268.7	5,380.0	2,576.5	5,360.0	91.3	(20.0)
	Business Profit (A)	187.9	235.8	290.0	164.3	290.0	54.2	0.0
	Finance Income/Costs (B)	(6.6)	(14.8)	(20.0)	(8.9)	(20.0)	(5.2)	0.0
	Steel Business	148.2	146.8	200.0	122.8	200.0	53.2	0.0
	Engineering Business	(3.9)	13.4	25.0	8.7	25.0	11.6	0.0
	Trading Business	40.6	65.1	48.0	26.8	48.0	(17.1)	0.0
	Adjustments	(3.6)	(4.3)	(3.0)	(3.1)	(3.0)	1.3	0.0
	Segment Profit (A+B)	181.2	221.0	270.0	155.3	270.0	49.0	0.0

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

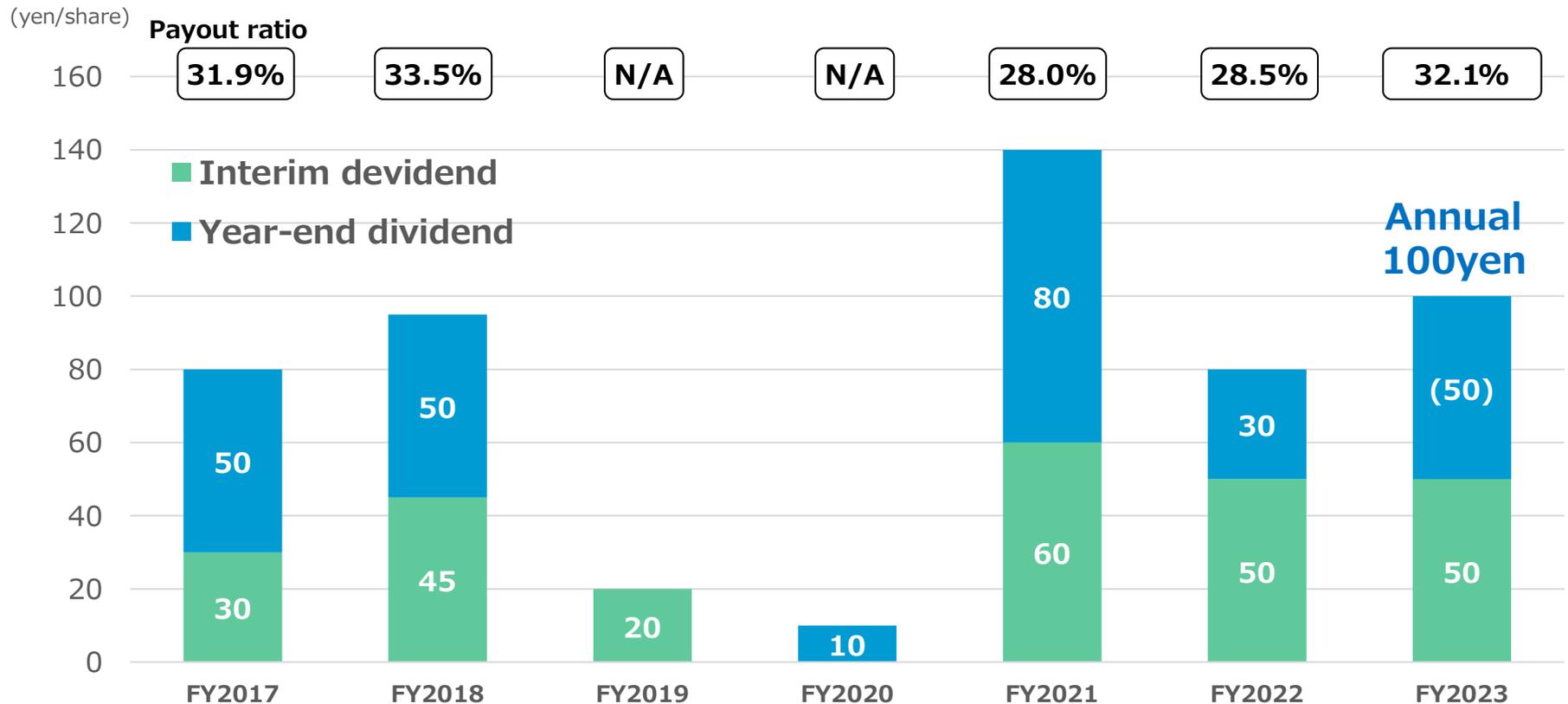
Segment profit is profit including financial income in business profit.



Dividend

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- The Board of Directors resolved to pay an interim dividend of **50 yen per share**. (As previous announced)
- The annual dividend is expected to be **100 yen per share**, based on the business outlook and the payout ratio policy of about 30%. (As previous announced)



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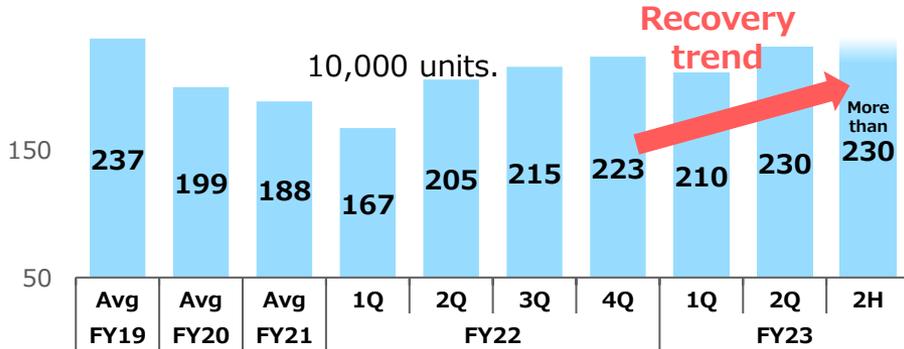
Financial Forecast for Fiscal Year 2023

Business environment (Domestic)



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

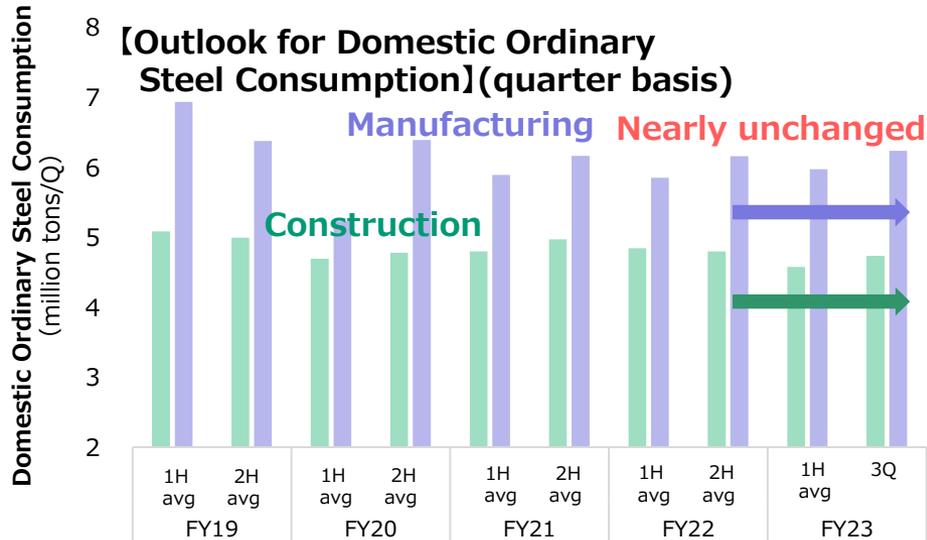
[Outlook for Domestic Auto Production]



[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"> As for construction machinery, demand for mining is strong and stable due to high resource prices, but a decline in external demand is seen in construction and civil engineering. It is necessary to keep an eye on this trend. 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 for large-scale projects, which had been relatively strong, has been postponed due to rising material 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 in a slump.
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.

[Outlook for Domestic Ordinary Steel Consumption](quarter basis)



Source: Ministry of Economy, Trade and Industry, "Outlook for Steel Consumption" 12 oct. 2023. (FY2022, 3Q and after is estimated results)

Business environment (Overseas)

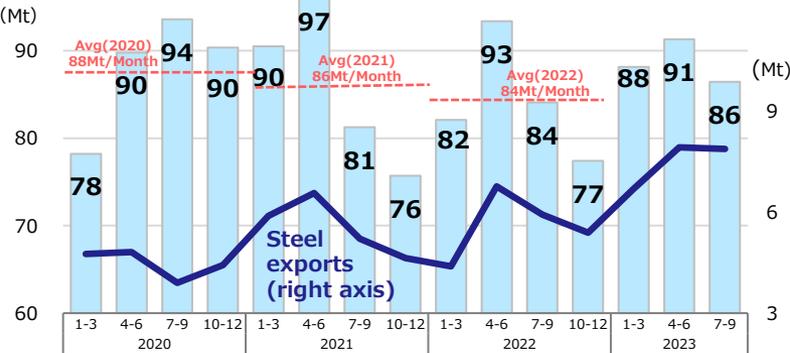


- In China, steel exports increased due to sluggish domestic demand caused by a slump in the real estate sector, resulting in **a loosening of overseas steel supply and demand and continued stagnation in the market.**
- Although Chinese government stimulus measures and curbs on crude steel are expected, it will take time for steel demand and market conditions to recover in earnest.

【China's crude steel production and steel exports】

Crude steel production(per month)

Annual crude steel production (per month)
 2020: 1,053 million tons (88)
 2021: 1,033 million tons (86)
 2022: 1,013 million tons (84)



【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%
Jul. 2023 Forecast	3.0%	1.8%	5.2%	6.1%	5.3%
Oct. 2023 Forecast	3.0% ➡	2.1% ➡	5.0% ➡	6.3% ➡	5.2% ➡

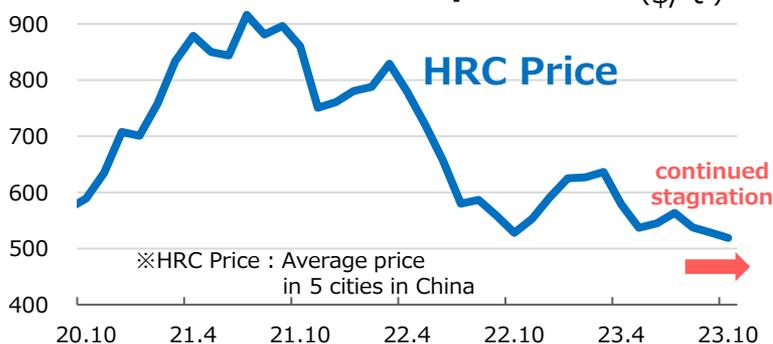
Source : IMF World Economic Outlook Update July 25 and October 10, 2023

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

【Trend by Sector】

Thin Sheet	<ul style="list-style-type: none"> • In China, domestic demand has slumped due to a slow recovery in the real estate sector. • In Southeast Asia, the steel market continued to stagnate due to an increase in imported materials from China, a decline in external demand and a decline in resource prices.
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.

【 China : Steel market price 】





Raw materials market trends

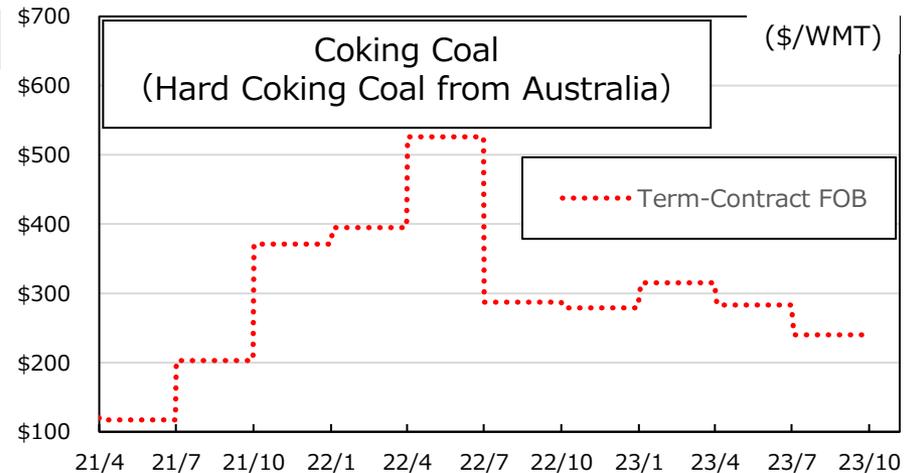
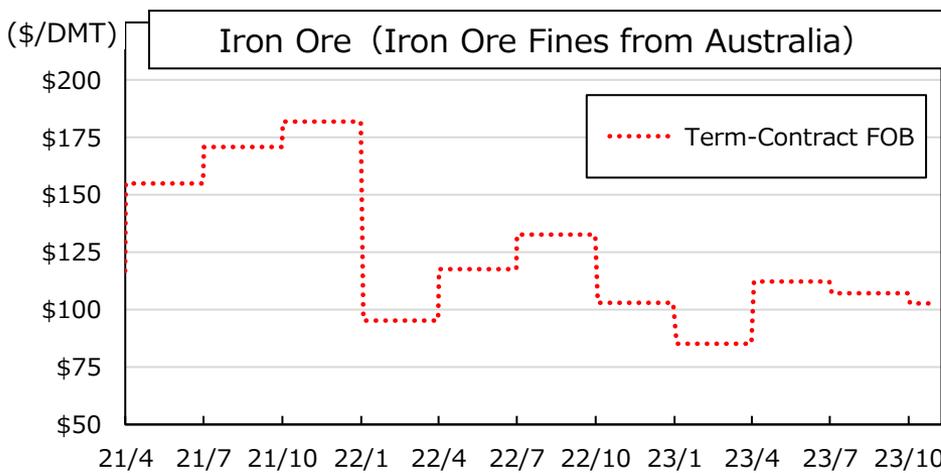
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■ Key raw materials

- Iron ore is currently hovering around \$100 FOB amid a slump in the Chinese steel market.
- Since September, coking coal has surged due to increased demand in India and has exceeded FOB \$300.
- **Both iron ore and coking coal are expected to remain at current levels.**
(The effect of weather should be carefully observed.)

■ Metals

- Metals prices remain weak due to the sluggish European economy and the slower recovery in China's economy and steel demand.



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

Term-Contract FOB	FY2022				FY2023		
	Apr-Jun	Jul-Sep	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
\$/WMT	526	287	279	315	283	240	-

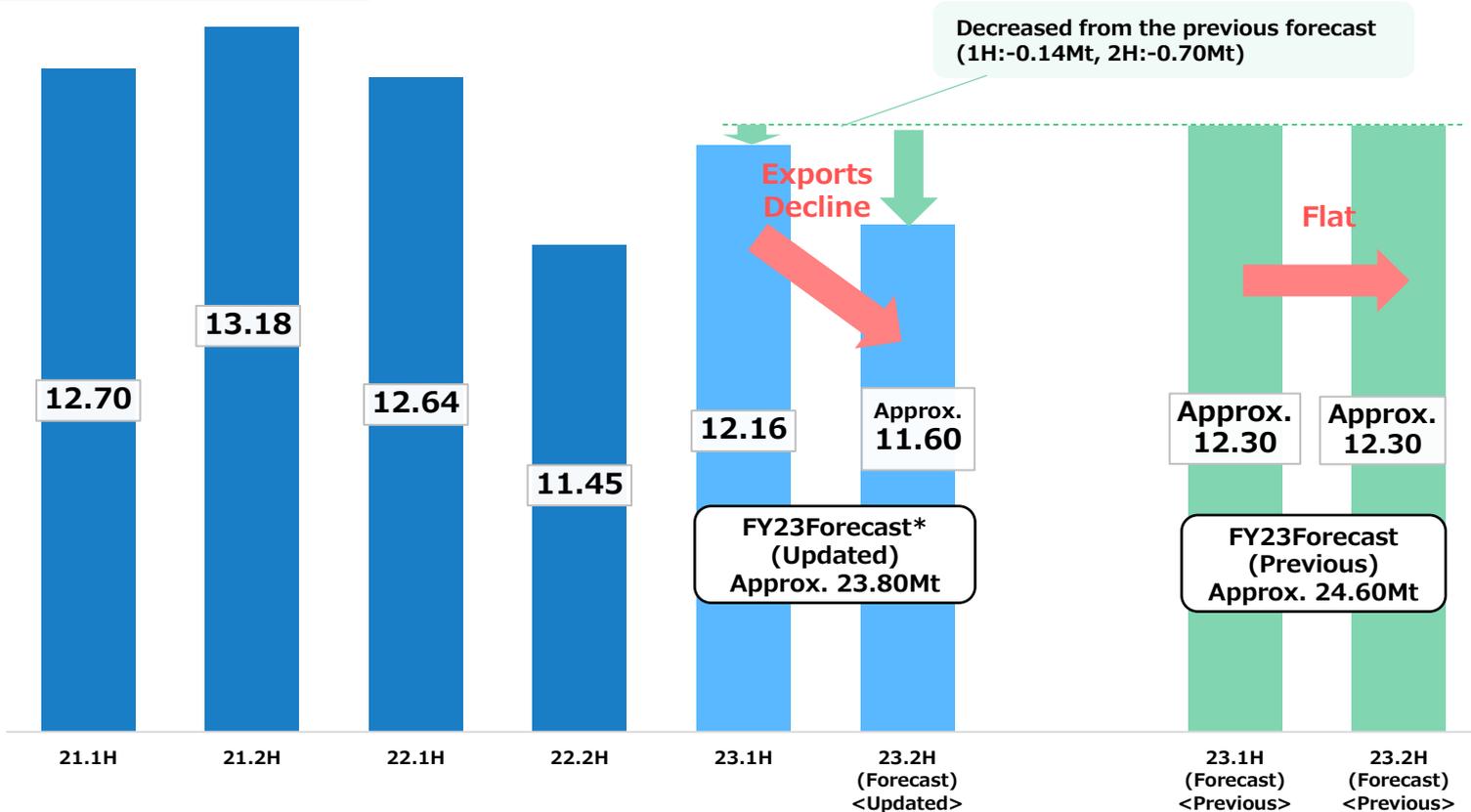
Crude steel production



- Compared with previous assumptions, the coking coal market has risen sharply, and the recovery of overseas steel demand and market conditions has been slow. Standalone crude steel production is expected to fall to approx. 23.80 Mt per year, mainly due to a decline in exports. **(down 0.80Mt from the previous forecast)**

Standalone crude steel production<Half year>

Unit: MT



*The upstream and hot rolling facilities in Keihin were closed on September 16th (As previous announced)

Financial Forecast for Fiscal Year 2023

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	Unit	FY2022					FY2023(updated)					FY2023 Previous Forecast
		1Q	2Q	1H	2H	Full Year	1Q	2Q	1H	2H	Full Year	
Revenue	billion yen	932.6	986.3	1,918.9	1,962.2	3,881.1	917.2	948.6	1,865.8	1,934.2	3,800.0	3,770.0
Segment Profit	billion yen	93.0	55.2	148.2	(1.4)	146.8	68.1	54.7	122.8	77.2	200.0	200.0
Excluding Inventory Valuation etc.*	billion yen	(23.0)	55.2	32.2	41.6	73.8	59.1	64.7	123.8	76.2	200.0	225.0
Crude Steel (Standalone)	Mt	6.43	6.21	12.64	11.45	24.10	6.05	6.11	12.16	Approx. 11.60	Approx. 23.80	Approx. 24.60
Crude Steel (Consolidated)	Mt	6.77	6.59	13.37	12.11	25.48	6.38	6.47	12.85			
Shipment (Standalone)	Mt	5.54	5.32	10.86	10.88	21.74	5.23	5.42	10.65			
Export Ratio on Value Basis (Standalone)	%	48.5	45.0	46.7	42.2	44.5	44.2	44.2	44.2			
Average Sales Price (Standalone)	000 yen/t	126.7	136.7	131.6	129.9	130.8	128.5	130.1	129.3			
Exchange Rate	¥/\$	126.5	136.6	131.6	138.6	135.1	135.8	144.1	139.9	Approx. 150	Approx. 145	Approx. 139
Exchange Rate (End of Term)	¥/\$	136.7	144.8	144.8	133.5	133.5	145.0	149.6	149.6	Approx. 150	Approx. 150	Approx. 140

* Excluding inventory valuation, carry over, one-time structural reform costs and foreign exchange valuation from segment profit

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No change in JFE Steel's Segment Profit (FY2023 (Previous Forecast) vs. FY2023(Updated Forecast))

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(billion yen)

JFE Steel	FY2023 Previous Forecast	FY2023 Updated Forecast	Change
Segment Profit	200.0	200.0	0.0
Excluding Inventory Valuation etc.	225.0	200.0	(25.0)

1. Cost**+5.0****2. Volume and Mix****(8.0)**

- Crude Steel Production approx.24.60Mt⇒approx.23.80Mt

3. Sales and Raw materials**(25.0)**

- Deterioration due to the slowdown in overseas market conditions

4. Inventory valuation**+25.0**

- Inventory valuation +14.0 (-12.0→+2.0)
- Carry over +22.0 (-19.0→+3.0)
- Foreign exchange valuation +9.0 (+6.0→+15.0)
- one-time structural reform costs -20.0

5. Others**+3.0**

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

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JFE Steel		FY2022 Actual	FY2023 Forecast	(billion yen) Change
Segment Profit		146.8	200.0	53.2
Excluding Inventory Valuation etc.		73.8	200.0	126.2

1. Cost**+68.0**

- Structural reforms effect +20.0
- Operational improvement +25.0
- Disappearance of blast furnace refurbishment impact +13.0
- Disappearance of production reduction impact +10.0

**2. Volume
and Mix****+2.0**

- Crude Steel Production 24.10Mt⇒approx. 23.80Mt

**3. Sales and
Raw
materials****+120.0**

- Improved spreads due continued sales price improvement efforts

**4. Inventory
valuation****(73.0)**

- Inventory valuation -77.0 (+79.0→+2.0)
- Carry over +26.0 (-23.0→+3.0)
- Foreign exchange valuation -2.0 (+17.0→+15.0)
- one-time structural reform costs -20.0

5. Others**(63.8)**

- Foreign exchange effects on trade -23.0
- Depreciation cost -11.0

¥45.6Bn. Decrease in JFE Steel's Segment Profit (FY2023.1H vs. FY2023.2H)

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JFE Steel	FY2023 Forecast			Change (Billion yen)
	1H Actual	2H Forecast	Full Year	
Segment Profit	122.8	77.2	200.0	(45.6)
Excluding Inventory Valuation etc.	123.8	76.2	200.0	(47.6)

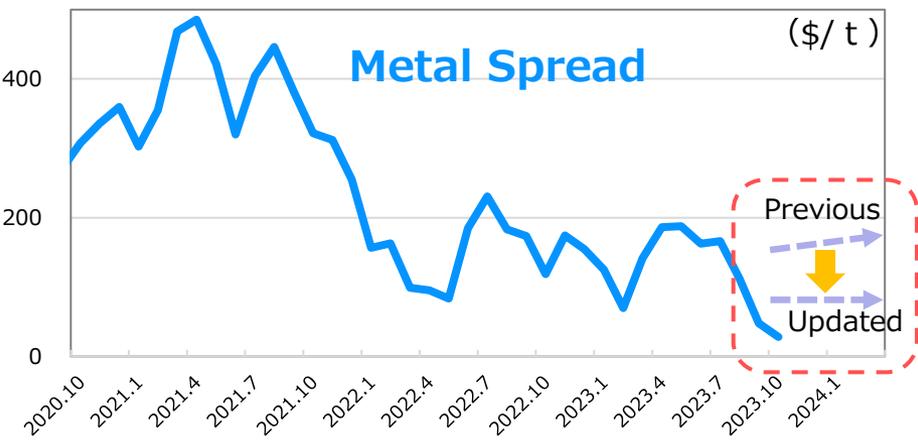
1. Cost	+28.0	<ul style="list-style-type: none"> Structural reforms effect +20.0 Operational improvement +8.0
2. Volume and Mix	(3.0)	<ul style="list-style-type: none"> Crude Steel Production 12.16Mt⇒approx. 11.60Mt
3. Sales and Raw materials	(50.0)	<ul style="list-style-type: none"> Deterioration due to the slowdown in overseas market conditions
4. Inventory valuation	+2.0	<ul style="list-style-type: none"> Inventory valuation ±0.0 (+1.0→+1.0) Carry over +37.0 (-17.0→+20.0) Foreign exchange valuation -15.0 (+15.0→±0.0) one-time structural reform costs -20.0
5. Others	(22.6)	<ul style="list-style-type: none"> Foreign exchange effects on trade -11.0 etc.

Outlook on spread for the second half of FY2023

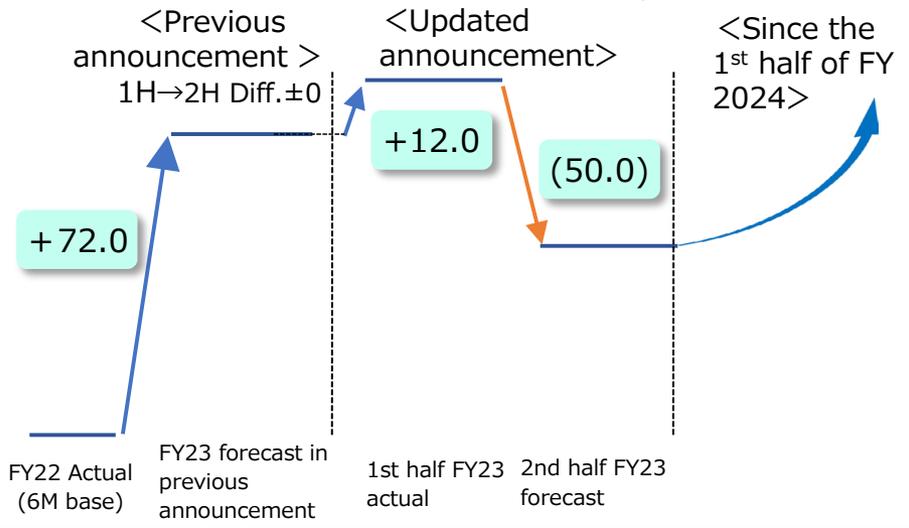


- In the second half of FY2023, the spread, especially for export is expected to deteriorate significantly due to the rise in the coking coal market and the slump in overseas markets.
- Since the first half of FY2024, spreads expect to improve by passing on unreflected coking coal costs, pursuing sustainable price levels, and raising the ratio of high value-added products. With the recovery of overseas market conditions, further upside can be expected.

HR coil Spread (Chinese spot basis)



Outlook on Spread



- < Approach to overseas market conditions in the 2nd half >
- Previous : Improve steel supply & demand and market conditions since the beginning of the year
 - Updated : Reflected the recent market downturn. Full-scale recovery is expected to be delayed beyond next fiscal year

- In the 1st half actual, increased by ¥12 billion from the previous announcement due to improvement in sales price, etc.
- Expect a decrease of ¥50 billion from the 1st half to the 2nd half, taking into account the effects of weak overseas market conditions and rising coking coal prices. (¥38 billion decrease against the previous announcement of the 2nd half).

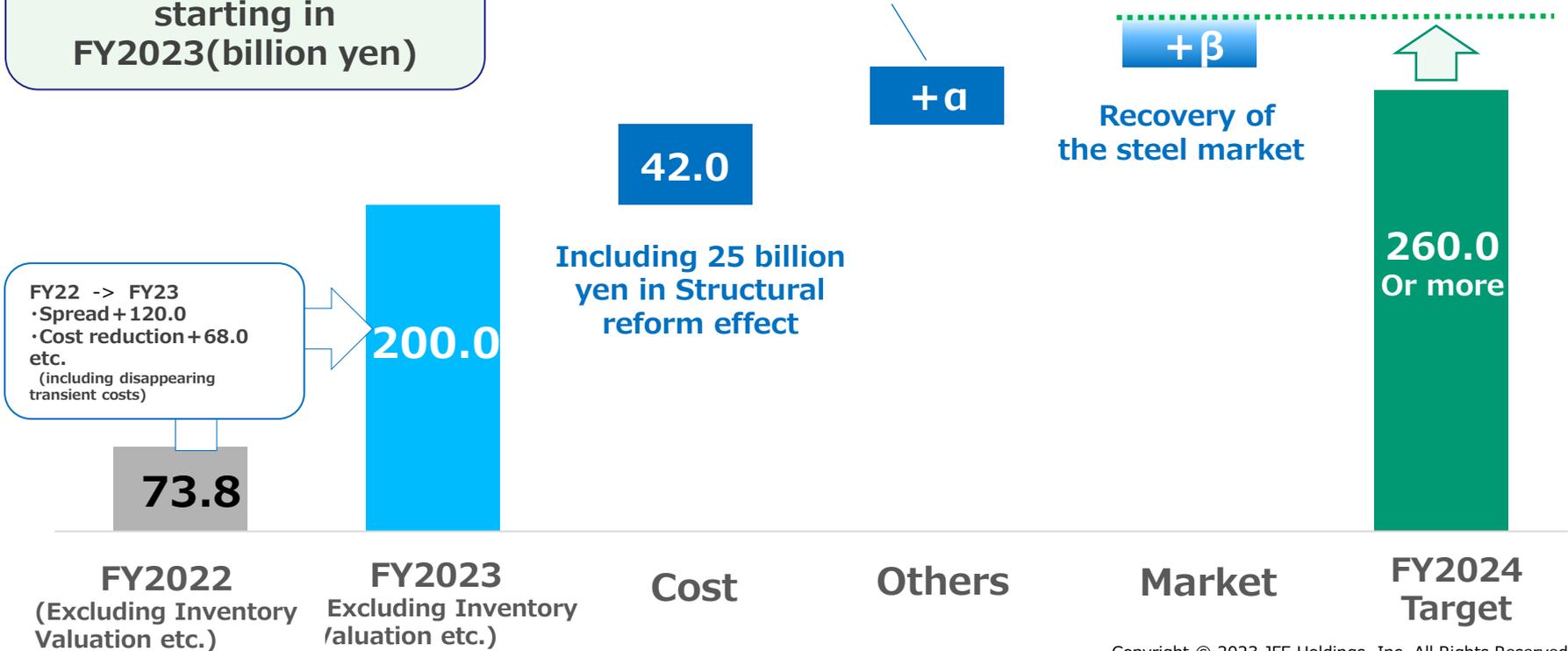
Paths toward achieving the Seventh Medium-Term Plan



- In FY2023, segment profit excluding Inventory Valuation etc. in the steel business is expected to be **200 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.**

Initiatives to achieve mid-term plan targets, starting in FY2023(billion yen)

- Product-mix enhancements (Electrical steel sheet etc.)
- Improvements in sales prices by pursuing sustainable price levels
- Expansion of overseas solution business, etc.



JFE Engineering

Financial Forecast for Fiscal Year 2023



Financial Forecast for Fiscal Year 2023

JFE

■ Current Business Environment/Overview of Financial Status

Annual segment profit is expected to be **¥25 billion**. (As previous forecast)

<Year-on-year>

- Orders: Expect to increase in the field of **“Waste to Resource”** and **“Carbon neutral”**.
- Segment profit: Expect to increase due to increased sales by the progress of ordered projects and price reflecting the impact of soaring prices of materials and equipment.

■ Financial Forecast

(billion yen)	FY2022 Actual		FY2023 Forecast		Change		FY2023 Forecast (Previous)	
	1H	Full Year	1H	Full Year	1H	Full Year	1H	Full Year
	Orders	286.0	564.9	269.7	580.0	(16.3)	15.1	280.0
Revenue	219.0	512.5	248.4	550.0	29.4	37.5	230.0	550.0
Segment Profit	(3.9)	13.4	8.7	25.0	12.6	11.6	5.0	25.0

From previous forecast

<1H segment profit +37> Increased revenue, etc.

<Full year segment profit ±0> As previous forecast.

JFE Shoji

Financial Forecast for Fiscal Year 2023



Financial Forecast for Fiscal Year 2023

JFE

■ Current Business Environment/Overview of Financial Status

Annual segment profit is expected to be **¥48 billion**. (As previous forecast)

<Year-on-year>

- Despite the recovery in automobile production, **profit is expected to decline** due to the slow recovery of the Chinese economy and **the narrowing of domestic and international spreads, particularly in North America**.

(Down ¥17.1 bn. from the previous year and up ¥8.0 bn. from the mid-term plan.)

■ Financial Forecast

(billion yen)	FY2022 Actual		FY2023 Forecast		Change		FY2023 Forecast (Previous)	
	1H	Full Year	1H	Full Year	1H	Full Year	1H	Full Year
	Revenue	750.2	1,514.1	742.0	1,580.0	(8.2)	65.9	780.0
Segment Profit	40.6	65.1	26.8	48.0	(13.8)	(17.1)	26.0	48.0

Topics

Shutdown of upstream facilities in Keihin district



- The upstream and hot rolling facilities in Keihin were closed on September 16th.
- By FY2024, a fixed cost reduction of ¥45 billion can be realized, which significantly lower the break-even point.
- Utilizing slabs and coils from other districts, Keihin will be a new urban steel plant that focuses on high-value-added products such as steel plates for building (HBL™) and hot-dip galvanized steel sheets with excellent corrosion resistance (ECOGAL Neo™).

	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) ★		
Shutdown of upstream and hot rolling facilities in Keihin		Shutdown (Sep. 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) ★	Development plans in Ohgishima (Sep. 7, 2023) ★	To Sell Ohgimachi land (Dec. 2024) ★	

Production system after structural reform



Promote automation of logistics of materials received from other districts by new DX technology.

Remote and automated coastal cranes



Under research and development

Autonomous trailer



Under demonstration

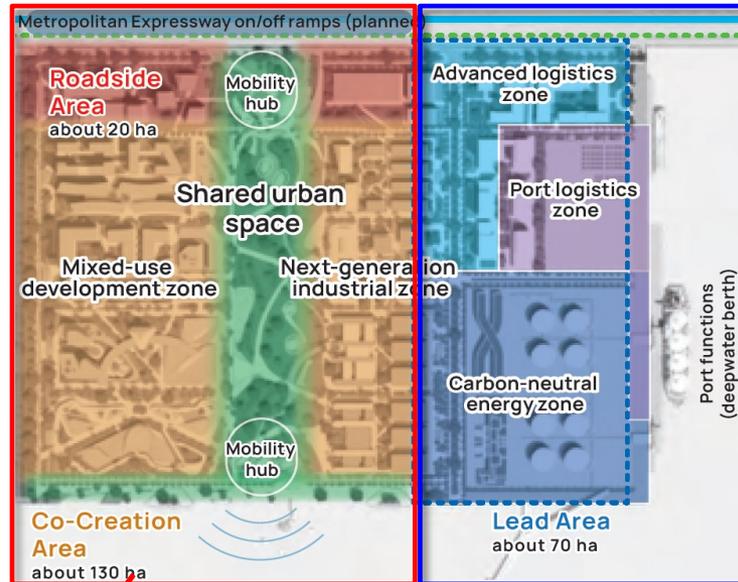
Land reuse project in Keihin district

("OHGISHIMA2050" released on 7th Sep. 2023)

JFE

- **Comprehensive land management** will be engaged that appropriately combines "sale", "lease" and "business use". **Proactive introduction of public funds will be discussed** with the national and city governments, and continuous development will be promoted.
- **About 1/4 of the 400ha area subject to land use conversion, including the lead area,** is under consideration for **publication of an income and expenditure plan in FY2024.**

【Zoning of Ohgishima (about 222ha)】



Lead Area

Leveraging deep water berths to form hydrogen supply bases and lead the way in carbon neutrality and land use conversion for the entire area.

Roadside・Co-Creation Area

A "share-type urban space," a lush green common space, is arranged as the central axis, and a "next-generation industrial and complex development zone" is arranged on both sides to integrate next-generation industries and facilities.

【Major events】

FY2023	<ul style="list-style-type: none"> • "OHGISHIMA2050" release (7th Sep.) • Shutdown of upstream facilities in Keihin (16th Sep.)
FY2024	<ul style="list-style-type: none"> • Delivery of Ohgimachi (about 21ha) (Capital gain: about ¥45 billion)
FY2027	<ul style="list-style-type: none"> • Opening of Minamiwatarida area.
FY2028	<ul style="list-style-type: none"> • A portion of the land in the Lead Area is slated to become available. • Roadside and Co-Creation Area will be steadily developed.
FY2050	<ul style="list-style-type: none"> • Completion

Adoption status of green steel “JGreeX”

JGreeX™ has been **first adopted for buildings and transformers** as well as for ships.

■ Steel plates for ships

- With eight domestic shipping companies, we are the first in the world to build a model that will bear CO₂ reduction cost throughout the entire supply chain.
- **Sales volume: about 14,000t**



Release on 6th Jun. 2023

■ Steel plates for buildings

- **First adopted for the new construction of “(tentative name) Suidobashi PREX”.**
- Contributing to CO₂ reduction in manufacturing materials for new buildings.
- **Sales volume: about 200t**



PREX	
(tentative) Suidobashi PREX	
Owner	SUMITOMO CORPORATION
Construction	Kumagai Gumi Co.,Ltd. (planned)
Building size	Steel-framed 10-story building
Release on 2 nd Oct. 2023	

■ Electrical steel sheets for transformers

Release on 26th Oct. 2023

- Grain-oriented electrical steel sheets are adopted for the first time for transformers manufactured in Europe. Contributing to the reduction of CO₂ emissions by supplying high-grade grain-oriented electrical steel sheets that enable the manufacture of high-efficiency transformers.
- **Sales volume: about 300t**

Fundraising through public offering and CB issuance



JFE

- In September 2023, we **raised a total of 204.5 billion yen through a public offering and CB issuance (Issuance of new shares, disposal of treasury shares, and issuance of convertible bonds)** in order to flexibly and reliably implement the GX strategy and continue sustainable profit growth.
- With this financing, we will strengthen our financial base **to support the 1 trillion yen scale investments toward 2030 for decarbonization of our steel manufacturing process.**

Type	Amount raised	Use of funds	Amount	Aim
[Issuance of new shares] 25 million shares [Disposal of Treasury Stock] 30 million shares	114.5 billion yen	(Kurashiki District) Enhancement of manufacturing facilities for non-oriented electromagnetic steel sheets *Period I: First half of FY 2024, Period II: FY 2026	Approx. 95.0 billion yen	Strengthen profitability by capturing rising demand for electrical steel sheets
		(India) Investment in the establishment of a joint venture company for the manufacture and sale of directional electrical steel sheets	Approx. 15.0 billion yen	
[Issuance of Convertible Bonds] Maturity of 2028 Conversion Price: ¥3,041 * UP rate 39.98%	90.0 billion yen	(Chiba District) Introduction of electric furnaces for stainless steel	Approx. 15.0 billion yen	Establish a strong financial foundation to support the swift implementation of the GX strategy
		Capital investment, business investment, R & D expenses, etc. necessary for decarbonizing the steel manufacturing process	Approx. 75.0 billion yen	

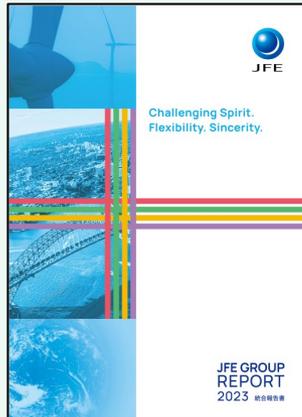
* At the time of determination of the condition (September 11, 2023). 2,973.7 yen after adjusting for the interim dividend for fiscal 2023.

Published JFE Group Report and Sustainability Report

JFE

JFE Group Report 2023 and Sustainability report has been published

JFE Group Report: Published on 26th Sep. 2023
Sustainability Report: Published on 28th Sep. 2023



1. Strategy to Create Value

- Message from the CEO and CFO
- Material Issues of Corporate Management and KPIs
- Progress on the Seventh Medium-term Business Plan (FY2021–2024)
- Special Feature (Electrical Steel Strategy・Land Utilization in Keihin)

2. Initiatives to Create Value

- Business Model and Strategy of JFE Group
- Helping to Resolve Issues Related to Climate Change

3. Management Foundation that Supports Growth

- Dialogue with Outside Executives, Corporate Governance etc.



<https://www.jfe-holdings.co.jp/investor/library/group-report/index.html>



1. JFE Group Vision

- Value of Steel
- Progress on 7th Mid-term Business Plan
- Material Business Issues, Achievement of KPIs

2. Sustainability Management

3. Initiatives for ESG Issues, ESG Data

- Environment: Climate change issues, environmentally conscious processes and products, biodiversity etc.
- Social: Occupational safety measures, diversity & inclusion, respect for human rights etc.
- Governance: Corporate governance, risk management etc.

English version is
coming soon

Carbon Neutrality Strategy Briefing is held on 8th Nov. 2023
regarding climate change issues

Appendix(1) Profit/Loss Analysis



Main Financial Data

JFE
JAAP

IFRS

	FY15	FY16	FY17	FY18		FY18	FY19	FY20	FY21	FY22	FY23 Forecast
(bn. Yen, times)					(bn. Yen, times)						
Ordinary Income	64.2	84.7	216.3	221.1	Business profit	232.0	37.8	-12.9	416.4	235.8	290.0
EBITDA	254.4	279.9	388.8	405.9	EBITDA * 1	428.2	269.4	223.4	668.7	505.4	570.0
ROS	1.9%	2.6%	5.9%	5.6%	ROS * 2	6.0%	1.0%	-0.4%	9.5%	4.5%	5.4%
ROE	1.8%	3.7%	7.6%	8.3%	ROE * 3	8.6%	-11.1%	-1.3%	15.7%	7.9%	8.3%
ROA	1.7%	2.3%	5.2%	5.1%	ROA * 4	5.0%	0.8%	-0.3%	8.4%	4.4%	5.2%
Debt Outstanding	1,379	1,375	1,331	1,450	Interest-bearing debt outstanding	1,524	1,814	1,806	1,849	1,863	1,900
Debt/EBITDA Ratio	x5.4	x4.9	x3.4	x3.6	Debt/EBITDA multiple *5	x3.6	x6.7	x8.1	x2.8	x3.7	x3.3
D/E Ratio	56.9%	51.4%	58.1%	62.0%	D/E Ratio * 6	68.2%	96.4%	93.2%	80.8%	67.8%	60.9%
Profit attributable to owners of parent (yen/share)	58	118	251	285	Profit attributable to owners of parent (yen/share)	284	-343	-38	500	281	311
Dividend (yen/share)	30	30	80	95	Dividend (yen/share)	95	20	10	140	80	100
Pay-out Ratio	51.4%	25.5%	31.9%	33.3%	Pay-out Ratio	33.5%	-	-	28.0%	28.5%	32.1%

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.

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. [¥290.0bn.]
	Profit attributable to owners of the parent	¥ 220.0 bn.	¥ 288.0bn.	¥162.6bn.	¥190.0bn.
	ROE	10%	15.7%	7.9%	8.3%
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]	10,000yen/t [10,000yen/t]
	Segment profit [Excluding Inventory Valuation etc.]	¥ 230.0bn.	¥323.7bn. [¥129.7bn.]	¥146.8bn. [¥73.8bn.]	¥200.0bn. [¥200.0bn.]
	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)

Cash Flow Improvements, Debt/EBITDA Ratio

➤ At the end of FY2023, the Debt/EBITDA ratio is expected to be x3.3.

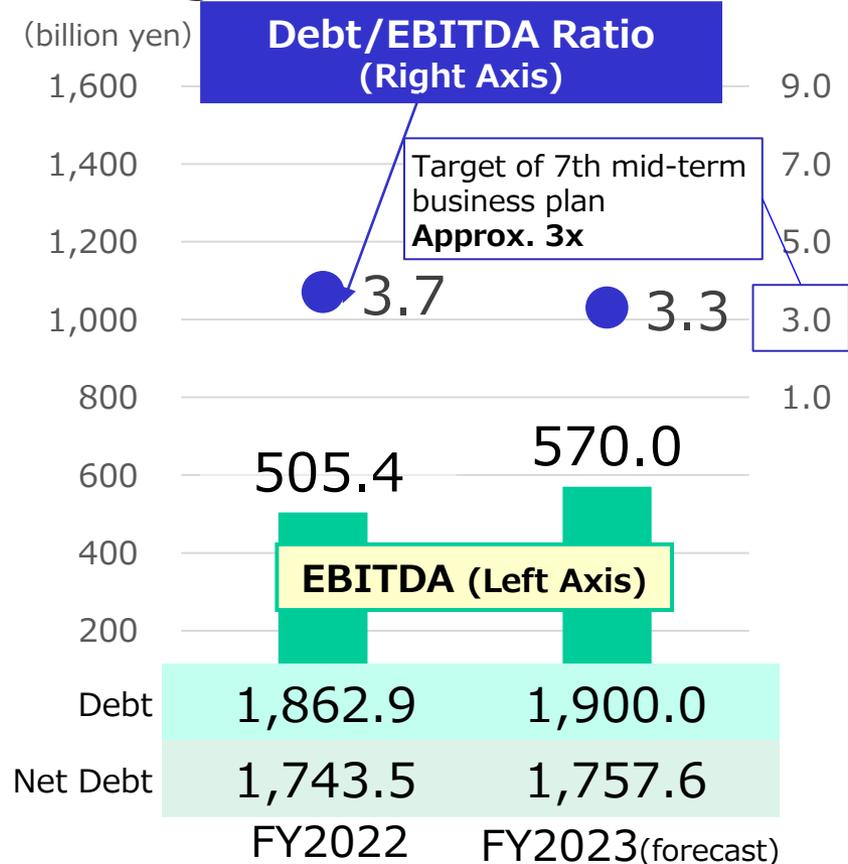
FY2023 Consolidated Cash Flow Forecast (billion yen)

Cash-in	Cash-out
Net Profit 190.0	CAPEX & Investments 440.0
Depreciation and Amortization 280.0	
Asset Compression 32.0	Dividend Payment 49.0
Capital Increase 114.5	Working Capital etc. 141.6
Debt ¹⁾²⁾ 37.1	Cash and Deposits Increase 23.0

1) Debt includes CB ¥90 billion.

2) Debt is expected to increase by ¥37.1 billion. from FY2022 to FY2023. It includes about ¥30 billion. increase by foreign currency translation impact due to the yen depreciation.

Progress of Debt/EBITDA Ratio



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

Financial Results for 1H of Fiscal Year 2023

JFE

	Unit	FY2021					FY2022					FY2023	
		1Q	2Q	3Q	4Q	Full Year	1Q	2Q	3Q	4Q	Full Year	1Q	2Q
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	948.6
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	54.7
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	64.7
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	6.11
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	6.47
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	5.42
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	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	130.1
Exchange Rate	¥/\$	109.8	110.0	113.1	115.3	112.1	126.5	136.6	144.0	133.2	135.1	135.8	144.1
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	149.6

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

¥13.4bn. Decrease in JFE Steel's Segment Profit
(FY2023.1Q (Actual) vs. FY2023.2Q (Actual))



JFE Steel	FY2023			Change (billion yen)
	1Q(Actual)	2Q(Actual)	1H(Actual)	
Segment Profit	68.1	54.7	122.8	(13.4)
Excluding Inventory Valuation etc.	59.1	64.7	123.8	+5.6

- | | | |
|-----------------------------------|---------------|--|
| 1. Cost | +5.0 | |
| 2. Volume and Mix | +2.0 | • Crude Steel Production 6.05Mt⇒6.11Mt |
| 3. Sales and Raw materials | +12.0 | |
| 4. Inventory valuation | (19.0) | • Inventory valuation +11.0 (-5.0+6.0)
• Carry over-27.0 (+5.0→-22.0)
• Foreign exchange valuation-3.0 (+9.0→+6.0) |
| 5. Others | (13.4) | • Group companies -6.0 |

¥124.2bn. Increase in JFE Steel's Segment Profit (FY2022.2H (Actual) vs. FY2023.1H (Actual))

JFE Steel	FY2022 2H(Actual)	FY2023 1H(Actual)	Change (billion yen)
Segment Profit	(1.4)	122.8	124.2
Excluding Inventory Valuation etc.	41.6	123.8	82.2

1. Cost**+25.0**

- Disappearance of blast furnace refurbishment impact and production reduction impact

2. Volume and Mix**+13.0**

- Crude Steel Production 11.45Mt⇒12.16Mt

3. Sales and Raw materials**+27.0**

- Improved spreads due continued sales price improvement efforts

4. Inventory valuation**+42.0**

- Inventory valuation +4.0 (-3.0→+1.0)
- Carry over+11.0 (-28.0→-17.0)
- Foreign exchange valuation +27.0 (-12.0→+15.0)

5. Others**+17.2**

- Group companies +16.0

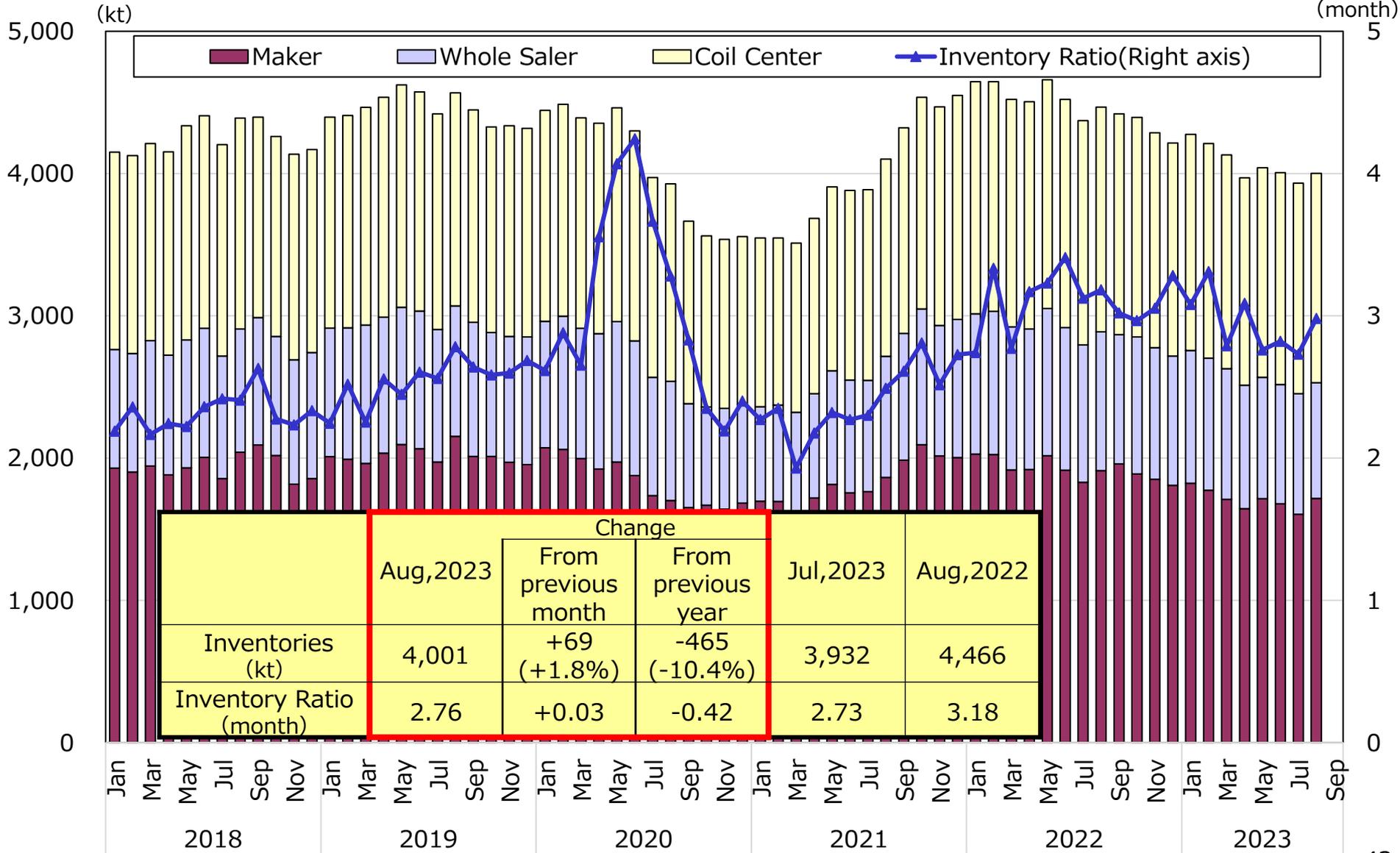
Appendix(2) Business Environmental Indicators, etc.



Domestic Market Environment

Combined Inventories of HR, CR and Coated Steel Sheet

JFE

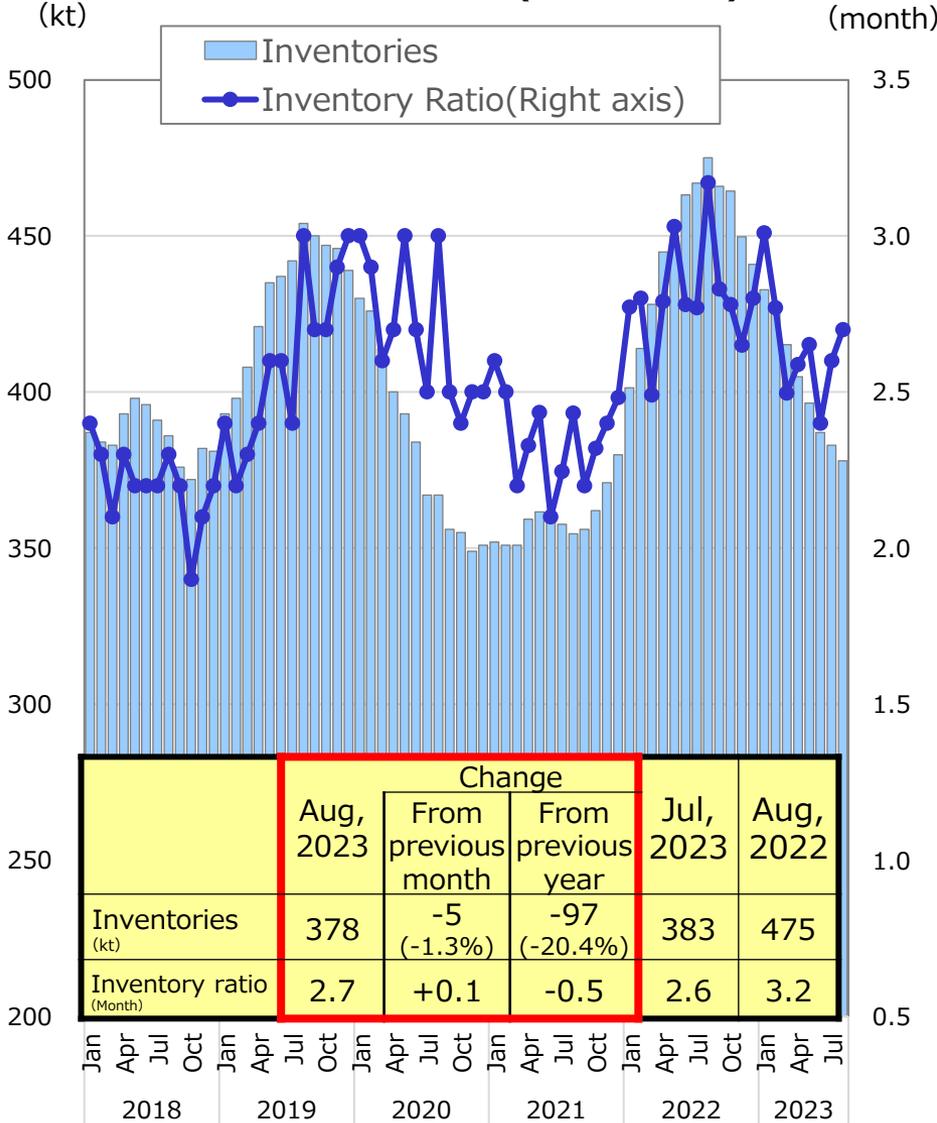


Domestic Market Environment

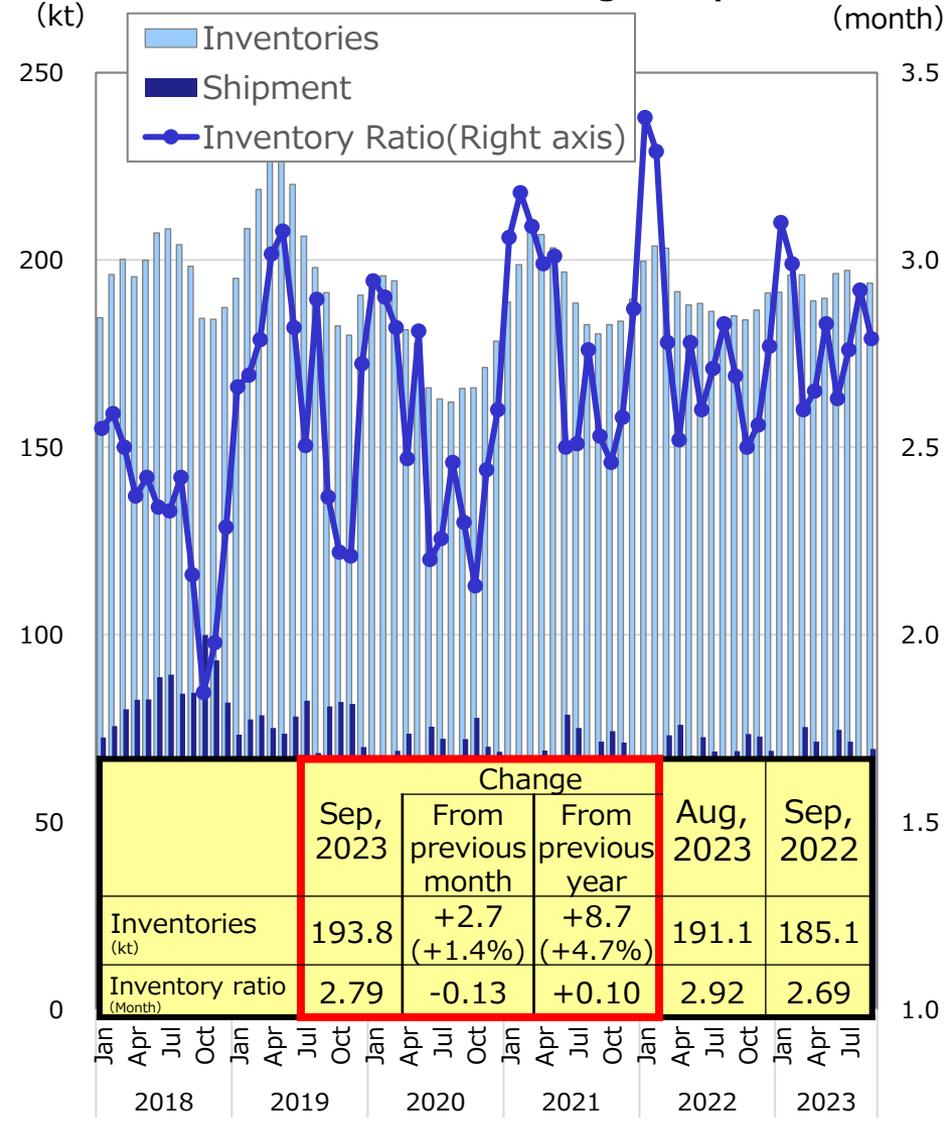
Inventories of Plate (Plate Shear) and Wide Flange Shapes



Inventories of Plate (Plate Shear)



Inventories of Wide Flange Shapes



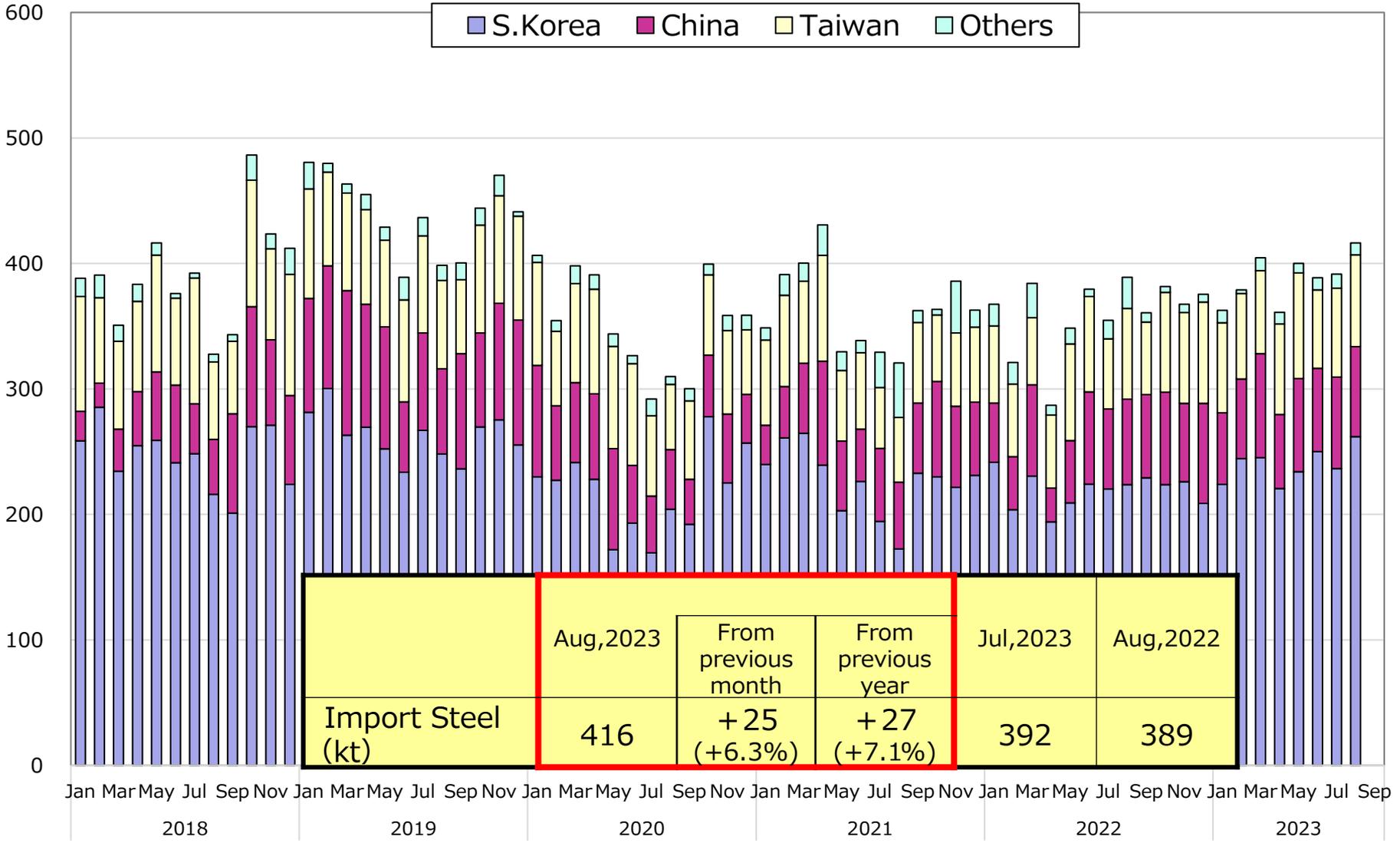


Domestic Market Environment

Trend of Import Steel (Ordinary Steel)

JFE

(kt)



	Aug,2023	From previous month	From previous year	Jul,2023	Aug,2022
Import Steel (kt)	416	+ 25 (+6.3%)	+ 27 (+7.1%)	392	389

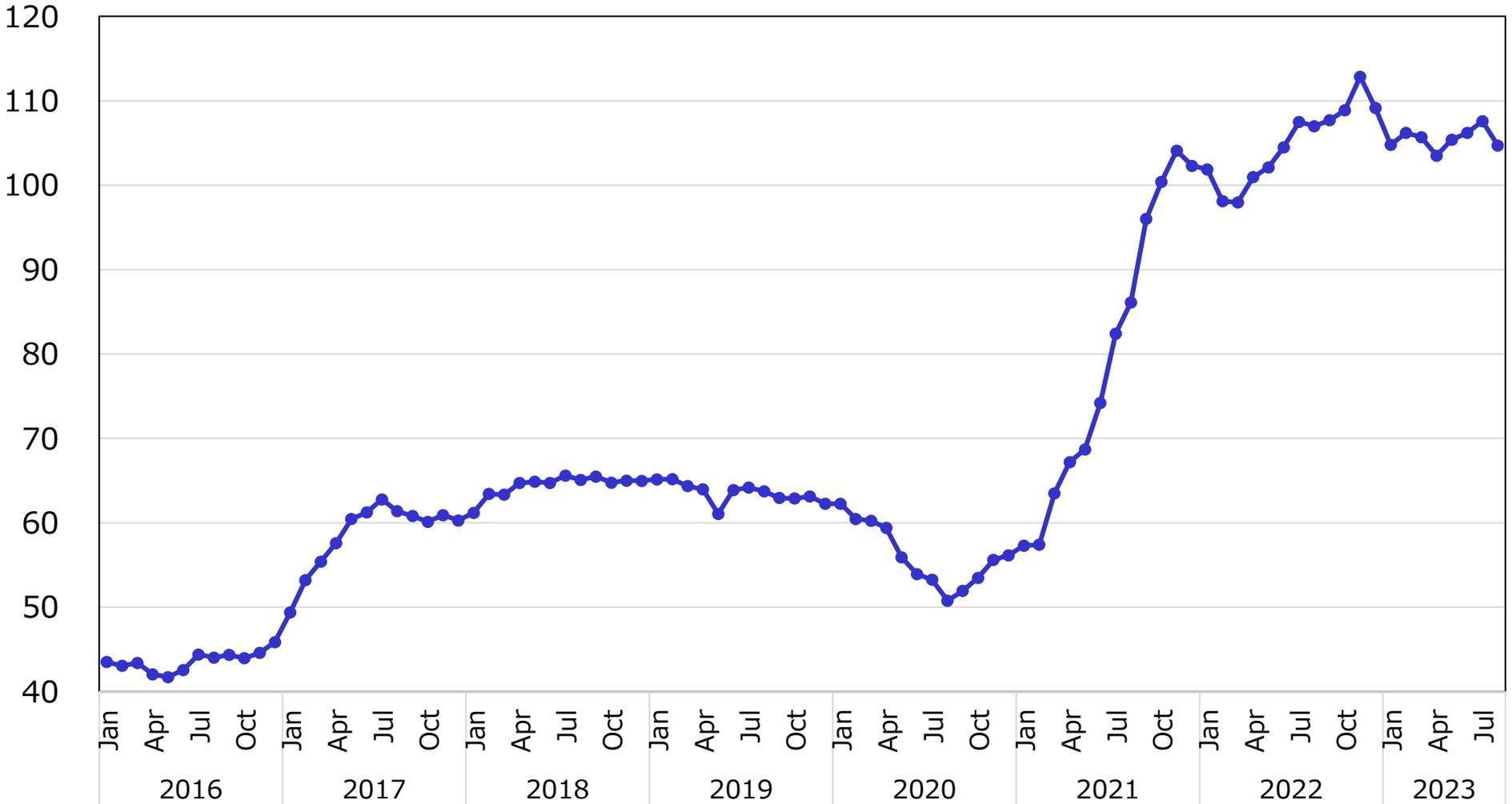


Domestic Market Environment

Price Trend of Import Steel

JFE

(k yen / t)



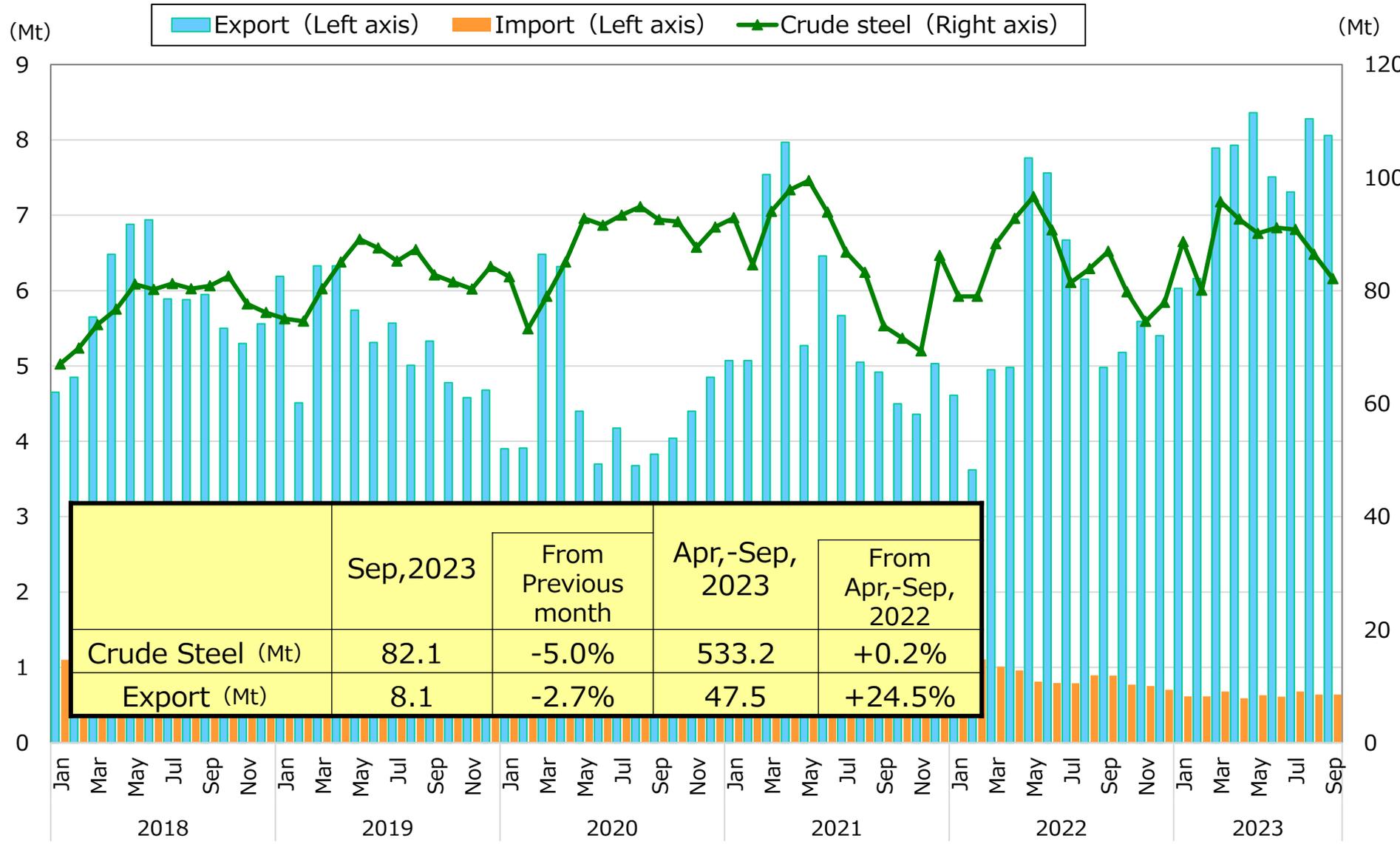
Data: The Japan Iron and Steel Federation Import Steel from S. Korea



Overseas Market Environment

Crude Steel & Im/Export, China

JFE

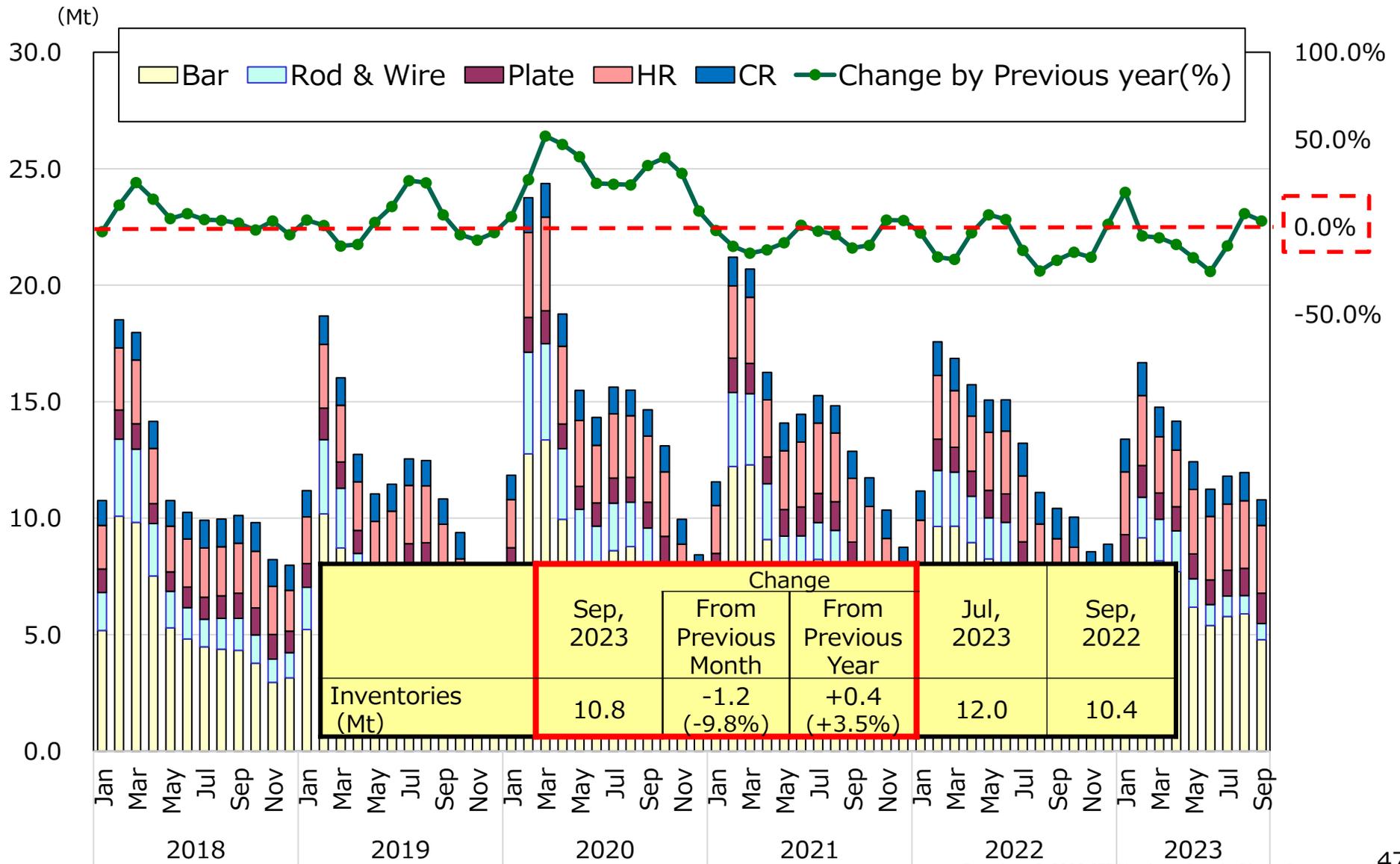




Overseas Market Environment

Crude Steel & Im/Export, China

JFE

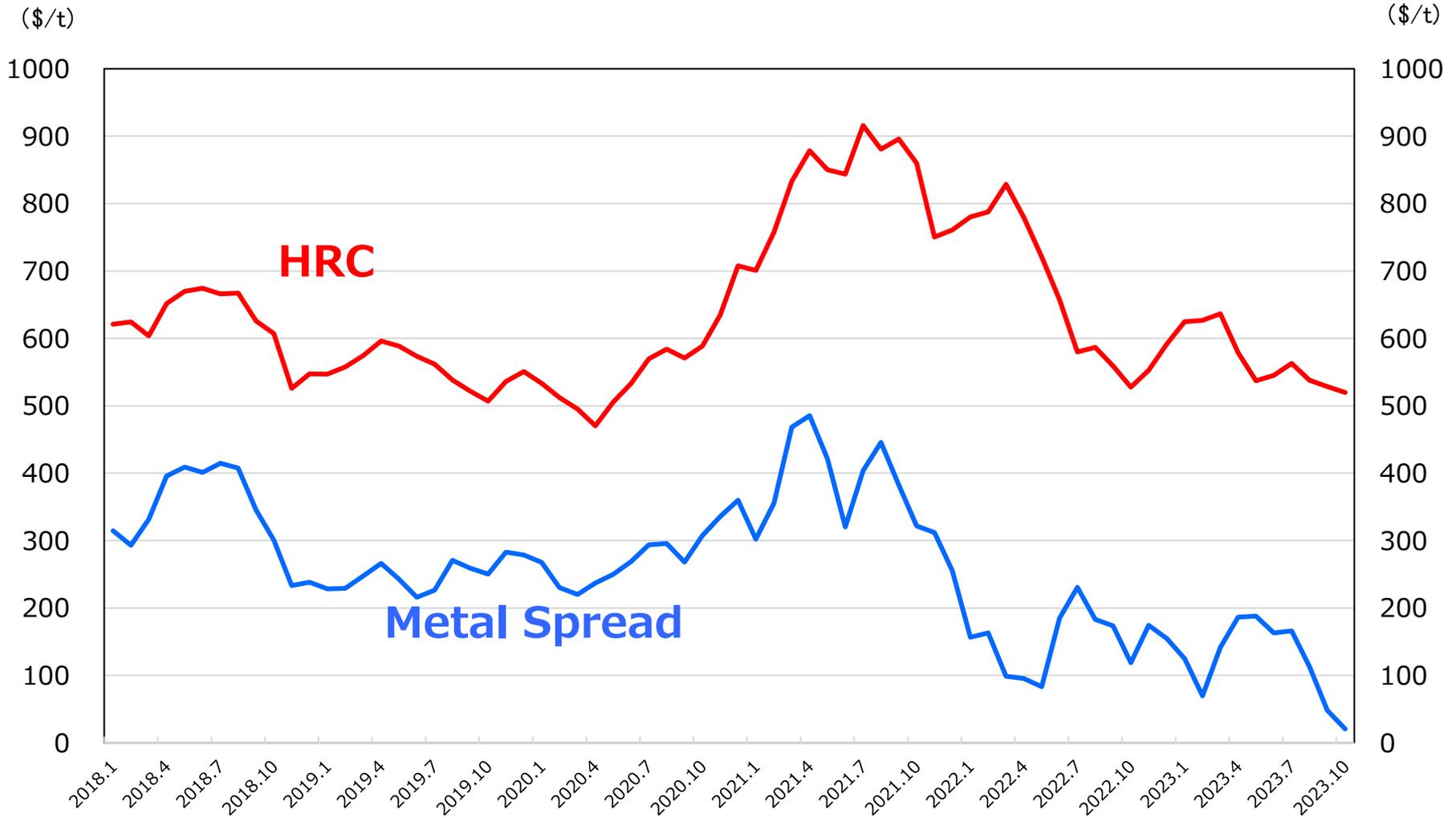




Overseas Market Environment

Metal Spread Trend (Chinese Spot Basis)

JFE



Metal Spread = HRC Price – Raw Materials Cost

*HRC Price : Chinese Spot basis

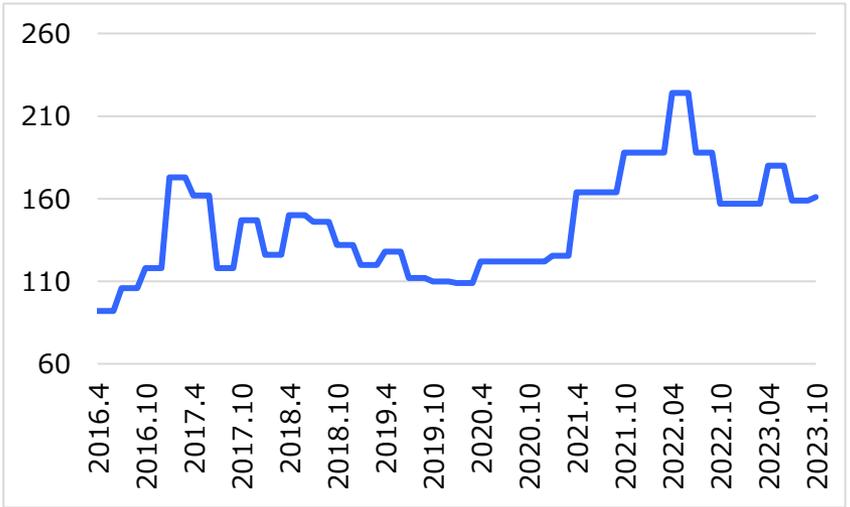
Raw Materials Cost : Calculated from market price of Iron Ore and Hard Coking Coal

Raw Materials

Trend of Sub Material's Market Price



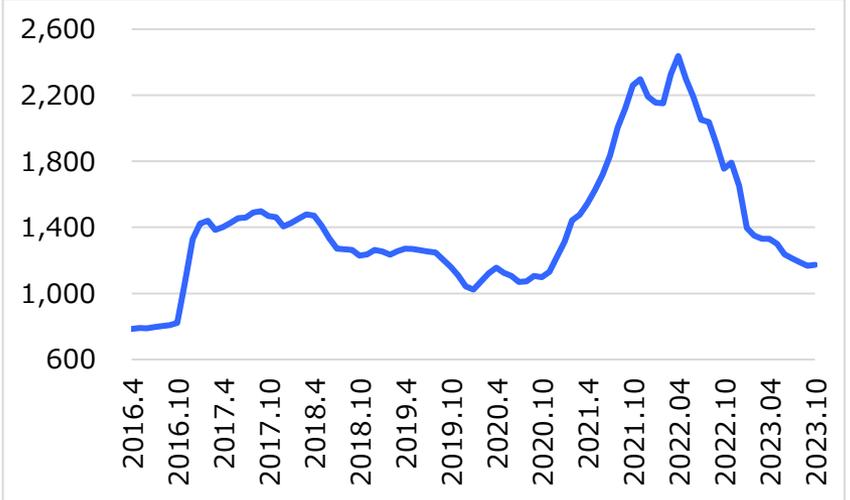
(¢/lb) FeCr



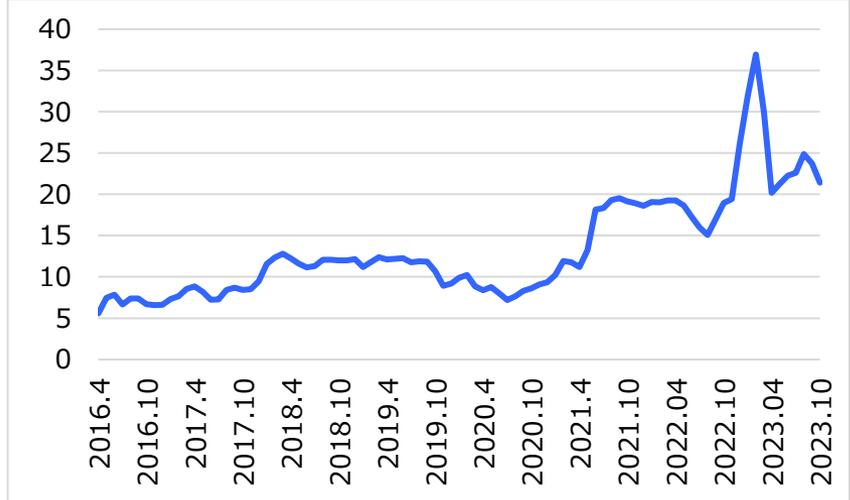
(US\$/t) Zn



(US\$/t) FeMn



(US\$/lb) Mo

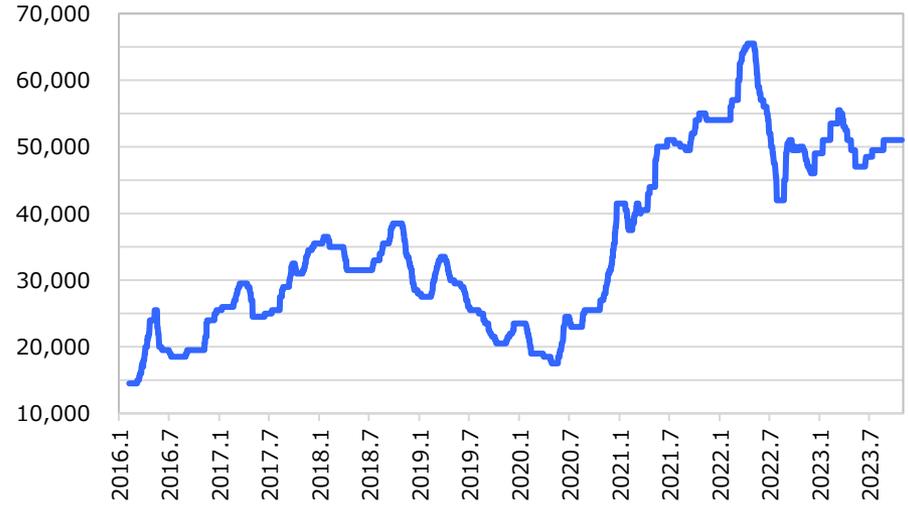




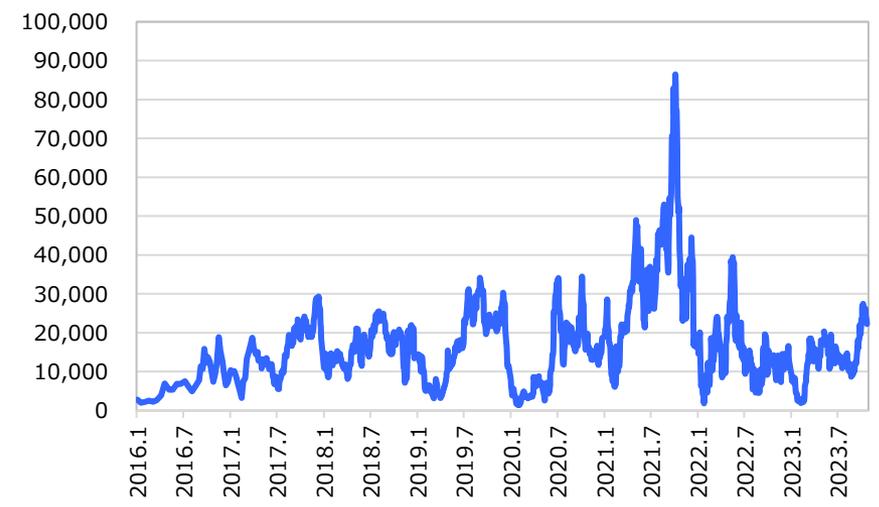
Raw Materials

Trend of Sub Material's Market Price

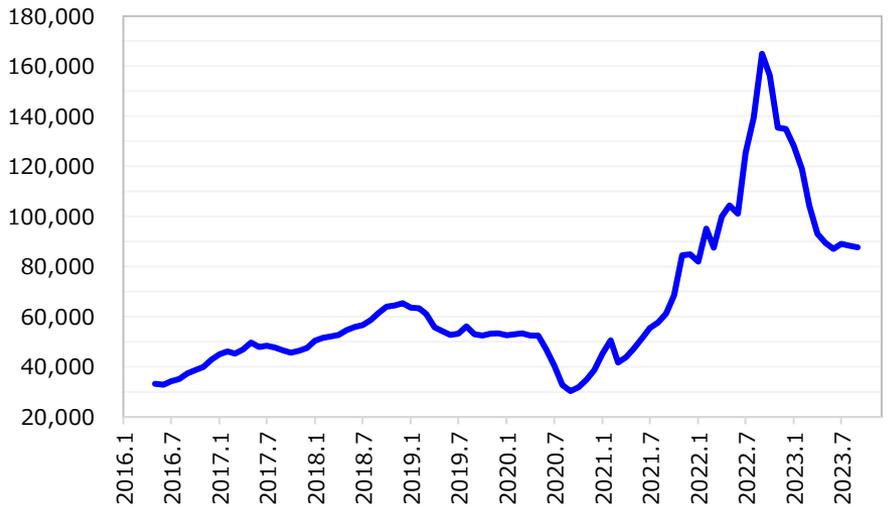
(yen/ t) Scrap



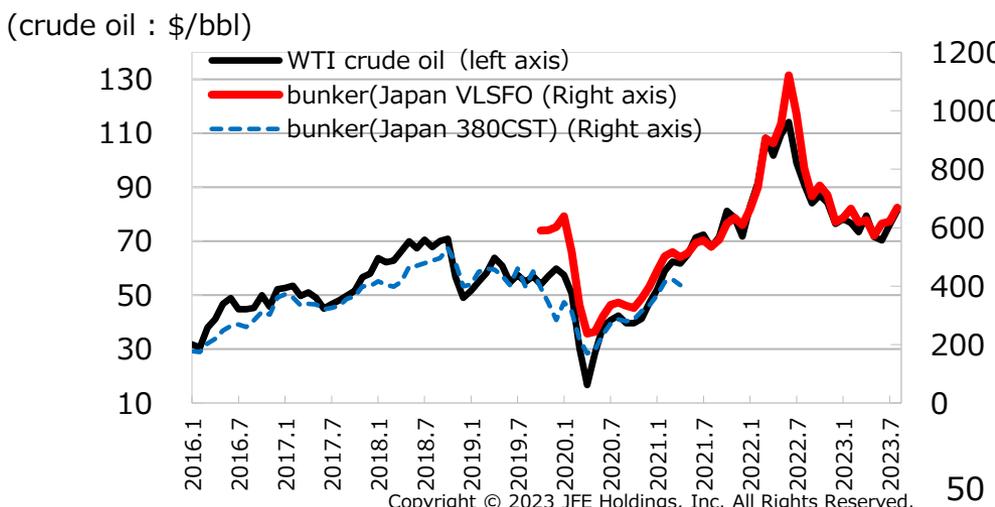
(\$/B) Spot Bulker



(¥/ t) LNG



Crude oil, Bunker oil





Orders by Business Field

JFE

(billion yen)

Business Field	FY2022 Actual	FY2023 Outlook	Change	Main orders received in 1H of FY2023 ★...New projects received in 2Q of FY2023
Waste to Resource	216.9	238.0	21.1	Construction works of domestic waste treatment facility [★Mie] Renewal works of domestic waste treatment facility [Saitama]
Carbon Neutral	57.6	80.0	22.4	
Combined Utility Service	21.1	17.0	(4.1)	
Core Infrastructure	269.3	245.0	(24.3)	Reinforcement work of cable tunnel for domestic telecommunications facilities [Osaka] Construction works of bridge [★TOKAI-KANJO Expressway [Gifu], ★RINKO Expressway [Kagoshima]] Reconstruction works of bridge [★Metropolitan Expressway [Tokyo]] Container crane [★Oi Pier [Tokyo]]
Total	564.9	580.0	15.1	

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**
- Steel business : Develop & market eco-products and eco-solutions.

FY2024	12 Mt
FY2030	25 Mt
- 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

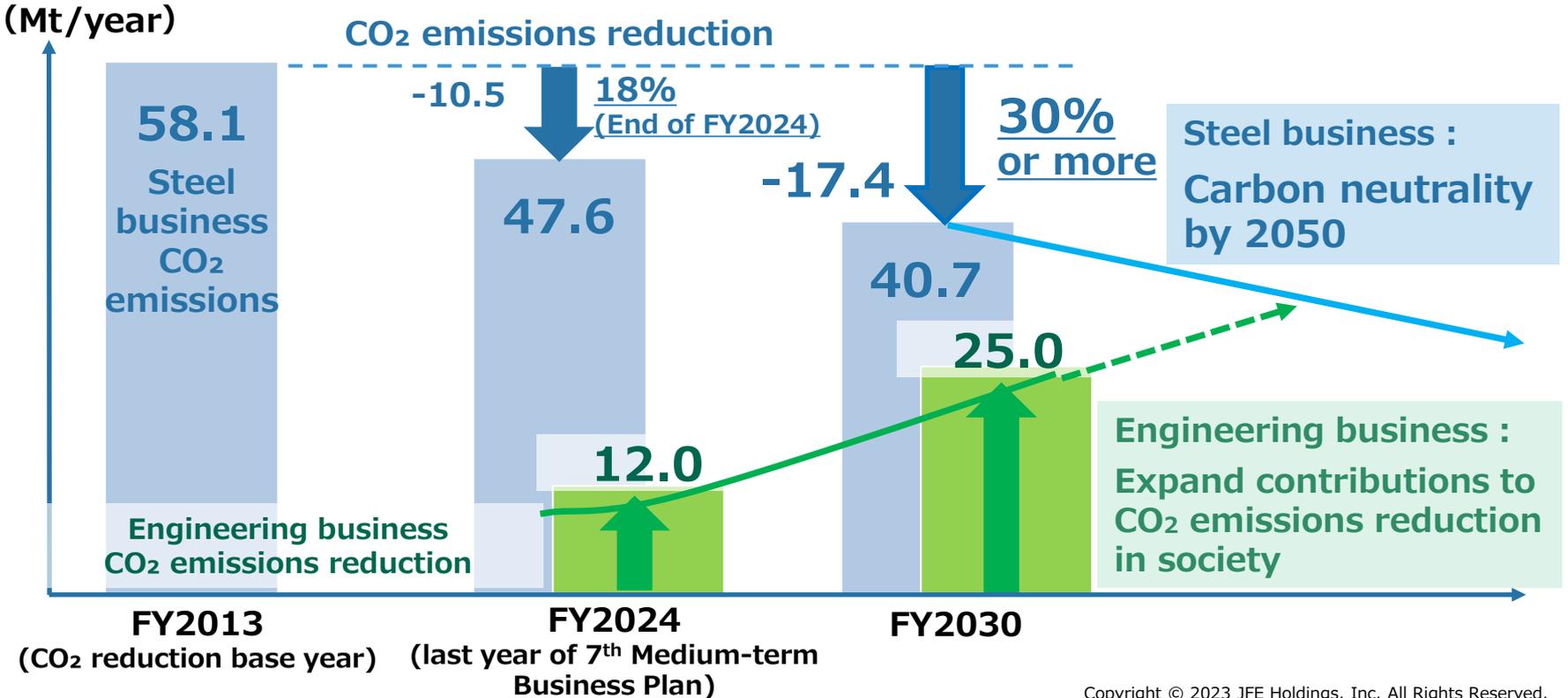


JFE Group's activities for Carbon neutrality

JFE

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.





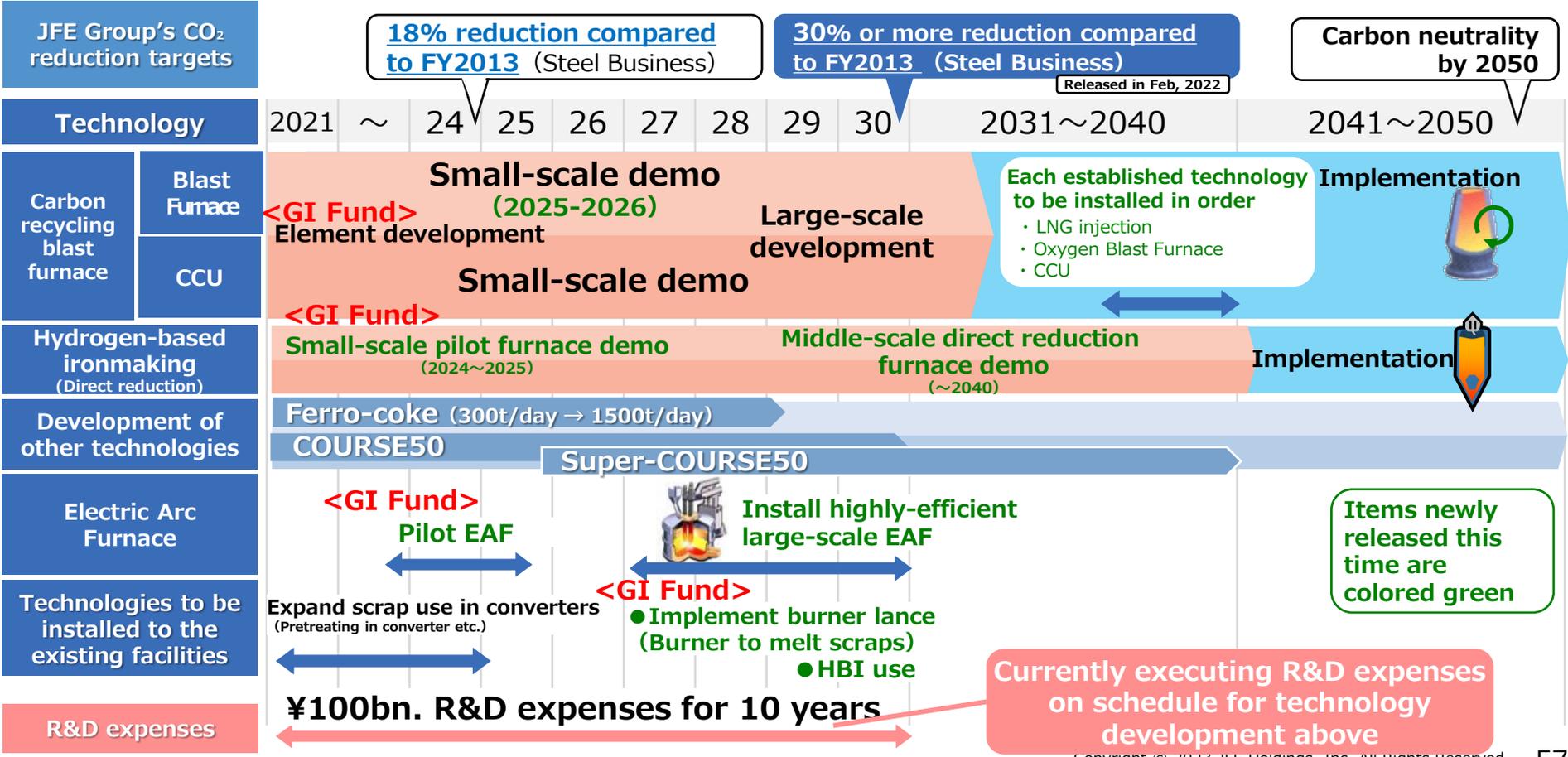
[Steel Business] Roadmap for Carbon Neutrality



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)

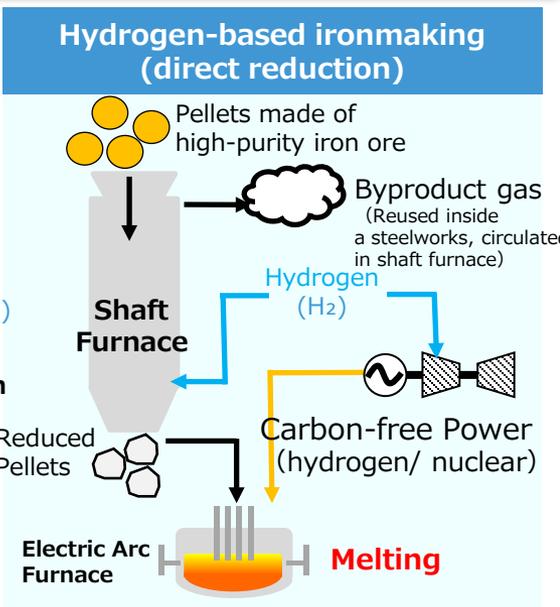
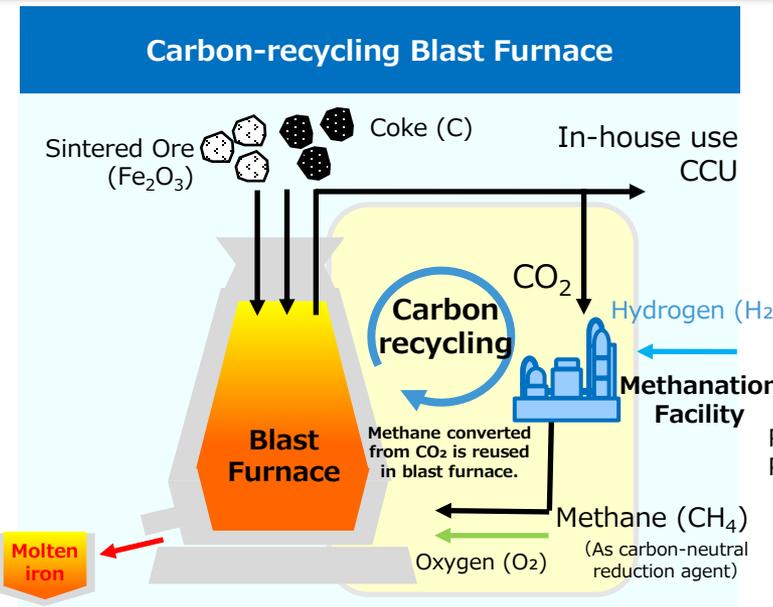
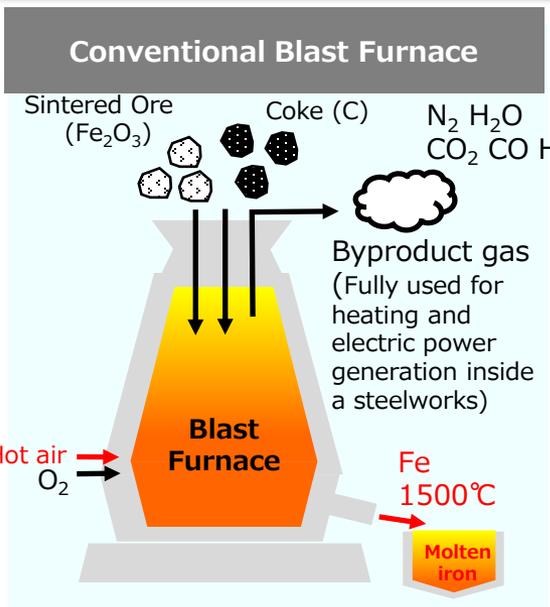




Carbon-recycle Blast Furnace

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

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

- 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)

Smart Energy Kumamoto

Electric power

Electric power



Eastern waste disposal factory

Electric power



Public Facilities

Charge/Discharge (optimized control)



Storage battery

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

*Regional PPS (Power Producer and Supplier) : Power producers and suppliers engaged in local production of energy for local consumption **Self-supporting energy supply line: Direct energy supply line from power generation plants to the connection points © 2023 JFE Holdings Ltd. All rights reserved.



Establish economic sustainability (stable earnings power)

JFE

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

JFE

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)**

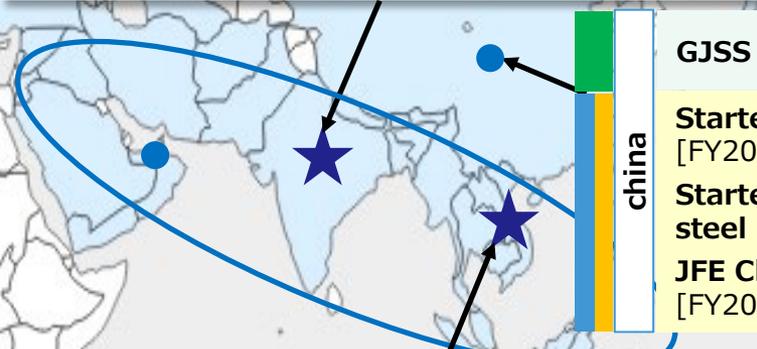
1. Vertical specialization business

2. "Insider" business

3. Solution business

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



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
CO₂ 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

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

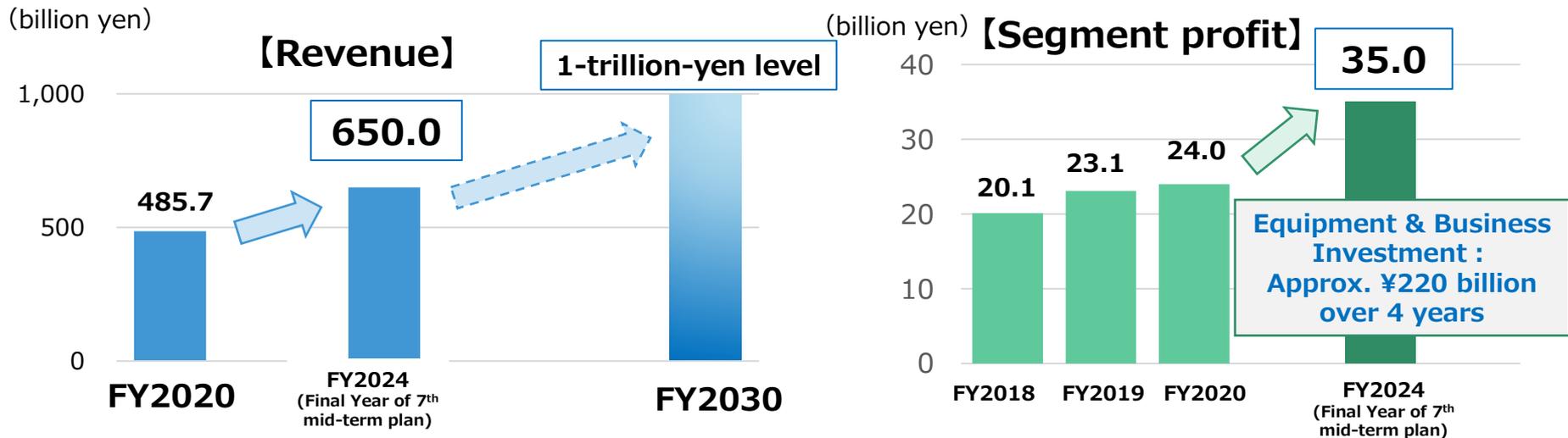
7th mid-term business plan <Engineering Business>

JFE

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–

JFE

- 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

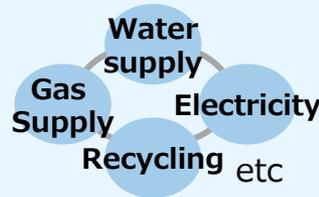
- Put priority in renewable energy (offshore wind-power generation, biomass power plant, solar power plant, geothermal power plant etc.)
- Develop carbon neutral technologies.



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



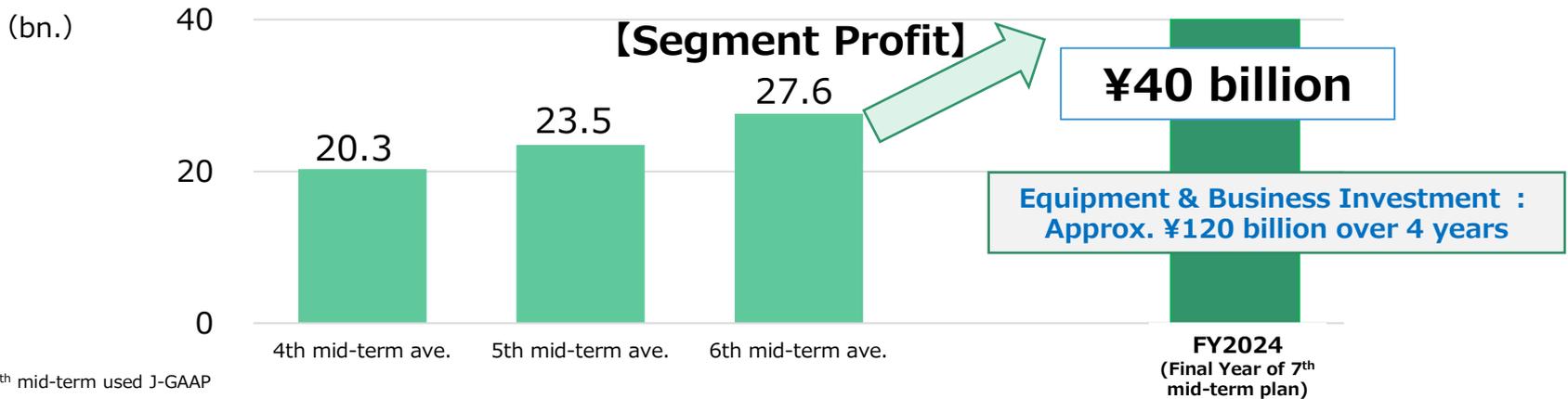
7th mid-term business plan <Trading Business>

JFE

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.



China

Japan

US

ASEAN

Strengthen SCM along with groupwide optimum business across four-pillar regions

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.



Main Financial Data and Performance & Profitability Targets

JFE

		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	7th mid-term business plan Around 30%	6 th mid-term business plan Around 30%

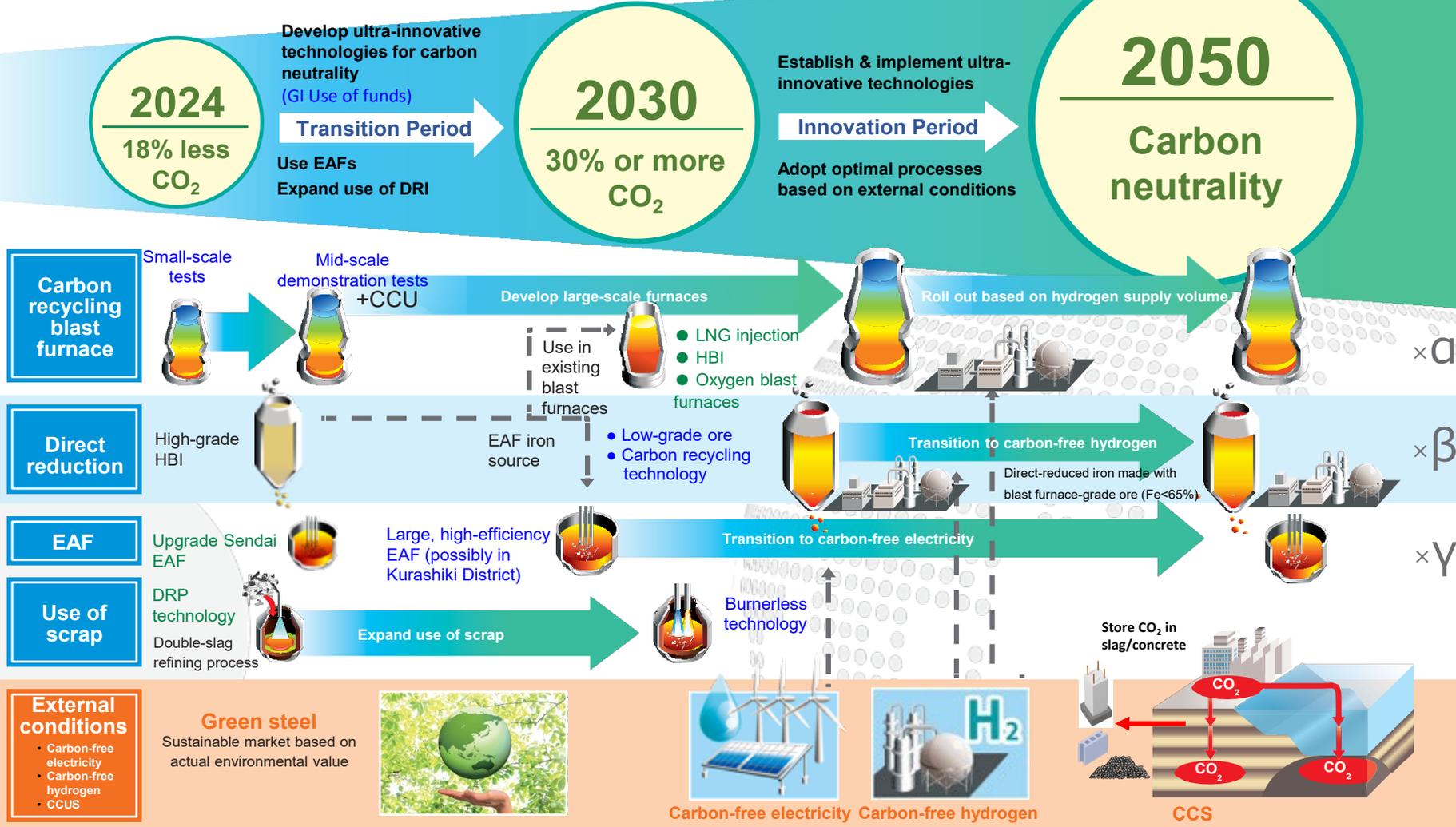
*1 For liabilities with equity subject to credit ratings, these equities reflect the evaluations of rating agencies

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

Appendix(4) JFE Steel Carbon Neutral Strategy Briefing

JFE Steel's Transition to Low-carbon Processes

Environmental
Vision 2050

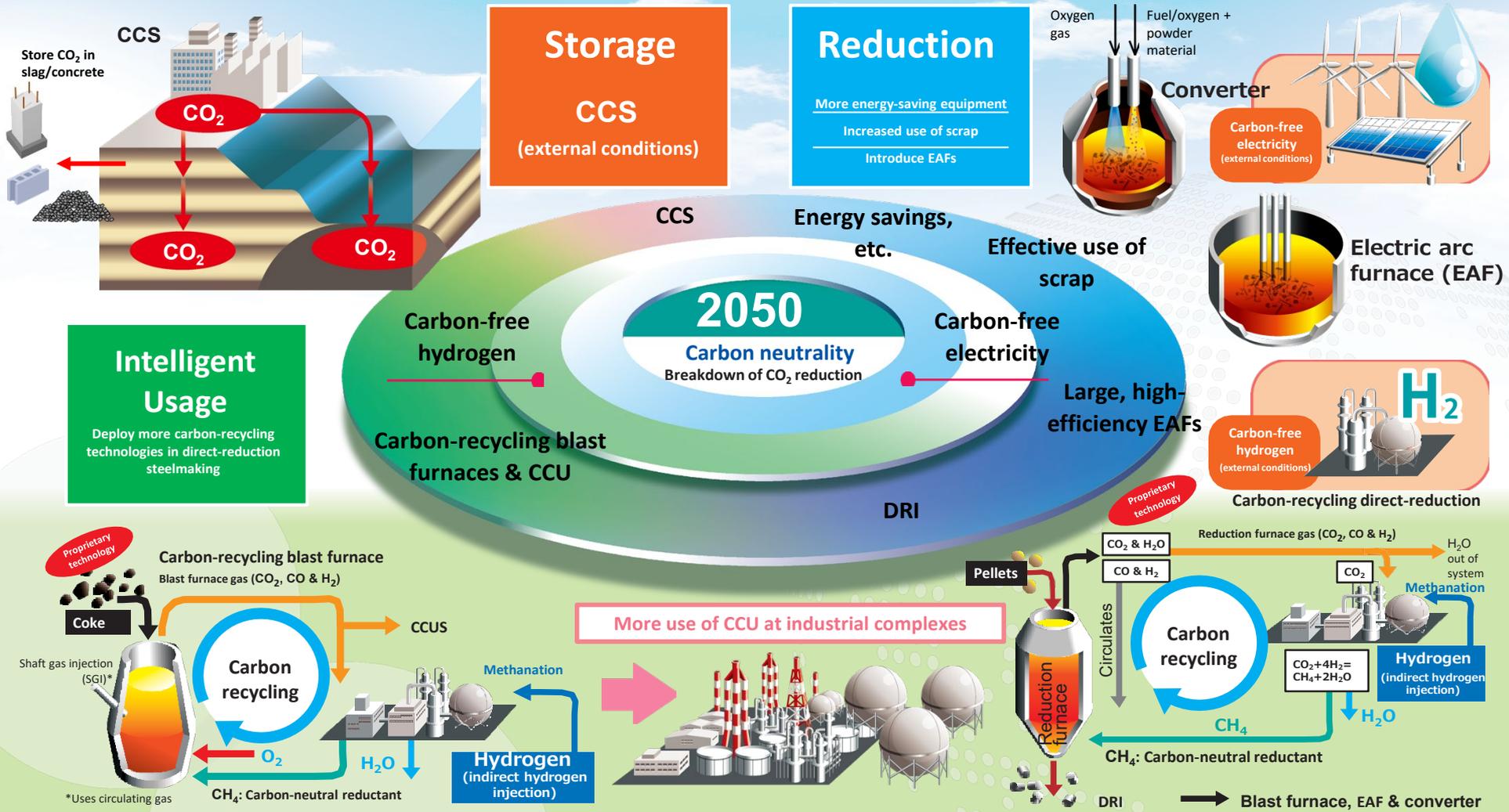


Pursue multilayered technology development, via GI Fund projects, etc., to discover the most proven technologies and then achieve carbon neutrality by deploying the most optimized configuration of green steelmaking processes.



JFE Steel's Carbon Neutrality Vision 2050

Environmental
Vision 2050



Combine reduction, intelligent usage and CO₂ storage to realize a carbon-neutral steel business by 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
<p>Upgrade to high-efficiency coke ovens</p> <p>Fukuyama District (2025)</p>	<p>Expand use of scrap in converters Use direct-reduced iron (HBI)</p> <p>All districts (under way)</p>	<p>Upgrade existing EAFs</p> <p>Sendai Works (2024)</p>
<p>Improve efficiency of power-demand facilities (Electrify blast-furnace blowers, raise efficiency of oxygen plants, etc.)</p> <p>All districts (under way)</p>	<p>Securing Scrap and HBI Reinforcing storage depots</p> <p>All districts (under way)</p>	<p>Introduce large, high-efficiency EAFs</p> <p>Kurashiki District (2027-2030)</p>
<p>Leverage AI & DS (companywide CPS, etc.) for energy savings</p> <p>All districts (under way)</p>	<p>Bolster LNG supply network</p>	<p>Use ferro-coke for commercial production</p> <p>Fukuyama District (TBD)</p>

- ✓ 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



- ▶ 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.

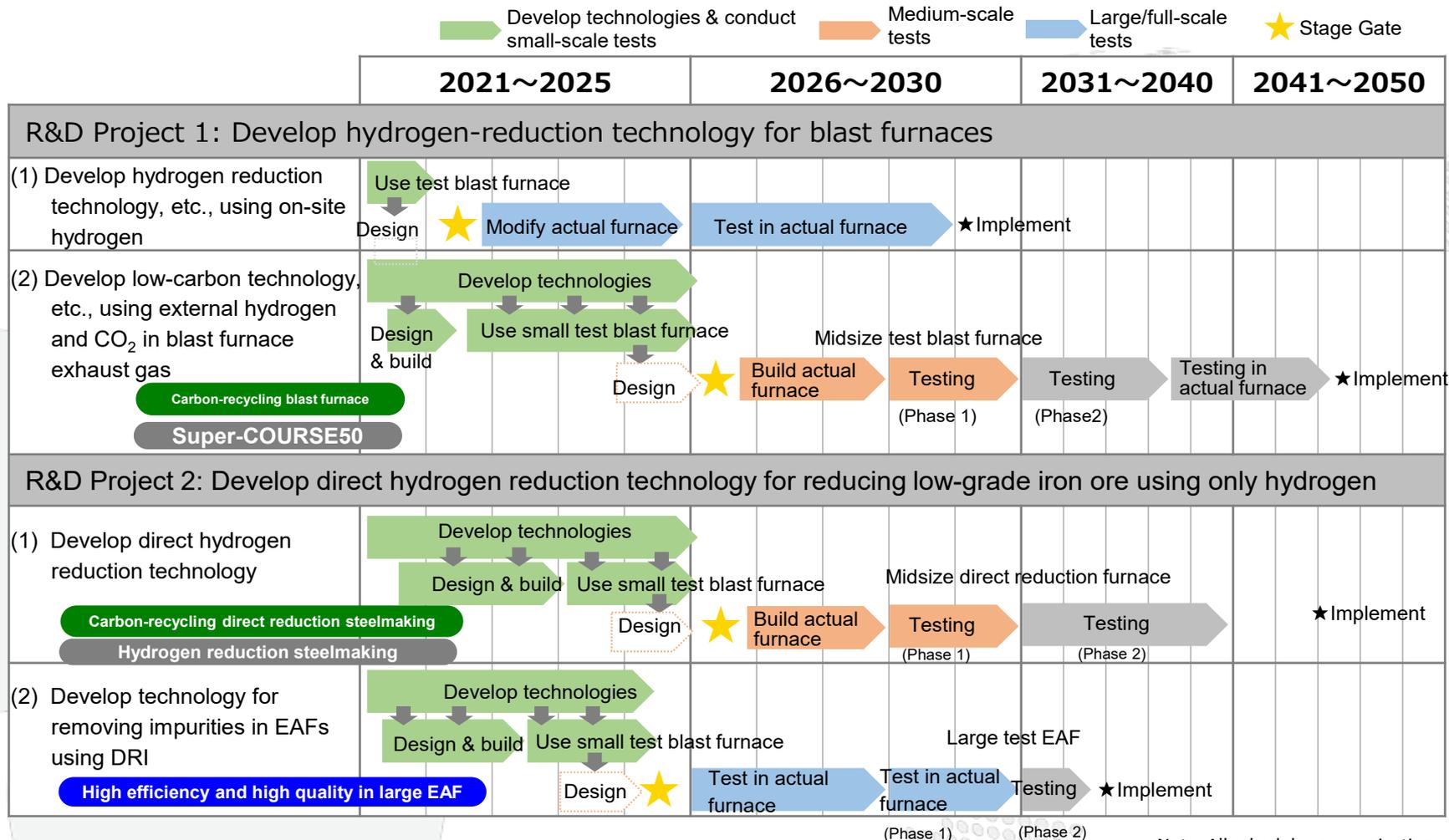
*New Energy and Industrial Technology Development Organization **Japan Research and Development Center for Metals

	Carbon-recycling blast furnace	Direct-reduction steelmaking	Large, high-efficiency EAF
Development project			
Summary	<p>Build a small test blast furnace (150m³) in Chiba District Prefecture to develop a process for converting CO₂ by-product into methane for reuse as a reductant, aiming to cut CO₂ emissions by 50% or more.</p>	<p>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 CO₂ emissions by 50% or more vs. blast furnaces.</p>	<p>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.</p>

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



- ▶ 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



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