



JFE

JFE Group

**Financial Results for First Half of
Fiscal Year 2022 ending March 31, 2023**

JFE Holdings, Inc.

November 4, 2022



Key Points of today's Announcement

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Results for 1H of FY2022

- Business profit in 1H of FY2022 was **¥187.9 bn. increased by ¥22.9 bn. from previous forecast** mainly due to profit growth from improving spreads in the steel business. (decreased by ¥10.9 bn. year-on-year)

Forecast of FY2022

- **Full-year business profit is expected to be ¥255.0bn.** (Increased by ¥20.0bn. from previous forecast, decreased by ¥161.4bn. year-on-year)
- The economy and demand for steel continue to recover, but **the recovery of auto production and overseas steel market has been slow since the last announcement.**
- **JFE Steel plans to continue optimal production, its standalone crude steel production is expected to decrease.**
(Crude steel production [standalone]
Previous forecast: less than 26.00Mt ⇒ Updated forecast: Approx. 25.00Mt)
- On the other hand, despite the decline in crude steel production, segment profit of the steel business is **expected to be higher than previous forecast** due to initiatives for improvement in earnings, such as domestic sales **price improvement.**
- In the engineering and trading businesses, earnings are expected to remain stable.
(Engineering business : no change from previous forecast
Trading business : increase by 5.0bn. from previous forecast)
- Foreign exchange : Assume 145 yen/\$ in the exchange rate for the second half of FY2022.
: In the steel business, the overpayment of foreign currency has shrunk due to the calmer raw material market, etc.

Dividends

- The Board of Directors has decided to pay **an interim dividend of 50 yen per share.** (Last announcement : 40 yen per share)

Topics

- Progress of development plans for the land of Keihin district

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Appendix 3: The 7th Medium-Term Business Plan

Appendix 4: JFE Steel Carbon Neutrality Strategy Briefing (Excerpted)

This presentation material is for information and discussion purpose only.

Any statements in the presentation which are not historical facts are future projections based on certain assumptions and currently available information. Please note that actual performance may vary significantly due to various factors.

**Consolidated Results for First Half of
Fiscal Year 2022
(April 1 to September 30, 2022)
and
Consolidated Financial Forecast
for Fiscal Year 2022
(April 1, 2022 to March 31, 2023)**

Financial Results and Forecast for Fiscal Year 2022



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- **Business profit in 1H of FY2022 was ¥187.9bn.**
(increased by ¥22.9bn. from previous forecast, decreased by ¥10.9bn. year-on-year)
- Full-year business profit is expected to be **¥255.0bn.**
(increased by ¥20.0bn. from previous forecast, decreased by ¥161.4bn. year-on-year)

(billion yen)	FY2021 Actual		FY2022 Forecast (Previous)		FY2022 Forecast (Updated)		Change FY2021(Actual) →FY2022(Updated)		Change Previous→Updated	
	1H (Apr-Sep)	Full Year	1H (Apr-Sep)	Full Year	1H (Apr-Sep)	Full Year	1H (Apr-Sep)	Full Year	1H (Apr-Sep)	Full Year
Revenue	1,942.9	4,365.1	2,610.0	5,370.0	2,564.3	5,260.0	621.4	894.9	(45.7)	(110.0)
Business Profit	198.8	416.4	165.0	235.0	187.9	255.0	(10.9)	(161.4)	22.9	20.0
Finance Income/Costs	(5.6)	(11.6)	(10.0)	(15.0)	(6.6)	(15.0)	(1.0)	(3.4)	3.4	0.0
Segment Profit	193.2	404.8	155.0	220.0	181.2	240.0	(12.0)	(164.8)	26.2	20.0
Exceptional Items	-	(16.2)	-	-	-	-	-	16.2	-	-
Profit before Tax	193.2	388.5	155.0	220.0	181.2	240.0	(12.0)	(148.5)	26.2	20.0
Tax Expense and Profit (Loss) Attributable to Non-Controlling Interests	(52.4)	(100.4)	(55.0)	(80.0)	(57.9)	(85.0)	(5.5)	15.4	(2.9)	(5.0)
Profit Attributable to Owners of Parent	140.7	288.0	100.0	140.0	123.2	155.0	(17.5)	(133.0)	23.2	15.0

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.

Financial Results and Forecast for Fiscal Year 2022 (by Segment)



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(Billion yen)

	FY2021 Actual		FY2022 Forecast (Previous)		FY2022 Forecast (Updated)		Change FY2021(Actual) →FY2022(Updated)		Change Previous→Updated	
	1H (Apr-Sep)	Full Year	1H (Apr-Sep)	Full Year	1H (Apr-Sep)	Full Year	1H (Apr-Sep)	Full Year	1H (Apr-Sep)	Full Year
Steel Business	1,410.4	3,173.4	1,975.0	4,100.0	1,918.9	3,960.0	508.5	786.6	(56.1)	(140.0)
Engineering Business	229.2	508.2	230.0	520.0	219.0	520.0	(10.2)	11.8	(11.0)	0.0
Trading Business	544.4	1,231.7	750.0	1,470.0	750.2	1490.0	205.8	258.3	0.2	20.0
Adjustments	(241.1)	(548.3)	(345.0)	(720.0)	(323.9)	(710.0)	(82.8)	(161.7)	21.1	10.0
Revenue	1,942.9	4,365.1	2,610.0	5,370.0	2,564.3	5,260.0	621.4	894.9	(45.7)	(110.0)
Business Profit (A)	198.8	416.4	165.0	235.0	187.9	255.0	(10.9)	(161.4)	22.9	20.0
Finance Income/Costs (B)	(5.6)	(11.6)	(10.0)	(15.0)	(6.6)	(15.0)	(1.0)	(3.4)	3.4	0.0
Steel Business	158.5	323.7	120.0	150.0	148.2	165.0	(10.3)	(158.7)	28.2	15.0
Engineering Business	11.1	26.0	4.0	20.0	(3.9)	20.0	(15.0)	(6.0)	(7.9)	0.0
Trading Business	25.6	55.9	35.0	55.0	40.6	60.0	15.0	4.1	5.6	5.0
Adjustments	(2.0)	(0.9)	(4.0)	(5.0)	(3.6)	(5.0)	(1.6)	(4.1)	0.4	0.0
Segment Profit (A+B)	193.2	404.8	155.0	220.0	181.2	240.0	(12.0)	(164.8)	26.2	20.0

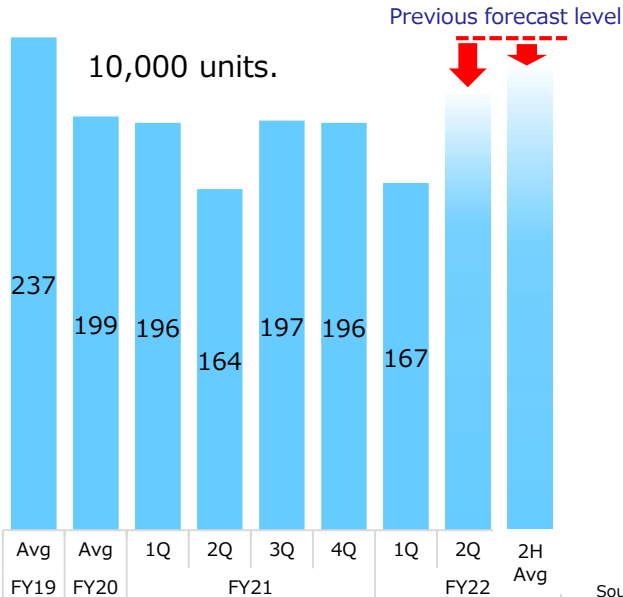
Demand for steel and Crude steel production



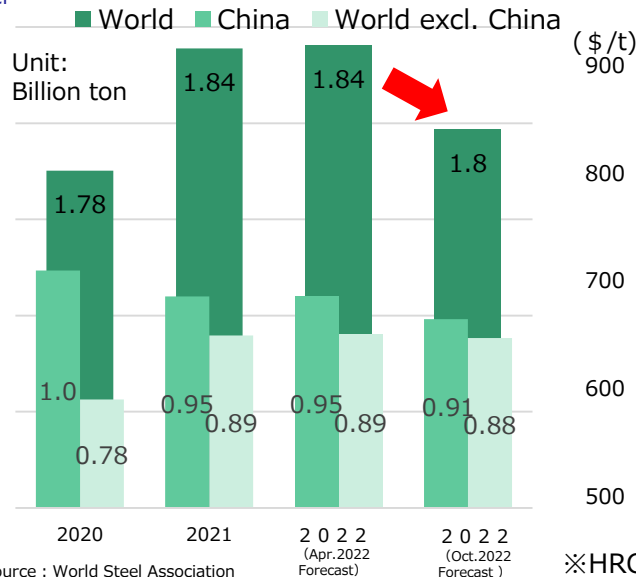
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- The economy and demand for steel continue to recover, but the recovery has been slow since the last announcement.
 - Domestic : Parts supply constraints continue in the automotive sector.
 - ▶ **The decline in auto production is longer than previous expected.**
 - Overseas : Major economies such as the United States and Europe have slowed down due to soaring prices and monetary tightening.
 - China: weak real estate market, Southeast Asia: weak building demand.
 - ▶ **The recovery in overseas steel demand and market is delayed than previous expected.**
- Due to the recent decline in demand for steel products and the sluggish overseas steel market, JFE Steel plans to continue optimal production, and **standalone crude steel production is projected to be approx. 25Mt, down 1Mt from previous forecast.**

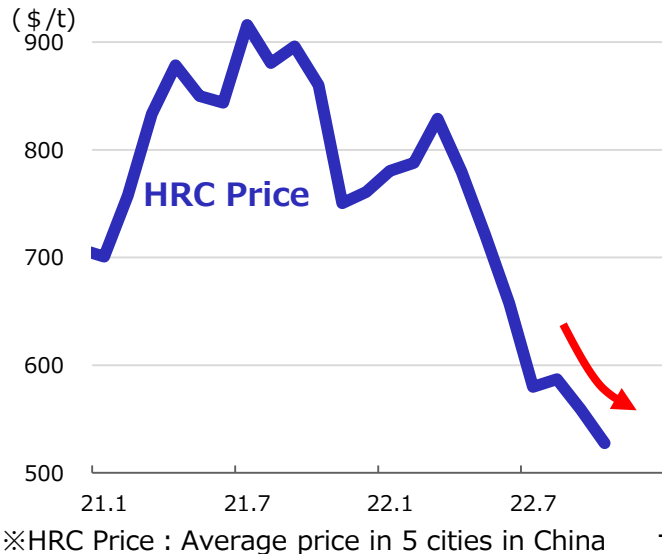
Outlook for Domestic Auto Production



World Steel Demand Forecasts



China : Steel market price



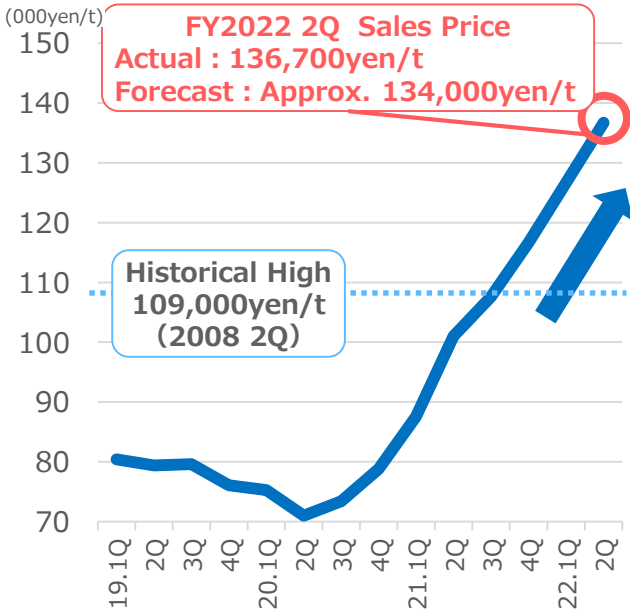


Initiatives for Improving Sales Price

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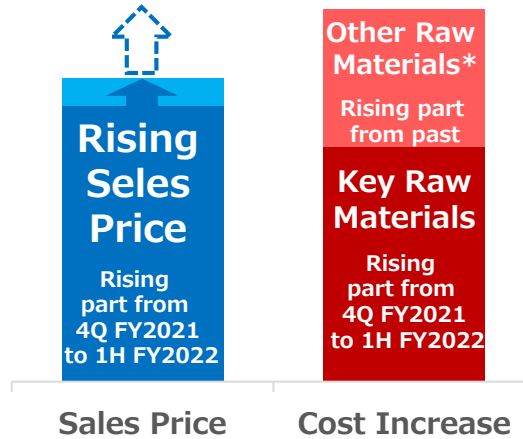
- In the 1H of FY2022, **we achieved further sales price improvement** from previous forecast by **accelerating the reflections of metal and commodity costs** in addition to **having reflected key raw material cost to sales price without delay**, including the impact of the depreciation of the yen.
In the 2H of FY2022, we will also **make a strong push to quickly reflect the key raw material cost, metal costs and other commodity costs.**
- We will continue to improve sales price to reach the target of the mid-term plan (Per-ton profit 10,000yen/ton)

Average Sales Price (000yen/t)



Progress in Rising Price in the 1st Half of FY2022

Achieved further sales price improvement from the forecast in 1H
More price improvement is planned for the 2H



*metal, scrap, fare, energy, etc.

Initiatives to Improve our Sales Price

- ◆ **Quick reflection of raw material cost to sales price**
Make effort to quickly and steadily pass on the cost increase of key raw materials to the sales prices.
- ◆ **Overhaul of extra pricing**
Already realized some part of extra revision. Accelerate overhaul to modify the extra pricing which is inappropriate to the current status.
- ◆ **Sales price improvement to the sustainable level**
Improve sales prices to the sustainable level even among the long-term/continuous contracts if the margin is not enough.

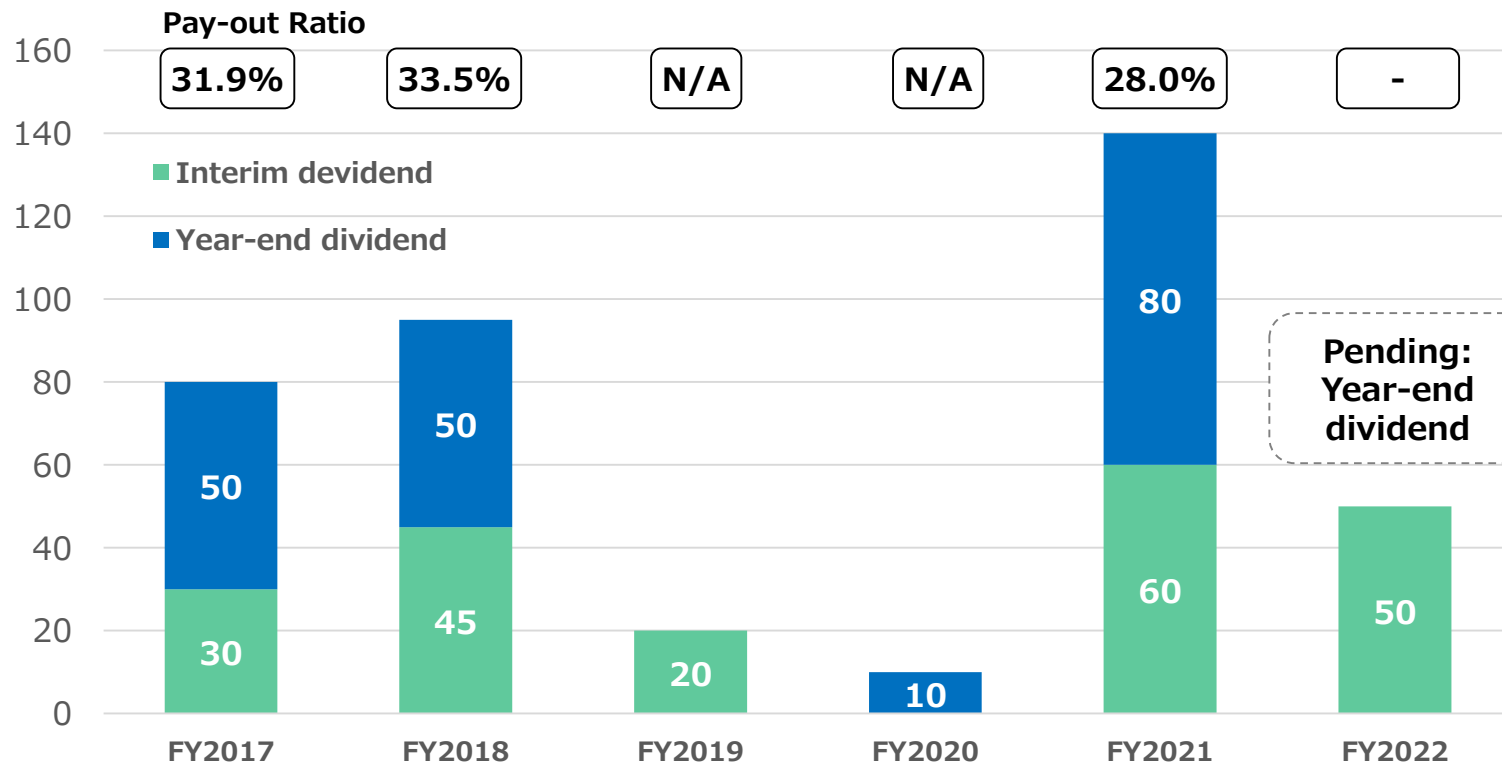
Dividends



Dividend

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- JFE Holdings has decided to pay an interim dividend of **50 yen per share** at its Board of Directors. (Last announcement : 40 yen per share)
- A decision regarding the year-end dividend has been postponed while the company carefully monitors its ongoing performance.



JFE Steel

Financial Results for First Half of Fiscal Year 2022 and Financial Forecast for Fiscal Year 2022



Financial Forecast for Fiscal Year 2022

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	Unit	FY2021 Actual			FY2022 Updated Forecast			FY2022 Previous Forecast	
		1H	2H	Full Year	1H	2H	Full Year	1H	Full Year
Revenue	billion yen	1,410.4	1,763.0	3,173.4	1,918.9	2,041.1	3,960.0	1,975.0	4,100.0
Segment Profit	billion yen	158.5	165.2	323.7	148.2	16.8	165.0	120.0	150.0
Excluding Inventory Valuation etc.*	billion yen	68.5	61.2	129.7	32.2	50.8	83.0	11.0	28.0
Crude Steel (Standalone)	Mt	12.70	13.18	25.88	12.64	Less than 12.50	Approx. 25.00	Less than 13.00	Less than 26.00
Crude Steel (Consolidated)	Mt	13.39	13.87	27.26	13.37	/		Approx. 13.70	/
Shipment (Standalone)	Mt	10.83	11.55	22.38	10.86			Approx. 11.50	
Export Ratio on Value Basis (Standalone)	%	46.5	44.7	45.5	46.7			Approx. 48	
Average Sales Price (Standalone)	000 yen/t	94.5	112.2	103.7	131.6			Approx. 130	
Exchange Rate	¥/\$	109.9	114.2	112.1	131.6		Approx. 145	Approx. 138	

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

28.2bn. Increase in JFE Steel's Segment Profit (1H of FY2022 (Previous Forecast) vs. 1H of FY2022(Actual))

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			(billion yen)
JFE Steel	FY2022 1H (Forecast)	FY2022 1H (Actual)	Change
Segment Profit	120.0	148.2	28.2
Excluding Inventory Valuation etc.*	11.0	32.2	21.2

1. Cost **±0.0**

**2. Volume
and Mix** **(5.0)**

**3. Sales and
Raw materials** **+24.0**

- Reflected high prices of main raw materials, metals, and other commodities quickly in selling prices to improve spreads

**4. Inventory
valuation** **+7.0**

- Inventory valuation ±0.0 (+82.0→+82.0)
- Carry over of raw materials -50 (+10.0→+5.0)
- Foreign exchange valuation +120(+17.0→+29.0)

5. Others **+2.2**

10.3bn. Decrease in JFE Steel's Segment Profit (FY2021.1H (Actual) vs. FY2022.1H (Forecast))

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JFE Steel	FY2021 1H(actual)	FY2022 1H(actual)	(billion yen) Change
Segment Profit	158.5	148.2	(10.3)
Excluding Inventory Valuation etc.*	68.5	32.2	(36.3)

1. Cost	+10.0	• Capital investment effects, etc.
2. Volume and Mix	±0.0	
3. Sales and Raw materials	+76.0	• Improved spreads due to the reflection of high prices of main raw materials, metals, and other commodities in selling prices
4. Foreign exchange effects on trade	(50.0)	• 1USD=109.9yen→1USD=131.6yen
5. Inventory valuation	+26.0	• Inventory valuation +23.0 (+59.0→+82.0) • Carry over of raw materials -25.0 (+30.0→+5.0) • Foreign exchange valuation +28.0(+1.0→+29.0)
6. Others	(72.3)	• Group companies -13.0 • Energy unit price -24.0, etc.

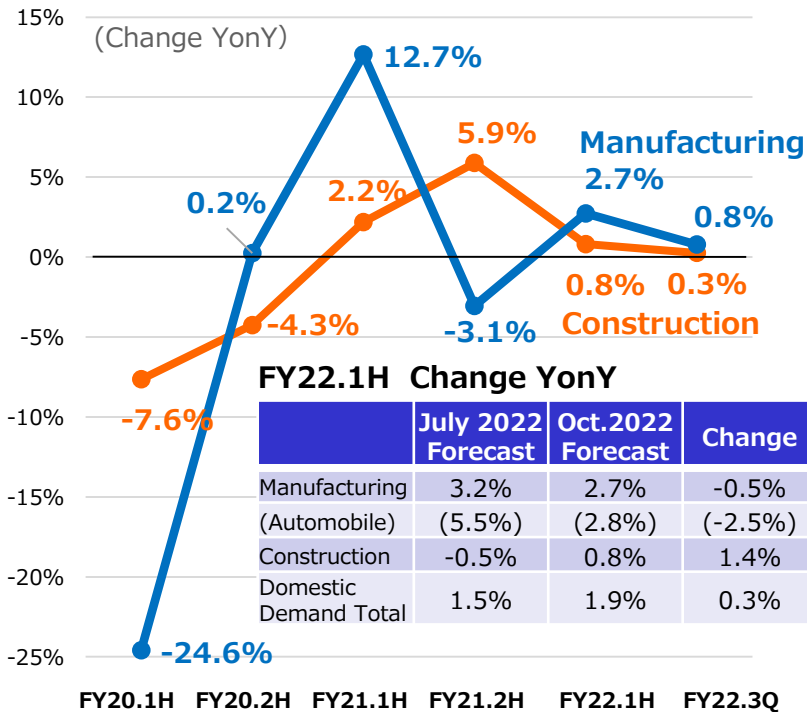


Current Business Environment (Domestic)

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- Parts supply constraints are improving, but **the decline in auto production is longer than previous expected.**
- Uncertainty about the future due to rising prices and a slowdown in overseas economies has led to **some risk-averse moves such as buying restrained and adjusting inventories.**
- **Steel supply and demand are expected to tighten in the latter part of second half** due to the continued recovery of automobile production.

Outlook for Domestic Ordinary Steel Consumption



Source: Ministry of Economy, Trade and Industry, "Outlook for Steel Consumption" 14 October 2022. (FY2021.4Q and after is estimated results)

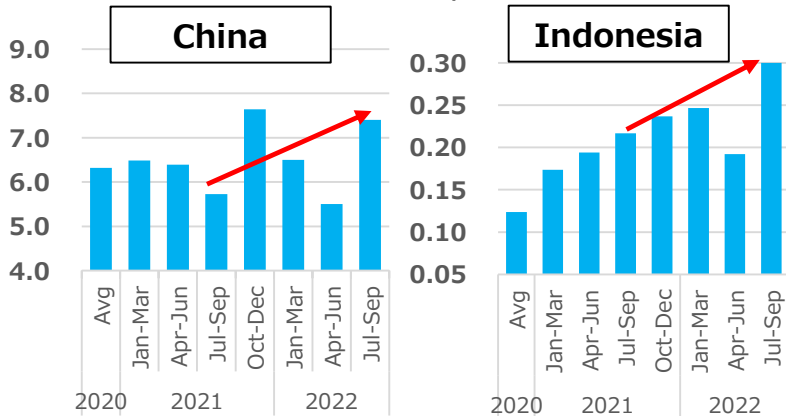
	Trends
Auto-mobile	<ul style="list-style-type: none"> • Demand remains strong. • Although the elimination of constraints on the supply of semiconductors and other components lags delays compared to previous forecast, it has gradually eased recently. • The level of activity is expected to improve in the future.
Shipbuilding	<ul style="list-style-type: none"> • Negotiation of new shipbuilding is still in a wait-and-see mode because chartering fees have been calmer than they were for a while, due to the slowdown in domestic demand in China. However, the contract balance still remains for two years. • The current level of activity is expected to remain stable over the next two to three years, although there are soaring materials prices and labor shortages.
Building	<ul style="list-style-type: none"> • Demand for non-residential use has been robust, supported by large-scale projects such as distribution warehouses and semiconductor plants. • Demand for residential housing is expected to decline due to the end of the government's housing assistance program and soaring materials costs. Demand for steel materials was almost flat compared to the previous year.
engineering Civil	<ul style="list-style-type: none"> • In the public sector, a high level of the budget remains. • In both the public and private sectors, the unexpected surge in materials prices has caused delays of bid solicitation due to re-designing. Steel demand is expected to decrease slightly from the previous year.

Current Business Environment (Overseas)



- **The level of activity** in the automobile and other manufacturing industries **is recovering**.
- **Demand for steel products overseas is currently weak.**
For example, demand for steel in China continues to stagnate due to a slump in the real estate market and in emerging countries, demand for construction is postponed due to a weaker currency.
- Steel demand and the steel market are expected to recover due to the Chinese government's support for the economy and autumn demand, but **the recovery timing is expected to be later than previous expected and will be delayed into the fourth quarter.**

Automobile Sales by Quarter (million units)

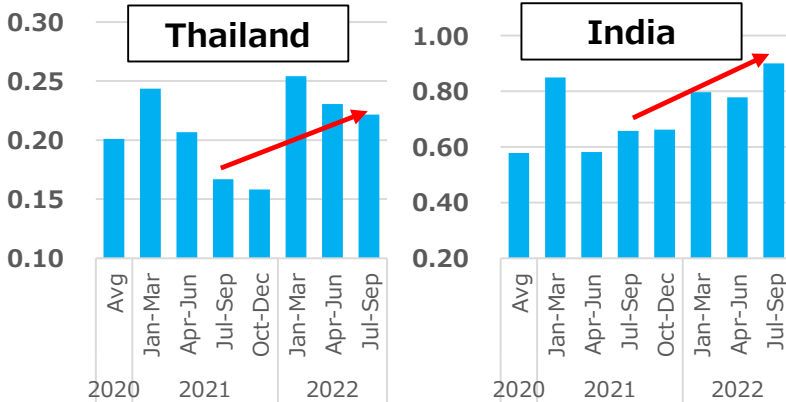


Real GDP Growth Forecast in 2022

(Arrows indicate changes from the previous forecast)

	World	US	China	India	ASEAN-5
2021 Actual	6.1%	+5.7%	8.1%	8.7%	+3.4%
Jul. 2022 Forecast	3.2%	2.3%	3.3%	7.4%	5.3%
Oct. 2022 Forecast	3.2% →	1.6% ↘	3.2% ↘	6.8% ↘	5.3% →

Source: IMF World Economic Outlook Update July 26, 2022, October 14, 2022 *ASEAN-5 : Thailand, Malaysia, Indonesia, Philippine, and Vietnam



Trend by Sector

Thin sheet	<ul style="list-style-type: none"> • Demand is currently weak due to the weak real estate market in China, the rainy season in South Asia and the postponement of demand in the construction sector. • It is expected that demand will recover to a certain extent after the rainy season and the Chinese government's economic stimulus measures, but the recovery timing is later than previous forecast.
Ship-Building	<ul style="list-style-type: none"> • Chinese and South Korean shipbuilding companies secured stable contracts balance by increasing new construction orders. • It is assumed that there will be a delay in construction due to a shortage of workers, but there will be no significant impact.
Energy	<ul style="list-style-type: none"> • WTI crude oil prices remain in high range. Development of alternatives to Russian crude oil and gas has progressed mainly in North America and the Middle East. • Inquiries increased mainly for high chromium seamless steel pipes.

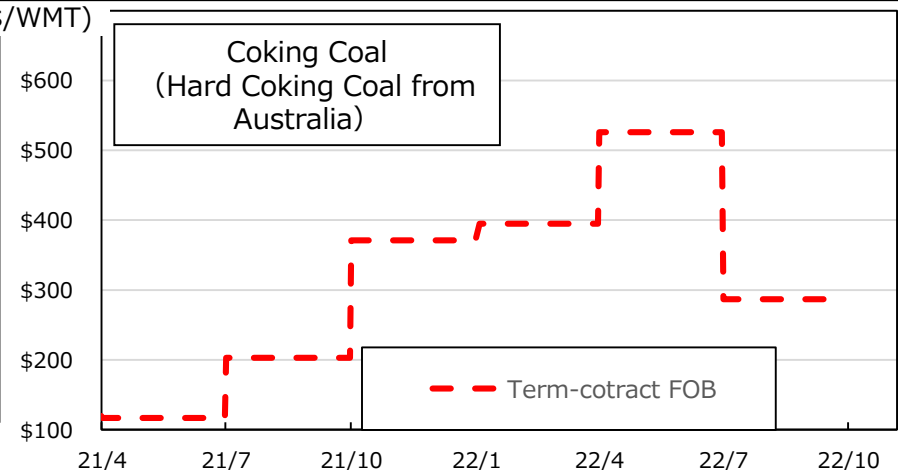
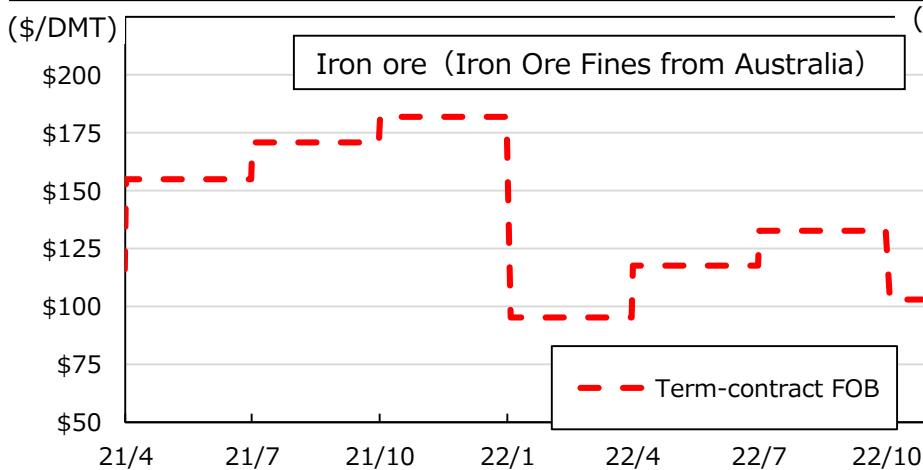
Raw materials (Steel Business)

■ Key raw material

- Iron ore remained **weak due to sluggish demand for steel products** in China.
- Coking coal prices are on a downward trend from their recent peak due to the recent deterioration in overseas steel prices, **but it remain in the high range**.
- As Australia and Brazil enter the rainy season in the future, it is important to watch out for a decrease in the supply of raw materials due to weather factors. However, **raw material prices are expected to continue at current levels**.

■ Metal and scrap

- **Almost all metal prices rose sharply** due to tight supply and demand for alloy iron, which is highly dependent on Russia and Ukraine, as well as a rise in electricity prices due to a rise in the fuel market. Although the metal prices have calmed down after a brief surge, **it still remains at a high level**.



15.0bn. Increase in JFE Steel's Segment Profit (FY2021 (Previous Forecast) vs. FY2021(Updated Forecast))

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JFE Steel		FY2022 Previous Forecast	FY2022 Updated Forecast	(billion yen) Change
Segment Profit		150.0	165.0	15.0
Excluding Inventory Valuation etc.*		28.0	83.0	55.0

1. Cost	±0.0	
2. Volume and Mix	(15.0)	• Volume -18.0, Mix +3.0
3. Sales and Raw materials	+130.0	• Reflect high prices of main raw materials, metals, and other commodities quickly in selling prices to further improve spreads
4. Foreign exchange effects on trade	(5.0)	• 1USD=133yen(about)→1USD=138yen(about)
5. Inventory valuation	(40.0)	• Inventory valuation(30) (+750→+720) • Carry over of raw materials -490 (+300→-190) • Foreign exchange valuation+120 (+170→+290)
6. Others	(55.0)	• Group companies -23.0 • Energy prices -19.0, etc.

158.7Bn. Decrease in JFE Steel's Segment Profit (FY2021 (Actual) vs. FY2022 (Forecast))

JFE

JFE Steel	FY2021 Actual	FY2022 Forecast	(billion yen) Change
Segment Profit	323.7	165.0	(158.7)
Excluding Inventory Valuation etc.*	129.7	83.0	(46.7)

1. Cost**+10.0**

- Cost reductions +23.0
- Chiba No.6 blast furnace refit -13.0

2. Volume and Mix**(15.0)**

- Volume -20.0, Mix +5.0

3. Sales and Raw materials**+200.0**

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

4. Foreign exchange effects on trade**(105.0)**

- 1USD=109.9yen→1USD=138yen(about)

5. Inventory valuation**(112.0)**

- Inventory valuation -88.0 (+160.0→+72.0)
- Carry over of raw materials -42.0 (+23.0→-19.0)
- Foreign exchange valuation +18.0 (+11.0→+29.0)

6. Others**(136.7)**

- Group companies -68.0
- Energy prices -45.0, etc.

131.4Bn. Increase in JFE Steel's Segment Profit (FY2022.1H vs. FY2022.2H)

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JFE Steel		FY2022 Forecast			Change
		1H	2H	Full year	
Segment Profit		148.2	16.8	165.0	(131.4)
Excluding Inventory Valuation etc.*		32.2	50.8	83.0	18.6

(billion yen)

1. Cost**±0.0**

- Recovery for Chiba No.6 blast furnace refit by Cost reductions

2. Volume and Mix**(4.0)**

- Volume -7.0, Mix +3.0

3. Sales and Raw materials**+98.0**

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

4. Inventory valuation**(150.0)**

- Inventory valuation -92.0 (+82.0→-10.0)
- Carry over of raw materials -29.0 (+5.0→-24.0)
- Foreign exchange valuation -29.0(+29.0→±0.0)

5. Others**(75.4)**

- Group companies -19.0
- Foreign exchange effects on trade -14.0
- Energy prices -16.0, etc.

Impact of the depreciation of the yen(Steel Business)



- While **the yen has depreciated** since the last announcement, **the overpayment of foreign currency has shrunk** due to the calmer raw material market and other factors.
- The impact of foreign exchange effects on trade in FY2022 is expected to be (105)billion yen (5 billion yen lower than previous forecast).
(Sensitivity: - 1.4 billion yen per 1 yen depreciation in the second half)
- We **promote to reflect the impact of the depreciation of the yen to sales price** by improving sales prices in the domestic market.

Sales environment

Past

Improving export competitiveness of customers/JFE Steel

Now

Parts supply constraints in the automotive sector and weak overseas steel market

Manufacturing cost

A small portion of imported raw materials in manufacturing costs
=> Small impact of FOREX movements

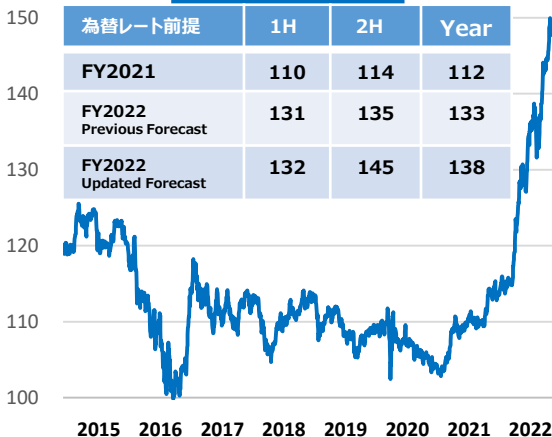
Due to the soaring prices, a big portion of imported raw materials in manufacturing costs
=> Heavy impact of FOREX movements

Profit and Loss※1

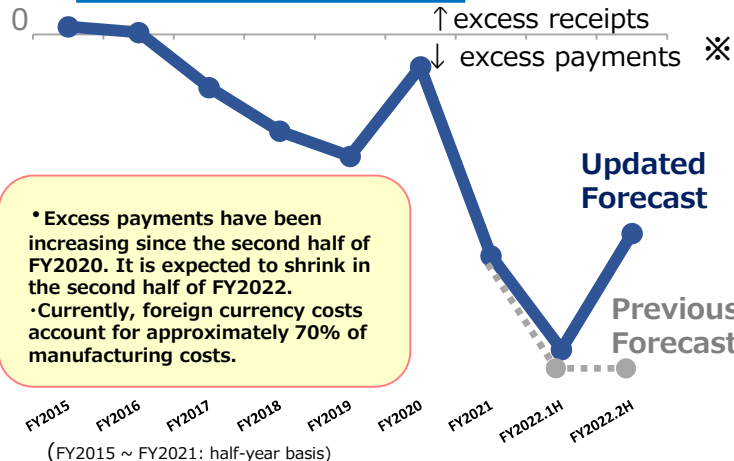
Valuation : positive
effects on trade : neutral (imports and exports)

Valuation : positive
effects on trade : Negative (imports and exports)

USD-JPY trend



FOREX balance of trade



* Excess payments have been increasing since the second half of FY2020. It is expected to shrink in the second half of FY2022.
- Currently, foreign currency costs account for approximately 70% of manufacturing costs.

※1 **Valuation** : Translational FOREX Impact concerning foreign currency assets, liabilities and overseas Gr companies' profit.

effects on trade : Impact of FOREX movements on foreign currency trade (imports and exports) on earnings.

Shifting Focus from Quantity to Quality

(Progress of Structural Reform and Major CAPEX)

- Steadily implementing structural reforms and capital investment to shift from quantity to quality.
 - ✓ August 2022: Shutdown of Tin Mills in Chiba was completed, and production of steel sheet for cans was consolidated in Fukuyama.
 - ✓ September 2022: Refit of No. 6 Blast Furnace in Chiba began.

Facilities	FY2022	FY2021	FY2022	FY2023	FY2024~
Shutdown of Tin Mills in Chiba (No.2 Tandem Mill, No.4 CAL, TFL)			Shutdown(Aug. 2022) (No.2 Tandem Mill, No.4 CAL, TFL)		
Refit of Blast Furnace		Kurashiki Refit No.4 BF(~Dec.2021) ★	No.6 BF(Sep.2022~Jan.2023)		
Shut down of upstream facilities in Keihin (No.2 BF, Sintering Machine, Coke oven, Converters, EAF, Continuous Casting Machine etc.)				To be shut down (~Sep. 2023) ★	<div style="background-color: #0056b3; color: white; padding: 5px; text-align: center;">Effect of structural reform and CAPEX</div> <ul style="list-style-type: none"> Maintenance cost reduction Fixed cost reduction Product-mix enhancements etc.
Shutdown of Hot Rolling Facilities in Keihin (excl. Pickling line and skinpass mill)				To be shut down (~Sep. 2023) ★	
CAPEX related to improvements of high-value added product ratio		Installed new Continuous Casting Machine (Jun.2021) ★		Reinforce extra-thick steel plate production line for offshore wind-power application (Nov.2023) ★	

Shutdown of Tin Mills in Chiba

- August 2022: Shutdown of Tin Mills in Chiba was completed.
- Consolidation of manufacturing to Fukuyama and customer approval are progressing well.

Refit of No. 6 Blast Furnace in Chiba

- Refit began in Sept. 22, and a blow-in is scheduled for Jan. 23.
- Facility enhancements such as furnace stabilization and Cyber Physical Systems improvements are also planned.
- Investment: 43 billion yen/Furnace capacity after refit: 5,153m³



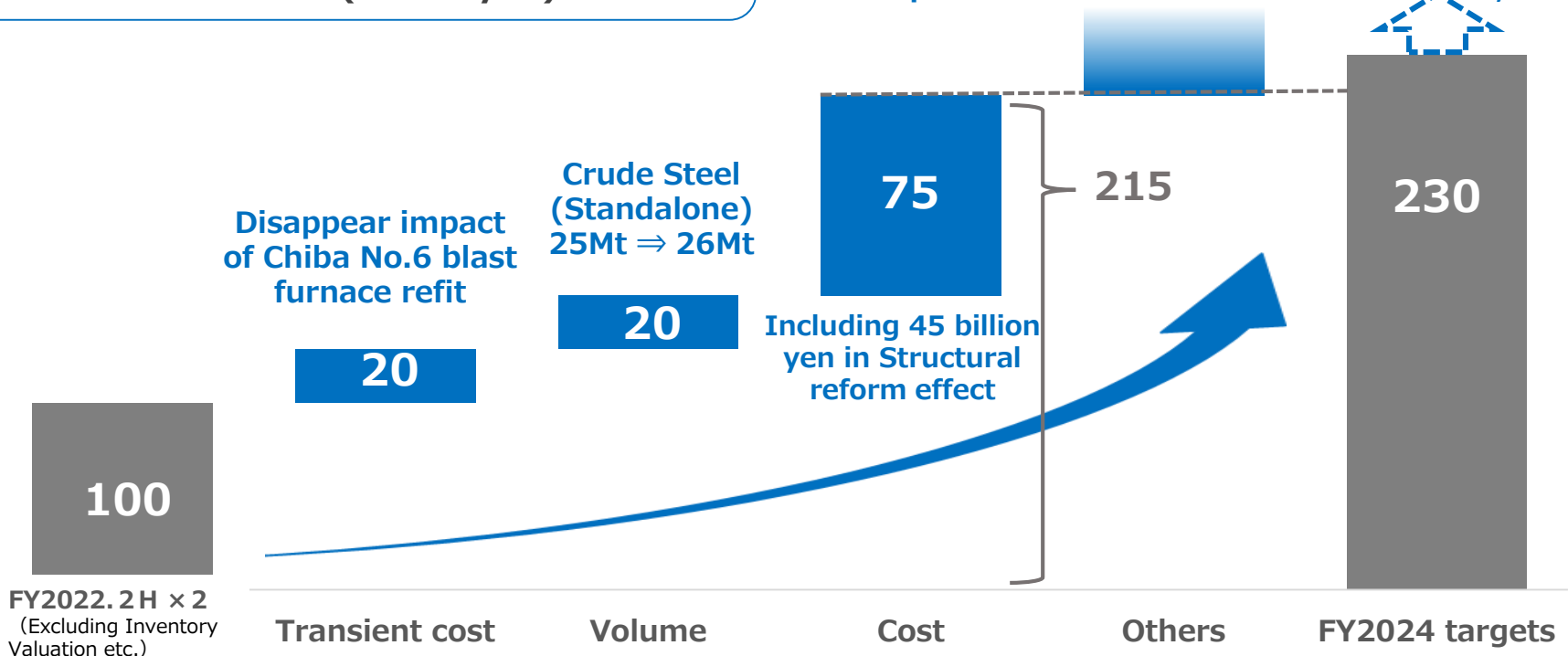
Initiatives toward achieving the 7th mid-term plan from 2nd half of FY2022

JFE

- In the second half of FY2022, segment profit (Excluding Inventory Valuation etc.) in the steel business is expected to be **about 100 billion yen on an annual basis**.
- We will implement various measures, including the Shut down of upstream facilities in Keihin planned for next fiscal year, and aim to exceed the performance target of 230 billion yen in FY2024.

Initiatives to achieve mid-term plan targets, starting in the second half of fiscal 2022(billion yen)

- Product-mix enhancements
- Improvements in sales prices such as overhauling the extra pricing, etc.
- Expansion of overseas solution business, etc.



JFE Engineering

Financial Forecast for Fiscal Year 2022

Financial Forecast for Fiscal Year 2022


JFE

Current Business Environment/Overview of Financial Status

- **Segment profit in 1H of FY2022 was deficit ¥3.9bn., decreased by ¥7.9 bn. from previous forecast, due to rising price of material and equipment, change in schedule of progression, and loss on overseas constructions.**
- **Full-year segment profit is expected to maintain ¥20.0 bn. due to implementing the passing on the rising price of material and equipment to the customers, the cost reduction, etc. (decreased by ¥6.0 bn. year-on-year)**

Financial Forecast

(billion yen)	FY2021 Actual		FY2022 Forecast (Updated)		Change FY2021 →FY2022 (Updated forecast)		FY2022 Forecast (Previous)	
	1H	Full Year	1H	Full Year	1H	Full Year	1H	Full Year
Orders	252.3	505.8	286.0	550.0	33.7	44.2	310.0	550.0
Revenue	229.2	508.2	219.0	520.0	(10.2)	11.8	230.0	520.0
Segment Profit	11.1	26.0	(3.9)	20.0	(15.0)	(6.0)	4.0	20.0

Compared to previous forecast (segment profit)

- <1H (7.9)> Rising price of material and equipment, changing schedule of progress (4.1)
(Changing schedule of progress (2.9))
Loss on overseas constructions (3.8)
- <Full-year ±0.0> Declining in 1H segment profit (7.9)
Passing on the rising price of material and equipment, reducing cost, etc. +5.0
Changing schedule of progress +2.9

JFE Shoji
Financial Forecast
for Fiscal Year 2022



Financial Forecast for Fiscal Year 2022

JFE

Current Business Environment/Overview of Financial Status

- Segment profit in 1H of the FY2022 increased significantly year-on-year due to **better steel demand and price than expected mainly in Northern America**. Full-year segment profit **is expected to be ¥60.0 bn.** (increased by ¥4.1 bn. year-on-year, increased by 5.0 bn. from previous forecast)

Financial Forecast

	FY2021 Actual		FY2022 Forecast (Updated)		Change FY2021 →FY2022 (Updated forecast)		FY2022 Forecast (Previous)	
	1H	Full Year	1H	Full Year	1H	Full Year	1H	Full Year
(billion yen)								
Revenue	544.4	1,231.7	750.2	1,490.0	205.8	258.3	750.0	1,470.0
Segment Profit	25.6	55.9	40.6	60.0	15.0	4.1	35.0	55.0

Compared to previous forecast (Segment profit)

- Full year+5.0 Segment profit in both standalone and subsidiaries is expected to increase from previous forecast due to better sales of steel and raw materials than expected.

Topics

Progress of development plans for the land of Keihin district



- The development area is a huge land. (5 areas, Approx. 400ha)
- Develop through "Sale", "Lease", and "Do business (by ourselves)", consistent with the land use policy by Kawasaki City, which will be disclosed by the end of FY2022.

Area	Size (ha)	Progress	Initiatives towards 2030
Ogishima	<p style="font-size: 2em; font-weight: bold;">279</p> <p><small>*Area of upstream facilities (shut down area) :222ha</small></p>	<ul style="list-style-type: none"> ✓ Strive to see some properties put to new use by FY2030 ✓ Launched joint study for the development of a base for receiving and supplying decarbonized fuels such as hydrogen and ammonia with ENEOS Corporation and JERA Co., Inc. (Released on 21th Apr. 2022) ✓ Launched Community association with the other companies based in Ogishima. (Total 9 companies, Released 28th Oct, 2022) 	<p>To be shut down Sep. 2023</p> <p>★</p> <p>Disclose development plans in FY2023</p> <p>★</p> <p>→</p> <p>~FY2030 Partially put to new use</p>
Minami-watarida	<p style="font-size: 2em; font-weight: bold;">51</p>	<ul style="list-style-type: none"> ✓ The most preceding area for development consideration. ✓ Developing as an R & D and innovation base consistent with the policy of Kawasaki City. ✓ The northern area of Minami-watarida will start construction in FY2024 and will be partially put to new use in FY2027. (Disclosed the basic plan for area development by Kawasaki City, 26th Aug. 2022) 	<p>Start construction in FY2024</p> <p>★</p> <p>→</p> <p>★</p> <p>Partially put to new use in FY2027</p>
Other 3 areas*	<p style="font-size: 2em; font-weight: bold;">76</p>	<ul style="list-style-type: none"> ✓ Expansion and development as a major recycling base in the Tokyo metropolitan area.(Mizue area) 	<p>Continue to announce the progress in sequence.</p>

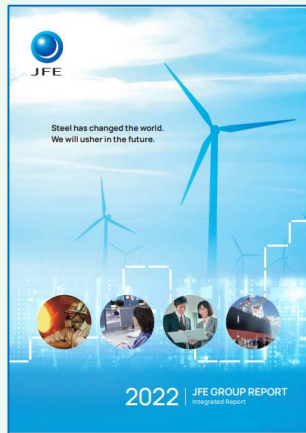
*Mizue area, Ogimachi area, and Ikegami area

Published JFE Group Report and CSR Report

Published JFE Group Report 2022 and CSR Report

JFE Group Report : Published 20th Sep. 2022

CSR Report : Published 28th Sep. 2022



1. Management Strategy ~Tackling the Biggest Challenge Since Our Founding to Ensure Earth's Prosperity~

- Message from the CEO
- Material Business Issues, Business Model

2. Strategy of Create Value ~Toward Ensuring Sustainability of the environment and society~

- Progress on 7th Mid-term Business Plan
- Special Feature : Advancing the Commercialization of the Wind Power Generation Business
- Special Feature : Contributions to Resolving Climate Change
- Initiatives at Operating Companies, Business Strategies



<https://www.jfe-holdings.co.jp/en/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. Challenge and Path to Carbon-Neutrality in the Steel Business

3. Initiatives for ESG Issues, ESG Data

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

English version is coming soon

Appendix(1)

Profit/Loss Analysis



Main Financial Data

JFE
J-GAAP

	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%

IFRS

	FY18	FY19	FY20	FY21	'22 Forecast
(bn. Yen, times)					
Business profit	232.0	37.8	-12.9	416.4	255.0
EBITDA *1	428.2	269.4	223.4	668.7	525.0
ROS *2	6.0%	1.0%	-0.4%	9.5%	4.8%
ROE *3	8.6%	-11.1%	-1.3%	15.7%	7.5%
ROA *4	5.0%	0.8%	-0.3%	8.4%	4.7%
Interest-bearing debt outstanding	1,524	1,814	1,806	1,849	1,950
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%	79.5%
Profit attributable to owners of parent (yen/share)					
	283.8	-343.4	-38.0	500.1	267.5
Dividend (yen/share)	95	20	10	140	TBD (Interim: 50 yen)
Pay-out Ratio	33.5%	-	-	28.0%	TBD

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 Financial Data and Performance & Profitability Targets

JFE

		7 th mid-term business plan FY2024	FY2020 Actual	FY2021 Actual	FY2022 Forecast
Consolidated	Business profit	¥320.0 billion	¥-12.9 billion	¥416.4 billion	¥255.0 billion
	Profit attributable to owners of the parent	¥220.0 billion	¥-21.8 billion	¥288.0 billion	¥155.0 billion
	ROE	10%	-1.3%	15.7%	7.5%
	Debt/EBITDA	About 3x	8.1x	2.8x	3.7x
	D/E*1	About 70%	93.2%	80.8%	79.5%
Operating companies	Steel business Profit per ton*2 Segment profit	10,000 yen/ton ¥230.0 billion	-3,000 yen/ton ¥65.4 billion	14,000 yen/ton ¥323.7 billion	7,000 yen/ton ¥165.0 billion
	Engineering business Segment profit Revenue	¥35.0 billion ¥650.0 billion	¥24.0 billion ¥485.7 billion	¥26.0 billion ¥508.2 billion	¥20.0 billion ¥520.0 billion
	Trading Business Segment profit	¥40.0 billion	¥20.0 billion	¥55.9 billion	¥60.0 billion
	Payout ratio	7 th mid-term business plan Around 30%	– (10 yen)	28.0% (140 yen)	(interim: 50yen)

*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)

Progress of Cash Flow Improvements, Debt/EBITDA Ratio

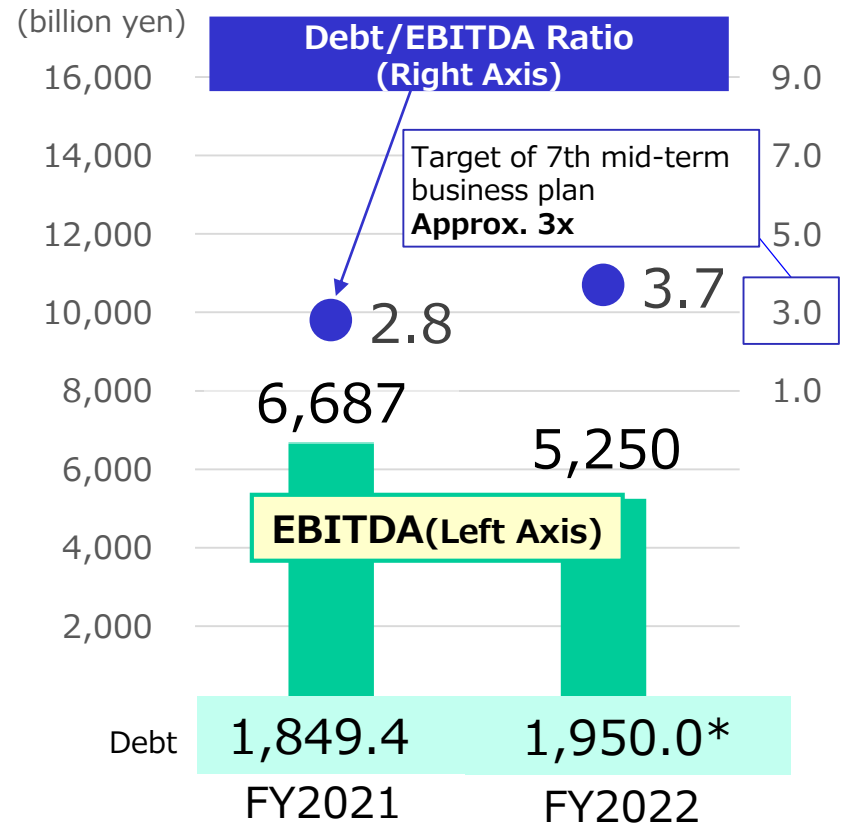
JFE

➤ At the end of FY2022, the Debt/EBITDA ratio is expected to be x3.7.

FY2022 (billion yen) Consolidated Cash Flow Forecast

Cash-in	Cash-out
Net Profit 155.0	CAPEX & Investments 320.0
Depreciation and Amortization 270.0	Dividend Payment 75.0
Asset Compression 45.0	Working Capital etc. 175.0
Debt 100.0	

Progress of Debt/EBITDA Ratio



* Debt is expected to increase by ¥100 bn. from FY2021 to FY2022. It includes ¥50 bn. increase by foreign currency translation impact due to the yen depreciation.

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

Financial Results for First Half of Fiscal Year 2022

JFE

	Unit	FY2021					FY2022		
		1Q	2Q	1H	2H	Full Year	1Q	2Q	1H
		Revenue	billion yen	638.5	771.9	1,410.4	1,763.0	3,173.4	932.6
Segment Profit	billion yen	69.7	88.8	158.5	165.2	323.7	93.0	55.2	148.2
Excluding Inventory Valuation etc.*	billion yen	25.7	42.8	68.5	61.2	129.7	(23.0)	55.2	32.2
Crude Steel (Standalone)	Mt	6.25	6.45	12.70	13.18	25.88	6.43	6.21	12.64
Crude Steel (Consolidated)	Mt	6.59	6.80	13.39	13.87	27.26	6.77	6.59	13.37
Shipment (Standalone)	Mt	5.26	5.56	10.83	11.55	22.38	5.54	5.32	10.86
Export Ratio on Value Basis (Standalone)	%	43.2	49.3	46.5	44.7	45.5	48.5	45.0	46.7
Average Sales Price (Standalone)	000 yen / t	87.6	101.0	94.5	112.2	103.7	126.7	136.7	131.6
Exchange Rate	¥/\$	109.8	110.0	109.9	114.2	112.1	126.5	136.6	131.6
Exchange Rate (End of Term)	¥/\$	110.6	111.9	111.9	122.4	122.4	136.7	144.8	144.8

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

17.0Bn. Decrease in JFE Steel's Segment Profit (FY2021.2H (Actual) vs. FY2022.1H (Actual))

JFE

			(billion yen)
JFE Steel	FY2021 2H(actual)	FY2022 1H(actual)	Change
Segment Profit	165.2	148.2	(17.0)
Excluding Inventory Valuation etc.*	61.2	32.2	(29.0)

1. Cost **±0.0**

**2. Volume
and Mix** **(12.0)**

**3. Sales and
Raw materials** **+46.0**

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

**4. Inventory
valuation** **+12.0**

- Inventory valuation -19.0 (+101.0→+82.0)
- Carry over of raw materials +12.0 (-7.0→+5.0)
- Foreign exchange valuation +19.0(+10.0→+29.0)

5. Others **(63.0)**

- Foreign exchange effects on trade -39.0
- Group companies -35.0, etc.

37.8Bn. Decrease in JFE Steel's Segment Profit (FY2022.1Q (Actual) vs. FY2022.2Q (Actual))

JFE

JFE Steel	FY2022			Change
	1Q (Actual)	2Q (Actual)	1H	
Segment Profit	93.0	55.2	148.2	(37.8)
Excluding Inventory Valuation etc.*	(23.0)	55.2	32.2	78.2

(billion yen)

1. Cost **±0.0**

2. Volume and Mix **(4.0)**

3. Sales and Raw materials **+113.0**

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

4. Inventory valuation **(116.0)**

- Inventory valuation -40.0 (+61.0→+21.0)
- Carry over of raw materials -69.0 (+37.0→-32.0)
- Foreign exchange valuation -7.0(+18.0→+11.0)

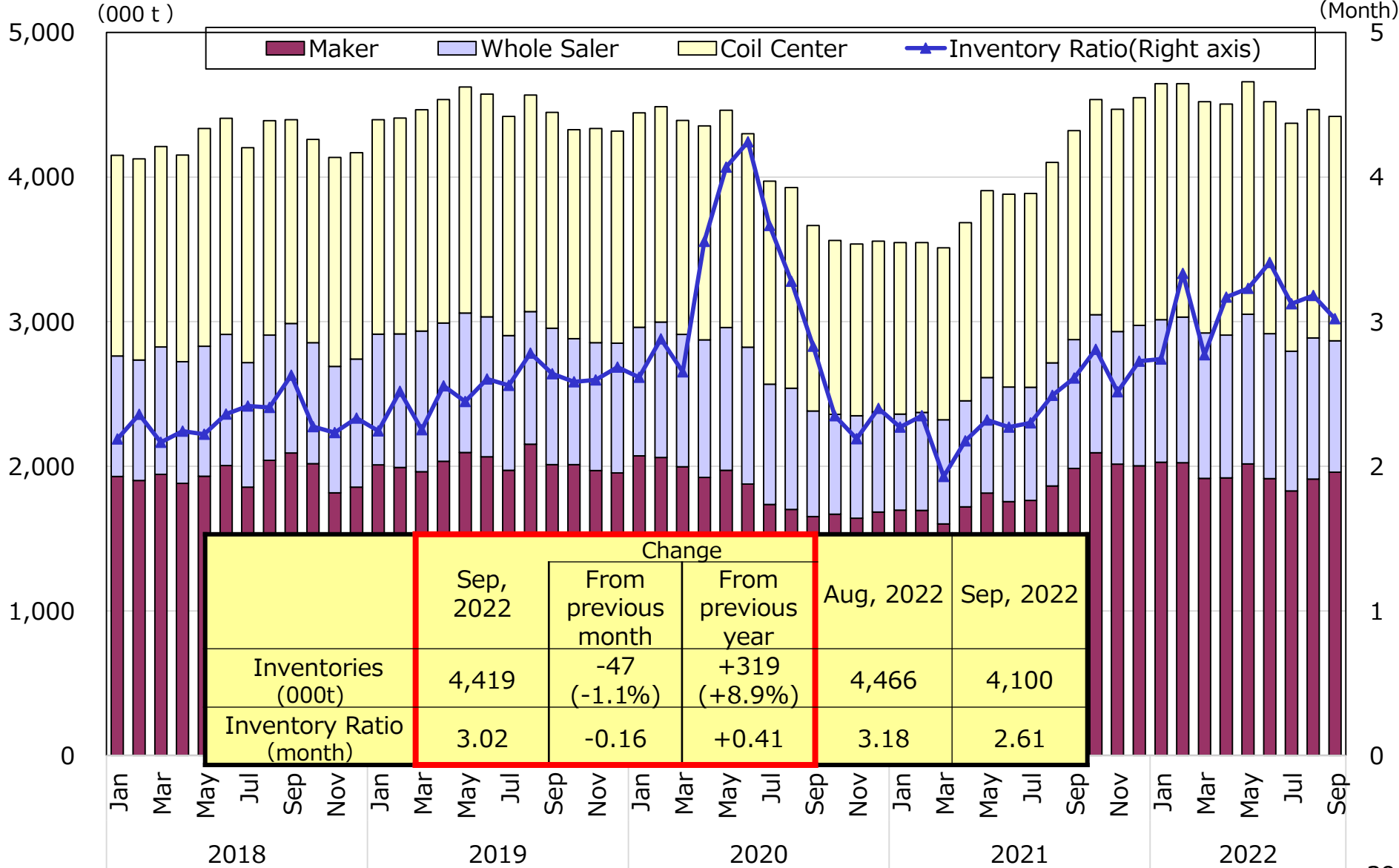
5. Others **(30.8)**

- Group companies -11.0
- Foreign exchange effects on trade -10.0, etc.

Appendix(2)
Business Environmental
Indicators, etc.

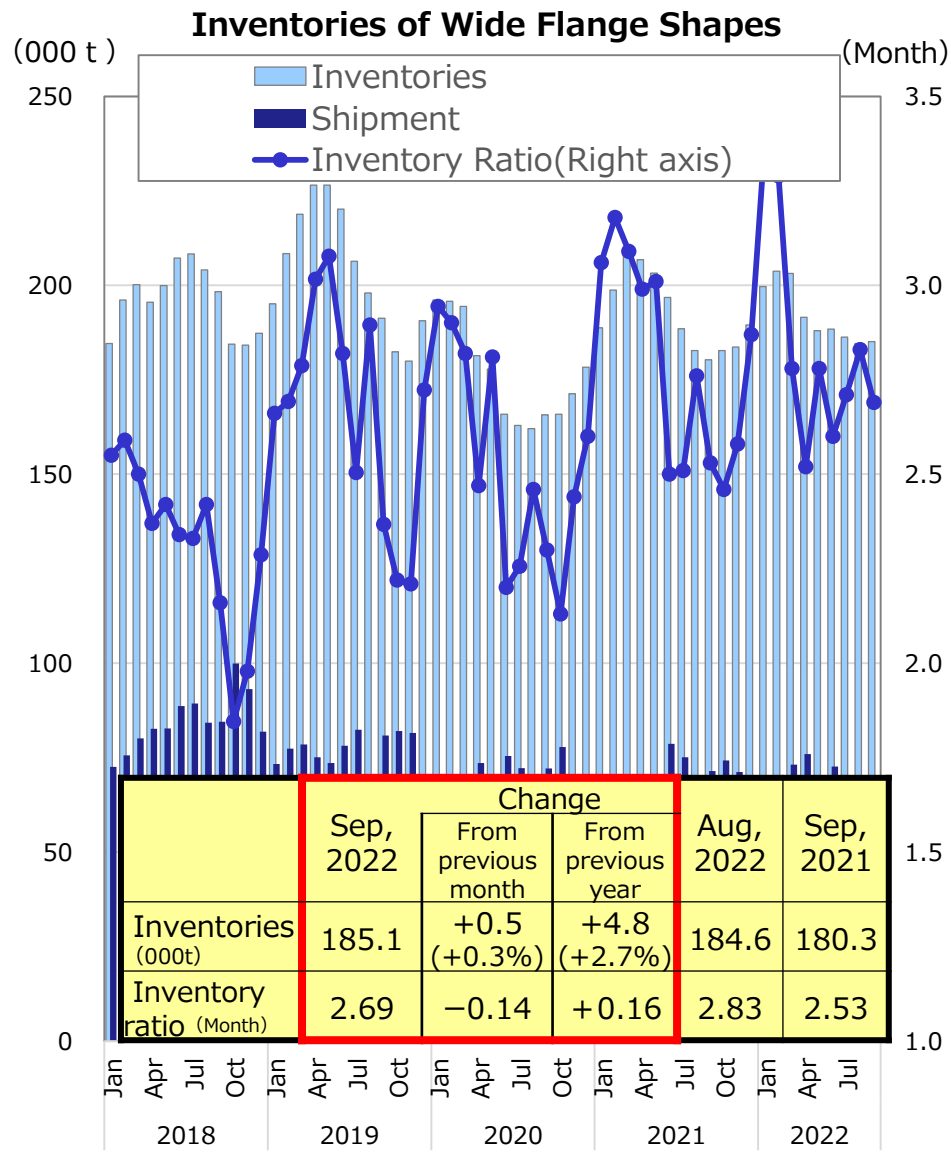
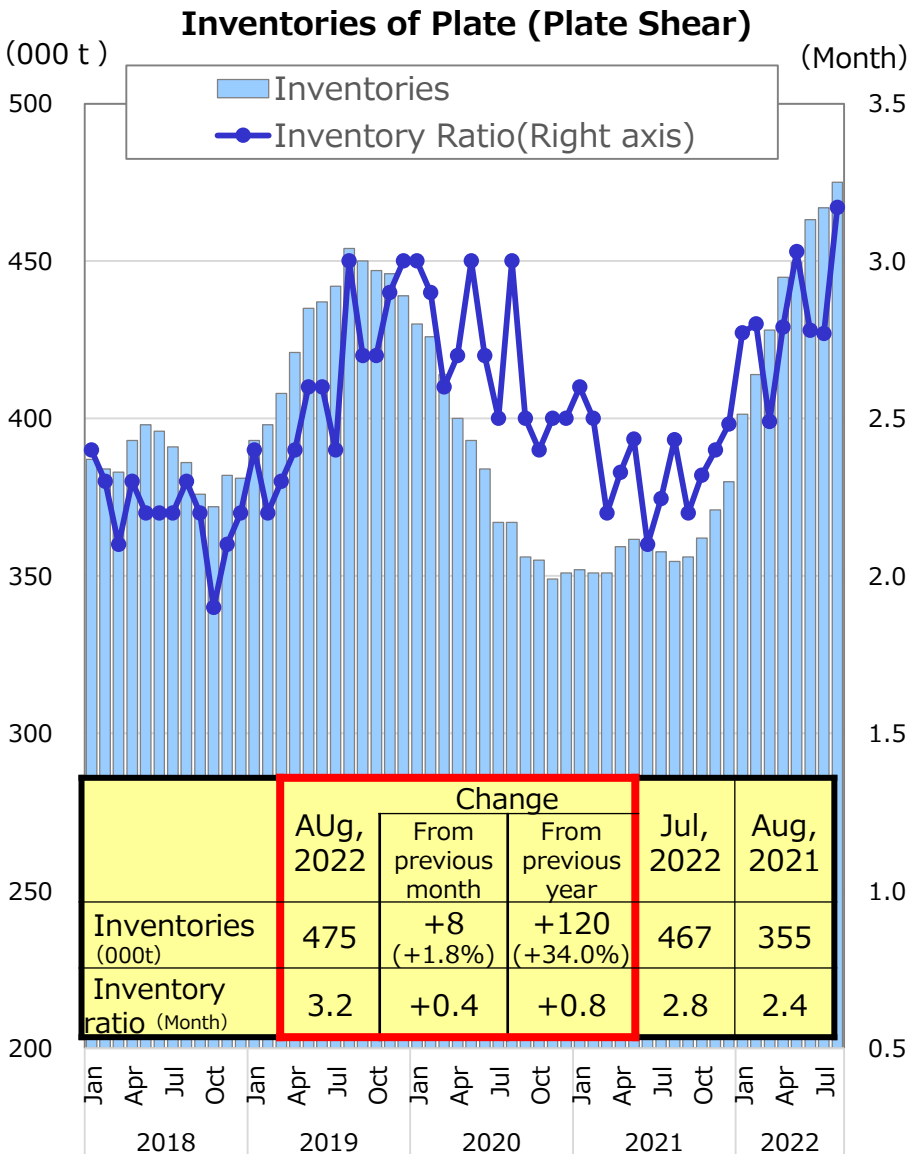
Domestic Market Environment

Combined Inventories of HR, CR and Coated Steel Sheet



Domestic Market Environment

Inventories of Plate (Plate Shear) and Wide Flange Shapes

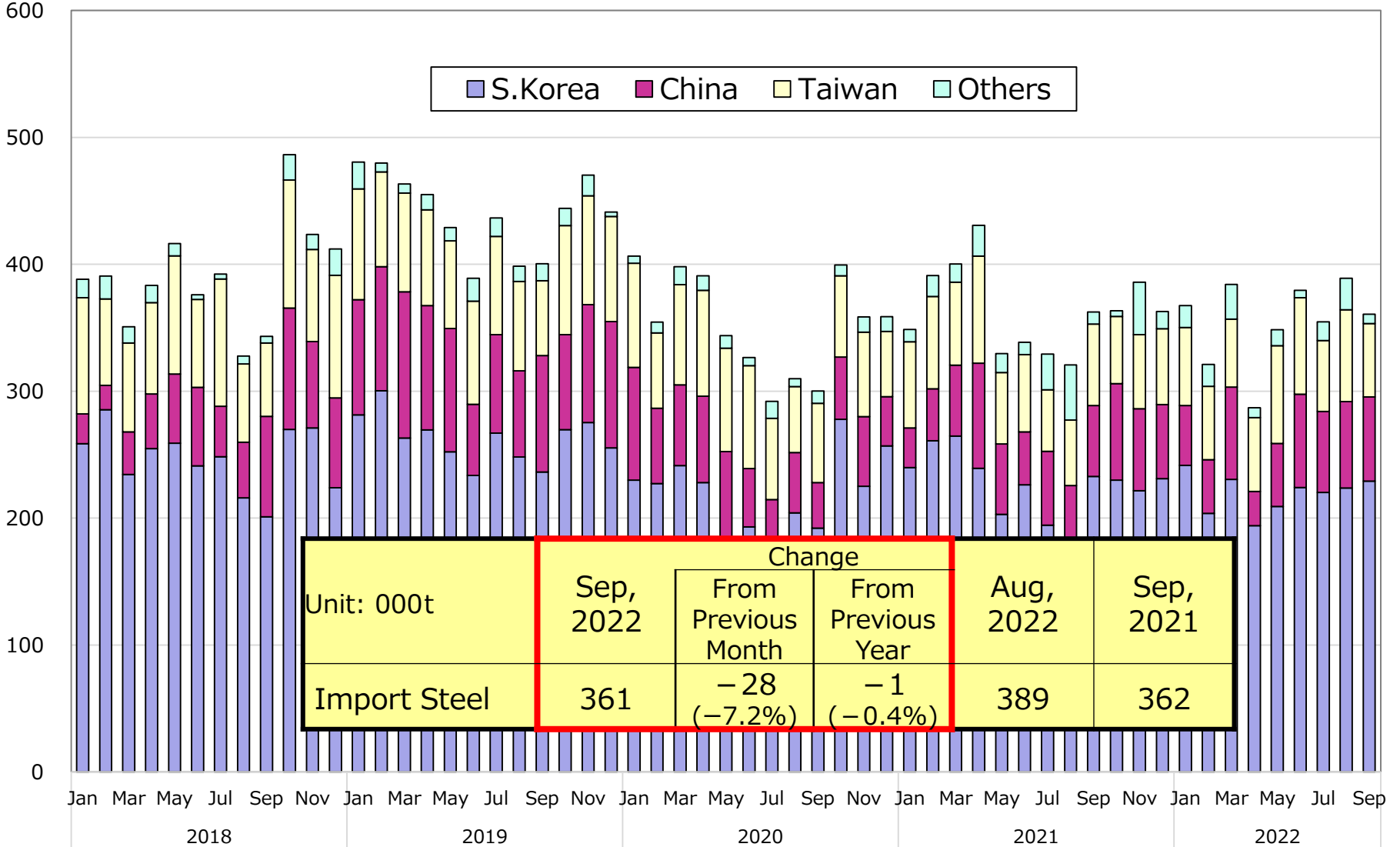


Domestic Market Environment

Trend of Import Steel (Ordinary Steel)



(000 t)



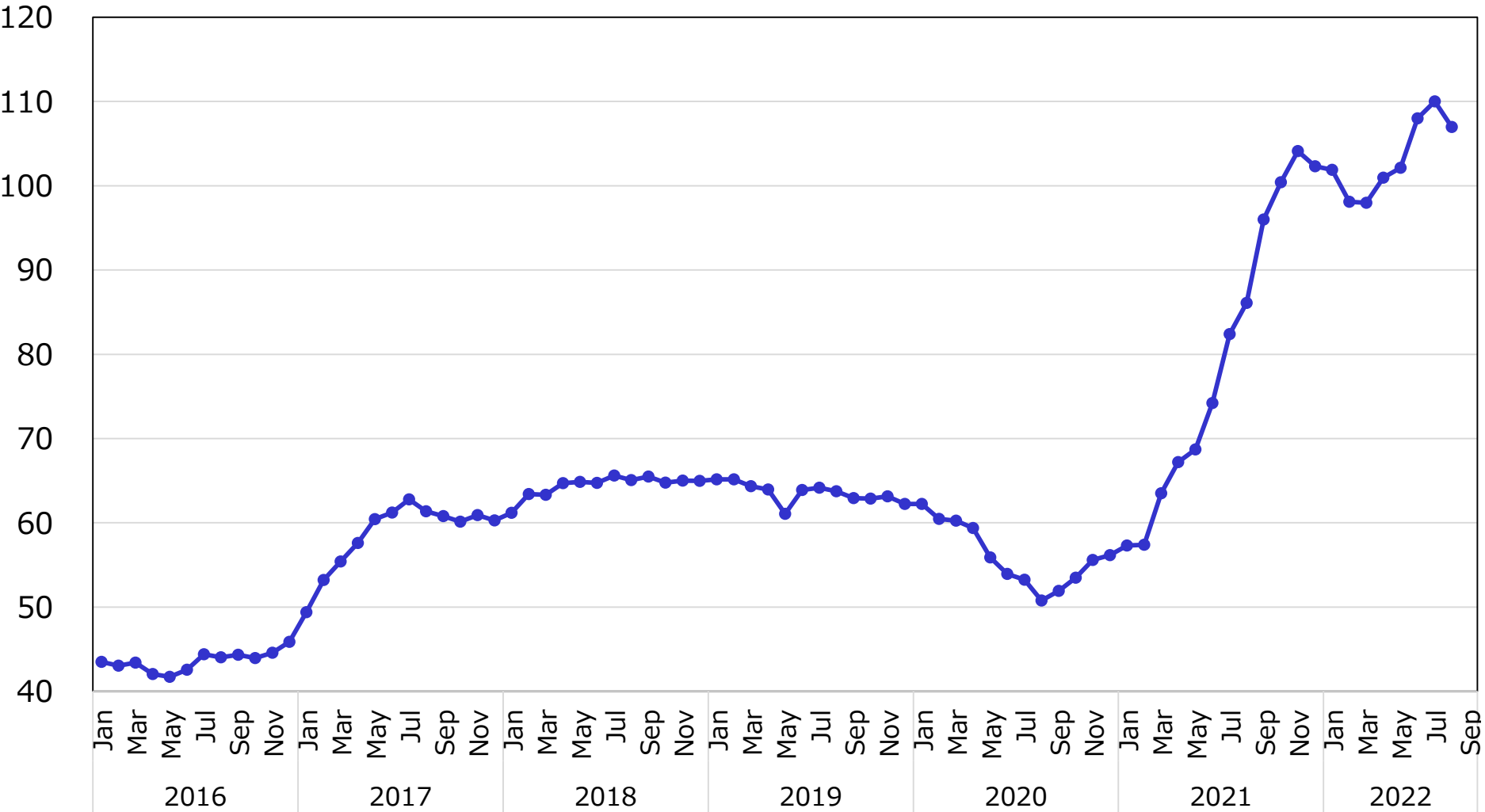


Domestic Market Environment

Price Trend of Import Steel

JFE

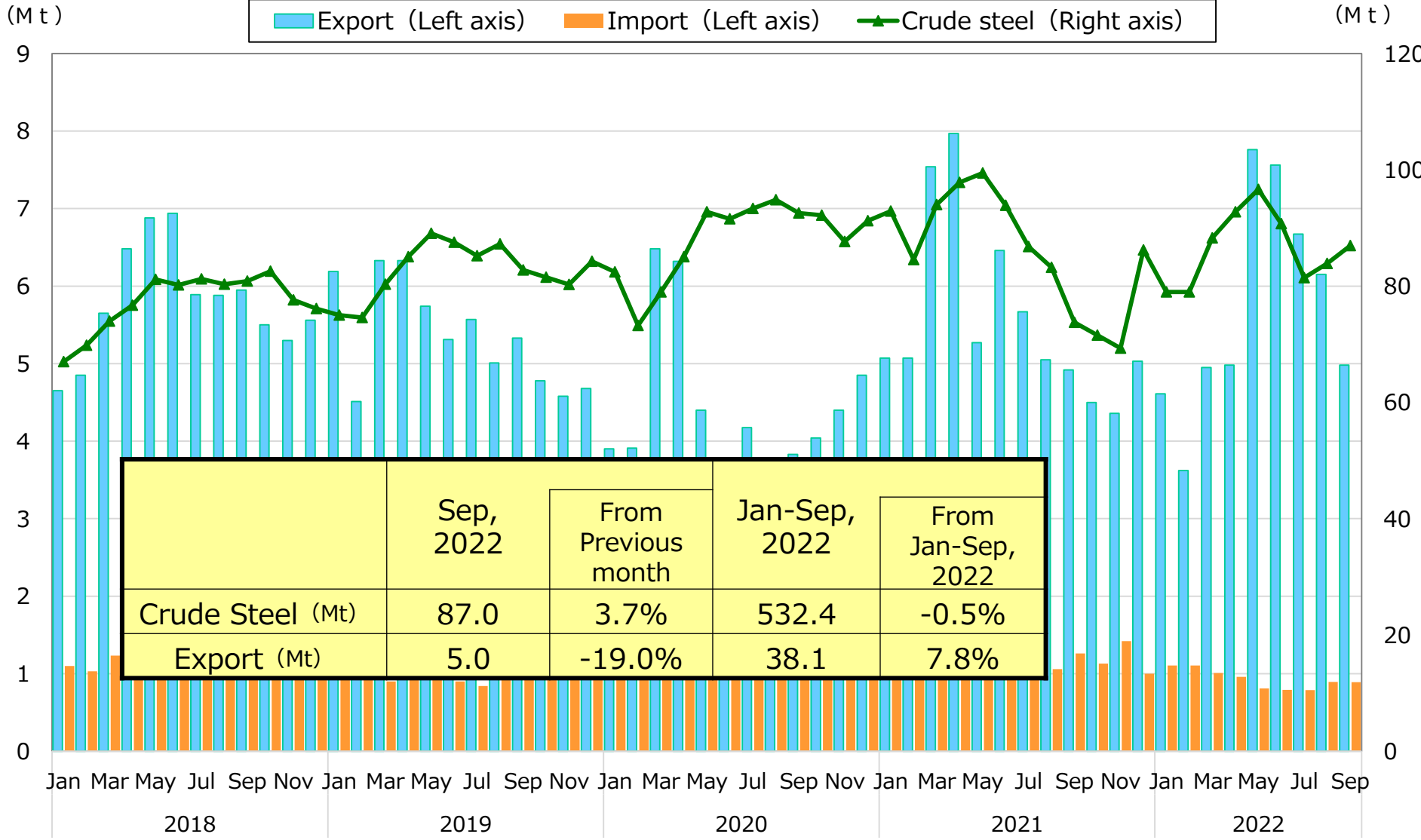
(000 yen / t)



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

Overseas Market Environment

Crude Steel & Im/Export, China

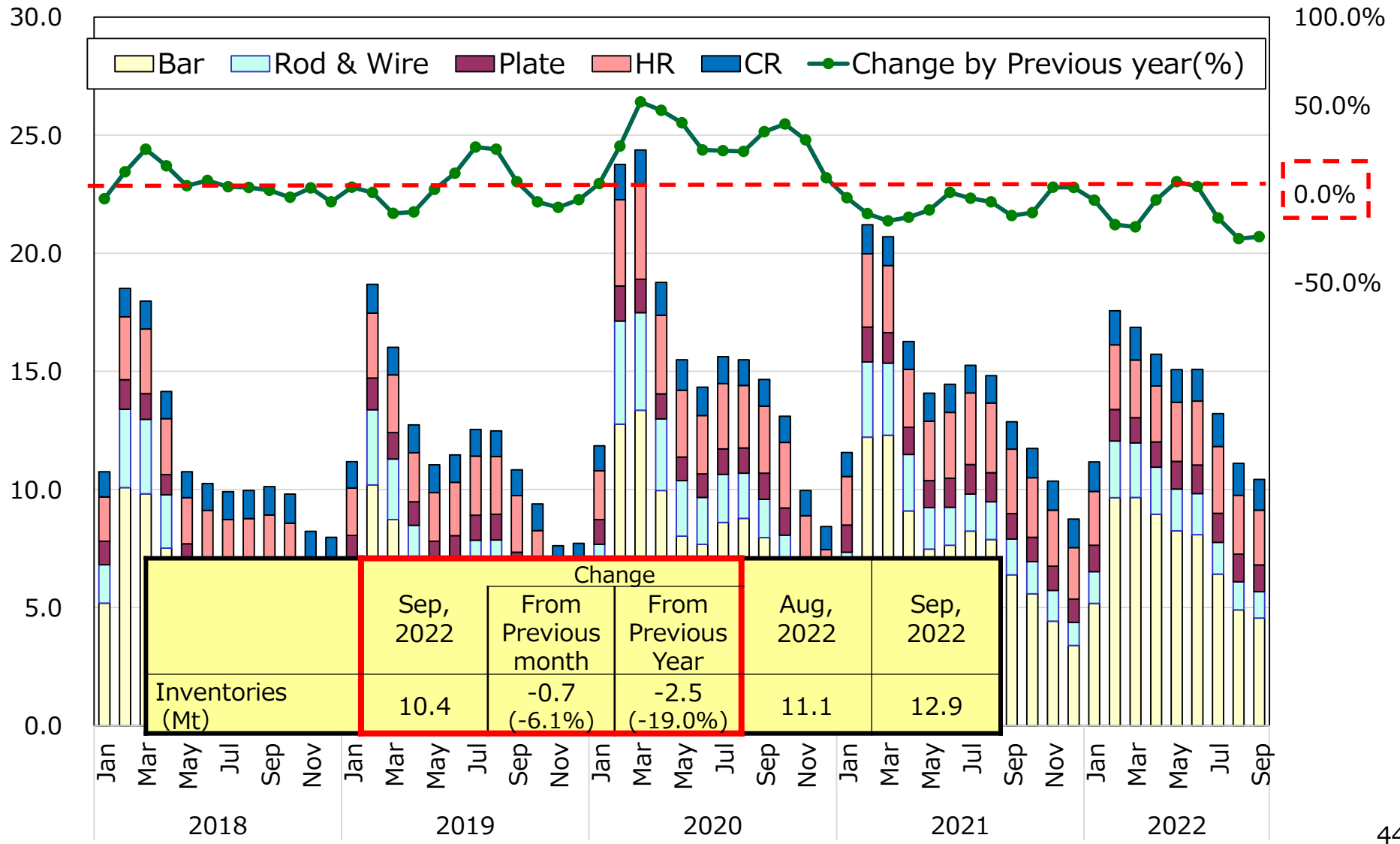


Overseas Market Environment

Inventories in China by Product



(Mt)

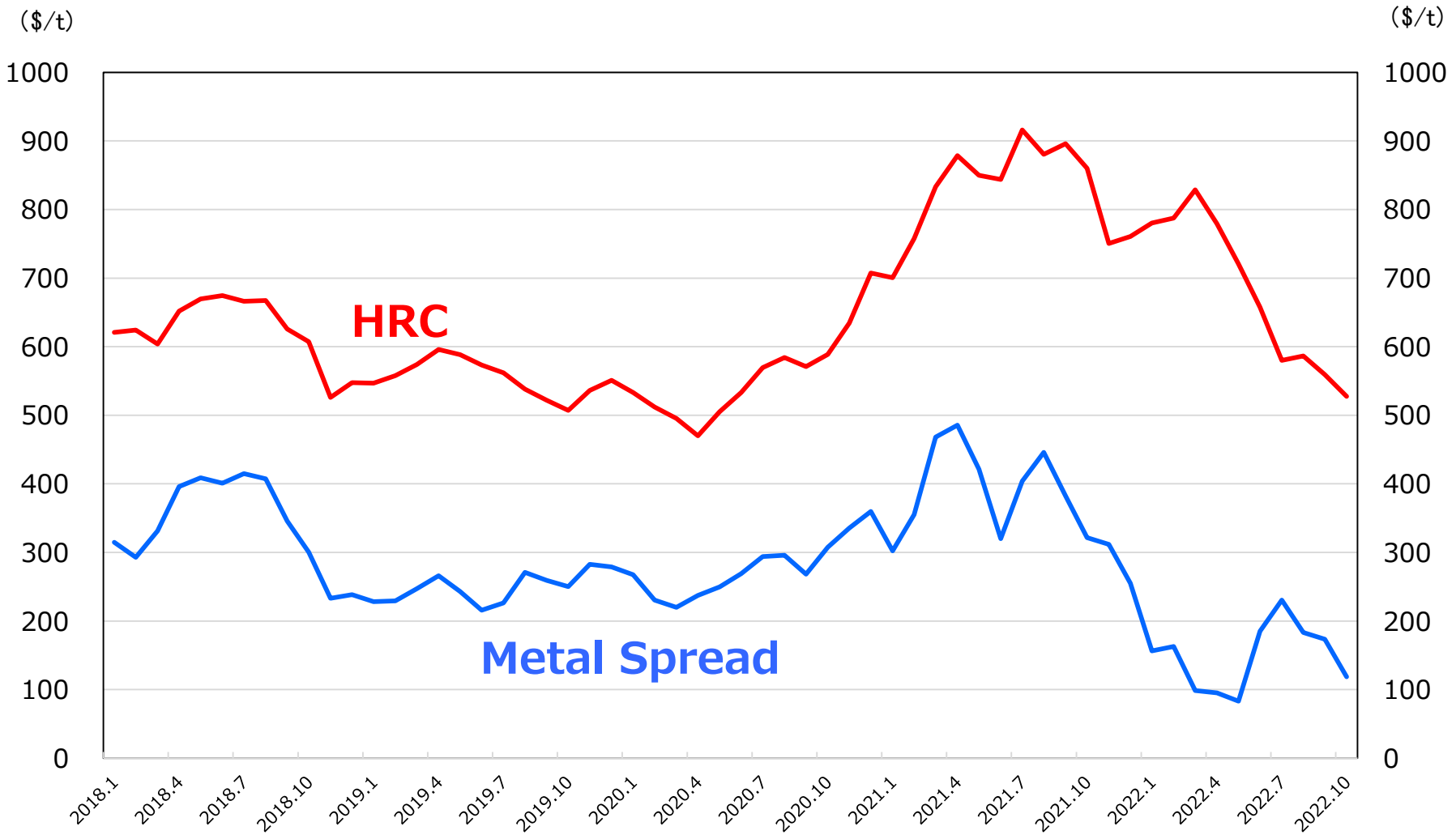




Overseas Market Environment

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

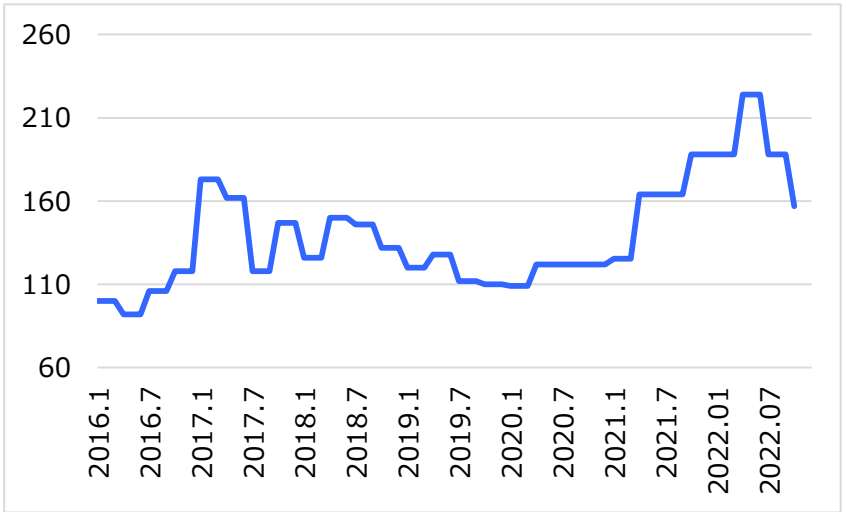


JFE

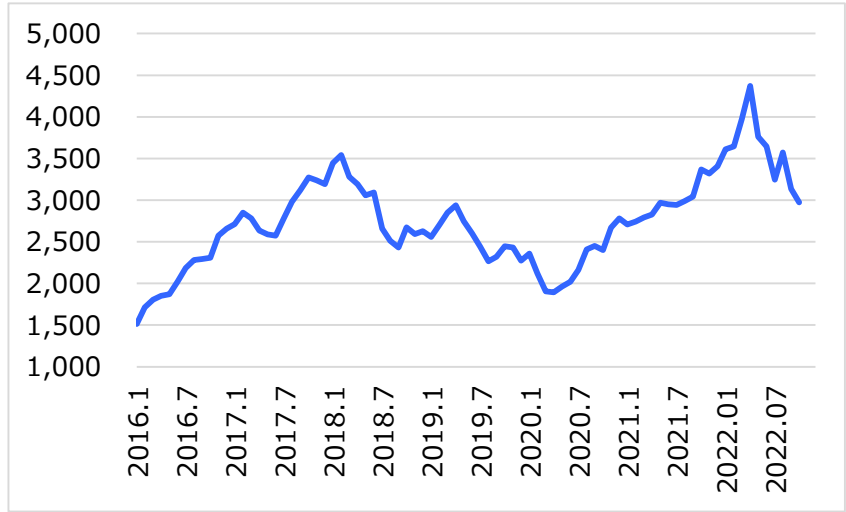
Raw Materials

Trend of Sub Material's Market Price

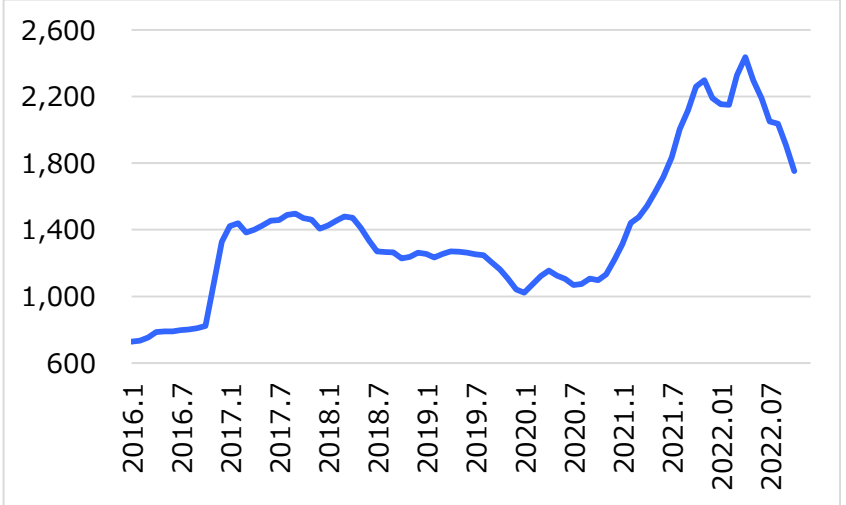
(¢/lb) FeCr



(US\$/t) Zn



(US\$/t) FeMn



(US\$/lb) Mo

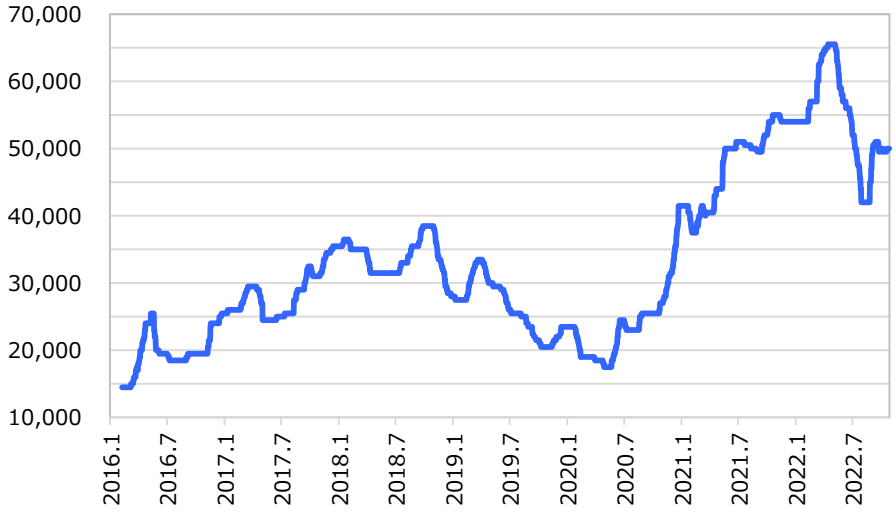




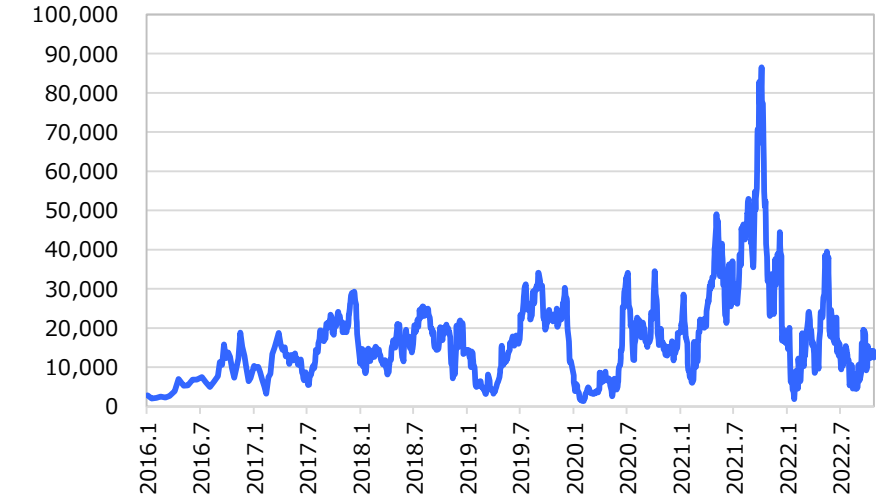
Raw Materials

Trend of Sub Material's Market Price

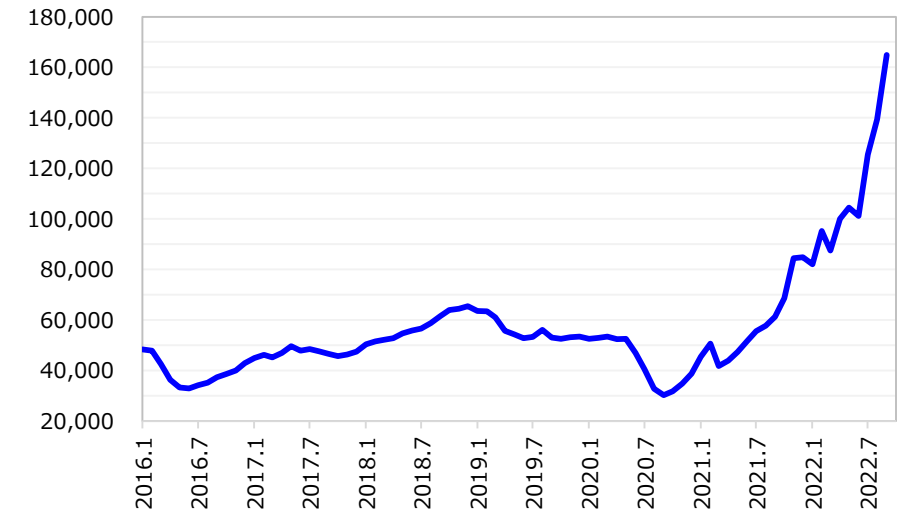
Scrap (yen/ t)



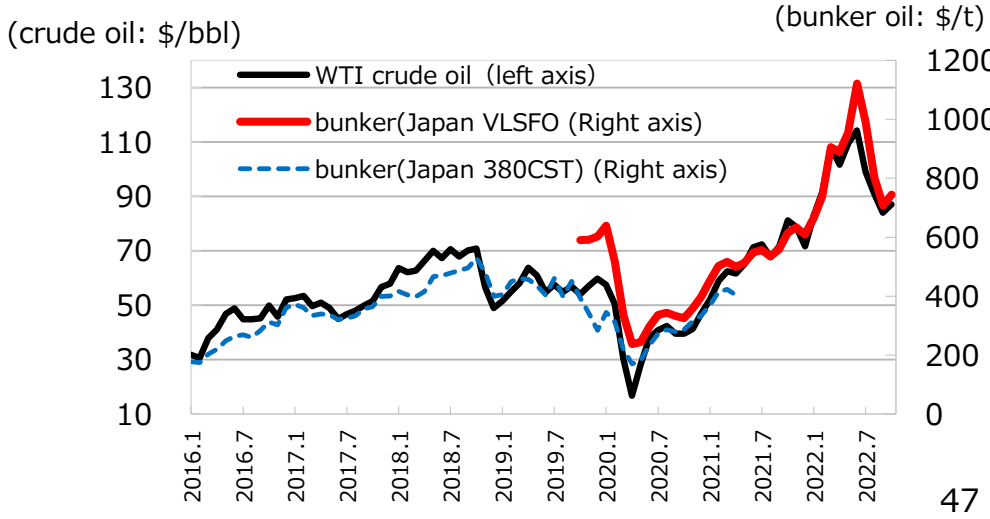
Spot Bulker (\$/B)



LNG (yen/ t)



Oil



Progress of Initiatives of Steel Business

(Structural Reforms and Strategic Investment in Japan)



Facilities		~FY19	FY20	FY21	FY22	FY23~	
Structural Reforms	Keihin District	Upstream Facilities				★ To be shut down (~Sep. 2023)	
		Hot rolling Facilities				★ To be shut down (~Sep. 2023)	
		Cold-rolling & Hot-dip Galvanizing Facilities		★ Shut down			
	Chiba District	Tin Mills	★ Shut down (2CAL·2ETL)		Facilities manufacturing steel sheet for cans were shut down (Aug.2022)		
Strategic Investments	Chiba & Kurashiki	Blast Furnace Refit		Kurashiki Refit No.4 BF(~Dec.2021) ★		Chiba Refit No.6 BF(Sep.2022~Jan.2023) ★	
	Kurashiki District	Continuous Casting Machine		★ Installed new Continuous Casting Machine (Jun.2021)			
		Extra-thick steel plate for offshore wind-power application				Reinforce extra-thick steel plate production line (Nov. 2023) ★	
		Electrical Steel Sheet Facilities				★ FY24 Reinforce Non-oriented Electrical Steel Sheet Production Line	
	Fukuyama District	Coke Oven		★ Renewed No.3 Coke Oven(A) ★ Renewed No.3 Coke Oven(B) (Jun.2021)			
		Sintering Machine		★ Installed new Sintering Machine			
		Energy Plants			★ Installed No.2 power generator in Joint Thermal Power		
		Ferro Coke Production Facility		← Develop ferro coke production technology →			
Overseas	Mexico NJSM	★ Begun Operating CGL for Automotive Applications					



Orders by Business Area

JFE

(billion yen)

Business Area	FY2021 Actual	FY2022 Forecast	Change	Main orders received in FY2022 ★...New projects received in 2Q of FY2022
Waste to Resource	203.9	224.0	20.1	Construction works of domestic waste treatment plant [★Okayama] Renewal construction of domestic waste treatment plant [Hokkaido, ★Aichi] Construction works of overseas waste treatment and power plant [Germany, UK]
Carbon Neutral	87.4	73.0	▲14.4	
Combined Utility Service	13.4	18.0	4.6	
Core Infrastructure	201.1	235.0	33.9	Construction works of fuel feeding pipe for LNG power plant [Hyogo] Construction works of bridge (★DAINI SHINMEI ROAD [Hyogo]) Construction works of overseas bridge [Ghana]
Total	505.8	550.0	44.2	

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

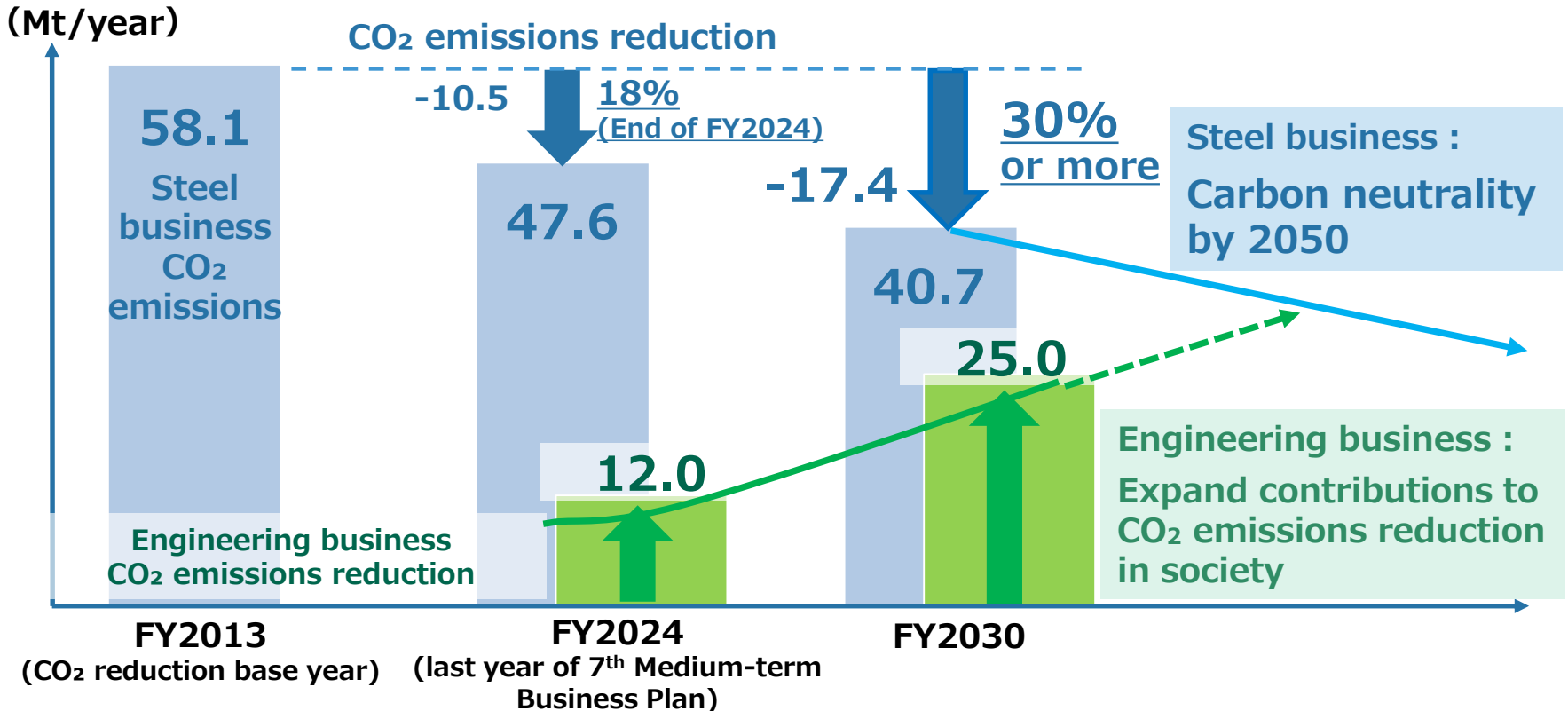


JFE Group's activities for Carbon neutrality

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.





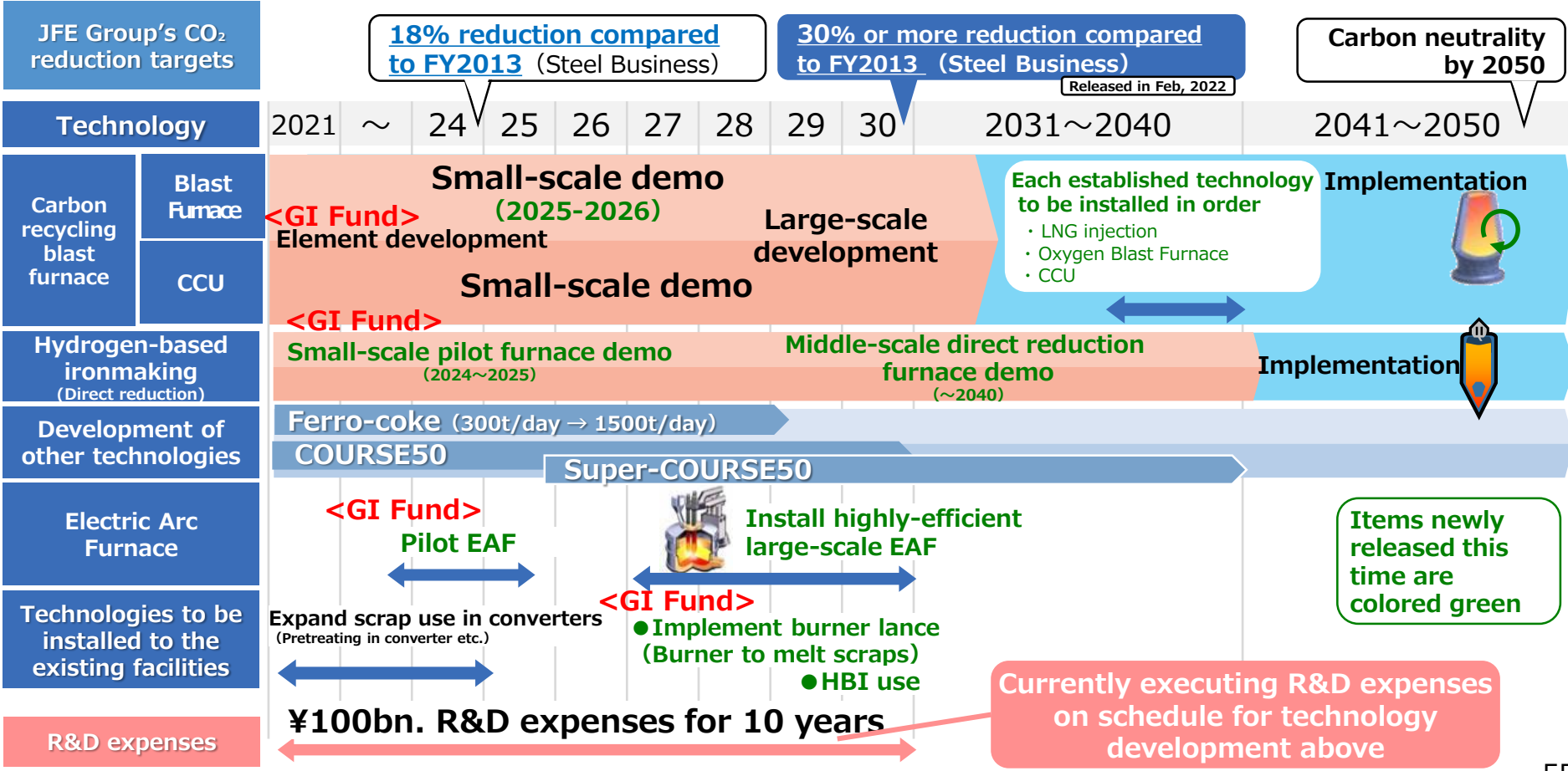
[Steel Business] Roadmap for Carbon Neutrality



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)

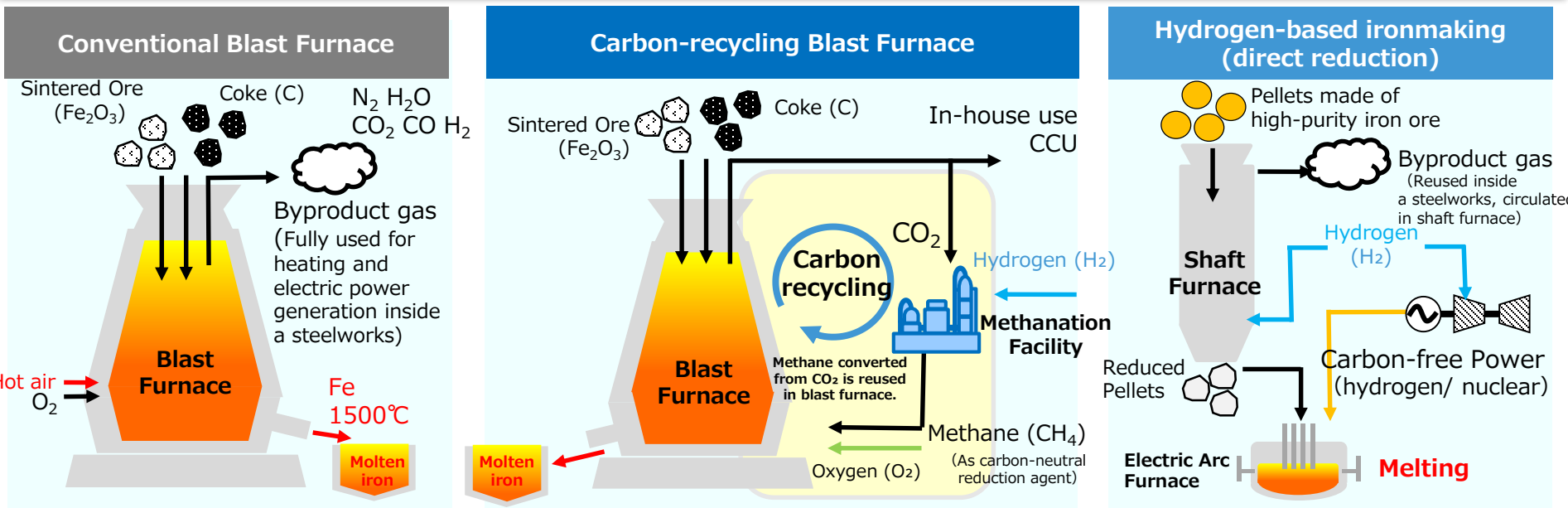




Carbon-recycle Blast Furnace

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)

Carry out SCM
Provide steel products

Carry out SCM

Provide steel products

Provide steel products

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

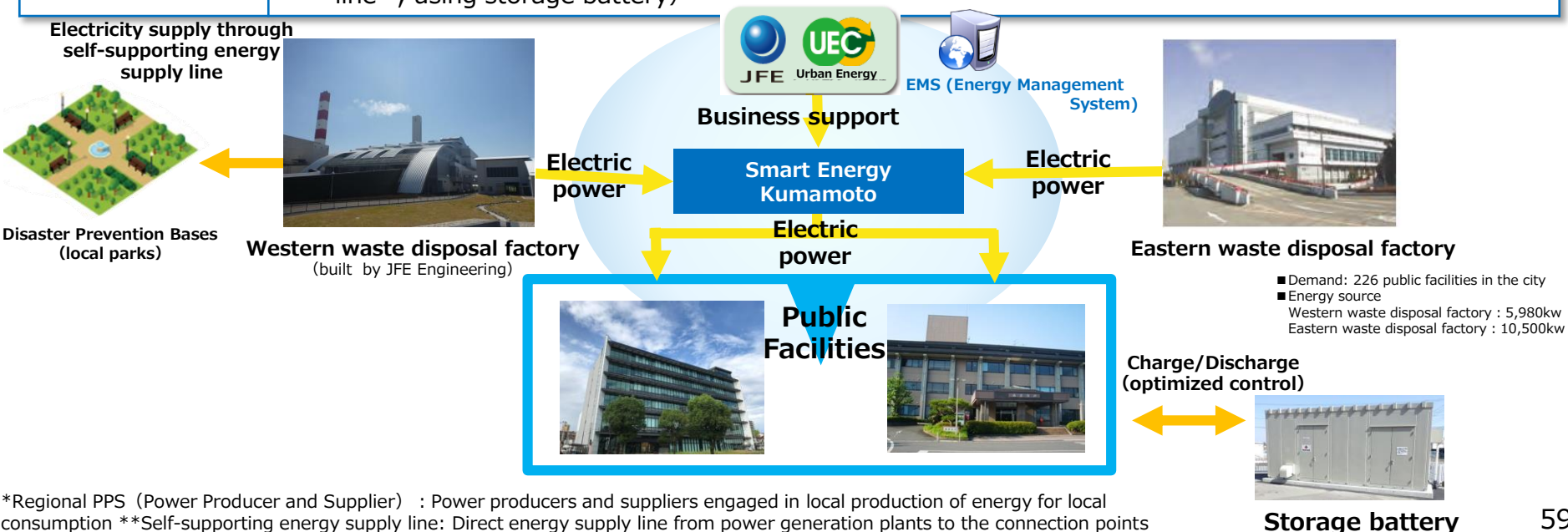
Social sustainability : Contribution to Regional Societies through Engineering Business

- 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)



*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



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)**

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

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

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 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



Expand collaboration with alliance partners



Establish SCM in new regions



Expand processing functions in coil centers

Synergy

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

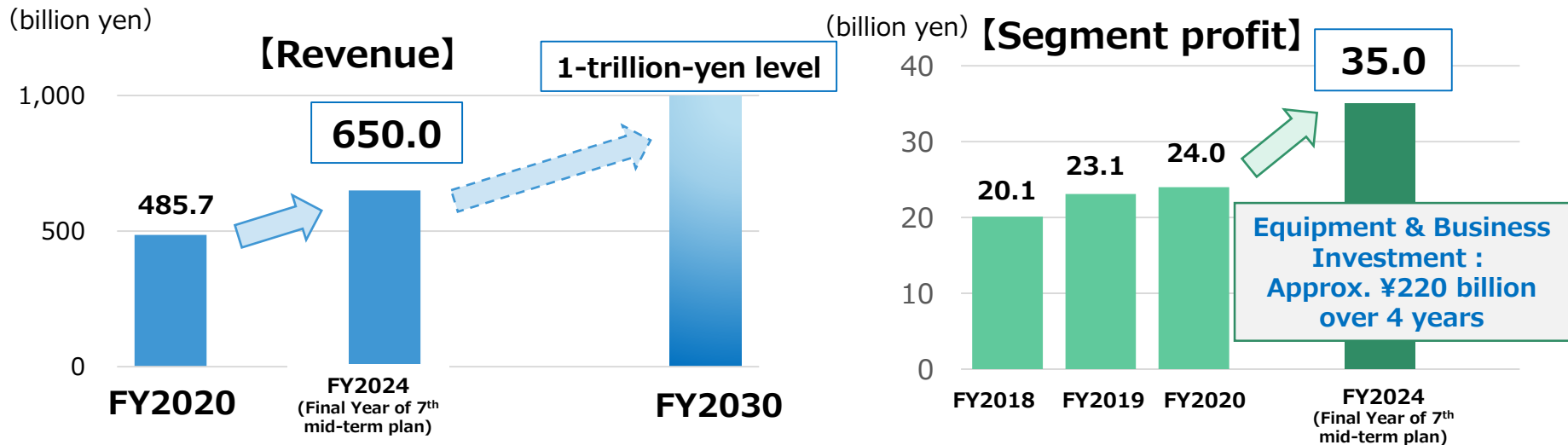
7th mid-term business plan <Engineering Business>

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

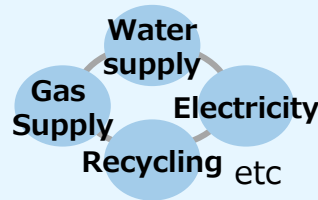
- Put priority in renewable energy (offshore wind-power generation, biomass power plant, solar power plant, geothermal power plant etc.)
- Develop carbon neutral technologies.



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.



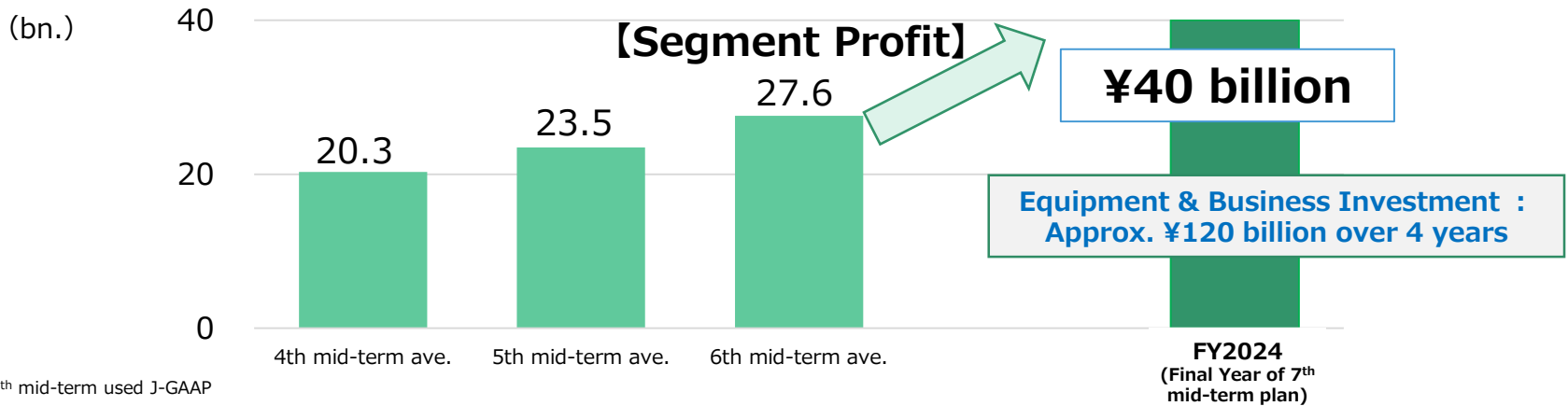
7th mid-term business plan <Trading Business>

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%

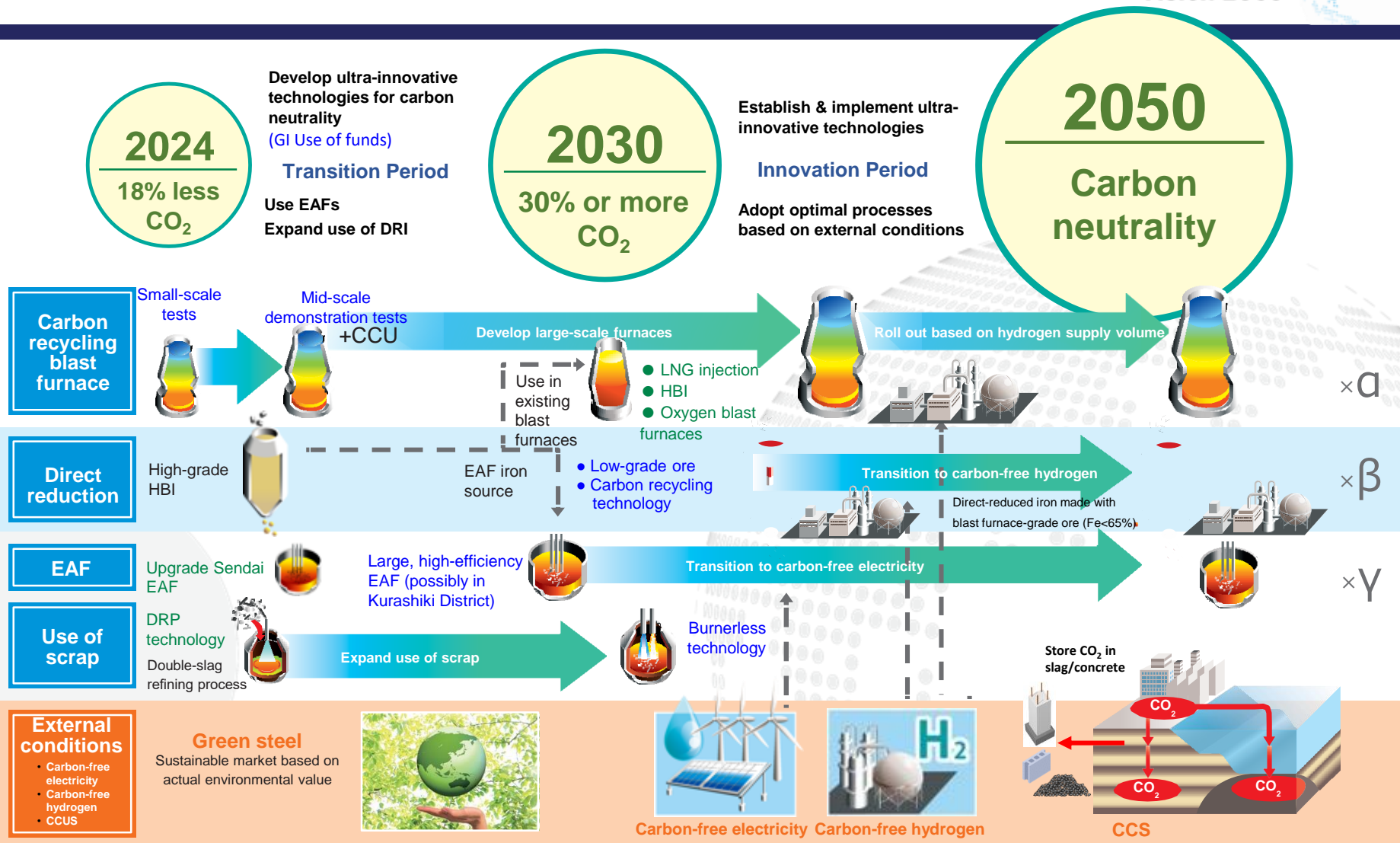
*1 For liabilities with equity subject to credit ratings, these equities reflect the evaluations of rating agencies

*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

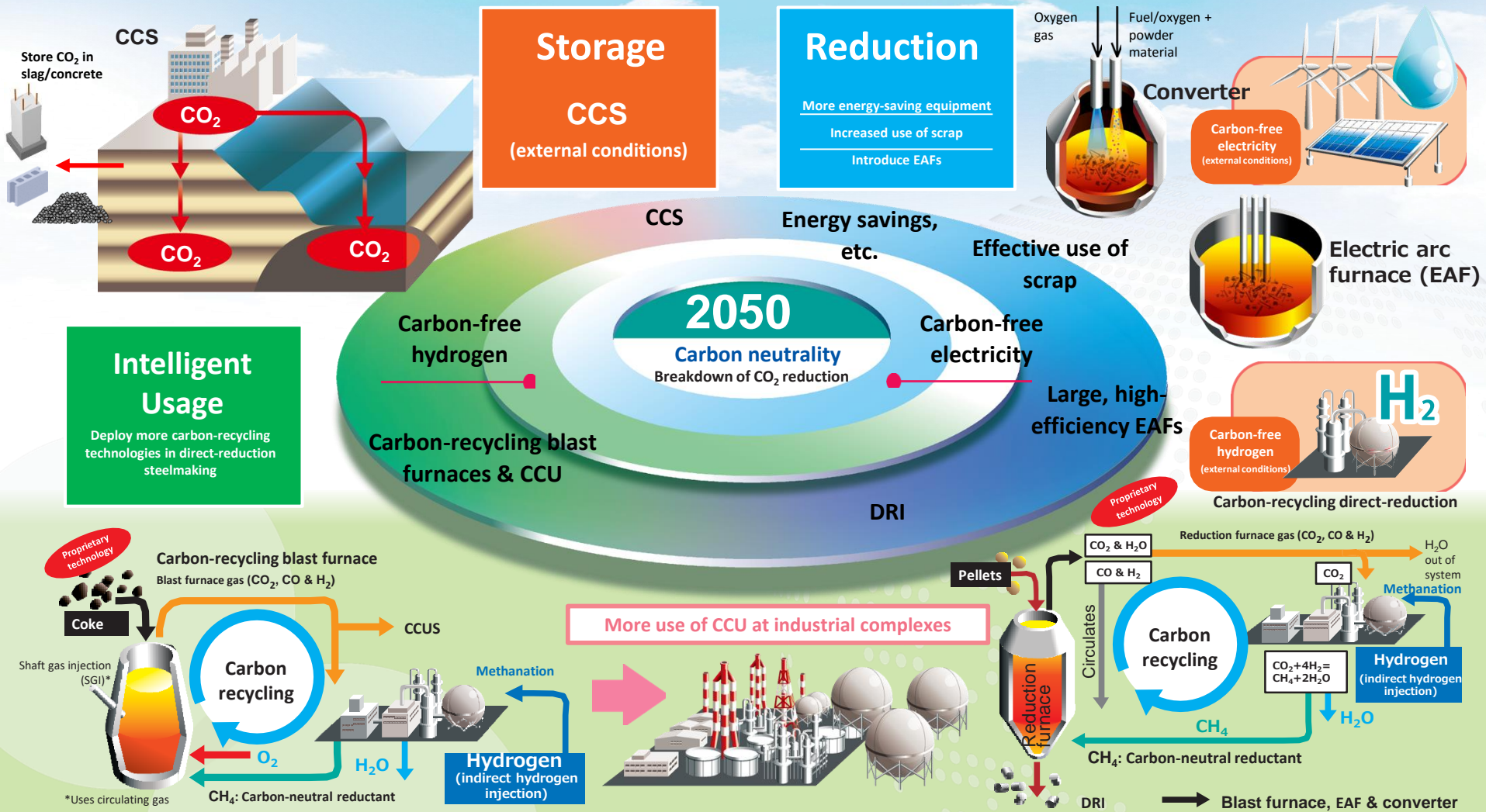


Pursue multilayered technology development, via GI Fund projects, etc., to discover the most proven technologies and then achieve carbon neutrality by deploying the most optimized configuration of green steelmaking processes.



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



- ▶ 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



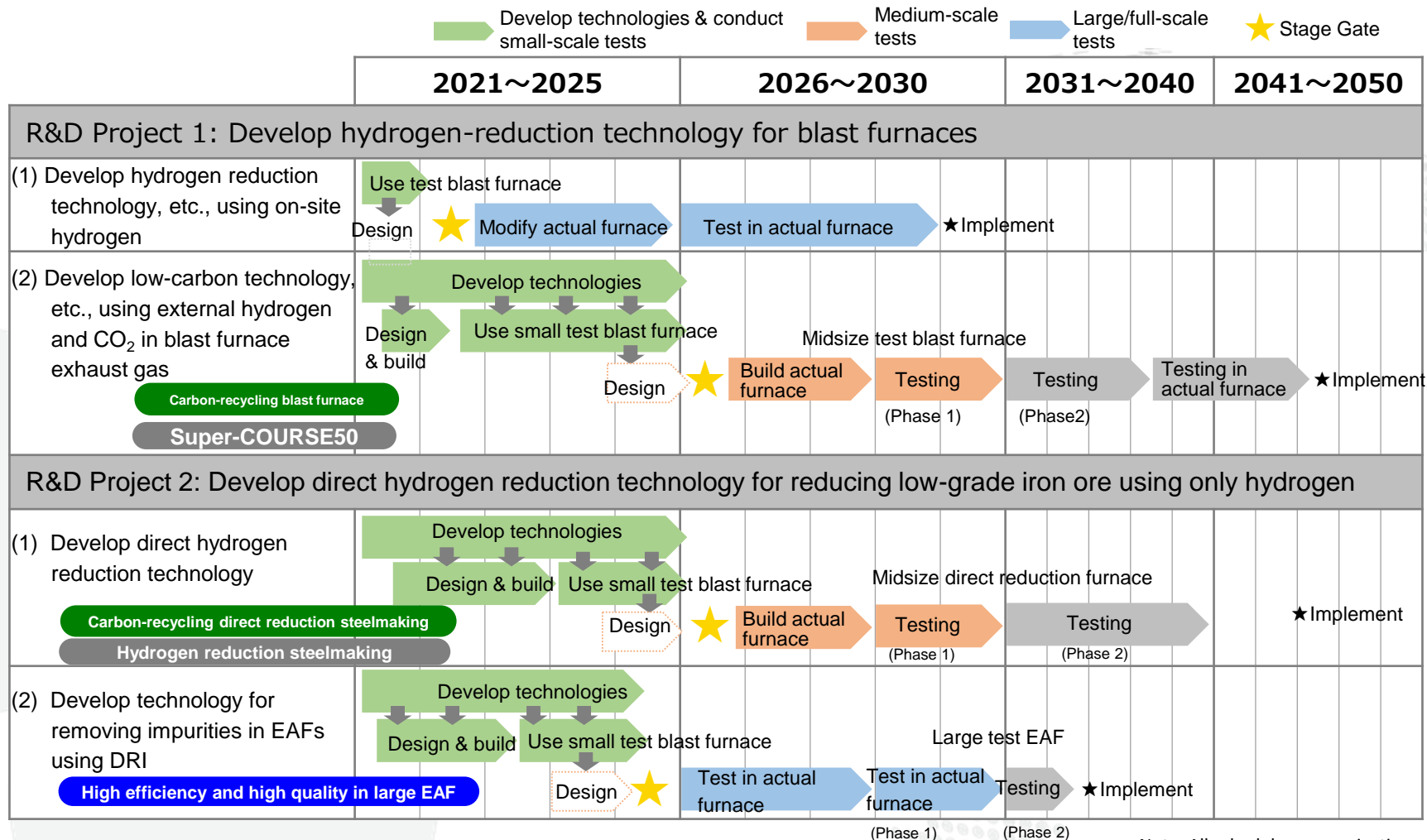
- ▶ This project, targeted at using hydrogen in ironmaking and commissioned and subsidized by NEDO*, was selected in December 2021 to receive support from the Green Innovation Fund.
- ▶ The fund is helping to accelerate the development of technologies for achieving carbon neutrality.
- ▶ Formed a consortium 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)

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

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