

# **Presentation on Results for the 2<sup>nd</sup> Quarter FY2023**

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**November 14, 2023  
Idemitsu Kosan Co.,Ltd.**

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# ■ Initiatives aimed at enhancing corporate and equity value

-Action to Implement Management that is Conscious of Cost of Capital And Stock Price-

# To Improve Corporate Value and Equity Value

**FY25 ROE target revised upward to “ $\geq 10\%$ ”  
Reduce cost of capital to rapidly achieve  
PBR  $\geq 1.0$**

**Further accelerate medium-term plan initiatives**

## **Business strategy**

- **Promote structural reforms**
  - Further enhance earnings from existing businesses and capital efficiency
  - Transform business and reduce GHG through expansion of new businesses

## **Capital/financial strategy**

- **Promote capital/ financial strategy to enhance return on capital**
- **Enhance shareholder returns**

**Expand the shareholder/investor base and improve communication**

# Upward Revision of the FY25 ROE Target

## ■ FY25 ROE target:

At the medium-term plan announcement (11/2022)	<b>Current revision</b>
8.0%	<b>≥ 10%</b>

## ■ Reason for the upward revision

- ✓ Considering both necessity for further improvement of return on capital from existing businesses and the cost of capital expected by the market; ROE ≥ 10% must be achieved

## ■ Direction of efforts aimed at achieving “ROE ≥ 10%”:

### 1. Further enhance earnings and capital efficiency from existing businesses

- Petroleum: Increase capacity utilization at refineries, increase earnings from overseas, reduce capital investments, etc.
- Functional materials: Leverage M&A, etc. to expand growing businesses
- Businesses facing challenges: Achieve stable profits of NSRP and power/renewable energy segment

### 2. Implement capital/financial strategy to enhance profitability

- Pursue optimal financing balance, taking business risk, credit ratings, return on capital, etc.
- Improve shareholder returns (next slide)

# Review of the Shareholder Returns Policy

## ■ Current

- ✓ Total payout ratio of at least 50% of cumulative net income excluding inventory impact in FY23-25
- ✓ Provide stable dividends of ¥120/share

**Stronger focus on return on capital and shareholder return**

## ■ Revised

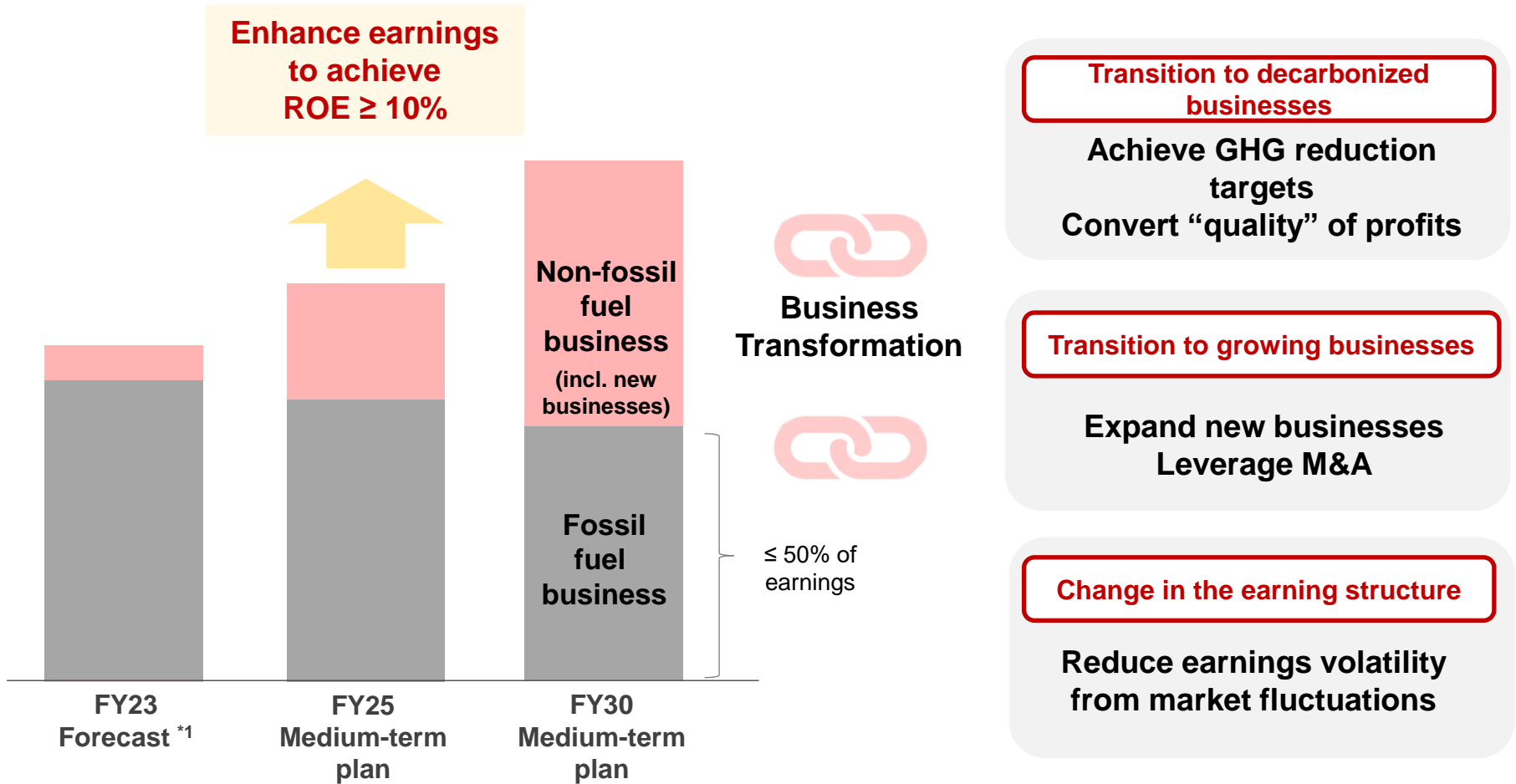
- ✓ Total payout ratio of at least 50% of cumulative net income excluding inventory impact in FY23-25
  - **Dividends: Increase to ¥160/share and set this as the minimum**
  - **Acquisition of treasury shares : Execute in a flexible manner while monitoring the stock price**

## ■ Shareholder returns in FY2023

- **Dividends: ¥160/share**
- **Acquisition of treasury shares: ¥35 billion**

(total payout ratio of around 50% in FY23 single)

# Reduce Cost of Capital through Business Transformation



**Achieve carbon neutrality, profit growth, and a stable earning structure through business transformation while also pursuing lower cost of capital**

# Major Progress towards Business Transformation

## Adapt to needs for CN of fossil fuel

Hydrogen/  
Ammonia

**Collaboration on supply chain establishment**  
(Tosoh, Tokuyama, Zeon, JERA, KEPCO)

Biofuel  
(SAF, etc.)

**Collaboration on security and procurement of feedstock**  
(J-OIL MILLS, LOPS)

Synthetic  
Fuel

**Production/Procurement**  
-study on practical application and diffusion in Japan  
(Saudi Aramco, HIF Global, HEPCO, JAPEX)



### ■ Our key strengths

- location of production and transportation
- production technologies
- overseas trading network
- SS network
- domestic sales network



## Enter electrification/EV value chain

Solid  
electrolytes

**Collaboration on development of high-performance materials and scale-up production of all-solid-state lithium-ion batteries**

Rare metal  
development

**Investment in mine exploration companies and projects**  
(Delta Lithium [lithium], Vecco [vanadium])



### ■ Our key strengths

- Mine development know-how
- Research technologies
- SS network



**Achieve social implementation and commercialization by taking advantage of Idemitsu's existing assets and through domestic and foreign partnerships**



# Towards the Achievement of GHG Reduction Targets (New Scope 3 Indicator)

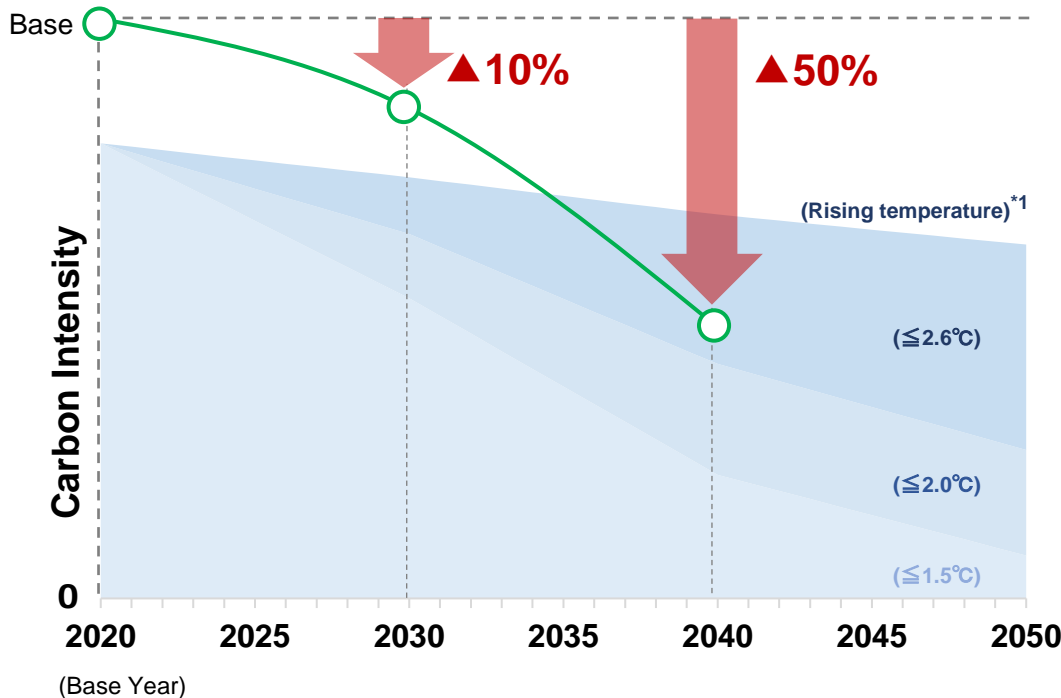
- ✓ Aiming to reduce emission throughout the supply chain through business transformation
- ✓ A new indicator “**carbon intensity**” will be used to set targets and promote further initiatives

[Formula]

$$\text{Carbon Intensity} = \frac{\text{CO}_2 \text{ emissions (Scope1+2+3)}^*1}{\text{Volume of energy supplied}}$$

[Target - vs. 2020]

**2030: -10%**  
**2040: -50%**



[Social Implementation Themes and Expected Business Size]

Theme	Units	2030	2040
Hydrogen/ammonia	0000 tons	100	400
SAF/biofuel/synthetic fuel	0000 KL	50	250
Mixing non-fossil fuels into gasoline*2	%	10*2	20
Idemitsu Green Energy Pellet	0000 tons	300	300~
Planting, CCS, etc.	0000 tons	100	700

\*To be revised as needed based on progress in investment screening for business structure reforms, etc.

# Expand the Shareholder/Investor Base and Improve Communication

## ■ Stock split

- ✓ The stock split will be implemented to increase shareholders who identify with our group's medium-to-long-term strategy by reducing the share price and making it easier to invest in our stock

Split ratio:	<b>1 : 5</b>	Minimum investment:	<b>~¥70,000 *1</b>	Record date: 12/31/2023 Effective date: 1/1/2024
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- ✓ Increase from ¥24 to ¥32/share for annual dividend after the stock split and set this as the minimum  
(increase from ¥120 to ¥160/post-split share and set this as the minimum)

FY 2023 Good Disclosure Company

## ■ Increase opportunities for dialogue with the capital markets and information disclosures

- ✓ We were ranked the 1<sup>st</sup> of the energy sector in good disclosure company selected by the Securities Analyst Association of Japan
- ✓ We will continue to increase the quality and quantity of disclosures



## ■ Created shareholder website “Idemitsu Connect”

- ✓ Created as a platform for individual shareholders to learn about and connect more with Idemitsu
- ✓ Planning the following events

:online live events featuring the president, site tours, shareholder perks lottery system, etc.



**Idemitsu Connect**

Shareholders' website

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# ■ Highlights

# Results for the 2Q FY2023

## ■ Summary

- ✓ Operating + equity income (segment income) decreased by ¥163.1 billion y-o-y, due to reversal of inventory impact resulting from increased crude oil prices in the previous fiscal year, etc.
- ✓ Segment income excluding inventory impact increased by ¥28.4 billion, as the positive impact of time-lag in the petroleum business, etc. offset the negative impact of mine size reductions in the coal business and the decrease in coal prices in reaction to the sharp rise observed in the previous year

[¥ billions]

	2Q FY2022	2Q FY2023	Change
<b>Operating Income + Equity Income</b>	374.3	211.2	(163.1)
<i>Inventory impact</i>	208.2	16.7	(191.5)
<i>Exc. inventory impact</i>	166.2	194.6	+28.4
<b>Net Income Attributable to Owners of the Parent</b>	280.8	164.9	(115.9)
<i>Exc. inventory impact</i>	136.4	153.4	+17.0

# Revision of Forecasts for FY2023

## ■ Overview

- ✓ Revised forecasts upward to reflect changes in the external environment such as increased crude oil prices and further JPY depreciation

[¥ billions]

	5/9 Forecast	Revised Forecasts	Change
<b>Operating Income + Equity Income</b>	155	265	+110
<i>Inventory impact</i>	(30)	45	+75
<i>Exc. inventory impact</i>	185	220	+35
<b>Net Income Attributable to Owners of the Parent</b>	100	180	+80
<i>Exc. inventory impact</i>	120	150	+30

## ■ Shareholder returns (dividends and acquisition of treasury shares)

- ✓ Increased the FY23 dividend forecast from ¥120/share to ¥160/year (interim: ¥80, FY end: ¥80\*1) in light of the change in shareholder return policy
- ✓ Acquiring treasury shares of ¥35 billion based on the revised FY23 earnings forecast
- ✓ As a result, we expect the total payout ratio to exceed 50% in FY23

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## ■ Results for the 2Q FY2023

# Key Topics

## ■ Trends in Petroleum Demand and Sales

- ✓ Demand for core products, particularly gasoline, has stabilized after recovery from reduction under COVID-19
- ✓ Jet fuel demand has remained on a recovery trend since FY2020

	FY2020	FY2021	FY2022	2Q FY2023
Core products	94.6%	98.6%	<b>100.9%</b>	<b>98.0%</b>
<i>Gasoline</i>	90.4%	99.6%	<b>101.3%</b>	<b>98.5%</b>
Jet fuel	54.2%	126.0%	<b>136.8%</b>	<b>108.3%</b>

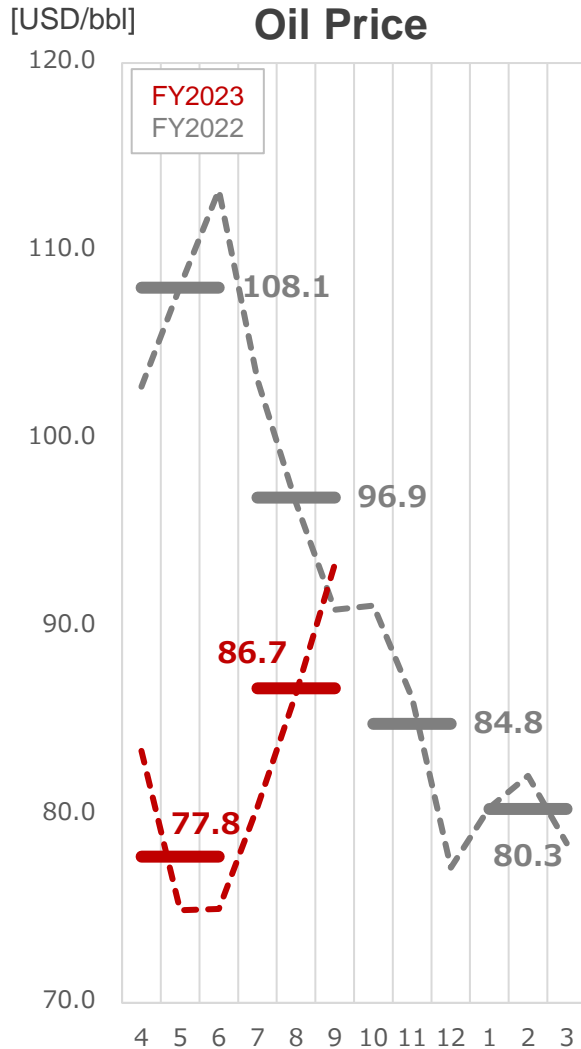
\*Idemitsu sales growth rate (y-o-y)

## ■ Situation of Nghi Son Refinery in Vietnam

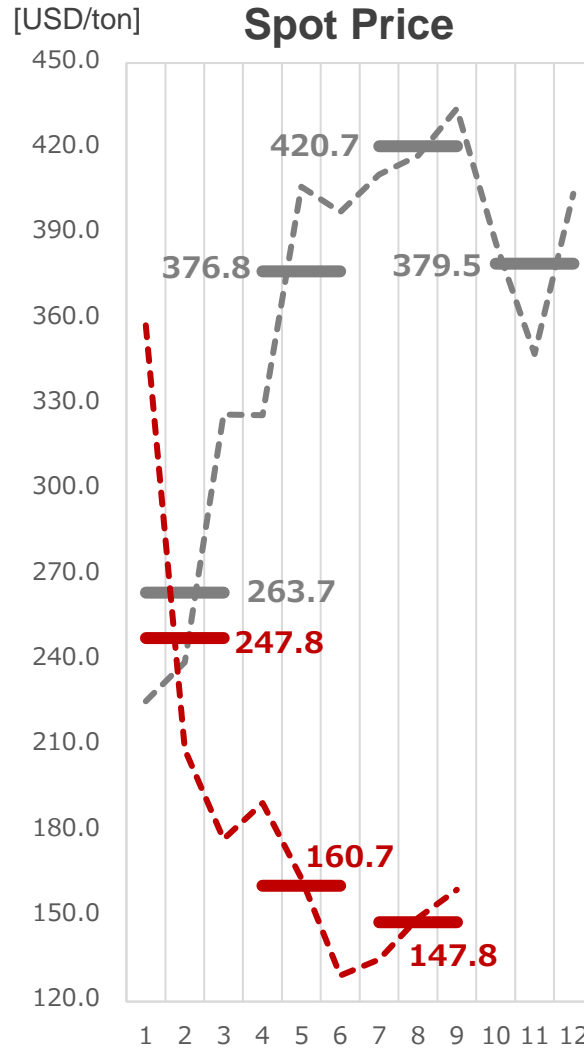
- ✓ Almost break-even at the operating profit level in 1H; forecasting positive profits for the full fiscal year
- ✓ Regular maintenance was completed as planned; anticipating earnings improvement in the next fiscal year due to enhanced productivity, etc.
- ✓ Continuing constructive discussions between sponsors to pursue further earnings improvement

# Operating Environment

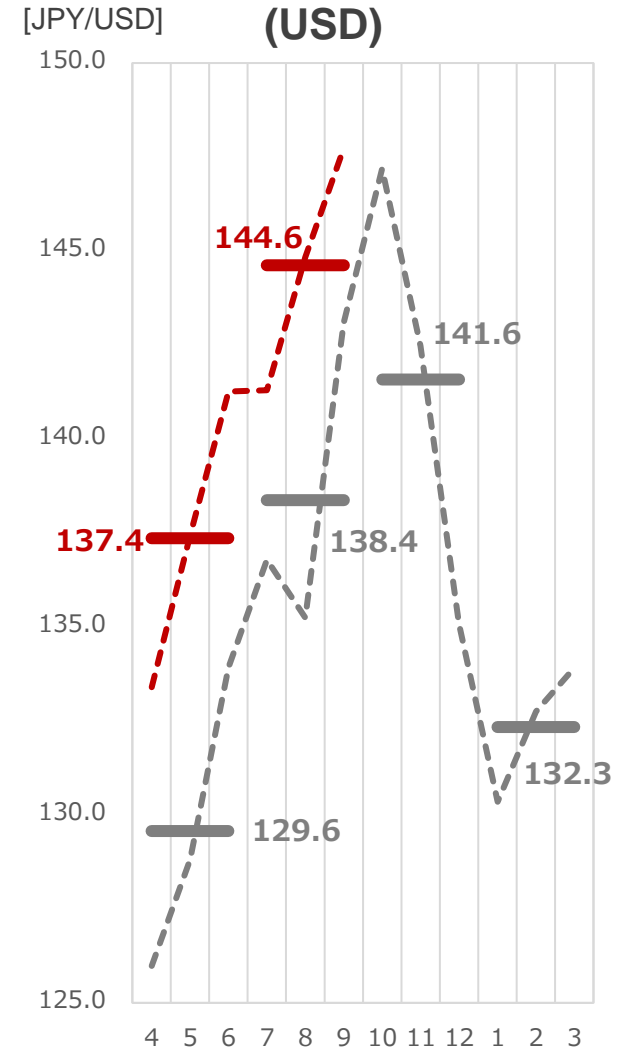
## Dubai Crude



## Australian Coal



## Exchange Rate





# Overview

## ■ Crude Oil/Coal/Exchange Rate

[USD/bbl, USD/ton, JPY/USD]

	2Q FY2022	2Q FY2023	Change	
Crude Oil (Dubai)	102.5	82.3	(20.2)	(19.7%)
Crude Oil (Brent)*	107.6	79.8	(27.8)	(25.8%)
Australian Coal Spot Price*	320.3	204.3	(116.0)	(36.2%)
Exchange Rate (TTM)	134.0	141.0	+7.0	+5.2%

\*Brent prices and Australian coal spot prices are averages based on the calendar year (Jan-Jun).

## ■ Consolidated Income Statement(Summary)

[¥ billions]

	2Q FY2022	2Q FY2023	Change	
Net Sales	4,814.1	4,024.5	(789.6)	(16.4%)
Operating Income	354.1	202.9	(151.2)	(42.7%)
<i>Inventory impact</i>	208.2	16.7	(191.5)	(92.0%)
Equity Income	20.3	8.3	(11.9)	(58.9%)
<b>Operating Income + Equity Income</b>	<b>374.3</b>	<b>211.2</b>	<b>(163.1)</b>	<b>(43.6%)</b>
<i>Excluding inventory impact</i>	<b>166.2</b>	<b>194.6</b>	<b>+28.4</b>	<b>+17.1%</b>
Ordinary Income	381.2	226.5	(154.8)	(40.6%)
Extraordinary Income/Losses	17.4	1.3	(16.0)	(92.2%)
<b>Net Income Attributable to Owners of the Parent</b>	<b>280.8</b>	<b>164.9</b>	<b>(115.9)</b>	<b>(41.3%)</b>
<i>Excluding inventory impact</i>	<b>136.4</b>	<b>153.4</b>	<b>+17.0</b>	<b>+12.5%</b>

# Segment Information

## ■ Operating + Equity Income

[¥ billions]

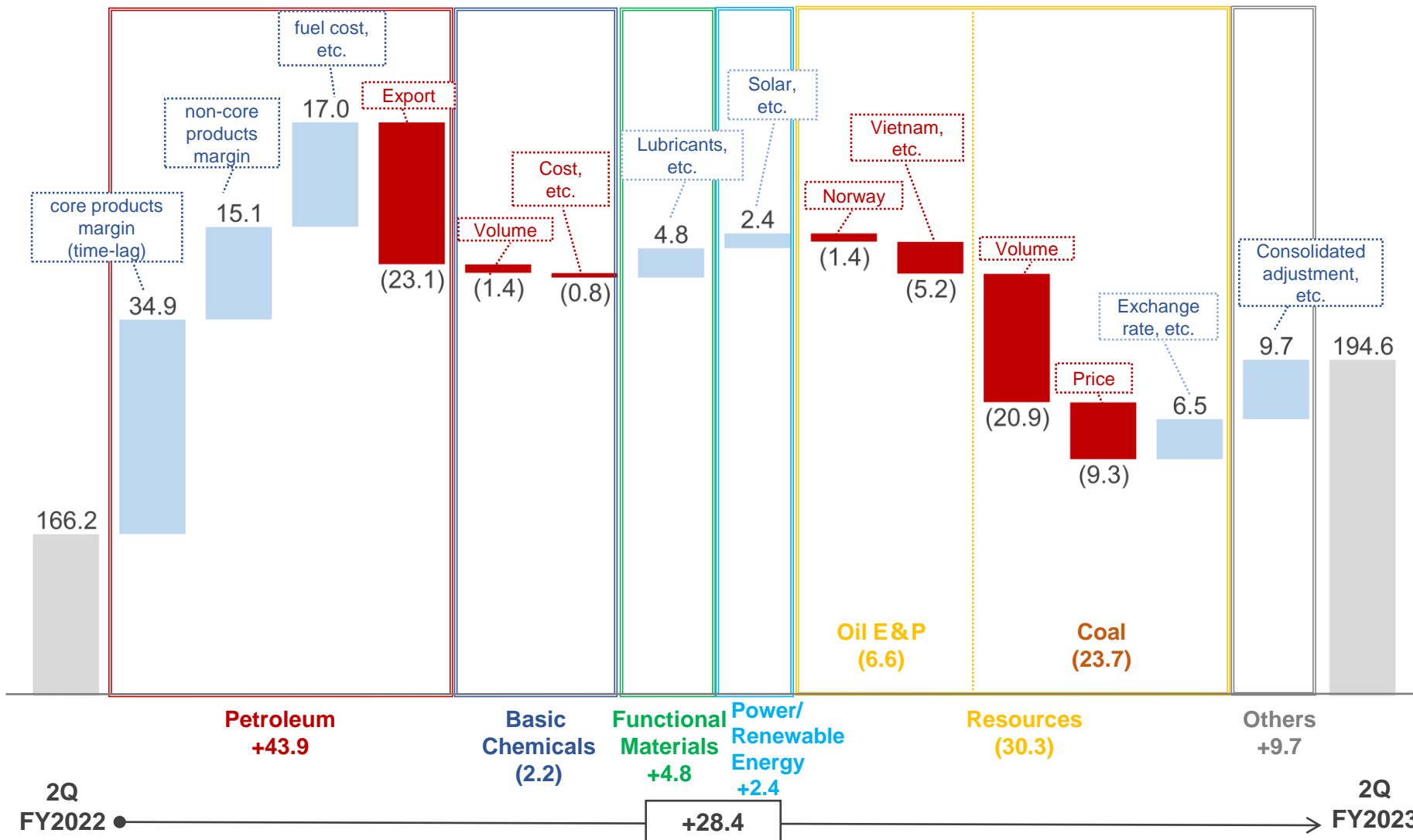
	2Q FY2022	2Q FY2023	Change	
<b>Petroleum</b>	269.3	121.7	(147.6)	(54.8%)
<i>Excluding inventory impact</i>	61.1	105.0	+43.9	+71.9%
<b>Basic Chemicals</b>	14.2	12.0	(2.2)	(15.3%)
<b>Functional Materials</b>	8.6	13.4	+4.8	+55.9%
<b>Power and Renewable Energy</b>	(2.9)	(0.4)	+2.4	—
<b>Resources*</b>	100.1	69.8	(30.3)	(30.3%)
<i>Oil Exploration and Production</i>	17.1	10.5	(6.6)	(38.6%)
<i>Coal</i>	83.0	59.3	(23.7)	(28.5%)
<b>Others/Reconciliation</b>	(14.9)	(5.2)	+9.7	—
<b>Total</b>	374.3	211.2	(163.1)	(43.6%)
<i>Excluding inventory impact</i>	166.2	194.6	+28.4	+17.1%

\*Fiscal year for Coal Oil E&P and Coal included in the Resources Segment end in Dec.

# Segment Information

## Factors Affecting Operating + Equity Income (excluding inventory impact, y-o-y)

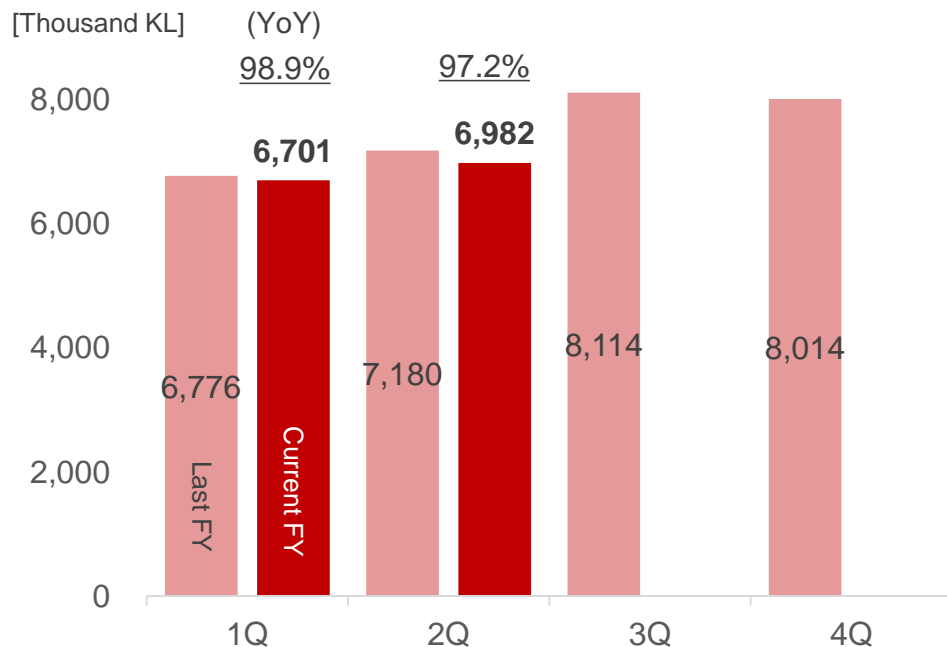
[ ¥ billions]



# Segment Information

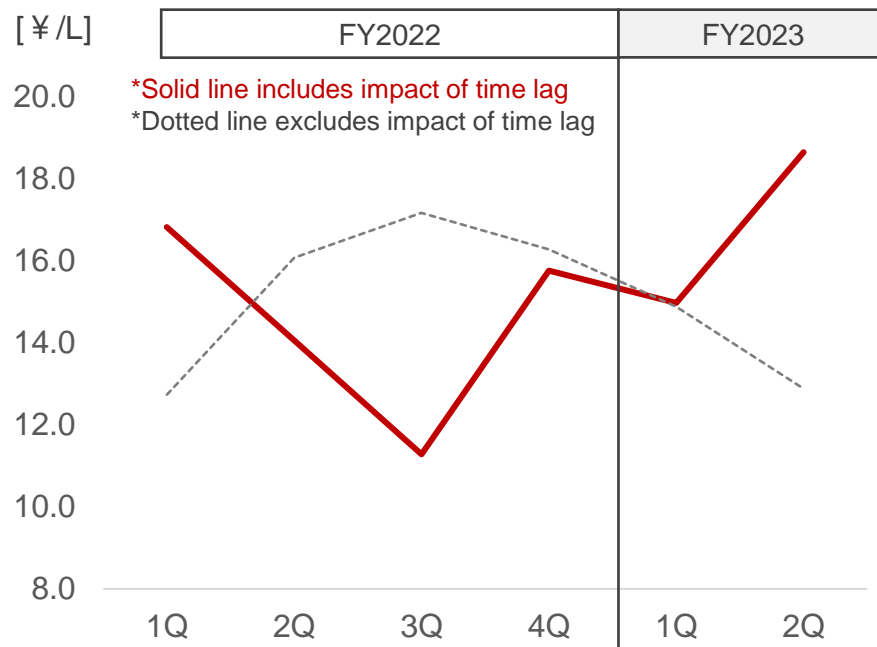
**[Petroleum]** YoY+¥43.9 (2Q FY22 : ¥61.1bn ➔ 2Q FY23 : ¥105.0bn)

**[Y-o-y change in Petroleum sales volume (core products)]**



**[Trends in Domestic Petroleum Product Margin\*]**

\*Average margin of gasoline, diesel oil, kerosene, and heavy oil A (domestic spot – crude oil)



- ✓ Profit increased as a result of improved domestic core product margins due to positive time-lag, improved non-core product margins and a decrease in fuel costs, etc.
- ✓ The above was partially offset by a decrease in export volume due to regular maintenance

# Segment Information

**[Basic Chemicals]** YoY-¥2.2bn (2Q FY22: ¥14.2bn ➡ 2Q FY23: ¥12.0bn)

- ✓ Decreased as a result of sales volume reduction and cost increase due to shut down maintenance
- ✓ Product margin was unchanged in total [USD/ton]

Product	2Q FY22		2Q FY23		Change	
	Price	Margin	Price	Margin	Price	Margin
PX	1,174	379	1,051	427	(122)	+ 48
MX	1,103	308	957	333	(145)	+ 25
SM	1,295	500	1,030	406	(265)	(95)

**[Functional Materials]** YoY+¥4.8bn (2Q FY22: ¥8.6bn ➡ 2Q FY23: ¥13.4bn)

- ✓ Lubricants: Increased due to reversal of negative time-lag impact from the previous FY
- ✓ Performance chemicals: Decreased due to reversal of soaring market prices in some products in the previous FY
- ✓ Electronic materials: Decreased due to reduced sales volume resulting from current weak demand for Smartphones and OLED-TVs

**[Power/Renewable Energy]** YoY+¥2.4bn (2Q FY22: -¥2.9bn ➡ 2Q FY23 : -¥0.4bn)

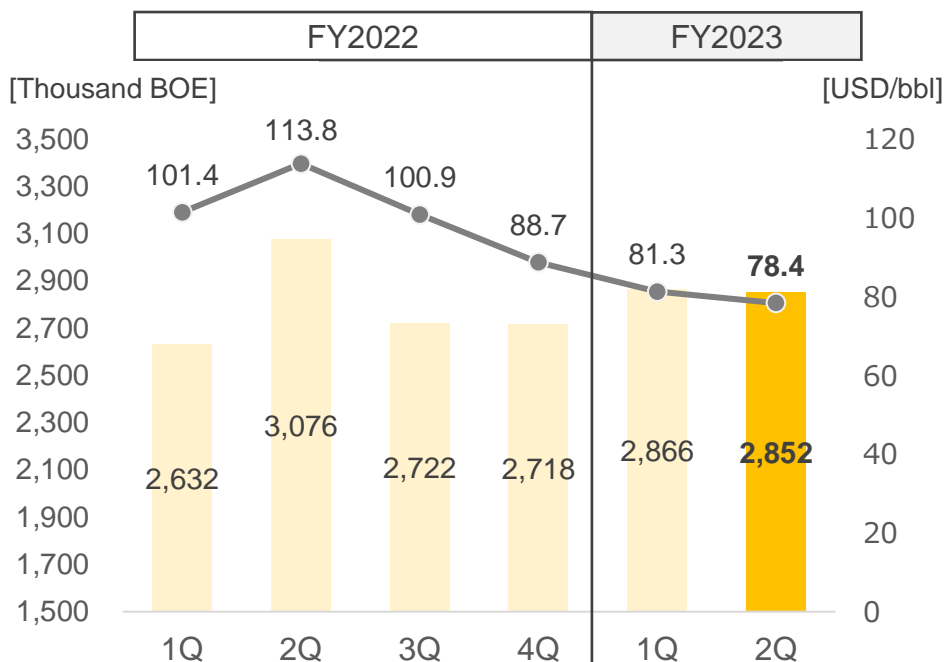
- ✓ Power: Improved mainly due to initiatives towards sales within self generation
- ✓ Solar: Improved due to cost reductions based on structural reforms and sales expansion of solar panels for self-consumption model

# Segment Information

**[Oil E&P]** YoY -¥6.6 bn

(2Q FY22 : ¥17.1bn ➔ 2Q FY23 : ¥10.5 bn)

<Crude Oil Production Volume and Brent Crude Oil Price Trends>



- ✓ Production volume remained flat y-o-y
- ✓ Profit decreased due to a fall in crude oil prices and to cost-related factors

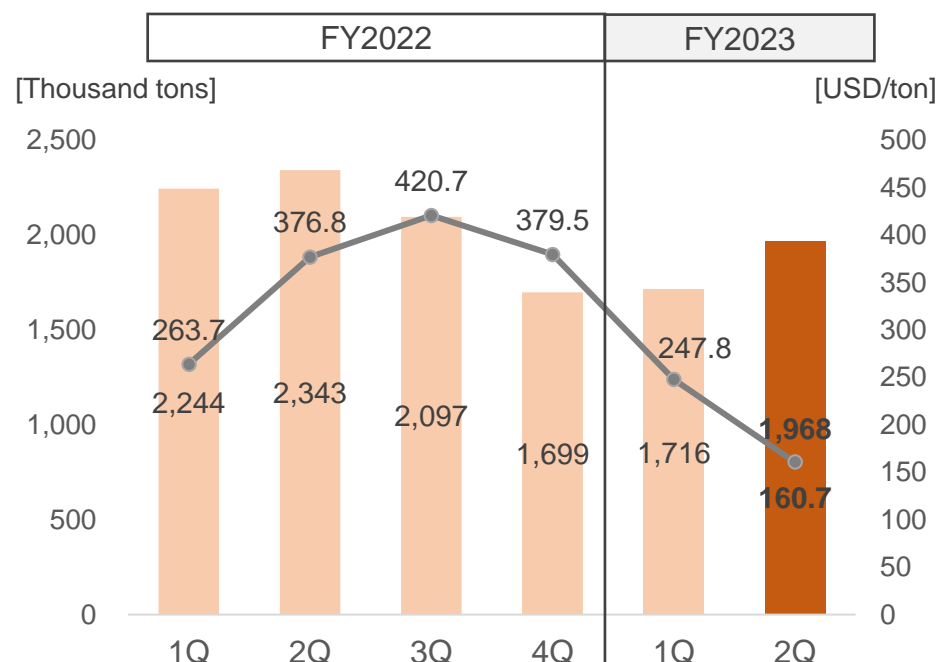
\* Figures reflect share of rights owned in resource development affiliates

\* Revised errors in Vietnam FY22 and FY23 1Q figures

**[Coal]** YoY -¥23.7 bn

(2Q FY22 : ¥83.0bn ➔ 2Q FY23 : ¥59.3 bn)

<Coal Production Volume and Australian Coal Spot Price Trends>



- ✓ Profit fell due to a decrease in production volume following a size reduction of mines as well as the reversal of the strong market conditions seen in the previous FY

\* Terminated mining at Muswellbrook mines in March 2023

# Balance Sheet

[¥ billions]

	3/31/2023	9/30/2023	Change		3/31/2023	9/30/2023	Change
Cash and Deposits	105.2	173.1	+67.9	Total Current Liabilities	2,164.0	2,317.4	+153.4
Receivables, Inventory, etc.	2,626.9	2,826.3	+199.4	Total Fixed Liabilities	1,072.1	1,055.9	(16.2)
Total Current Assets	2,732.1	2,999.4	+267.3	Total Liabilities	3,236.1	3,373.3	+137.2
Tangible Fixed Assets	1,390.0	1,390.2	+0.2	Shareholders' Equity and Other Comprehensive Income	1,614.5	1,767.3	+152.8
Other Fixed Assets	743.3	764.8	+21.5	Noncontrolling Interests	14.8	13.7	(1.0)
Total Fixed Assets	2,133.3	2,155.0	+21.7	Total Net Assets	1,629.3	1,781.1	+151.7
Total Assets	4,865.4	5,154.3	+288.9	Total Liabilities and Net Assets	4,865.4	5,154.3	+288.9

Net D/E ratio	0.87	0.75	(0.12)
Total Interest-bearing debt	1,503.4	1,495.2	(8.2)
Equity ratio	33.2%	34.3%	+ 1.1%

# Statement of Cash Flows

[¥ billions]

<b>Cash Flow from Operating Activities</b>	<b>206.9</b>
Net Income before tax	227.8
Depreciation Expense	53.7
Change in Working Capital	(115.5)
Other	40.9
<b>Cash Flow from Investing Activities</b>	<b>(58.2)</b>
Purchase of tangible fixed assets	(40.0)
Other	(18.2)
<b>Cash Flow from Financing Activities</b>	<b>(84.3)</b>
Change in borrowings	(30.4)
Dividend payments and share buyback	(49.8)
Other	(4.2)
Translation gains/losses	3.2
Change in cash and deposits	67.6
<b>Cash and Cash Equivalents - Beginning Balance</b>	<b>103.1</b>
<b>Cash and Cash Equivalents - Ending Balance</b>	<b>170.7</b>



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## ■ Forecasts for FY2023

# Forecasts for FY2023

## ■ Crude Oil/Coal/Exchange Rate

[USD/bbl, USD/ton, JPY/USD]

	5/9 Forecasts	Revised Forecasts	Change		Assumptions (from Oct.)
Crude Oil (Dubai)	80.0	83.6	+3.6	+4.5%	85.0
Crude Oil (Brent)*	85.0	83.2	(1.8)	(2.1%)	86.5
Australian Coal Spot Price *	170.0	175.3	+5.3	+3.1%	145.0
Exchange Rate (TTM)	130.0	140.5	+10.5	+8.1%	140.0

\*Brent prices and Australian coal spot prices are averages based on the calendar year (Jan-Dec).

## ■ Consolidated Income Statement(Summary)

[¥ billions]

	5/9 Forecasts	Revised Forecasts	Change	
Net Sales	8,300.0	8,650.0	+350.0	+4.2%
Operating Income	140.0	250.0	+110.0	+78.6%
<i>Inventory impact</i>	(30.0)	45.0	+75.0	—
Equity Income	15.0	15.0	—	—
<b>Operating Income + Equity Income</b>	<b>155.0</b>	<b>265.0</b>	<b>+110.0</b>	<b>+71.0%</b>
<i>Excluding inventory impact</i>	<i>185.0</i>	<i>220.0</i>	<i>+35.0</i>	<i>+18.9%</i>
Ordinary Income	150.0	270.0	+120.0	+80.0%
Extraordinary Income/Losses	(8.0)	(17.0)	(9.0)	—
<b>Net Income Attributable to Owners of the Parent</b>	<b>100.0</b>	<b>180.0</b>	<b>+80.0</b>	<b>+80.0%</b>
<i>Excluding inventory impact</i>	<i>120.0</i>	<i>150.0</i>	<i>+30.0</i>	<i>+25.0%</i>

# Segment Information

## ■ Operating + Equity Income

[¥ billions]

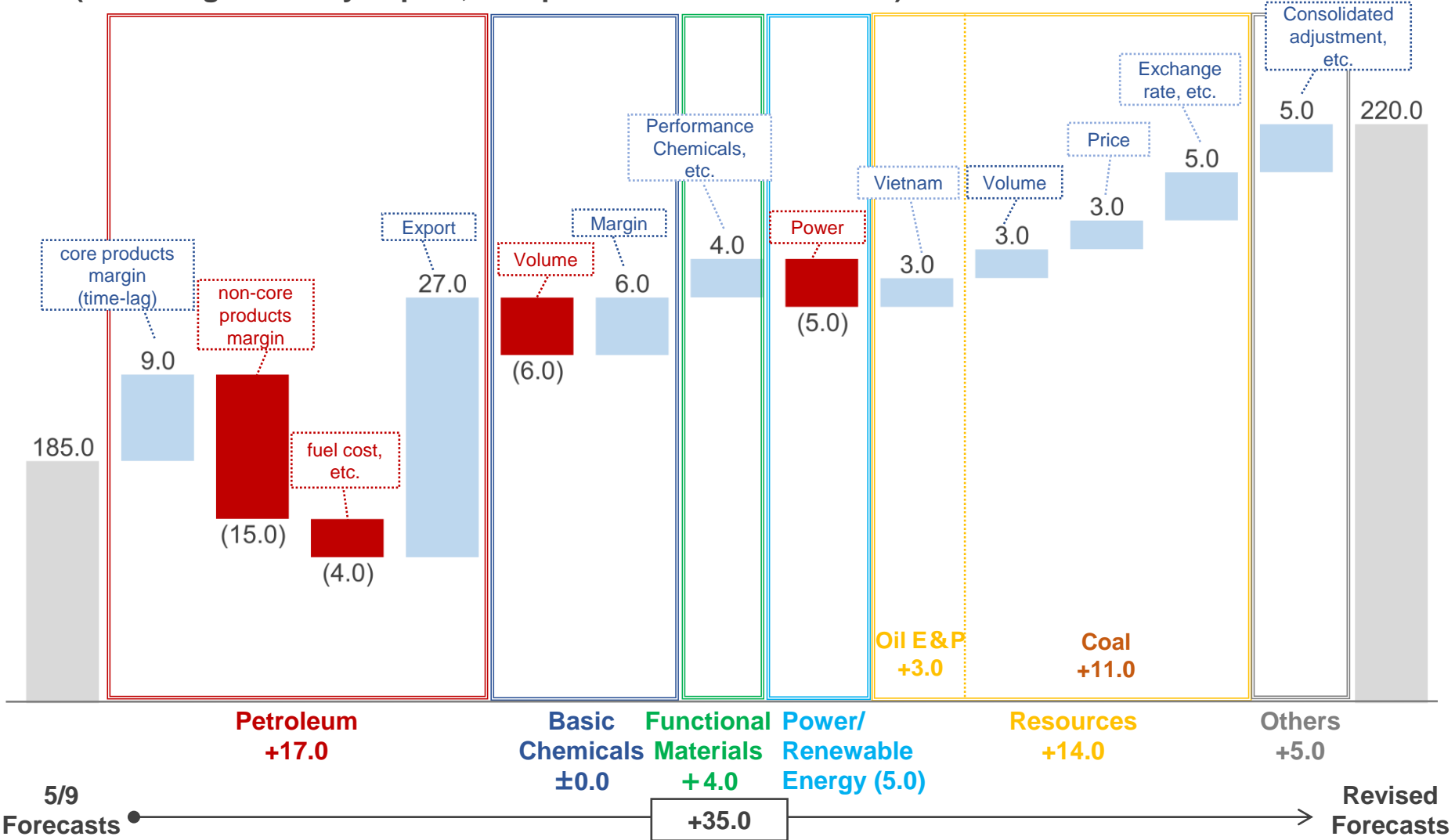
	5/9 Forecasts	Revised Forecasts	Change	
<b>Petroleum</b>	43.0	135.0	+92.0	+214.0%
<i>Excluding inventory impact</i>	73.0	90.0	+17.0	+23.3%
<b>Basic Chemicals</b>	21.0	21.0	—	—
<b>Functional Materials</b>	19.0	23.0	+4.0	+21.0%
<b>Power and Renewable Energy</b>	0.0	(5.0)	(5.0)	—
<b>Resources*</b>	95.0	109.0	+14.0	+14.7%
<i>Oil Exploration and Production</i>	13.0	16.0	+3.0	+23.1%
<i>Coal</i>	82.0	93.0	+11.0	+13.4%
<b>Others/Reconciliation</b>	(23.0)	(18.0)	5.0	—
<b>Total</b>	155.0	265.0	+110.0	+71.0%
<i>Excluding inventory impact</i>	185.0	220.0	+35.0	+18.9%

\*Fiscal year for Oil E&P and Coal included in the Resources Segment end in Dec.

# Segment Information

- Factors Affecting Operating + Equity Income (excluding inventory impact, Compared to the 5/9 forecasts)

[¥ billions]



# Segment Information

**[Petroleum]** +¥17 bn (5/9 announcement: ¥73 bn ➡ revised forecast: ¥90 bn)

- ✓ Revised upward to reflect improved export margins, positive time-lag effects resulting from a rise in crude oil prices, etc.
- ✓ A fall in non-core product margins and increased fuel costs partially offset by improvements in the overseas trading business

**[Basic Chemicals]** ±¥0 (5/9 announcement: ¥21 bn ➡ revised forecast: ¥21 bn)

- ✓ Decline in sales volume due to sluggish demand for olefin and other derivatives offset by a recovery in the aroma market price

[USD/ton]

Product	5/9 Announcement		Current Forecast		Change	
	Price	Margin	Price	Margin	Price	Margin
PX	960	290	980	330	+20	+40
MX	870	200	890	240	+20	+40
SM	1,090	420	1,060	410	(30)	(10)

**[Functional Materials]** +¥4 bn (5/9 announcement: ¥19 bn ➡ revised forecast: ¥23 bn)

- ✓ Functional chemicals: Revised upward to reflect price increases, etc.
- ✓ Asphalt: Revised downward due to increased raw material cost such as heavy oil fractions
- ✓ Lubricants: No change, with a volume decrease offset by cost reductions, etc.

## Segment Information

[Power/Renewable Energy] -¥5 bn (5/9 announcement: ¥0 ➡ revised forecast: -¥5 bn)

- ✓ Power business: Factored by the decrease in generated power volume due to an extension of the regular power plant maintenance period and reflected risk of a profit decrease in wholesale resulting from a fall in market prices
- ✓ Solar business: No change
- ✓ Sold Kunitomi Plant, which used to manufacture solar panels, anticipating cost reduction effects in the next fiscal year

[Oil E&P] +¥3 bn (5/9 announcement: ¥13 bn ➡ revised forecast: ¥16 bn)

- ✓ Revised upward due to increased production volume in Vietnam as well as JPY depreciation, etc.

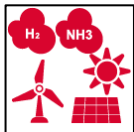
[Coal] +¥11 bn (5/9 announcement: ¥82 bn ➡ revised forecast: ¥93 bn)

- ✓ Revised upward due to JPY depreciation as well as production volume increase at Ensham coal mine, etc.

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# ■ Progress on the Medium-Term Plan

\*The icons on topics (from next page) related to progress in the medium-term plan shows business areas below



**Energy  
one step ahead**



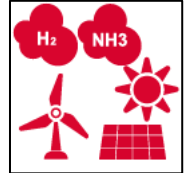
**Diverse resource  
conservation  
/circulation solutions**



**Smart Yorozuya**

# Topics Affecting Progress on the Medium-term Plan (1/4)

- **Commenced cooperation toward mass production of all-solid-state batteries for BEVs with Toyota**
  - ✓ Working together in developing mass production technology of solid electrolytes, improving productivity and establishing a supply chain
  - ✓ Seeking the successful commercialization of all-solid-state batteries in 2027-28, followed by full-scale mass production



Picture of joint press conference

(Link to our disclosure document)

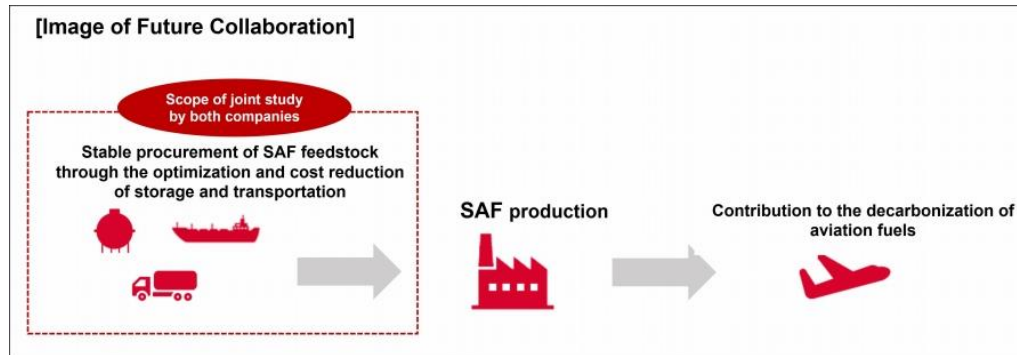
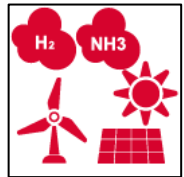
<https://www.idemitsu.com/en/content/100043691.pdf>



# Topics Affecting Progress on the Medium-term Plan (2/4)

### ■ Commenced joint study with LOPS on SAF feedstock procurement

- ✓ Aiming to establish a system to stably procure SAF feedstocks such as waste cooking oil from various parts of Japan by the late 2020s

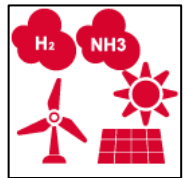


(Link to our disclosure document)

<https://www.idemitsu.com/en/news/2023/230824.html>

### ■ Commenced joint study with PETRONAS on SAF supply chains

- ✓ A feasibility study to scale-up bio feedstock possibilities including cost analyses
- ✓ Also focusing on supply potential of non-edible oil feedstock trees such as Pongamia and Jatropha



(Link to our disclosure document)

<https://www.idemitsu.com/en/content/100043647.pdf>

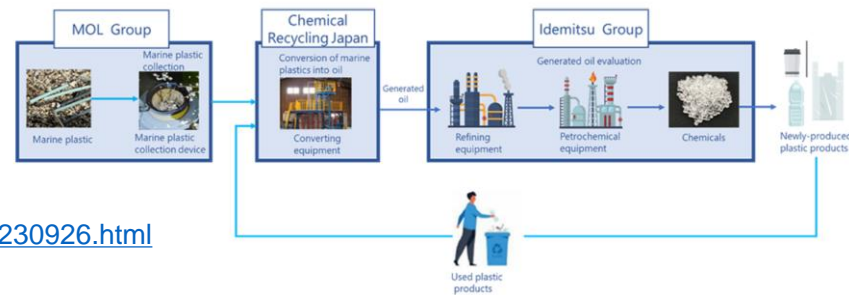


MOU signing ceremony

# Topics Affecting Progress on the Medium-term Plan (3/4)

## ■ Launched demonstration test on recycling marine plastic waste with Mitsui O.S.K. Lines

- ✓ To utilize marine plastic wastes using an automated marine debris collection device
- ✓ Aiming to produce generated oil by the technology of recycling of used plastics into oil

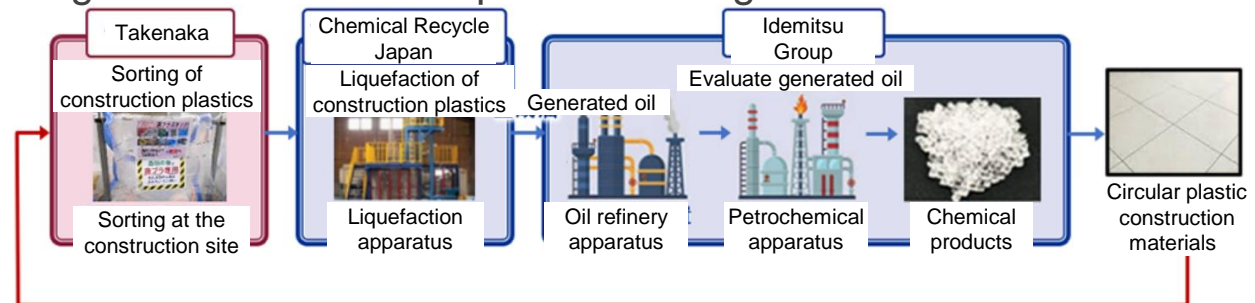


(Link to our disclosure document)

<https://www.idemitsu.com/en/news/2023/230926.html>

## ■ Launched demonstration test on recycling of used plastic construction waste with Takenaka Corporation

- ✓ Aiming to produce oil generated from used plastics arising at construction sites



(Link to our disclosure document, Japanese only)

[https://www.idemitsu.com/jp/news/2023/231031\\_2.html](https://www.idemitsu.com/jp/news/2023/231031_2.html)

### ■ Withdrawal from the Bisphenol A business

- ✓ The business environment has deteriorated owing to an oversupply caused by the expansion of facilities in Asia
- ✓ Planning to stop operating the manufacturing equipment at Chiba Complex by October 2024

(Link to our disclosure document)

<https://www.idemitsu.com/en/news/2023/231025.html>

### ■ Sales of former Kunitomi plant of Solar Frontier

- ✓ Terminated panel production in June 2022
- ✓ Completed sales of the plant in November 2023 for an effective use of idle assets in accordance with business structure reforms
- ✓ Enhancing growth strategy as a next-generation systems integrator

# Investments

[¥ billions]

	FY23 1H Results			FY23 Forecast *unchanged from 5/9 announcement		
	Strategic	Maintenance	Total	Strategic	Maintenance	Total
Existing Businesses	5.5	40.6	46.1	53.0	102.0	155.0
Business Structure Reforms	8.6	0	8.6	87.0	0.0	87.0
<b>Total</b>	<b>14.1</b>	<b>40.6</b>	<b>54.7</b>	<b>140.0</b>	<b>102.0</b>	<b>242.0</b>

\* Amounts based on expenditures

## [Strategic Investments]

- ✓ Investment in Delta Lithium, an Australia-based lithium exploration company as a main item for 1H Results
- ✓ Planning to invest business structure reforms amounting 3-year total of ¥290 billion set forth in the medium-term plan
- ✓ Selecting investment items through screening that secures investment return from a wide variety of options like SAF, hydrogen/ammonia, Recycling used plastics in addition to what we have tackled since the previous medium-term plan such as Lithium Solid Electrolytes and Idemitsu Green Energy Pellets.

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## ■ Reference

# Financial Results

## ■ Net Sales by segment

[¥ billions]

	2Q FY2022	2Q FY2023	Change	
<b>Petroleum</b>	3,814.1	3,189.1	(625.0)	(16.4%)
<b>Basic Chemicals</b>	363.0	280.2	(82.8)	(22.8%)
<b>Functional Materials</b>	245.6	248.4	+2.8	+1.1%
<b>Power and Renewable Energy</b>	89.8	72.1	(17.7)	(19.7%)
<b>Resources*</b>	300.3	233.3	(67.0)	(22.3%)
<i>Oil Exploration and Production</i>	22.2	21.8	(0.5)	(2.1%)
<i>Coal</i>	278.1	211.5	(66.5)	(23.9%)
<b>Others/Reconciliation</b>	1.3	1.4	+0.1	+8.3%
<b>Total</b>	4,814.1	4,024.5	(789.6)	(16.4%)

\*Fiscal year for Oil E&P and Coal included in the Resources Segment end in Dec.

# Financial Results

## ■ Quarterly segment income (cumulative, exc. inventory impact)

[¥ billions]

	FY2022				FY2023	
	1Q	2Q	3Q	4Q	1Q	2Q
Petroleum	57.4	61.1	1.2	17.3	18.4	105.0
Equity income	7.0	12.4	12.8	12.9	4.9	3.8
Basic Chemicals	8.1	14.2	11.4	10.1	(1.4)	12.0
Equity income	(0.1)	(0.1)	0.5	(0.1)	(0.6)	(1.0)
Functional Materials	3.3	8.6	16.4	17.0	5.5	13.4
Equity income	0.0	0.3	(0.3)	(0.7)	(0.2)	(0.1)
Power and Renewable Energy	(3.7)	(2.9)	1.1	0.5	(0.5)	(0.4)
Equity income	(0.4)	(0.7)	(0.4)	(1.6)	0.3	0.3
Resources						
-Oil Exploration and Production	6.5	17.1	26.4	32.8	5.7	10.5
Equity income	2.9	6.7	10.6	13.7	3.5	5.3
-Coal	25.1	83.0	151.3	198.1	34.7	59.3
Equity income	—	—	—	—	(0.0)	(0.0)
Others/Reconciliation	(11.9)	(14.9)	(22.5)	(23.0)	(5.1)	(5.2)
Equity income	1.1	1.7	1.7	1.8	0.0	0.0
<b>Total</b>	<b>84.9</b>	<b>166.2</b>	<b>185.4</b>	<b>252.7</b>	<b>57.4</b>	<b>194.6</b>
<b>Equity income</b>	<b>10.5</b>	<b>20.3</b>	<b>25.0</b>	<b>26.0</b>	<b>7.8</b>	<b>8.3</b>

# Financial Results

## ■ Quarterly segment income (Q on Q, exc. inventory impact)

[¥ billions]

	FY2022				FY2023	
	1Q	2Q	3Q	4Q	1Q	2Q
Petroleum	57.4	3.7	(59.9)	16.1	18.4	86.6
Equity income	7.0	5.4	0.4	0.1	4.9	(1.0)
Basic Chemicals	8.1	6.1	(2.8)	(1.3)	(1.4)	13.4
Equity income	(0.1)	(0.0)	0.6	(0.6)	(0.6)	(0.4)
Functional Materials	3.3	5.3	7.8	0.6	5.5	7.8
Equity income	0.0	0.3	(0.6)	(0.4)	(0.2)	0.1
Power and Renewable Energy	(3.7)	0.8	4.0	(0.7)	(0.5)	0.1
Equity income	(0.4)	(0.3)	0.3	(1.2)	0.3	0.0
Resources						
-Oil Exploration and Production	6.5	10.5	9.3	6.4	5.7	4.8
Equity income	2.9	3.8	3.9	3.1	3.5	1.8
-Coal	25.1	57.8	68.4	46.8	34.7	24.6
Equity income	—	—	—	—	(0.0)	(0.0)
Others/Reconciliation	(11.9)	(3.0)	(7.7)	(0.5)	(5.1)	(0.1)
Equity income	1.1	0.6	0.1	0.0	0.0	0.0
<b>Total</b>	<b>84.9</b>	<b>81.3</b>	<b>19.2</b>	<b>67.3</b>	<b>57.4</b>	<b>137.1</b>
<b>Equity income</b>	<b>10.5</b>	<b>9.8</b>	<b>4.7</b>	<b>1.0</b>	<b>7.8</b>	<b>0.5</b>



# Sensitivity

## ■ Major items affecting operating profit by changes in assumptions (3-4Q)

	Assumption Items	Revised assumption (from Oct.)	Range of fluctuation	Segment	Income impact (¥ billions)	Major Factors
Excluding inventory impact	Crude oil price	85.0\$/bbl	±10\$/bbl	Petroleum	±15.0	Fuel cost, time-lag
	Singapore product margin	—	±5\$/bbl		±22.0	Export
	Exchange rate	140.0¥/\$	±5¥/\$		±5.0	Fuel cost, time-lag
	Thermal coal price	145.0\$/t	±10\$/t	Resources (Coal)	±1.0	Thermal coal
Inventory impact	Crude oil price	85.0\$/bbl	±10\$/bbl	Petroleum	±37.0	
	Exchange rate	140.0¥/\$	±5¥/\$		±11.0	

\* In the petroleum segment, only performance impacts on products made in domestic refineries are shown. In addition to the above, income will also be affected by sales of overseas affiliates

\* 3-month impact during shown for the resources segment (coal), as its fiscal year ends in Dec.

# Sales Volume

## ■ Petroleum

[thousand KL,%]

	2Q FY2022	2Q FY2023	Change	
Gasoline	6,640	6,537	(103)	(1.5%)
Naphtha	190	192	+2	+0.8%
Jet Fuel	1,149	1,244	+95	+8.3%
Kerosene	826	750	(75)	(9.1%)
Diesel Oil	5,096	5,028	(69)	(1.3%)
Heavy Fuel Oil A	1,394	1,368	(26)	(1.9%)
Heavy Fuel Oil C	1,267	1,159	(108)	(8.5%)
<b>Total Domestic Sales Volume</b>	<b>16,562</b>	<b>16,278</b>	<b>(284)</b>	<b>(1.7%)</b>
Exported Volume	4,167	3,067	(1,100)	(26.4%)
<b>Total Sales Volume</b>	<b>20,729</b>	<b>19,345</b>	<b>(1,384)</b>	<b>(6.7%)</b>

\*Export includes bond sales of jet fuel and heavy fuel oil C

# Sales Volume

## ■ Basic Chemicals

[kt,%]

	2Q FY2022	2Q FY2023	Change	
Basic Chemicals	1,709	1,617	(91)	(5.3%)

## ■ Functional Materials

[KKL,kt,%]

	2Q FY2022	2Q FY2023	Change	
Lubricants	577	565	(12)	(2.0%)
Performance Chemicals	346	299	(47)	(13.6%)

\*Lubricants include sales overseas

## ■ Power/Renewable Energy

[Mkwh,%]

	2Q FY2022	2Q FY2023	Change	
Retail Power Sales	1,882	1,020	(863)	(45.8%)

# Production Volume

## Resources (Oil E&P)

[KBOED,%]

	2Q FY2022	2Q FY2023	Change	
Vietnam	15.8	16.8	+1.0	+6.2%
Norway	15.7	14.8	(0.9)	(5.8%)
Total('000BOED)	31.5	31.6	+0.1	+0.2%
Total('000BOE)	5,708	5,718	+10	+0.2%

\*The numbers reflect our rights and ownership ratios based on our equity share

\*The number shows Jan-Jun volume as fiscal year for Oil E&P in the Resources Segment ends in Dec.

\* Revised errors in Vietnam FY22 and FY23 1Q figures

## Resources (Coal)

[kt,%]

	2Q FY2022	2Q FY2023	Change	
Ensham	1,425	1,252	(173)	(12.1%)
Muswellbrook	716	15	(701)	(97.9%)
Boggabri	2,446	2,417	(29)	(1.2%)
<b>Total</b>	<b>4,587</b>	<b>3,684</b>	<b>(903)</b>	<b>(19.7%)</b>

\*The numbers reflect our rights and ownership ratios

\*The number shows Jan-Jun volume as fiscal year for Coal in the Resources Segment ends in Dec.

# Sales Volume(Forecast)

## ■ Petroleum

[KKL,%]

	5/9 Forecast	Revised Forecast	Change	
Gasoline	12,700	12,700	—	—
Naphtha	210	350	+140	+66.7%
Jet Fuel	2,330	2,470	+140	+6.0%
Kerosene	3,720	3,680	(40)	(1.1%)
Diesel Oil	10,530	10,320	(210)	(2.0%)
Heavy Fuel Oil A	3,230	3,240	+10	0.3%
Heavy Fuel Oil C	2,720	2,500	(220)	(8.1%)
<b>Total Domestic Sales Volume</b>	<b>35,440</b>	<b>35,260</b>	<b>(180)</b>	<b>(0.5%)</b>
Exported Volume	8,500	8,240	(260)	(3.1%)
<b>Total Sales Volume</b>	<b>43,940</b>	<b>43,500</b>	<b>(440)</b>	<b>(1.0%)</b>

\*Export includes bond sales of jet fuel and heavy fuel oil C

# Sales Volume(Forecast)

## ■ Basic Chemicals

[kt,%]

	5/9 Forecast	Revised Forecast	Change	
Basic Chemicals	3,780	3,600	(180)	(4.8%)

## ■ Functional Materials

[KKL,kt,%]

	5/9 Forecast	Revised Forecast	Change	
Lubricants	1,220	1,160	(60)	(4.9%)
Performance Chemicals	720	710	(10)	(1.4%)

\*includes sales overseas

## ■ Power/Renewable Energy

[Mkwh,%]

	5/9 Forecast	Revised Forecast	Change	
Retail Power Sales	2,060	1,990	(70)	(3.4%)

# Production Volume(Forecast)

## ■ Resources (Oil E&P)

[KBOED,%]

	5/9 Forecast	Revised Forecast	Change	
Norway	14.0	15.3	+1.2	+8.9%
Vietnam	12.8	13.0	+0.3	+2.1%
Total('000BOED)	26.8	28.3	+1.5	+5.7%
Total('000BOE)	9,779	10,333	+554	+5.7%

\*The numbers reflect our rights and ownership ratios based on our equity share

\*Revised errors in Vietnam of forecast announced on 5/9

## ■ Resources (Coal)

[kt,%]

	5/9 Forecast	Revised Forecast	Change	
Ensham	1,190	1,660	+470	+39.5%
Muswellbrook	0	15	+15	-
Boggabri	5,200	5,280	+80	+1.5%
<b>Total</b>	<b>6,390</b>	<b>6,955</b>	<b>+565</b>	<b>+8.8%</b>

\*Fiscal year for Oil E&P and Coal included in the Resources Segment end in Dec.

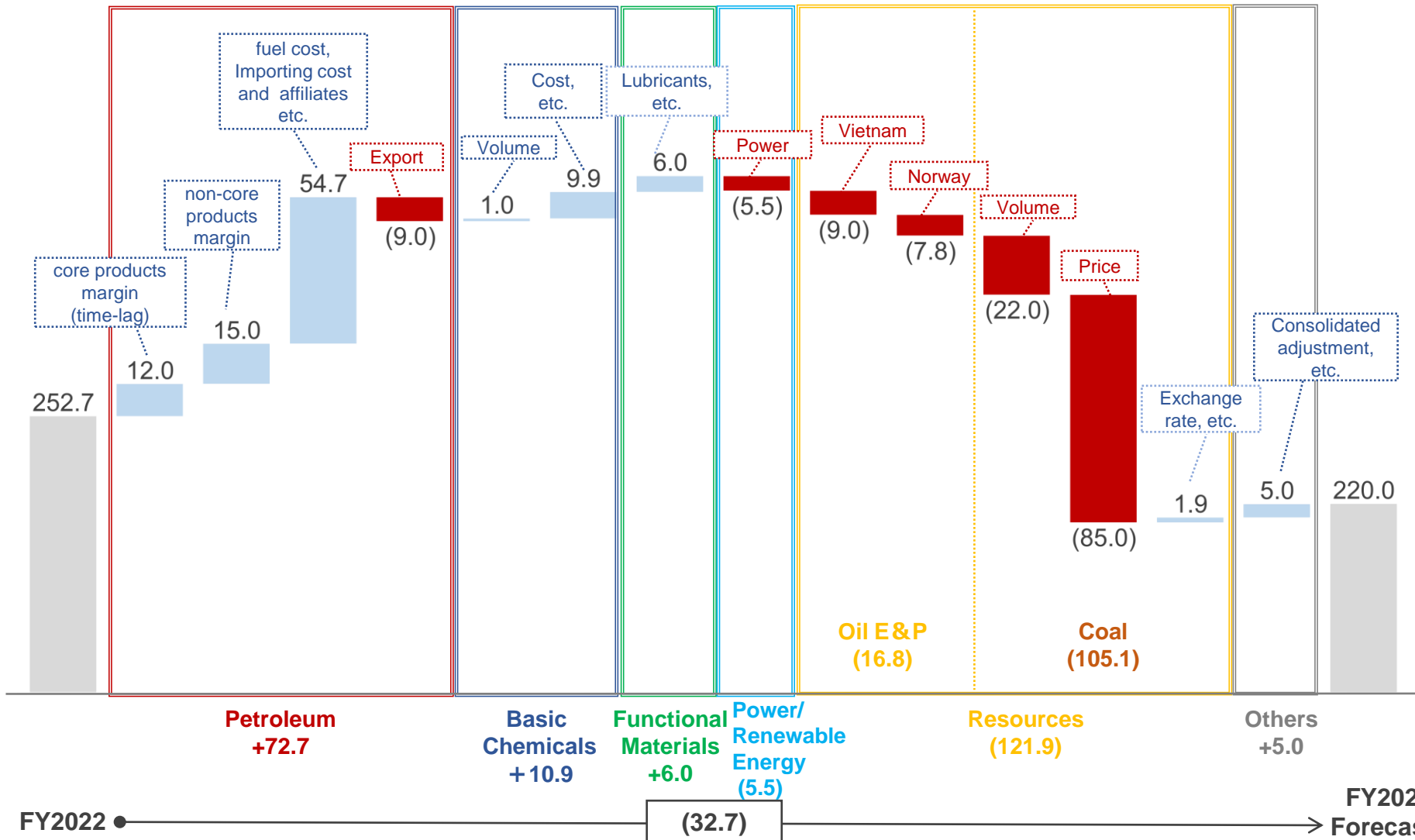
\*The numbers reflect our rights and ownership ratios

\*Ensham was sold by the end of Aug.

# Segment Information

## Factors Affecting Operating + Equity Income (excluding inventory impact, y-o-y)

[ ¥ billions]

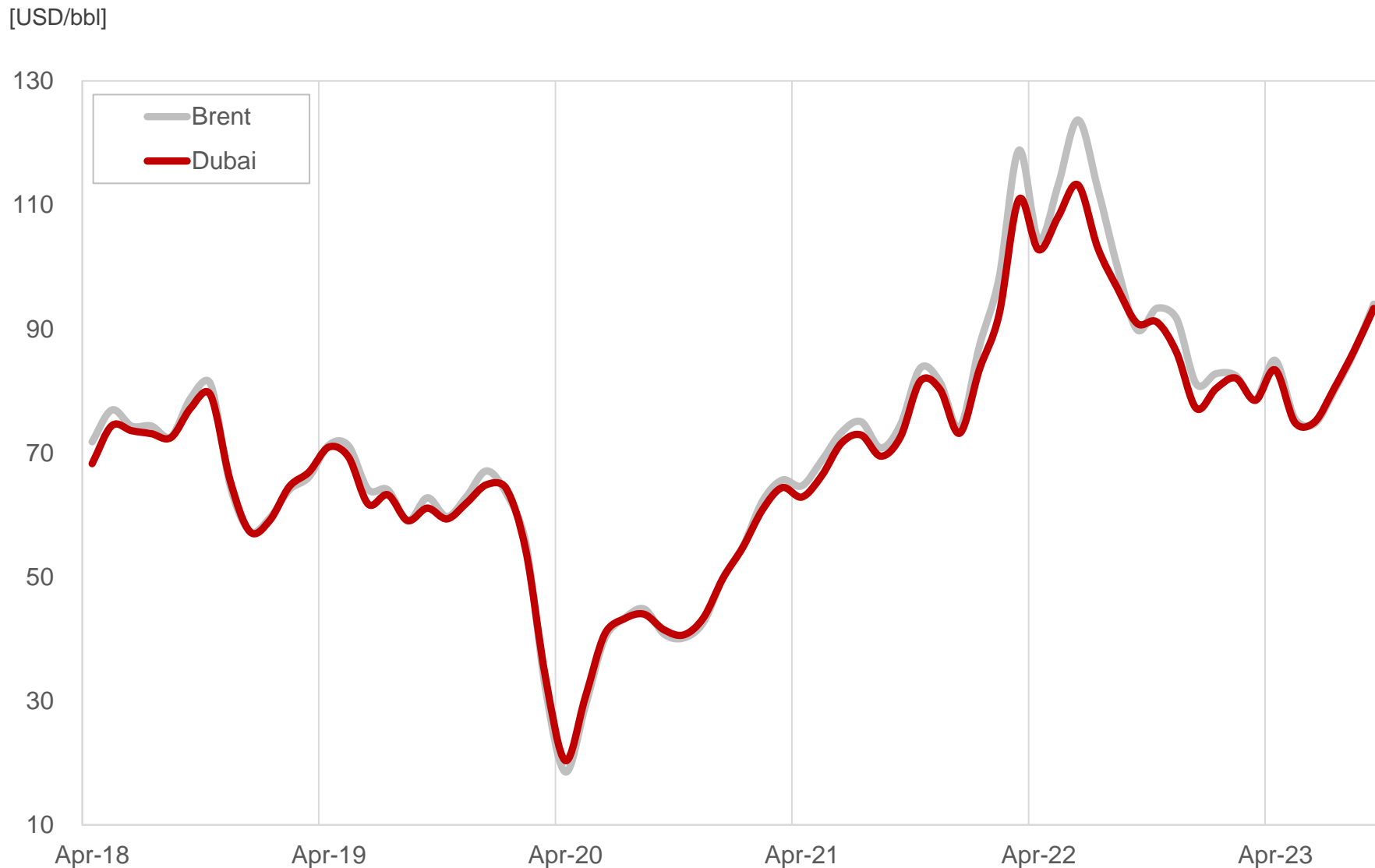


FY2022 ●

FY2023  
→ Forecasts



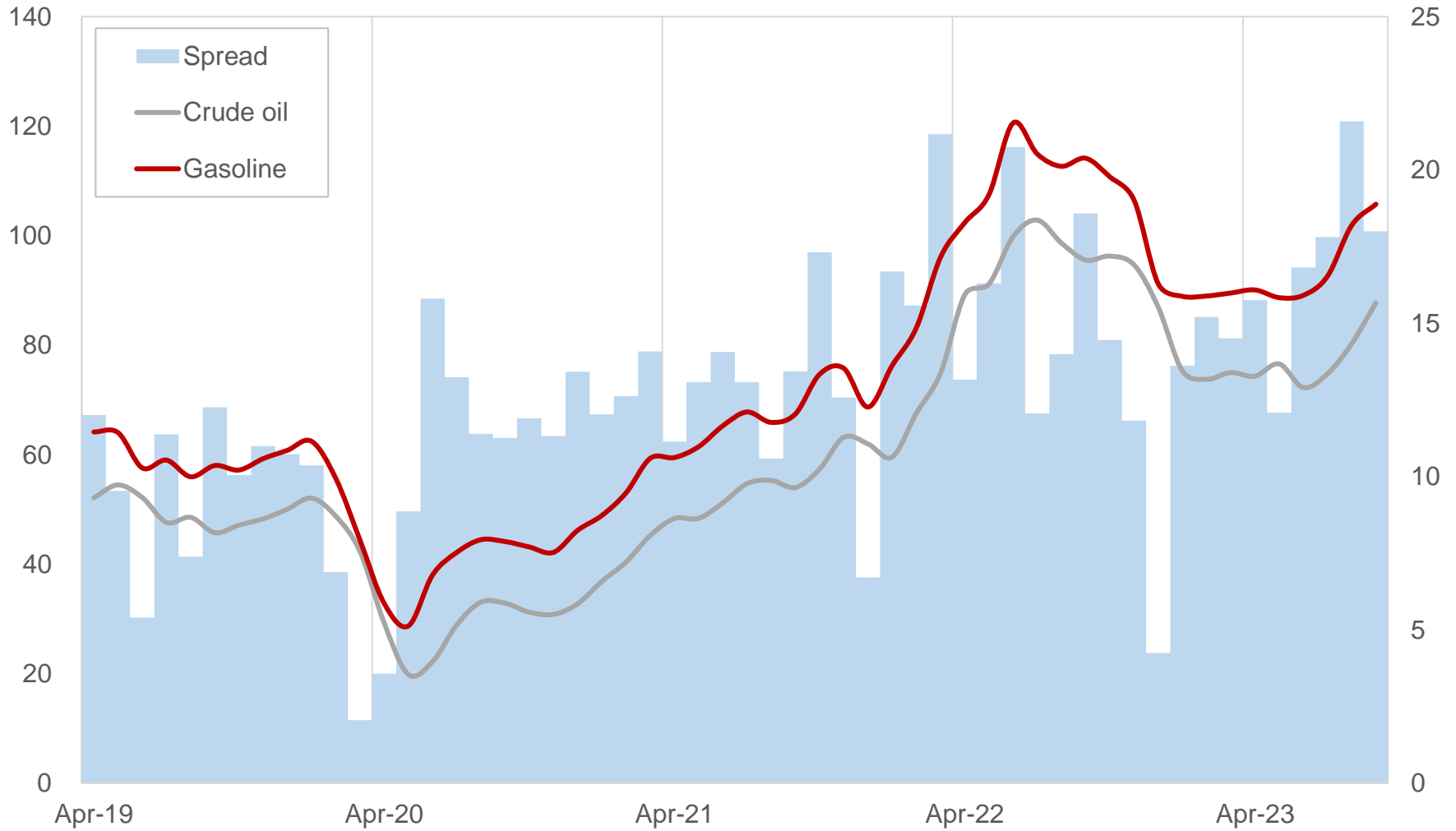
# Crude Oil Prices(Dubai and Brent)



# Gasoline-Crude Oil (Domestic spot price and spread)

[Price :JPY/L]

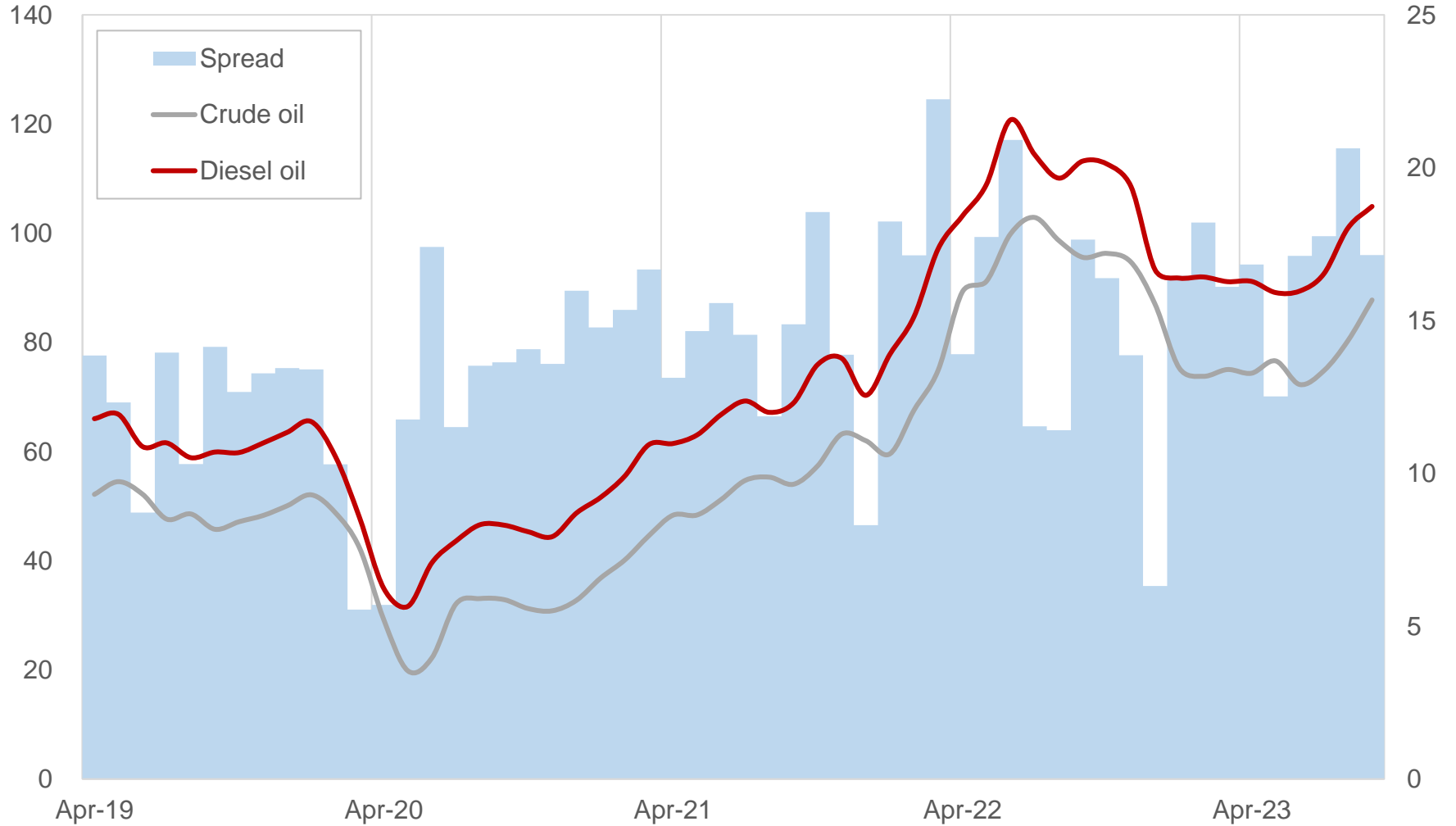
[Spread : JPY/L]



# Diesel-Crude Oil (Domestic spot price and spread)

[Price :JPY/L]

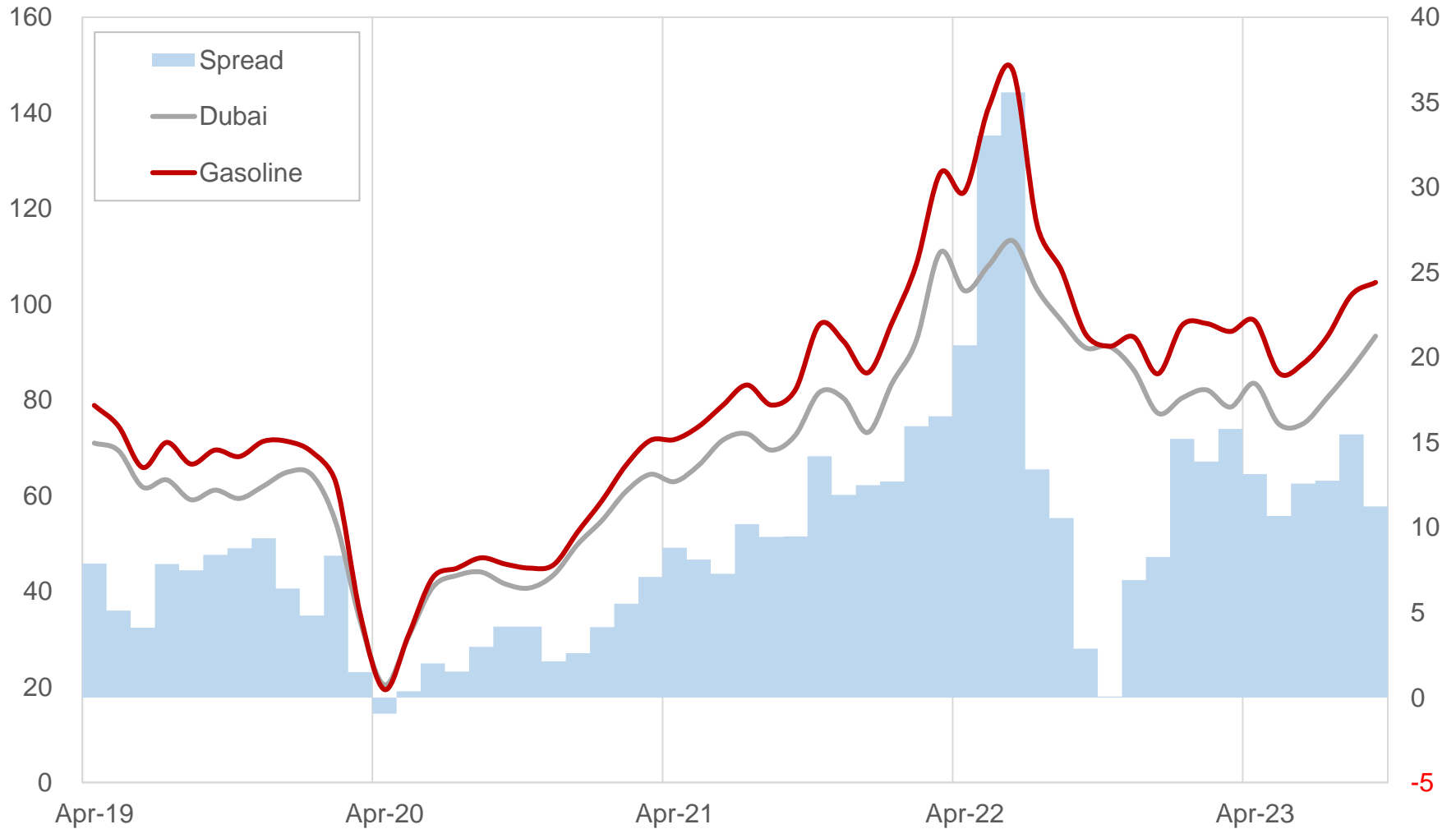
[Spread : JPY/L]



# Gasoline-Crude Oil (Singapore spot price and spread)

[Price :USD/bbl]

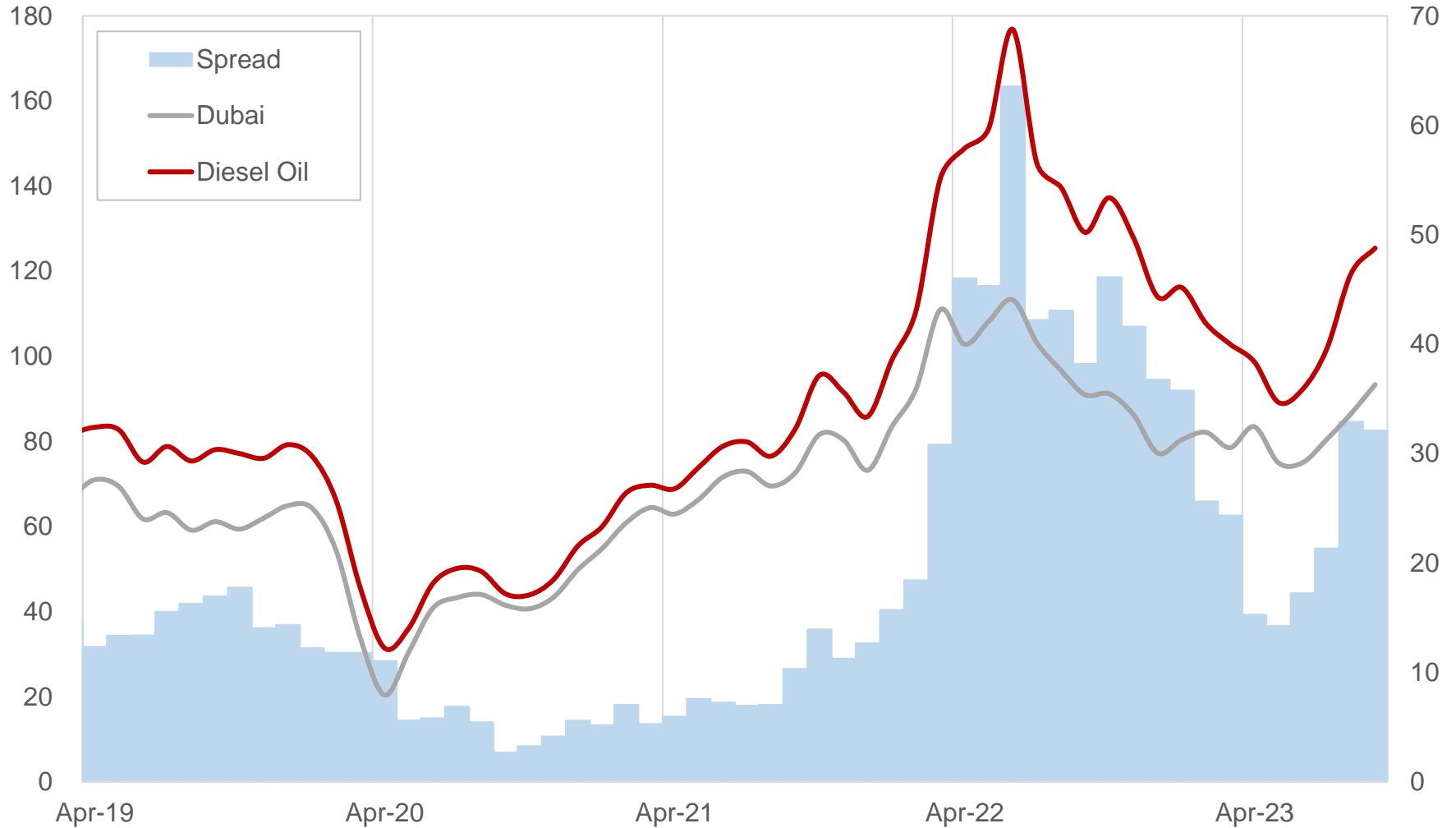
[Spread : USD/bbl]



# Diesel-Crude Oil (Singapore spot price and spread)

[Price :USD/bbl]

[Spread : USD/bbl]

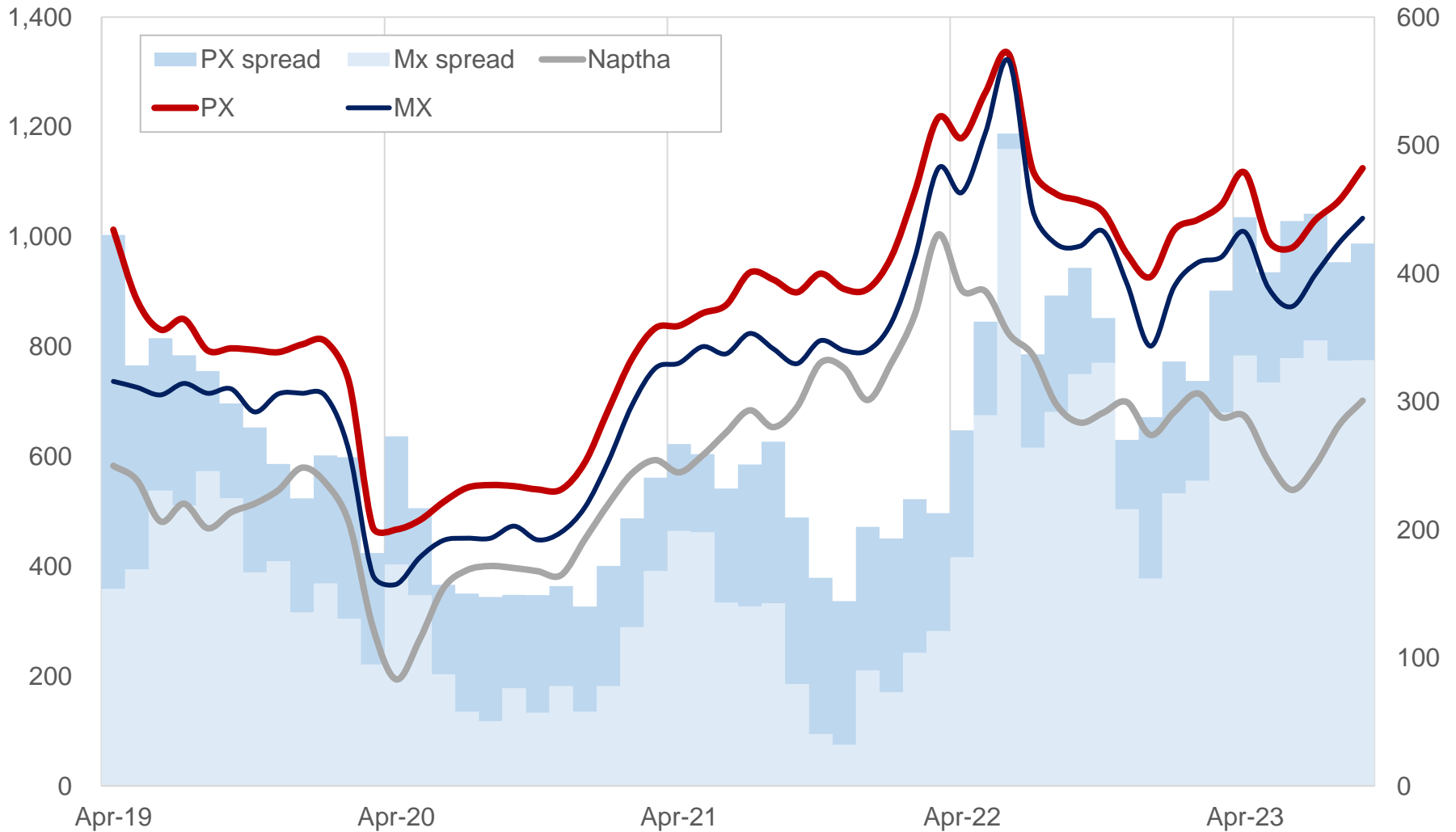


# Para-Xylene, Mixed Xylene-Naphtha (price and spread)

Product market price

[Price :USD/ton]

[Spread : USD/ton]

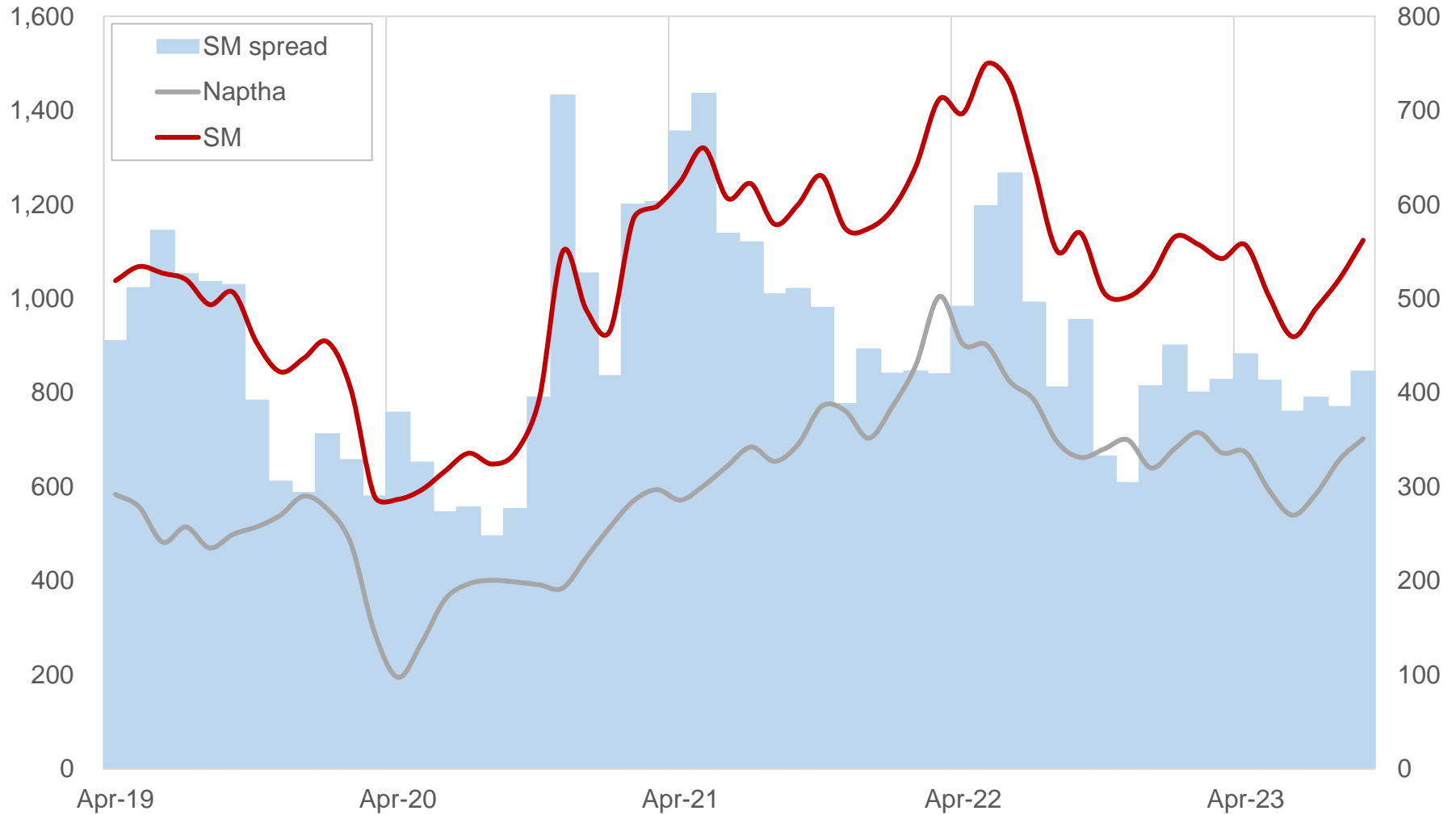


# Styrene Monomer-Naphtha (price and spread)

Product market price

[Price :USD/ton]

[Spread : USD/ton]



## Operational Data

### ■ Refineries Utilization

FY2019	FY2020	FY2021	FY2022	FY2023 (2Q)
87%	78%	77%	83%	75%

\*on BCD basis(including regular maintenance)

### ■ Number of Service Stations

FY2019	FY2020	FY2021	FY2022	FY2023 (2Q)
6,384	6,311	6,216	6,136	6,046



# Overview of the Company

FY2022, actual or  
as of the end of March 2023

## ■ Petroleum Segment

- Refining Capacity **945 KBD** \*1,2)
- Domestic fuel oil sales volume  
**35 million KL/year** \*3)
- Number of service stations **6,100**

## ■ Basic Chemicals Segment

(Production Capacity\*2)

- Ethylene **1 mil tons/year**
- Para-Xylene **0.84 mil tons/year**
- Mixed Xylene **0.94mil tons/year**
- Styrene monomers **0.79 mil tons/year**

## ■ Power and Renewable Energy Segment

- Power generation capacity **1.94GW**  
- Renewable energy **0.83GW**

## ■ Functional Materials Segment

(Lubricants, Performance Chemicals, Electronic Materials, Bitumen (High Performance Asphalt), Pesticides and Functional Feed, Lithium Solid Electrolytes)

- Lubricants (sales volume): **1.2 mil KL/year**
- Engineering plastics(sales volume): **150,000 tons/year**
- Adhesive materials(production capacity): **65,000 tons/year**
- OLED materials(production capacity): **26 tons/year**

## ■ Resources Segment \*4)

- Crude oil production **29,000 BD**
- Thermal coal production **6 mil tons/year**

\*1 1,090 KBD when adding the refining capacity of Fuji Oil, Co.,Ltd. with which a petroleum products trade agreement has been signed

\*2 excluding Nghi Son's capacity

\*3 Bond jet fuel and Bond heavy fuel oil C are included in the exports

\*4 For resources segment, the numbers are based on forecasts for FY2023. Muswellbrook was ceased in FY22. Ensham is decided to be sold

# Petroleum Segment

as of the end of March 2023

[KB/D]

Operating Company	Refinery	Refining Capacity	RH	FCC	RFCC	FLG	Equity Ratio
Idemitsu Kosan	<b>Japan</b> Hokkaido	150	42		33		
	Chiba	190	40		45		
	Aichi	160	60		50		
Showa Yokkaichi Sekiyu	Yokkaichi	255	45		61		75.0%
Toa Oil	Keihin	70		42		27	100.0%
Seibu Oil	Yamaguchi	120	52	30			100.0%
		<b>945</b>	<b>239</b>	<b>72</b>	<b>189</b>	<b>27</b>	
Nghi Son Refinery and Petrochemical LLC	<b>Overseas</b> Nghi Son *1,2 (Thanh Hoa, Vietnam)	200	105		80		35.1%
		<b>200</b>	<b>105</b>		<b>80</b>		

\*1 Capacity before equity ratio reflection

\*2 Yamaguchi refinery is scheduled to stop operation by the end of March 2024.

# Basic Chemicals Segment

as of the end of March 2023

[mil tons/year]

Operating Company	Complex/Factory/Refinery	Production Capacity for core products				Equity Ratio
		Ethylene	Para-Xylene	Mixed Xylene	Styrene Monomer	
Idemitsu Kosan	<b>Japan</b> Chiba	0.374	0.265		0.210	
	Aichi		0.357	0.170		
	Tokuyama	0.623	0.214		0.340	
Showa Yokkaichi Sekiyu	Yokkaichi			0.518		75.0%
Seibu Oil	Yamaguchi			0.250		100.0%
	<b>Total</b>	<b>0.997</b>	<b>0.836</b>	<b>0.938</b>	<b>0.550</b>	
Idemitsu SM (Malaysia) Sdn. Bhd.	<b>Overseas</b> Pasir Gudang (Johor, Malaysia)				0.240	70.0%
	Nghi Son Refinery and Petrochemical LLC		0.700			35.1%
	<b>Total</b>		<b>0.700</b>		<b>0.240</b>	

# Functional Materials Segment (1/2)

## Lubricants

- ◆ Product categories
  - Automotive lubricants (engine oil, etc.)
  - Grease
  - Industrial lubricants (hydraulic actuation oil, cutting oil, etc.)
  
- ◆ Global business with a focus on automotive lubricants
  - #8 global share
  - Over 50% overseas sales
  
- ◆ R&D centers
  - Japan and overseas (US, China, etc.)
- ◆ Global lubricant network



- Manufacturing/sales/R&D network in 28 countries
- Strengthening existing facilities and developing new facilities

## Performance Chemicals

- ◆ Product categories
  - Engineering plastics, adhesives materials, derivative products, solvents and functional materials
  
- ◆ Major products, applications, features
  - Engineering plastics

(Product) PC/Polycarbonates  
 (Applications) smartphones, lenses, automotive lights, etc.  
 (Features) highest impact resistance among plastics

(Product) SPS/ Syndiotactic Polystyrene resin  
 (Applications) automotive electronic parts, kitchen appliances, etc.  
 (Features) lightweight and offers excellent heat resistance, electrical properties, chemical resistance, and hydrolysis resistance



Daytime Running Lamp (DRL)



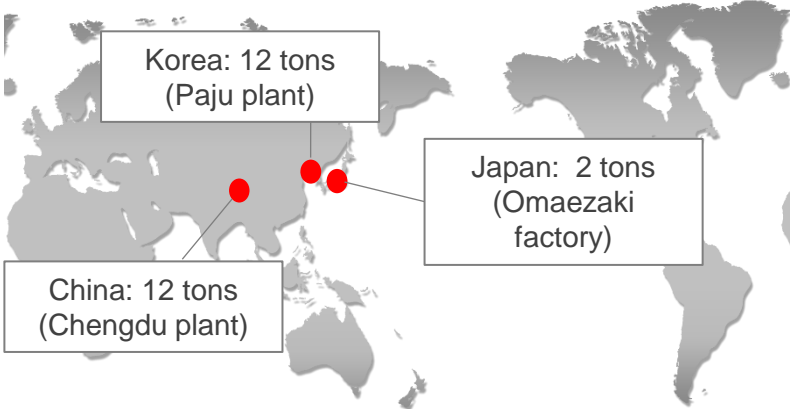



Automotive parts

- Adhesive materials
- (Product) Hydrogenated petroleum resin  
 (Applications) Tackifier for hot-melt adhesives



Disposable diapers and other hygiene products

# Functional Materials Segment (2/2)

Electronic Materials	Bitumen (High Performance Asphalt)
<ul style="list-style-type: none"> <li>◆ Product categories                             <ul style="list-style-type: none"> <li>• Organic EL materials</li> <li>• Display semiconductor materials etc.</li> </ul> </li>   <li>◆ OLED manufacturing/customer support</li> </ul>  <ul style="list-style-type: none"> <li>• Establishing factories and customer support centers in Asia and reinforcing relationships with display manufacturers, etc. to further expand the organic EL materials business in Asia</li>   <li>• Aiming to develop and commercialize oxidative semiconductor materials which are expected to conserve energy and enhance image quality of display products</li> </ul>	<ul style="list-style-type: none"> <li>◆ Asphalt manufacturer which aims to develop state-of-the-art technologies                             <ul style="list-style-type: none"> <li>• Recycling, longer life, carbon neutrality</li> </ul> </li>   <li>◆ Product categories                             <ul style="list-style-type: none"> <li>• Engineering/construction asphalt</li> <li>• Industrial asphalt</li> <li>• Value-added asphalt for roads</li> </ul> </li> </ul>  <p style="text-align: center;"><b>Maybright</b> (Value-added asphalt for roads)</p>
<b>Pesticides and Functional Feed</b>	
<ul style="list-style-type: none"> <li>◆ Product categories                             <ul style="list-style-type: none"> <li>• Chemical pesticides (Daconil 1000*1, etc.)</li> <li>• Plant-derived pesticides</li> <li>• Functional Feeds (RUMINUP*2, etc.)</li> </ul> </li> </ul> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;">  <p><b>Daconil 1000</b></p> </div> <div style="text-align: center;">  <p><b>RUMINUP® M</b></p> </div> </div>	

\*1 Protective disinfectants less affecting organism that has the stable effect toward various crops and damage owing to disease

\*2 An animal husbandry material containing cashew nut shell liquid that has the effect of reducing methane gas in cattle burps

# Power /Renewable Energy Segment

Power	Category	Power Plant	Operating Company	Stake Owned (%)	Power generation capacity* (10,000 KW)
	Solar	34 domestic locations	Idemitsu, other	—	18.7
	Biomass	Keihin Biomass Power Plant (Kanagawa)	Keihin Biomass Power	100	4.9
		Tosa Power Plant (Kochi)	Tosa Green Power	50	0.3
		Fukui Green Power (Fukui)	Fukui Green Power	10	0.1
		Tokuyama Biomass Power Plant (Yamaguchi)	Idemitsu	—	5.0
	Wind	Rokkasho Village Wind Farm (Aomori)	Futamata Wind Development	40	2.0
	Geothermal	Takigami Binary Power Plant (Oita)*	Idemitsu Oita Geothermal	100	0.5
	Renewable (Japan)				31.5
	Fire	Ohgishima Power Station (Kanagawa)	Ohgishima Power	25	30.5
		Mizue Thermal Power Plant (Kanagawa)	Toa Oil	100	27.6
		Aichi Refinery Power Plant (Aichi)	Idemitsu	—	25.0
	<b>Domestic</b>				<b>114.9</b>
	Solar	Overseas (North America, Vietnam, etc.)	—	—	52.1
	Fire	Overseas	—	—	27.1
	<b>Overseas</b>				<b>79.2</b>
	<b>Total</b>				<b>194.1</b>

\*Reflects Idemitsu's stake

- ◆ Owing 836 thousand KW(Japan:315, Overseas:521) of renewable energy generation capacity
- ◆ Operating businesses such as wholesale and retail sales for high and low pressure, based on the company's own generation

## Solar

- ◆ Terminated production in June 2022
- ◆ Shifting to a system integrator which engages in solar power generator design, construction, maintenance and recycling

# Resources Segment (Gas and Oil E&P)

## Business Overview

1. Producing and selling crude oil/gas in Vietnam and Norway
2. Exploration and development of gas in Vietnam and other parts of Southeast Asia to shift to production of natural gas, which will become an important energy source in a decarbonized society

### ◆ Rights owned in oil/gas fields and sales destinations

as of the end of March 2023

		Rights owned (%) <sup>*1</sup>	Destination
<b>Sao Vang and Dai Nguyet gas field (Vietnam)</b>		43.08	Asia
<b>Norway</b>	Snorre	9.60	Europe
	Tordis/Vigdis	9.60	
	Statfjord/East	4.80	
	Sygna	4.32	
	Fram	15.00	
	H-Nord	28.80	
	Byrding	15.00	
	Vega	3.30	
Duva	30.00		

<sup>\*1</sup> Companies in which Idemitsu owns rights

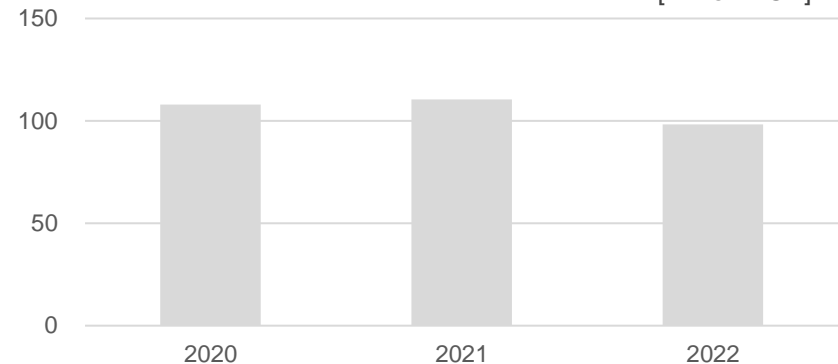
Norway : INPEX Idemitsu Norge AS

Vietnam : Idemitsu Gas Production (Vietnam) Co.,Ltd.

## Production Oil/Gas Reserves

### ◆ Reserves <sup>\*2,3</sup>

[million BOE]



<sup>\*2</sup> Total reserves in Norwegian oil fields and Vietnamese gas fields

<sup>\*3</sup> Reserves reflect Idemitsu's rights and ownership ratios

#### ◆ Reserve Estimation Standards

- Idemitsu's reserves estimation is conducted based on PRMS (Petroleum Resources Management System) standards
- PRMS standards were established jointly by the Society of Petroleum Engineers (SPE), the World Petroleum Congress (WPC), the American Association of Petroleum Geologists (AAPG), and the Society of Petroleum Evaluation Engineers (SPEE) and is recognized as an international standard
- Reserves defined by PRMS standards are categorized into 1) proved, 2) probable, and 3) possible reserves. Idemitsu's reserves estimate is calculated as the total of proved and probable reserves (1+2)




#### ◆ Proved Reserves

- The definition of proved reserves is recognized as the most conservative among definitions used widely in the petroleum/gas industry
- Proved reserves are those quantities of petroleum/gas which, by analysis of geological and engineering data, can be estimated with reasonable certainty to be commercially recoverable under current economic conditions and operating methods
- When probabilistic methods are used, there should be at least a 90% probability of recovery that the quantities actually recovered will equal or exceed proved reserves

#### ◆ Probable Reserves

- Probable reserves are those unproved reserves which analysis of geological and engineering data suggests are more likely than not to be recoverable
- When probabilistic methods are used, there should be at least a 50% probability that the quantities actually recovered will equal or exceed the sum of estimated proved plus probable reserves

# Resource Segment (Coal)

Business Overview	Business Structure Reforms
<p>[Business Strategy]</p> <ul style="list-style-type: none"> <li>◆ Stable supply and profit maximization by leveraging the highly competitive Boggabri Mine</li> <li>◆ Engage in low-carbon solution businesses such as Idemitsu Green Energy Pellets</li> <li>◆ Leverage management resources built up over years of experience in Australia to transition to new businesses such as rare metals, renewable energy, hydrogen/ammonia, etc.</li> </ul> <p>1. Mining Operations</p> <p>Owning an Australian coal mine (Boggabri Mine) and has established a whole supply chain from production to sales, providing a stable supply of high-quality coal mainly to Japan</p> <p>[Overview of Boggabri Mine]</p> <p>Location: New South Wales</p> <p>Coal quality: thermal coal (80%), raw coal (SS/PCI) (20%)</p> <p>Port for shipments: Newcastle Harbor (about 360 km by train)</p>  <p>*Mining operations at Muswellbrook Mine were terminated in 2022 and a decision to sell Ensham Mine has been finalized</p>	<p>◆ <b>Idemitsu Green Energy Pellets (black pellets)</b></p> <ul style="list-style-type: none"> <li>• CO<sub>2</sub> emissions can be reduced by replacing coal with black pellets in fuel used at coal-fired power stations</li> <li>• Succeeded in a mixed combustion to replace 20-30% of coal fuel with black pellets</li> <li>• Planning to operate a commercial plant that produces 120,000 tons/year in Vietnam in FY23. Aiming to reach 3,000,000 tons/year by 2030</li> </ul>   <p><b>Vietnam Commercial Plant</b></p> <p>◆ <b>New businesses in Australia</b></p> <ul style="list-style-type: none"> <li>• Rare metals: Invested in Vecco, which engages in vanadium operations in Australia</li> <li>• Renewable energy: Commercialization verification of pumped storage hydroelectric power generation at the post-mining Muswellbrook coal mine site</li> </ul>



## Precaution statement about forecasts

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Any information about forecasts for the Company's operating results, management strategy and management policy contained in this documents other than historical facts is prepared, according to judgments made by the top management of the Company based on information available as of the publication of the document.

Actual business environments contain potential risk factors and uncertainties including economic situations, crude oil prices, trends in petroleum products, market conditions, currency exchange rates and interest rates.

Consequently, actual operating results of the Company may substantially differ from forecasts due to changes in the important factors mentioned above.