

# **Presentation on Results for the 2<sup>ND</sup> Quarter FY2021**

**November 9, 2021  
Idemitsu Kosan Co.,Ltd.**

# Table of Contents

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- Executive Summary
- FY2021 2nd Quarter Results
- Forecast for FY2021
- Progress on the Medium-term Management Plan
- Reference Materials

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## ■ Executive Summary

# Executive Summary (FY21 2Q Results)

## ■ Overview

- ✓ Quarterly operating + equity income (“segment income”) turned positive due to a recovery in crude oil and resource prices. Segment income increased by ¥217.1 billion, driven by inventory impact
- ✓ Segment income excluding inventory impact increased by ¥48.8 billion year-on-year, supported by equity income from Nghi son refinery and a recovery in resource prices

[¥ billions]

	FY2020 2Q	FY2021 2Q	Change
<b>Operating Income + Equity Income</b>	(25.1)	191.9	217.1
<i>Inventory Impact</i>	(57.7)	110.6	168.3
<i>Excluding inventory impact</i>	32.6	81.3	48.8
<b>Net Income Attributable to Owners of the Parent</b>	(32.1)	142.7	174.8
<i>Excluding inventory impact</i>	7.9	66.0	58.0

# Executive Summary (FY2021 Forecasts)

## ■ Overview

- ✓ Segment income and net income were revised upward due to positive inventory impact and an expected profit increase in the resources segment
- ✓ keeping careful watch on the unclear situation of soaring resources prices and uncertainty for inflation

[¥ billions]

	5/11 Forecast	Revised Forecast	Change
Operating Income + Equity Income	140.0	320.0	180.0
<i>Inventory impact</i>	<i>0.0</i>	<i>140.0</i>	<i>140.0</i>
<i>Excluding inventory impact</i>	<i>140.0</i>	<i>180.0</i>	<i>40.0</i>
Net Income Attributable to Owners of the Parent	85.0	220.0	135.0
<i>Excluding inventory impact</i>	<i>85.0</i>	<i>120.0</i>	<i>35.0</i>

## ■ FY2021 Shareholder Returns and Dividend Forecasts

- ✓ Total payout ratio of over 50% on cumulative net income excluding inventory impact from FY2020–2022 and stable dividends of ¥120 per share
- ✓ Based on the above, our FY21 dividend forecast is ¥120 per share (Interim dividend: **¥60** Year-end dividend: **¥60** Annual total: **¥120**)

# Executive Summary (Progress on the Medium-term Management Plan)

## ■ Overview

- ✓ Forecast for ROIC and ROE is higher than mid-term plan in May
- ✓ Majority of FY 2021 profit results from external factors such as resources prices. We made no change in recognition of business environment of mid-term plan and continue to carry out the basic strategy and management objectives towards 2030.
- ✓ Profit exceeded the plan are considered to allocated to the CNX investments and shareholder returns for this fiscal year based on the shareholder return policy

[¥ billions]

	FY2021 Mid-term plan	<b>FY2021 Forecast</b>	Change
Operating Income + Equity Income	140.0	<b>180.0</b>	+ 40.0
Net Income Attributable to Owners of the Parent	85.0	<b>120.0</b>	+ 35.0
ROIC	3%	<b>4%</b>	+1%
ROE <i>Including inventory impact</i>	7% 7%	<b>10%</b> <b>16%</b>	+3% +9%

※Figures are excluded inventory impact

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## ■ FY2021 2nd Quarter Results

# Key Topics

## ■ Trends in petroleum demand

- ✓ Sales of the 4 core products remained flat year-on-year in 1H due to the extension of the state of emergency. Jet fuel recovered to about 130%.
- ✓ Demand trends seen in 1H are expected to continue in 2H, as the impact of COVID-19 is expect to linger in 2H.

	FY20	FY21 1H	FY21 2H Forecast	<b>FY21 Forecast</b>	[%] FY21 vs FY19
4 core products	94.6	99.9	100.5	<b>100.2</b>	94.7
<i>Gasoline</i>	<i>90.4</i>	<i>101.6</i>	<i>102.6</i>	<b><i>102.1</i></b>	92.2
Jet fuel	54.2	131.3	132.7	<b>132.0</b>	71.6

\*Idemitsu sales growth rate (year-on-year)

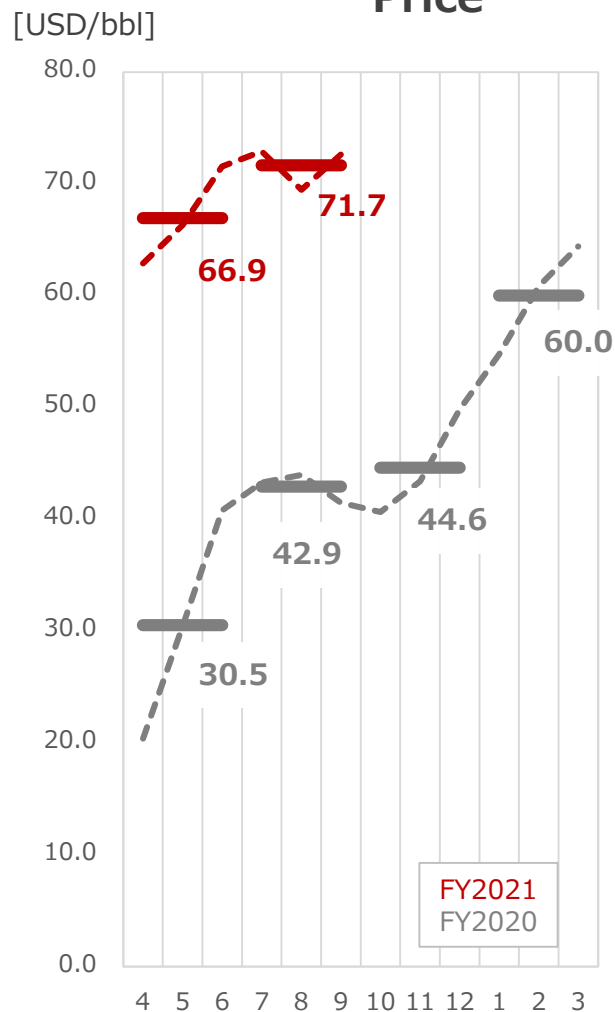
## ■ Outlook for Nghi Son Refinery in Vietnam

- ✓ While the spread of COVID-19 in Vietnam had an impact on refinery operations in 1H, earnings recovered significantly YoY due to the inventory impact and time lag
- ✓ We forecast break-even equity income from NSRP, with some improvement resulting from a recovery in markets being offset by losses on valuation for long-term loans in the last FY

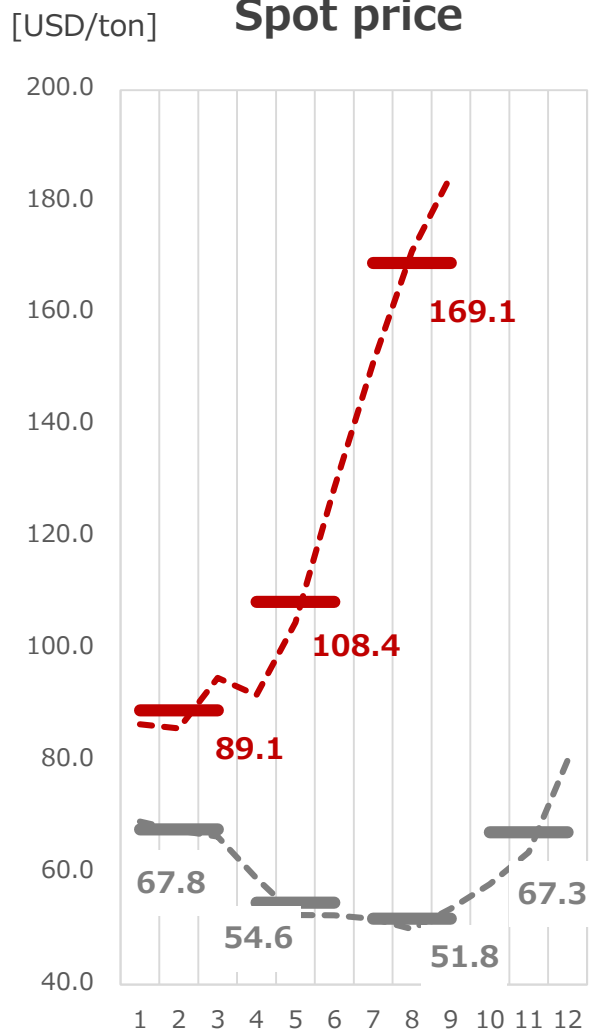


# Operating Environment

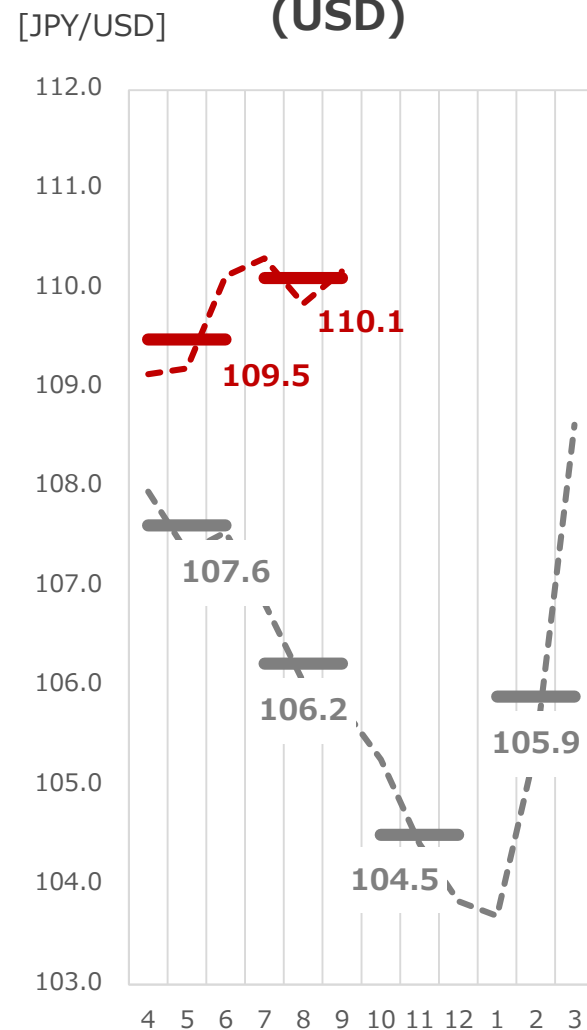
## Dubai Crude Oil Price



## Australian Coal Spot price



## Exchange Rate (USD)



# Overview

## ■ Crude Oil / Coal / Exchange Rates

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

	FY2020 2Q	FY2021 2Q	Change	
Crude Oil (Dubai)	36.7	69.3	32.6	+88.6%
Crude Oil (Brent)*	39.7	64.9	25.2	+63.5%
Australian Coal Spot price*	61.2	98.8	37.6	+61.4%
Exchange Rate (TTM)	106.9	109.8	2.9	+2.7%

\*Brent prices and Australian coal prices are averages based on the calendar year (January-June).

## ■ Consolidated Income Statement (Summary)

[ ¥ billions]

	FY2020 2Q	FY2021 2Q	Change	
Net Sales	2,015.7	2,867.0	851.3	+42.2%
Operating Income	3.1	179.3	176.2	—
<i>Inventory impact</i>	<i>(57.7)</i>	<i>110.6</i>	<i>168.3</i>	—
Equity Income	(28.3)	12.7	40.9	—
<b>Operating Income + Equity Income</b>	<b>(25.1)</b>	<b>191.9</b>	<b>217.1</b>	—
<b><i>Excluding inventory impact</i></b>	<b>32.6</b>	<b>81.3</b>	<b>48.8</b>	<b>+149.9%</b>
Ordinary Income	(25.8)	197.1	222.9	—
Extraordinary Gain/Loss	(7.2)	6.3	13.5	—
<b>Net Income Attributable to Owners of the Parent</b>	<b>(32.1)</b>	<b>142.7</b>	<b>174.8</b>	—
<b><i>Excluding inventory impact</i></b>	<b>7.9</b>	<b>66.0</b>	<b>58.0</b>	<b>+734.2%</b>

# Segment Information

## ■ Operating Income + Equity Income

[ ¥ billions]

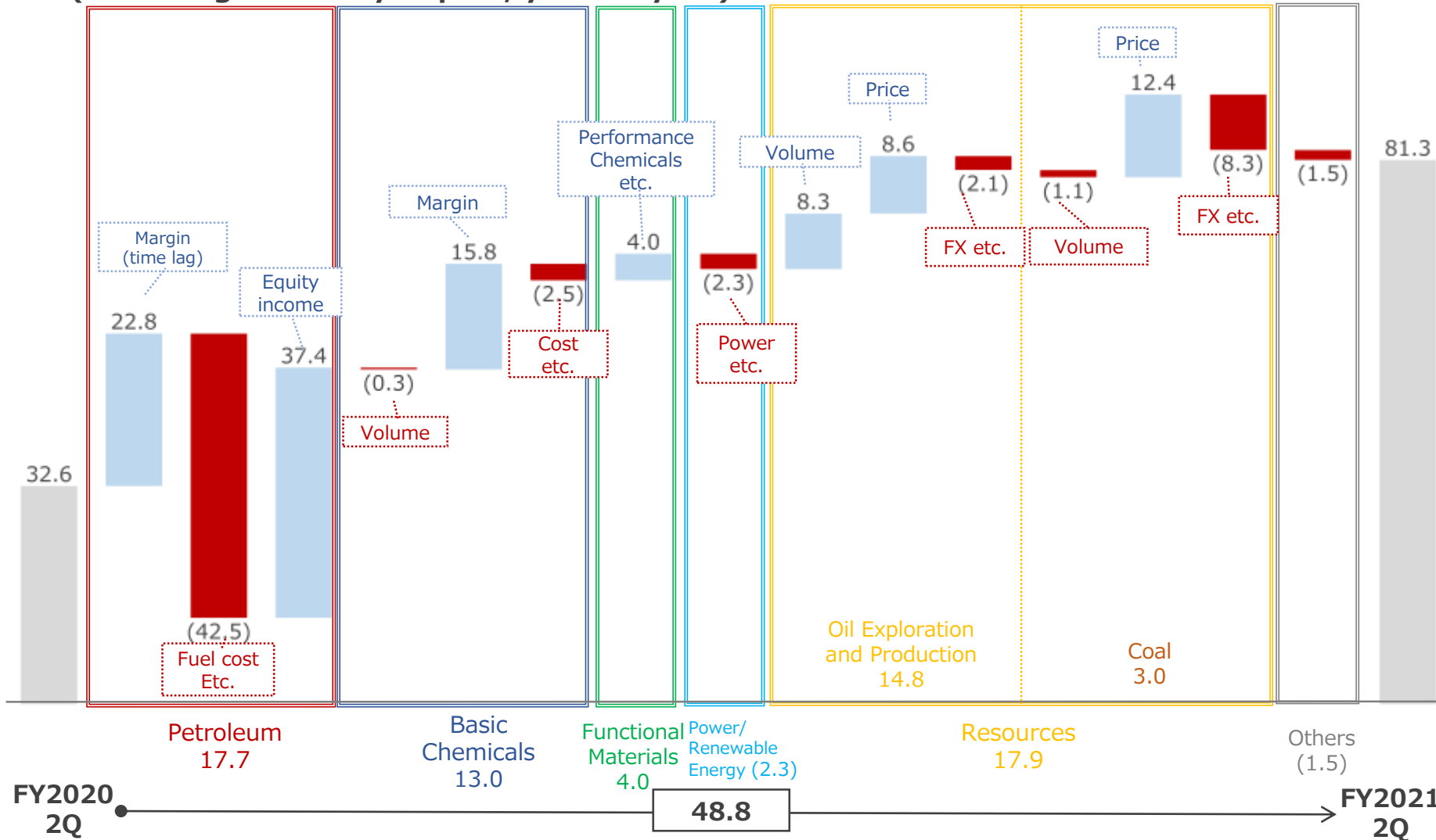
	FY2020 2Q	FY2021 2Q	Change	
<b>Petroleum</b>	(30.3)	155.7	186.0	—
<i>Excluding inventory impact</i>	27.3	45.1	17.7	+64.8%
<b>Basic Chemicals</b>	(2.0)	10.9	13.0	—
<b>Functional Materials</b>	6.2	10.2	4.0	+64.5%
<b>Power and Renewable Energy</b>	(0.5)	(2.8)	(2.3)	—
<b>Resources*</b>	3.6	21.5	17.9	+493.4%
<i>Oil Exploration and Production</i>	2.5	17.3	14.8	+598.2%
<i>Coal</i>	1.1	4.2	3.0	+265.9%
<b>Others/Reconciliation</b>	(2.1)	(3.6)	(1.5)	—
<b>Total</b>	(25.1)	191.9	217.1	—
<i>Excluding inventory impact</i>	32.6	81.3	48.8	+149.9%

\*Fiscal years for Australian coal operations and Oil Exploration and Production included in the Resources Business end in December

# Segment Information

## ■ Factors Affecting Operating Income + Equity Income (excluding inventory impact, year on year)

[ ¥ billions ]



FY2020  
2Q

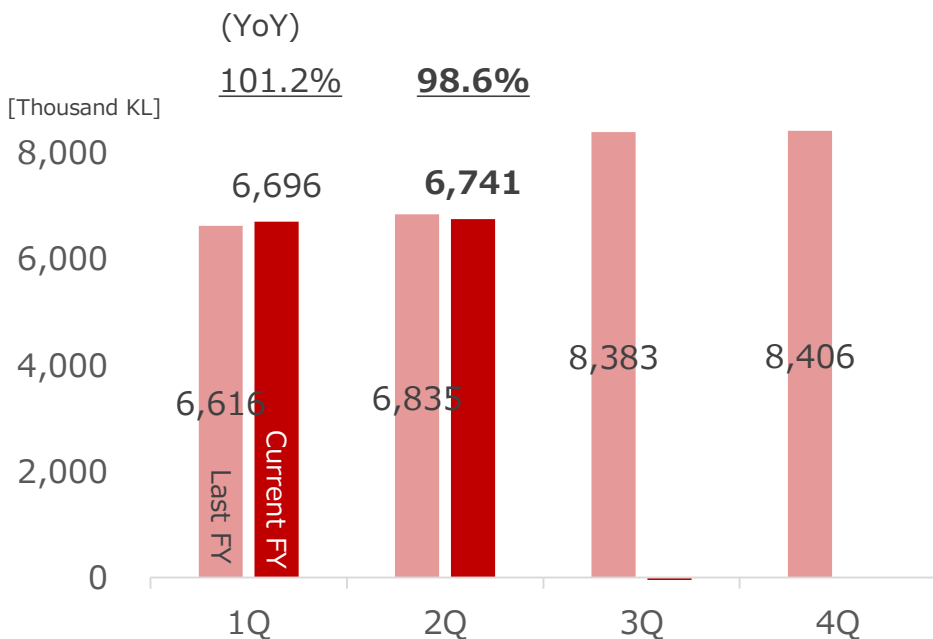
48.8

FY2021  
2Q

# Segment Information

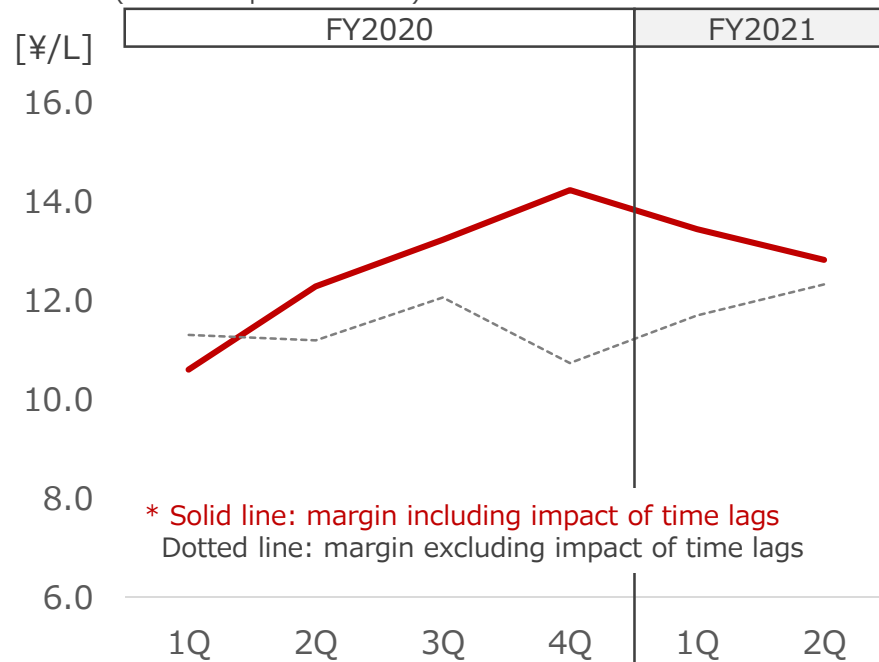
[Petroleum] YoY +¥17.7 bn (FY20 2Q: ¥27.3 bn ➔ FY21 2Q: ¥45.1 bn)

<Year-on-year Change in Petroleum Sales Volume (4 Core Products)>



<Trends in Domestic Petroleum Product Margins\*>

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



- ✓ Sales of the 4 core products for 1H basically unchanged from last year
- ✓ Refining margins improved, mainly due to time lags associated with an increase in crude oil prices
- ✓ Fuel cost and joint products offset refining margins
- ✓ Segment income increased YoY as improved NSRP equity income etc.

# Segment Information

[Basic Chemicals] YoY +¥13.0 bn (FY20 2Q: -¥2.0 bn ➔ FY21 2Q: ¥10.9 bn)

- ✓ Earnings improved by ¥13.0 bn YoY due to a recovery in product margins, especially of styrene monomers [USD/ton]

Product	FY20 2Q		FY21 2Q		Change	
	Price	Margin	Price	Margin	Price	Margin
PX	520	<b>185</b>	889	<b>248</b>	+369	<b>+63</b>
MX	419	<b>90</b>	779	<b>139</b>	+360	<b>+49</b>
SM	634	<b>299</b>	1,230	<b>590</b>	+596	<b>+291</b>

[Functional Materials] YoY +¥4.0 bn (FY20 2Q: ¥6.2 bn ➔ FY21 2Q: ¥10.2 bn)

- ✓ Performance chemicals: Earnings improved due to increased spreads in some products
- ✓ Electronic materials: Earnings improved YoY due to an increase in sales volume
- ✓ Lubricants: Earnings fell due to delays in reflecting increased oil prices in selling prices

[Power and Renewable Energy] YoY -¥2.3 bn (FY20 2Q: -¥0.5 bn ➔ FY21 2Q: -¥2.8 bn)

- ✓ Earnings fell due to an increase in procurement costs in the power business

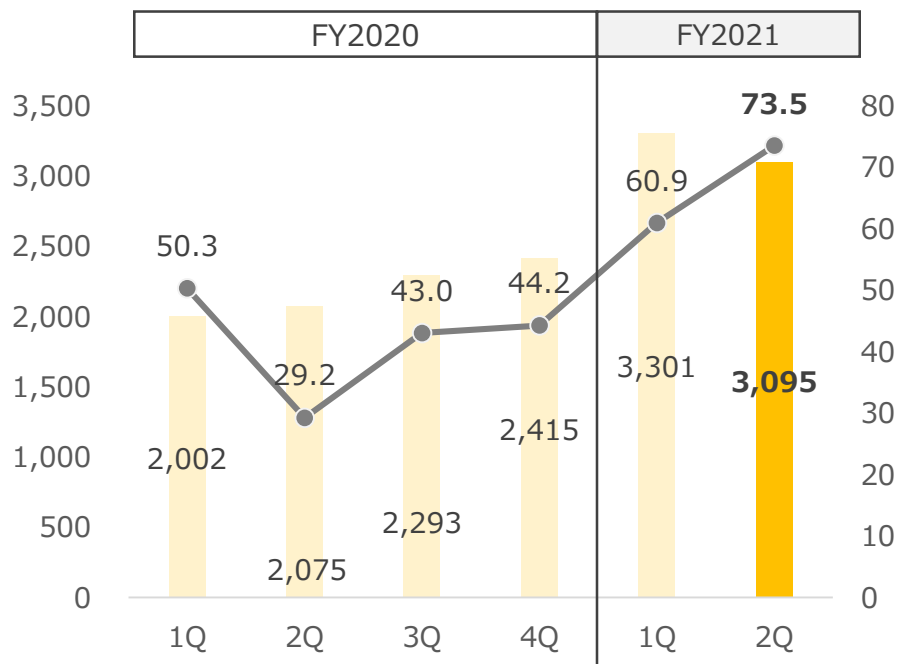
# Segment Information

**[Oil E&P]** YoY +¥14.8 bn

(FY20 2Q: ¥2.5 bn → FY21 2Q: ¥17.3 bn)

## <Crude Oil/Gas Production Volume and Brent Crude Oil Price Trends>

[Thousand BOE] [USD/barrel]



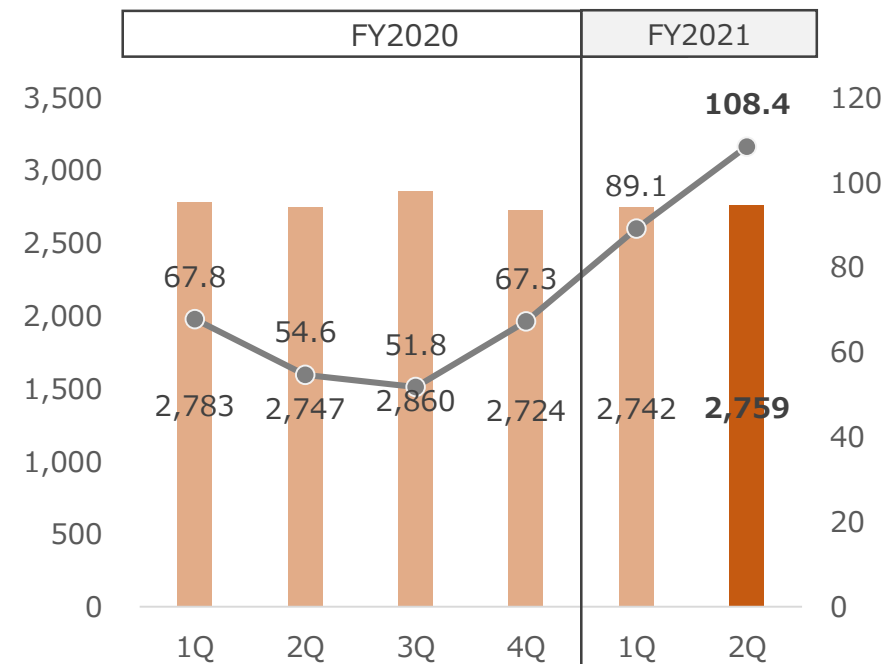
- ✓ Earnings increased due to increased production in Vietnam and Norway and an increase in the Brent crude oil price

**[Coal]** YoY +3.0 bn

(FY20 2Q: ¥1.1 bn → FY21 2Q: ¥4.2 bn)

## <Coal Production Volume and Australian Coal Spot Price Trends>

[Thousand tons] [USD/ton]



- ✓ Improved coal market conditions being partially offset by the appreciation of the Australian dollar

# Balance Sheet

[¥ billions]

	3/31/2021	9/30/2021	Change		3/31/2021	9/30/2021	Change
Cash and Deposits	131.3	73.8	(57.6)	Total Current Liabilities	1,621.3	1,633.7	12.4
Receivables, Inventory, etc.	1,534.2	1,789.8	255.6	Total Fixed Liabilities	1,118.0	1,183.5	65.4
Total Current Assets	1,665.5	1,863.6	198.1	Total Liabilities	2,739.3	2,817.1	77.8
Tangible Fixed Assets	1,521.9	1,525.0	3.1	Shareholders' Equity and Other Comprehensive Income	1,150.9	1,295.5	144.6
Other Fixed Assets	767.0	785.4	18.3	Noncontrolling Interests	64.2	61.3	(2.9)
Total Fixed Assets	2,288.9	2,310.4	21.5	Total Net Assets	1,215.1	1,356.8	141.7
Total Assets	3,954.4	4,174.0	219.5	Total Liabilities and Net Assets	3,954.4	4,174.0	219.5

Net D/E ratio	1.02	0.93	(0.09)
Total Interest - bearing Debt	1,308.9	1,278.0	(30.8)
Equity ratio	29.1%	31.0%	1.9%)



# Statement of Cash Flows

[¥ billions]

<b>Cash Flow from Operating Activities</b>	<b>53.6</b>
Net Income before tax	203.4
Depreciation Expense	51.9
Change in Working Capital	(139.0)
Other	(62.6)
<b>Cash Flow from Investing Activities</b>	<b>(45.1)</b>
Purchase of tangible fixed assets	(55.4)
Other	10.3
<b>Cash Flow from Financing Activities</b>	<b>(69.3)</b>
Change in borrowings	(47.1)
Dividend payments	(17.9)
Other	(4.3)
Translation gains/losses	2.4
Change in cash and deposits	(58.3)
<b>Cash and Cash Equivalents - Beginning Balance</b>	<b>131.0</b>
<b>Cash and Cash Equivalents - Ending Balance</b>	<b>72.6</b>

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## ■ Forecast for FY2021

# Key Topics

## ■ Soaring Resource Prices

- ✓ Revised crude oil and Australian coal spot price assumption due to a global increase in energy prices
- ✓ Resources prices are expected to continue at high level as entering into demand season

[USD/bbl, USD/ton]

	2021 Jan-Mar	2021 Apr-Jun	2021 Jul-Sep	Assumption for Oct 2021 and beyond
Crude Oil (Dubai)	60.0	66.9	71.7	<b>75.0</b>
Australian coal spot price	89.1	108.4	169.1	<b>175.0</b>

## ■ Partial sale of Idemitsu Snorre Oil Development Co., Ltd. (ISD) shares

- ✓ Sold 1% of our stake in ISD to INPEX, making ISD an equity-method affiliates
- ✓ Segment income from the resources business is expected to decrease by over ¥10 billion as a result. The impact on net income is negligible.  
(Pending approval of Norwegian government at the beginning of next year)

# Overview

## ■ Crude Oil / Coal / Exchange Rates

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

	5/11 Forecast	Revised Forecast	Change		Assumptions (2nd half)
Crude Oil (Dubai)	60.0	72.1	12.1	+20.2%	75.0
Crude Oil (Brent)*	61.0	70.4	9.4	+15.5%	78.5
Australian Coal Spot price*	80.0	135.5	55.5	+69.4%	175.0
Exchange Rate (TTM)	105.0	109.9	4.9	+4.7%	110.0

\*Brent prices and Australian coal prices are averages based on the calendar year (January-December).

## ■ Consolidated Income Statement (Summary)

[ ¥ billions ]

	5/11 Forecast	Revised Forecast	Change	
Net Sales	5,680.0	6,580.0	900.0	+15.8%
Operating Income	135.0	300.0	165.0	+122.2%
<i>Inventory impact</i>	0.0	140.0	140.0	—
Equity Income	5.0	20.0	15.0	+300.0%
<b>Operating Income + Equity Income</b>	<b>140.0</b>	<b>320.0</b>	<b>180.0</b>	<b>+128.6%</b>
<i>Excluding inventory impact</i>	<i>140.0</i>	<i>180.0</i>	<i>40.0</i>	<i>+28.6%</i>
Ordinary Income	140.0	330.0	190.0	+135.7%
Extraordinary Gain/Loss	(2.0)	(3.0)	(1.0)	—
<b>Net Income Attributable to Owners of the Parent</b>	<b>85.0</b>	<b>220.0</b>	<b>135.0</b>	<b>+158.8%</b>
<i>Excluding inventory impact</i>	<i>85.0</i>	<i>120.0</i>	<i>35.0</i>	<i>+41.2%</i>

# Segment Information

## ■ Operating Income + Equity Income

[¥ billions]

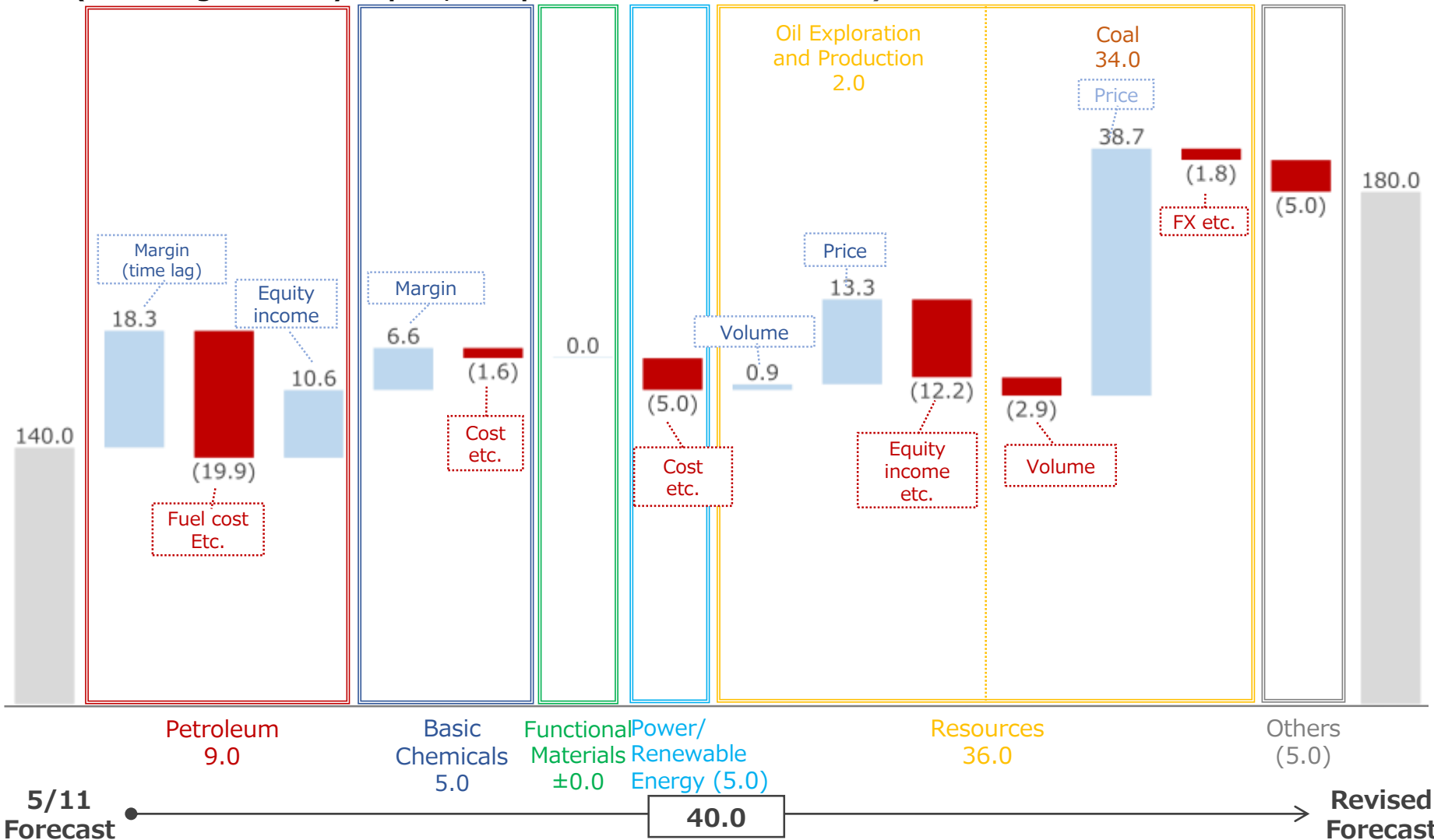
	5/11 Forecast	Revised Forecast	Change	
<b>Petroleum</b>	84.0	233.0	149.0	+177.4%
<i>Excluding inventory impact</i>	84.0	93.0	9.0	+10.7%
<b>Basic Chemicals</b>	10.0	15.0	5.0	+50.0%
<b>Functional Materials</b>	16.0	16.0	–	–
<b>Power and Renewable Energy</b>	(6.0)	(11.0)	(5.0)	–
<b>Resources*</b>	40.0	76.0	36.0	+90.0%
<i>Oil Exploration and Production</i>	33.0	35.0	2.0	+6.1%
<i>Coal</i>	7.0	41.0	34.0	+485.7%
<b>Others/Reconciliation</b>	(4.0)	(9.0)	(5.0)	–
<b>Total</b>	140.0	320.0	180.0	+128.6%
<i>Excluding inventory impact</i>	140.0	180.0	40.0	+28.6%

\* Fiscal years for Australian coal operations and Oil Exploration and Production included in the Resources Business end in December

# Segment Information

- Factors Affecting Operating Income + Equity Income (excluding inventory impact, Compared to the 5/11 forecast)

[¥ billions]



5/11 Forecast

Revised Forecast

# Segment Information

[Petroleum] YoY +¥9.0 bn (5/11 forecast: ¥84.0 bn ➡ Revised forecast: ¥93.0 bn)

- ✓ Increase in refining margins due to positive time lags offset by fuel costs
- ✓ Segment income increase mainly due to increase in equity income from LPG related affiliate

[Basic Chemicals] YoY +¥5.0 bn (5/11 forecast : ¥10.0 bn ➡ Revised forecast : ¥15.0 bn)

- ✓ Forecasting margin improvement in styrene monomers, etc.  
[USD/ton]

Product	5/11 Forecast		Revised Forecast		Change	
	Price	Margin	Price	Margin	Price	Margin
PX	800	250	910	250	+110	±0
MX	680	130	800	140	+120	+10
SM	910	350	1,140	480	+230	+130

[Functional Materials] YoY ±¥0 bn (5/11 forecast : ¥16.0 bn ➡ Revised forecast: ¥16.0 bn)

- ✓ Performance chemicals, electronic materials: revised upward
- ✓ Lubricants: Downward revision due to troubles in Chiba and time lags

# Segment Information

**[Power and Renewable Energy]** YoY -¥5.0 bn (5/11 forecast : -¥6.0 bn ➔ Revised forecast: -¥11.0 bn)

- ✓ Revised downward due to increased procurement costs resulting from increased wholesale prices in the power business

**[Oil E&P]** YoY +¥2.0 bn (5/11 forecast : ¥33.0 bn ➔ Revised forecast : ¥35.0 bn)

- ✓ Upward revision of ¥2.0 billion, with the impacts of increasing crude oil prices and the transition of Idemitsu Snore Oil Development to an equity income affiliate offsetting each other

**[Coal]** YoY +¥34.0 bn (5/11 forecast : ¥7.0 bn ➔ Revised forecast : ¥41.0 bn)

- ✓ Reduced production volume forecast, reflecting the impact of reduced production in some of the coal mines
- ✓ Increase from pricing factors, reflecting the strong coal market



# Investments

[¥ billions]

	FY2021(1 <sup>st</sup> half)			FY2021(5/11 Forecast)		
	Strategic	Maintenance Renewal	Total	Strategic	Maintenance Renewal	Total
Petroleum Basic Chemicals	2.1	34.9	37.0	9	82	91
Power/Renewable Functional Materials ,Others	5.7	4.5	10.3	28	19	47
Resources	18.0	6.6	24.6	38	17	55
<b>Total</b>	<b>25.9</b>	<b>46.0</b>	<b>71.9</b>	<b>75</b>	<b>118</b>	<b>193</b>

No changes made from 5/11 forecast

- ✓ Major projects  
Vietnam gas fields, Norwegian gas fields, Idemitsu Green Energy Pellets, Lithium solid electrolytes etc.
- ✓ Maintenance and renewal are high level due to concentration of shut down maintenance

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## ■ Progress on the Medium-term Management Plan

# Progress on basic strategy towards 2030

## ■ ROIC management



- ✓ Establish KPIs suited to the characteristics of each business division
- ✓ Implement planned sales of general affairs and idol assets

## ■ Evolve the business platform



**Accelerate DX**

- ✓ Accelerate DX projects each division (Selected DX stocks 2021)

**Enhance corporate governance**

- ✓ Smaller and diversified board members  
1→2 women (total 12→11 members)
- ✓ Added board member specializes in regional revitalization and retail business

## ■ Create an open, flat, and agile corporate culture

**Internal dissemination of the corporate mission and vision**

- ✓ Create opportunities for direct communication between management and employees
- ✓ Held discussion meeting about corporate mission

**Organizational reforms**

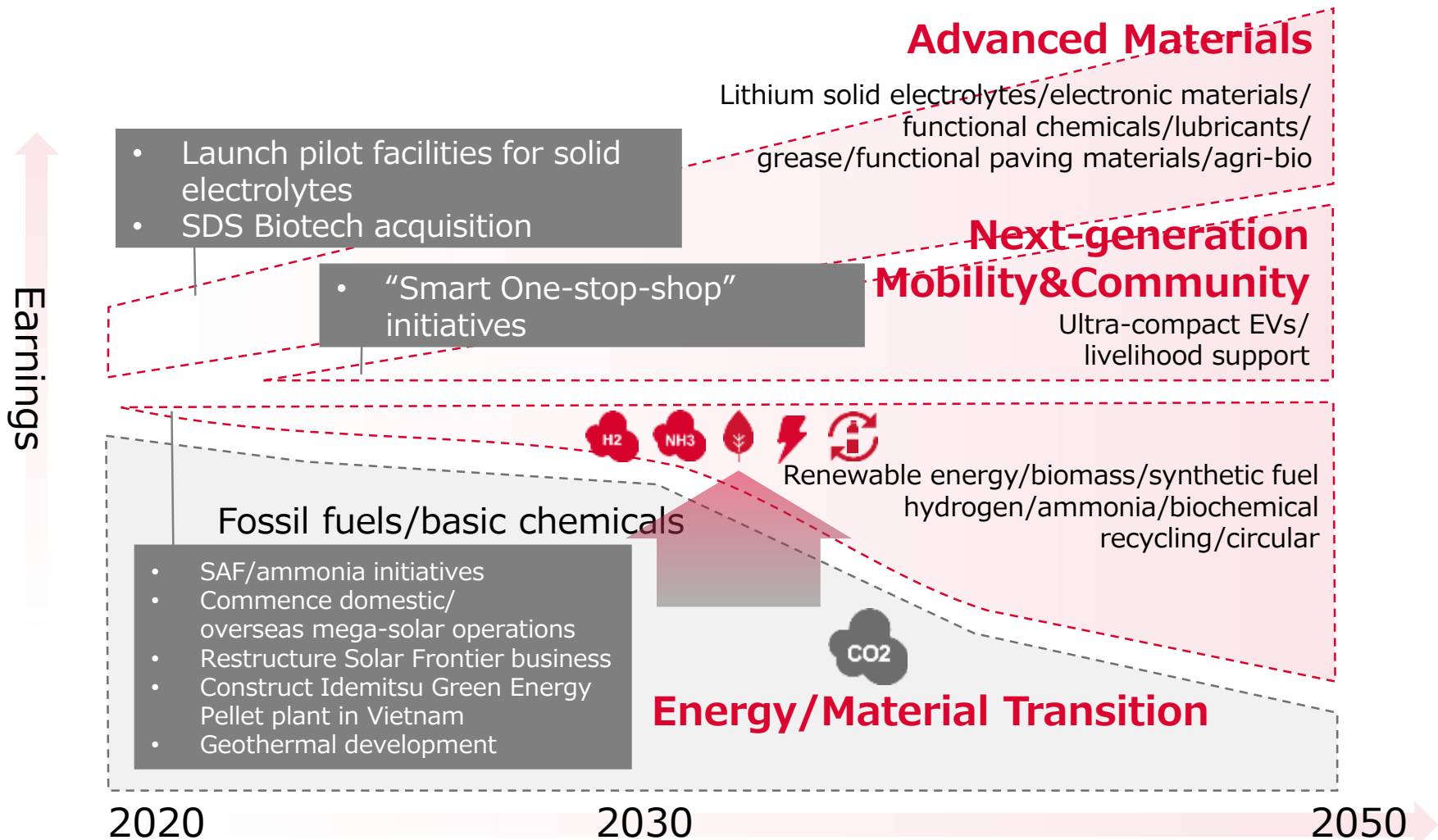
- ✓ Simplify corporate hierarchy to clarify/accelerate decision-making

**Workstyle reforms**

- ✓ Support workstyle reforms which relaxed terms of employment (work from home, etc.) implemented in response to COVID-19
- ✓ Establish a D&I promotion committee to establish a stronger internal D&I framework

# Progress on portfolio evolution aimed at carbon neutrality

We are various launching/strengthening efforts relating to energy/material transition, advanced materials, and next-generation mobility and community in order to achieve a carbon-neutral society



# Progress on Business Strategy (Petroleum, Basic Chemicals)

## ■ Turn apollostation into a “Smart Yorozyua (One-stop shop)”

- ✓ Commenced pilot programs for mobile brain medical checkup and food delivery services from SS (Shizuoka , Mie Prefecture)

## ■ Turn refinery/complex into stablish a “CNX\* Center”

\*CNX: Carbon Neutral Transformation

- ✓ Commenced pilot test for disposed plastic recycling at the Chiba complex, aiming to recycle 15,000 tons of resources per year
- ✓ An initiative to manufacture sustainable aviation fuel (SAF) from CO<sub>2</sub> was selected as a contracted business form the Ministry of the Environment
- ✓ Joint discussions with Yara International and JERA to establish an ammonia supply chain at the Tokuyama complex

## ■ Deepen integration between refining and petrochemical production

- ✓ Signed purchase agreement for ENEOS Chita Paraxylene manufacturing facilities, etc. (1)

## ■ Enabling profit contribution from Nghi Son Refinery

- ✓ Implementing efforts aimed at earnings improvement

Note)

- Business strategy stated in the revised medium-term plan
- ✓ Status of initiatives in FY21 1H

# Progress on Business Strategy (Functional Materials, Power and Renewable Energy)

## ■ Commercialize lithium solid electrolytes and accelerate development of advanced materials

- ✓ Commenced operating pilot facilities toward the commercial production of solid electrolytes(2)
- ✓ Strengthen R&D framework and accelerate development through acquiring SDS Biotech

## ■ Expand development of renewable energy sources (solar/wind/biomass)

- ✓ Commenced domestic mega-solar operations: Akaiwa-shi, Okayama Pref.: about 58,000kW; Hirono-cho, Iwate Pref.: about 17,000kW
- ✓ Commenced overseas mega-solar operations: Philippines: about 32,000 kW, US: about 100,000 kW

## ■ Develop distributed energy business centered around renewable energy

- ✓ Signed cooperative agreement with Saitama City to promote use of renewable energy within the City
- ✓ Commenced operation of an energy management validation system for energy use optimization using solar power generation systems, batteries, and EVs in Kunitomi-cho, Miyazaki Pref.

## ■ Convert Solar Frontier's module sales business into a system integrator business

- ✓ Decision to transform Solar Frontier into a next-generation systems integrator (3)

## Progress on Business Strategy (Resources)

- **Oil E&P: Shift to Southeast Asian gas development, CCS initiatives using developed technologies**
  - ✓ Full-scale production and earnings contributions from Vietnamese gas fields
  - ✓ Commenced production at Duva oil/gas field in the Norwegian North Sea
- **Coal: Shifting to the low-carbon solutions business (black pellets, ammonia)(4)**
  - ✓ Finalized plans to construct a manufacturing plant for Idemitsu Green Energy Pellets in Vietnam (120,000 t/year)
  - ✓ Developed and commenced sales of BAIOMIX™, which optimizes co-combustion ratios for biomass fuel
- **Expand domestic and overseas geothermal operations**
  - ✓ Completed environmental assessment of geothermal development (15,000 kW) in Yuzawa-shi, Akita Pref.

# 1) Signed purchase agreement for ENEOS Chita paraxylene manufacturing facilities, etc.

## ■ Description

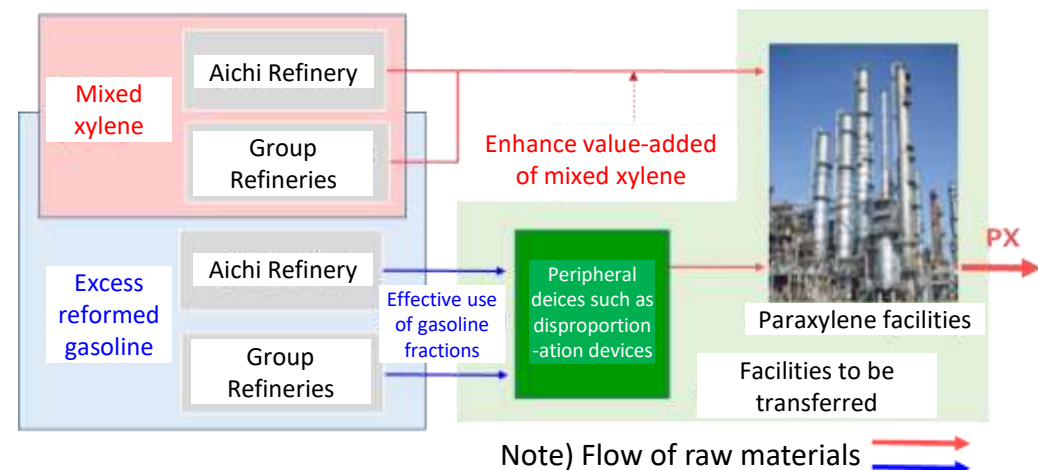
- ✓ Signed purchase agreement for ENEOS Chita's paraxylene manufacturing facilities, etc.
- ✓ Target facilities  
Paraxylene manufacturing facilities: 400,000 tons/year (including peripheral devices such as disproportionation devices)

## ■ Background and Objectives

- ✓ Decrease in demand for gasoline fractions is likely to accelerate going forward
- ✓ The petrochemical market is expected to continue achieving growth, in line with economic growth in Asia
- ✓ Effective use of excess gasoline fractions in production/supply of high value-added petrochemical ingredients will contribute to enhancing the competitiveness of Group refineries and to value maximization

## ■ Future Outlook

- ✓ Transfer to be executed around Oct 2022
- ✓ Commercial production to Commence around Jan 2023
- ✓ Forecasting several hundreds of millions of yen in average annual operating earnings in the first 10 years of operations





## 2) Start of verification facility of all solid electrolytes

### ■ Description

- ✓ location : Chiba complex
- ✓ Trial operation : FY2021 2<sup>nd</sup> half



Appearance of building

### ■ Background and Objectives

- ✓ Growing EV battery market
- ✓ All solid lithium ion battery as next generation battery with higher durability and faster charge

- ✓ Idemitsu has secured production process of higher purity sulfide lithium and has a lot of patents of solid electrolytes
- ✓ This facility is aiming a commercial production from raw material to final products as well as establishing a stable supply chain

### ■ Future Outlook

- ✓ Promoting operationalization by mass production as well as improving performance

### 3) Decision to transform Solar Frontier into a next-generation systems integrator

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#### ■ Description

- ✓ Management resources being used in research and manufacturing of general-purpose solar battery panels, which is currently facing fierce price competition, will be shifted to growth areas where the Idemitsu Group can capitalize on its unique strengths
- ✓ Kunitomi Plant's CIS thin-film solar battery production will be terminated at the end of June 2022 and to shift to OEM procurement of crystal silicon solar batteries. The Kunitomi Plant will continue to function as the core office in Solar Frontier's transformation into a next-generation systems integrator.

#### ■ Background and Objectives

- ✓ The transition to solar power generation as a key energy source, as set forth in the 6<sup>th</sup> Basic Energy Plan, faces 3 social challenges: limited space for solar panels, long-term stable use, and stability of supply and demand
- ✓ In order to resolve such challenges, Solar Frontier will leverage its technology, human talent, sales networks, and service centers established through many years of solar panel manufacturing and sales to transform into a next-generation systems integrator

#### ■ Future Outlook

- ✓ Engage in the following efforts to transform into a next-generation systems integrator (including transition from internal production to OEM procurement) and pursue positive earnings and earnings contributions to the Idemitsu Group from Solar Frontier in 2023
  - <Expand locations for placement>: Power generation system design, EPC business, develop technology to expand locations for panel placement
  - <Long-term stable use>: O&M (operations & maintenance) business, evaluation of power plants, repowering business, solar battery panel recycling business
  - <Stabilize supply/demand>: Develop energy management system business

## 4)Coal : Shifting to the low-carbon solutions business

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### 1. Black pellet(Idemitsu green energy pellet)

#### ■ Description

- ✓ Commercial plant in Vietnam with 120k t/y expected start in FY2022 1<sup>st</sup> half

#### ■ Background and Objectives

- ✓ Stable supply of a low-cost, sustainable fuel is crucial for the achievement of Japan's goal of 46% reduction in GHG by 2030
- ✓ Higher demand from existing coal users

#### ■ Overview of Idemitsu green energy pellet

- ✓ 35% of alternative to coal without any renovation of coal boiler
- ✓ Equivalent to competitiveness with ammonia or more  
Generation cost 20%mix : 10~11 ¥ /kwh, 100% : 15~17 ¥ /kwh

#### ■ Future Outlook

- ✓ Aiming to sales revenue of 50bil ¥ with 2 mil production in 2030

### 2. Our challenge to ammonia

- ✓ Started joint study with Yara international and JERA at Tokuyama complex and blue ammonia import from ADNOC

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## ■ Reference Materials

# Overview of the Company

## ■ Petroleum Segment

- Refining Capacity **945,000 BD** \*1)
- Domestic fuel oil sales volume **34 million KL/year** \*2)
- Number of service stations **6,300**

## ■ Basic Chemicals Segment

(Production Capacity)

- Ethylene **1 mil tons/year**
- Paraxylene **1.42 mil tons/year** \*3)
- Styrene monomers **0.79 mil tons/year**

## ■ Power and Renewable Energy Segment

- Power generation capacity **1.4GW**  
- Renewable energy **0.5GW**
- Solar panel production capacity **1GW/year**

## ■ Functional Materials Segment

(Lubricants, performance chemicals, electronic materials, functional asphalt, agricultural-biotechnology, solid electrolyte)

- Lubricants sales volume **1.1 mil KL/year**
- Engineering plastics(sales volume): **150,000 tons/year**
- Adhesive materials(production volume): **75,000 tons/year**
- OLED materials production capacity **22 tons/year**

## ■ Resources Segment

- Crude oil production **24,000 BD**
- Thermal coal production **11 mil tons/year**

\*1 1,090,000 barrels/day when adding the refining capacity of Fuji Oil, Co.,Ltd with which a petroleum products trade agreement has been signed

\*2 Bond jet fuel and Bond heavy fuel oil C are included in the exports

\*3 Including mixed xylene production capacity

# Financial Data

## ■ Net Sales by Segment

[¥ billions]

	FY2020 2Q	FY2021 2Q	Change	
<b>Petroleum</b>	1,570.7	2,230.1	659.5	+42.0%
<b>Basic Chemicals</b>	144.0	250.5	106.6	+74.0%
<b>Functional Materials</b>	155.4	194.0	38.6	+24.8%
<b>Power and Renewable Energy</b>	62.2	57.0	(5.2)	(8.3%)
<b>Resources*</b>	82.3	133.9	51.5	+62.6%
<i>Oil Exploration and Production</i>	<i>12.3</i>	<i>40.1</i>	<i>27.8</i>	<i>+226.7%</i>
<i>Coal</i>	<i>70.1</i>	<i>93.8</i>	<i>23.7</i>	<i>+33.9%</i>
<b>Others/Reconciliation</b>	1.2	1.5	0.3	+27.9%
<b>Total</b>	2,015.7	2,867.0	851.3	+42.2%

\*Fiscal years for Australian coal operations and Oil Exploration and Production included in the Resources Business end in December

# Financial Data

## ■ Quarterly segment income (accumulated, excluding inventory impact) [¥ billions]

	FY2020 1Q	FY2020 2Q	FY2020 3Q	FY2020	FY2021 1Q	FY2021 2Q
Petroleum	(9.4)	27.3	64.9	94.7	29.6	45.1
Equity income	(27.2)	(28.8)	(37.2)	(41.1)	6.0	8.6
Basic Chemicals	0.1	(2.0)	(1.0)	3.4	6.7	10.9
Equity income	0.3	0.4	0.7	0.4	0.1	0.7
Functional Materials	4.8	6.2	9.5	13.0	4.3	10.2
Equity income	0.1	(0.3)	(0.1)	0.8	0.6	1.4
Power and Renewable Energy	0.1	(0.5)	(1.7)	(17.3)	(1.0)	(2.8)
Equity income	(0.1)	(0.2)	(0.1)	(0.1)	(0.0)	(0.1)
Resources						
-Oil Exploration and Production	2.2	2.5	5.2	6.8	12.4	17.3
Equity income	—	—	—	—	—	—
-Coal	1.0	1.1	(0.7)	(2.0)	0.6	4.2
Equity income	0.4	0.7	0.6	0.6	0.4	0.8
Others/Reconciliation	(1.9)	(2.1)	(3.5)	(5.7)	(2.3)	(3.6)
Equity income	(0.4)	(0.0)	0.1	(0.4)	1.2	1.3
<b>Total</b>	<b>(3.1)</b>	<b>32.6</b>	<b>72.7</b>	<b>92.8</b>	<b>50.3</b>	<b>81.3</b>
<b>Equity income</b>	<b>(26.7)</b>	<b>(28.3)</b>	<b>(36.0)</b>	<b>(39.8)</b>	<b>8.3</b>	<b>12.7</b>

\*There was an error for equity income of Others/Reconciliation in FY20 1Q figure, actual figure is (0.3)

# Financial Data

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

[¥ billions]

	FY2020 1Q	FY2020 2Q	FY2020 3Q	FY2020	FY2021 1Q	FY2021 2Q
Petroleum	(9.4)	36.7	37.6	29.7	29.6	15.4
Equity income	(27.2)	(1.6)	(8.4)	(3.9)	6.0	2.6
Basic Chemicals	0.1	(2.2)	1.0	4.4	6.7	4.2
Equity income	0.3	0.1	0.3	(0.3)	0.1	0.5
Functional Materials	4.8	1.4	3.3	3.5	4.3	5.9
Equity income	0.1	(0.4)	0.2	0.9	0.6	0.8
Power and Renewable Energy	0.1	(0.5)	(1.3)	(15.6)	(1.0)	(1.8)
Equity income	(0.1)	(0.1)	0.0	0.1	(0.0)	(0.0)
Resources						
-Oil Exploration and Production	2.2	0.2	2.7	1.5	12.4	5.0
Equity income	—	—	—	—	—	—
-Coal	1.0	0.2	(1.8)	(1.3)	0.6	3.6
Equity income	0.4	0.2	(0.0)	(0.0)	0.4	0.4
Others/Reconciliation	(1.9)	(0.2)	(1.4)	(2.1)	(2.3)	(1.3)
Equity income	(0.4)	0.3	0.2	(0.6)	1.2	0.1
<b>Total</b>	<b>(3.1)</b>	<b>35.7</b>	<b>40.1</b>	<b>20.1</b>	<b>50.3</b>	<b>31.0</b>
<b>Equity income</b>	<b>(26.7)</b>	<b>(1.5)</b>	<b>(7.7)</b>	<b>(3.8)</b>	<b>8.3</b>	<b>4.4</b>

\*There was an error for equity income of Others/Reconciliation in FY20 1Q figure, actual figure is (0.3)



# Sales and Production

## ■ Sales Volume(Petroleum Segment)

[Thousand KL,%]

	FY 2020 2Q	FY 2021 2Q	Change	
Gasoline	6,308	6,406	99	1.6%
Naphtha	162	60	(102)	(63.0%)
Jet Fuel	613	806	192	31.3%
Kerosene	971	788	(183)	(18.8%)
Diesel Oil	4,799	4,898	99	2.1%
Heavy Fuel Oil A	1,372	1,345	(28)	(2.0%)
Heavy Fuel Oil C	942	1,071	129	13.7%
<b>Total Domestic Sales Volume</b>	<b>15,168</b>	<b>15,374</b>	<b>205</b>	<b>1.4%</b>
Exported Volume	1,524	2,334	810	53.2%
<b>Total Sales Volume</b>	<b>16,692</b>	<b>17,708</b>	<b>1,015</b>	<b>6.1%</b>

\*Bond jet fuel and Bond heavy fuel oil C are included in the exported volume

# Sales and Production

## ■ Sales Volume (Basic Chemicals Segment)

[Thousand tons,%]

	FY 2020 2Q	FY 2021 2Q	Change	
Basic Chemicals	1,787	1,769	(18)	(1.0%)

\*FY20 2Q figure was collected due to counting error

## ■ Sales Volume (Functional Materials Segment)

[Thousand KL, Thousand tons,%]

	FY 2020 2Q	FY 2021 2Q	Change	
Lubricants	476	589	113	23.7%
Performance Chemicals	301	374	73	24.4%

\*Includes sales of overseas licenses

## ■ Sales Volume (Power and Renewable Energy Segment)

[Million kWh,%]

	FY 2020 2Q	FY 2021 2Q	Change	
Retail Power Sales	1,759	2,620	861	48.9%

# Sales and Production

## ■ Oil E&P – Production Volume, including Gas (Resources Segment)

[Thousand BOED,%]

	FY 2020 2Q	FY 2021 2Q	Change	
Norway	22.4	23.6	1.2	5.2%
Vietnam	0.0	11.8	11.8	–
Total('000BOED)	22.4	35.3	12.9	57.8%
Total('000BOE)	4,077	6,396	2,319	56.9%

\*Figures based on interest owned by Idemitsu's resource development subsidiaries

## ■ Coal – Production Volume (Resources Segment)

[Thousand tons,%]

	FY 2020 2Q	FY 2021 2Q	Change	
Ensham	2,117	1,787	(330)	(15.6%)
Muswellbrook	426	443	17	4.0%
Boggabri	2,276	2,632	356	15.6%
<b>Sub Total</b>	<b>4,819</b>	<b>4,862</b>	<b>43</b>	<b>0.9%</b>
Malinau	712	639	(73)	(10.2%)
<b>Total Production Volume</b>	<b>5,530</b>	<b>5,501</b>	<b>(29)</b>	<b>(0.5%)</b>

\*Figures based on interest owned by Idemitsu Group

\*Fiscal years for Oil Exploration and Production and Coal operations end in December

# Sales and Production - Forecast

## ■ Sales Volume(Petroleum Segment)

[Thousand KL,%]

	5/11 Forecast	Revised Forecast	Change	
Gasoline	13,230	13,030	(200)	(1.5%)
Naphtha	100	140	40	40.0%
Jet Fuel	1,990	1,810	(180)	(9.0%)
Kerosene	4,050	3,930	(120)	(3.0%)
Diesel Oil	10,210	10,150	(60)	(0.6%)
Heavy Fuel Oil A	3,250	3,200	(50)	(1.5%)
Heavy Fuel Oil C	2,110	2,250	140	6.6%
<b>Total Domestic Sales Volume</b>	<b>34,940</b>	<b>34,510</b>	<b>(430)</b>	<b>(1.2%)</b>
Exported Volume	6,690	6,830	140	2.1%
<b>Total Sales Volume</b>	<b>41,630</b>	<b>41,340</b>	<b>(290)</b>	<b>(0.7%)</b>

\*Bond jet fuel and Bond heavy fuel oil C are included in the exported volume

# Sales and Production - Forecast

## ■ Sales Volume (Basic Chemicals Segment)

[Thousand tons,%]

	5/11 Forecast	Revised Forecast	Change	
Basic Chemicals	4,020	3,930	(90)	(2.2%)

\*5/11 Forecast figure was collected due to counting error

## ■ Sales Volume (Functional Materials Segment)

[Thousand KL, Thousand tons,%]

	5/11 Forecast	Revised Forecast	Change	
Lubricants	1,240	1,180	(60)	(4.8%)
Performance Chemicals	770	790	20	2.6%

\*Includes sales of overseas licenses

## ■ Sales Volume (Power and Renewable Energy Segment)

[Million kWh,%]

	5/11 Forecast	Revised Forecast	Change	
Retail Power Sales	4,240	5,160	920	21.7%

# Sales and Production - Forecast

## Oil E&P Production Volume, including Gas (Resources Segment)

[Thousand BOED,%]

	5/11 Forecast	Revised Forecast	Change	
Norway	25.1	26.8	1.7	6.9%
Vietnam	14.5	13.2	(1.3)	(8.8%)
Total('000BOED)	39.5	40.0	0.5	1.2%
Total('000BOE)	14,430	14,590	160	1.0%

\*Figures based on interest owned by Idemitsu's resource development subsidiaries

## Coal Production Volume (Resources Segment)

[Thousand tons,%]

	5/11 Forecast	Revised Forecast	Change	
Ensham	4,570	3,900	(670)	(14.7%)
Muswellbrook	1,210	1,190	(20)	(1.7%)
Boggabri	5,600	5,600	±0	±0.0%
<b>Sub Total</b>	<b>11,380</b>	<b>10,690</b>	<b>(690)</b>	<b>(6.1%)</b>
Malinau	1,050	1,200	150	14.3%
<b>Total Production Volume</b>	<b>12,430</b>	<b>11,890</b>	<b>(540)</b>	<b>(4.3%)</b>

\*Figures based on interest owned by Idemitsu Group

\*Fiscal years for Oil Exploration and Production and Coal operations end in December

# Sensitivity

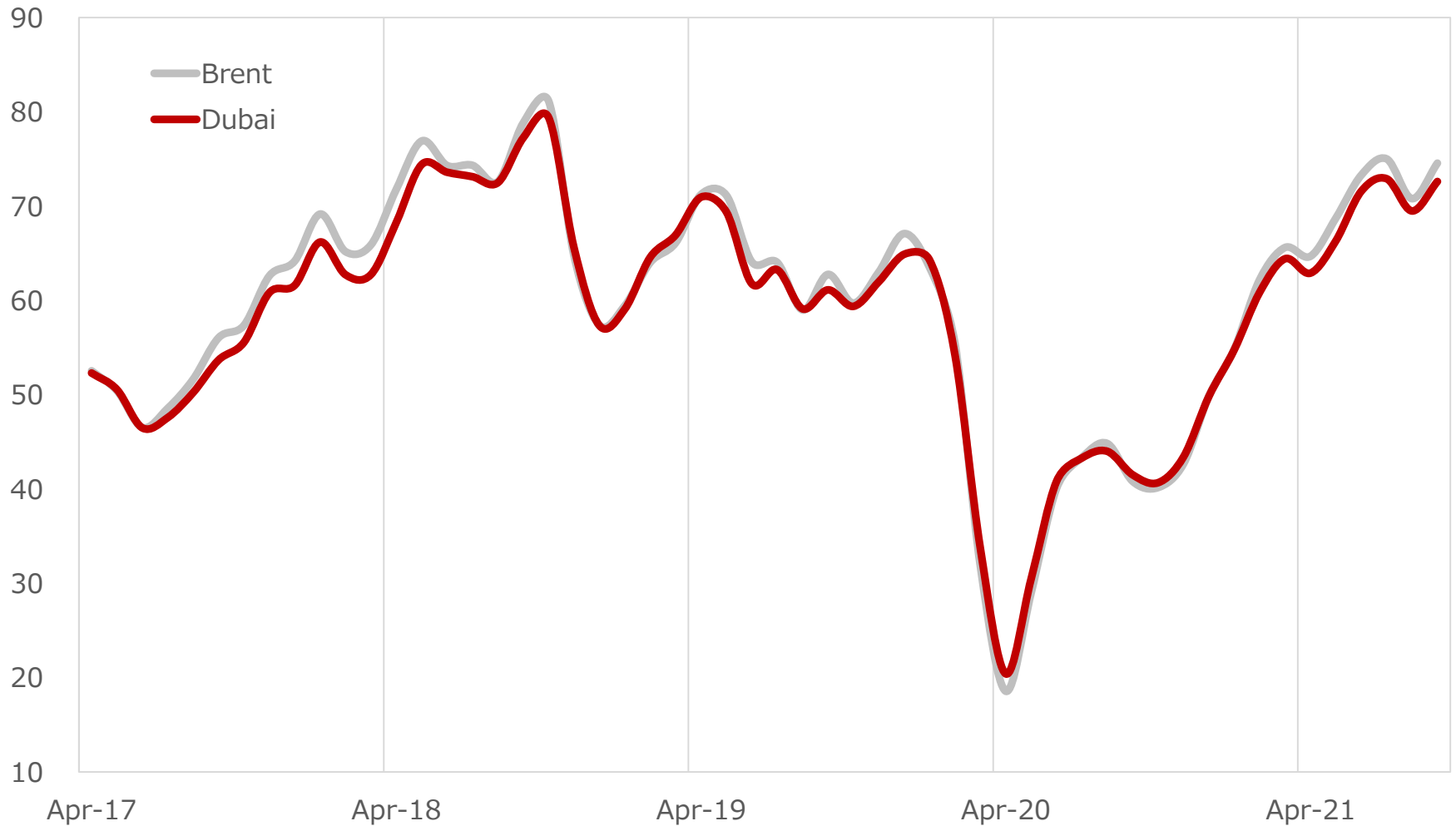
## ■ Impact on FY earnings

Items	Range	Impact on earnings
Crude Oil	1 \$/bbl Decrease	<b>Petroleum</b> (¥4.0 billion) Fuel cost, etc. ¥1.0 billion Inventory impact (¥5.0 billion)
		<b>Oil Exploration &amp; Production</b> (¥1.0 billion)
Foreign Exchange JPY/USD	1 JPY/\$ Appreciation	<b>Petroleum</b> (¥2.5 billion) Fuel cost, etc. ¥0.5 billion Inventory impact (¥3.0 billion)
		<b>Basic Chemicals</b> (¥0.5 billion)

\*In addition to the above, the resources businesses are impacted by fluctuations in exchange rates with other currencies (NOK, AUD, etc.)

# Crude Oil Prices (Dubai and Brent)

[USD/bbl]

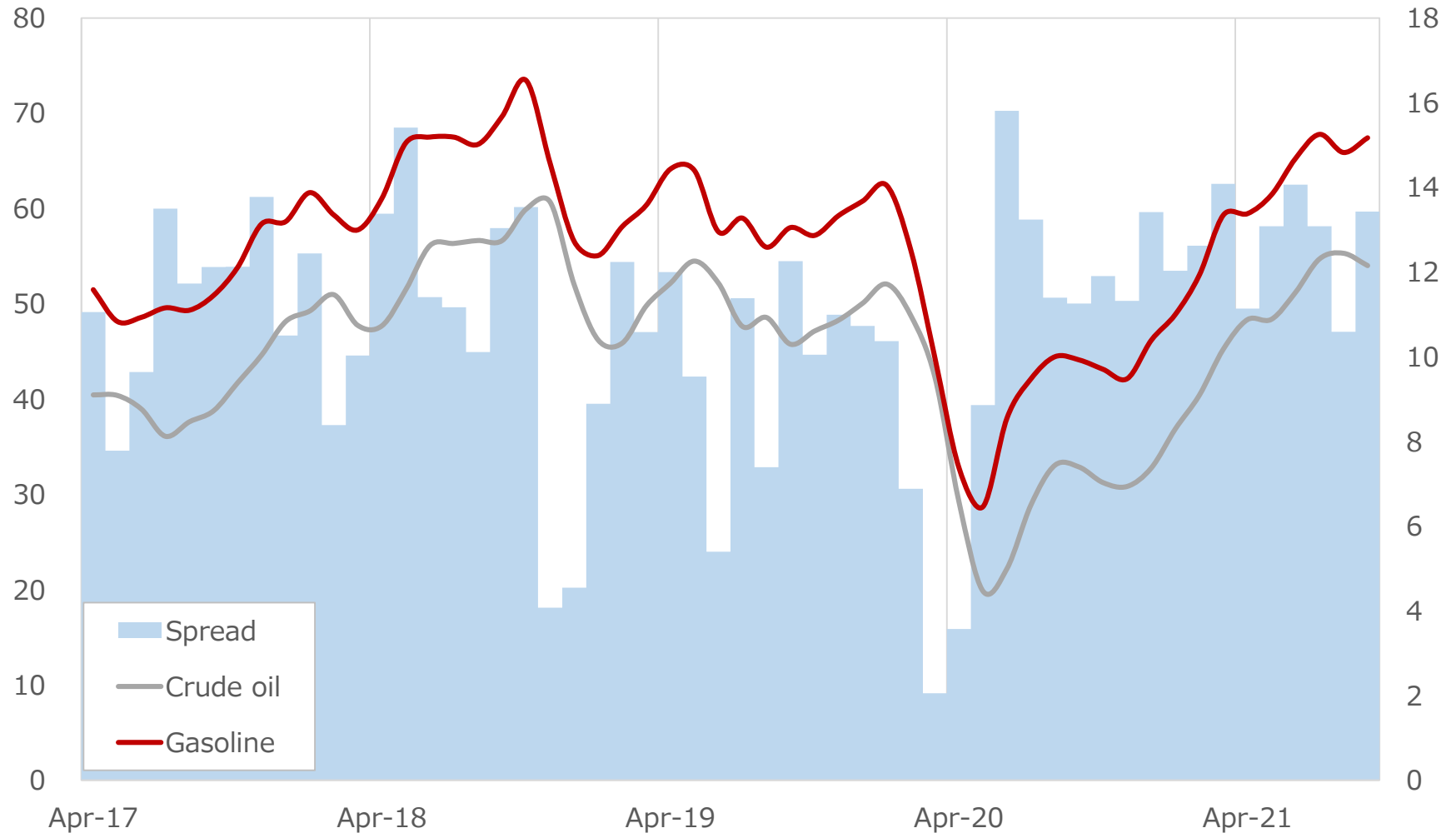




# Gasoline – Crude Oil (Domestic spot prices and Spreads)

[JPY/L] Prices

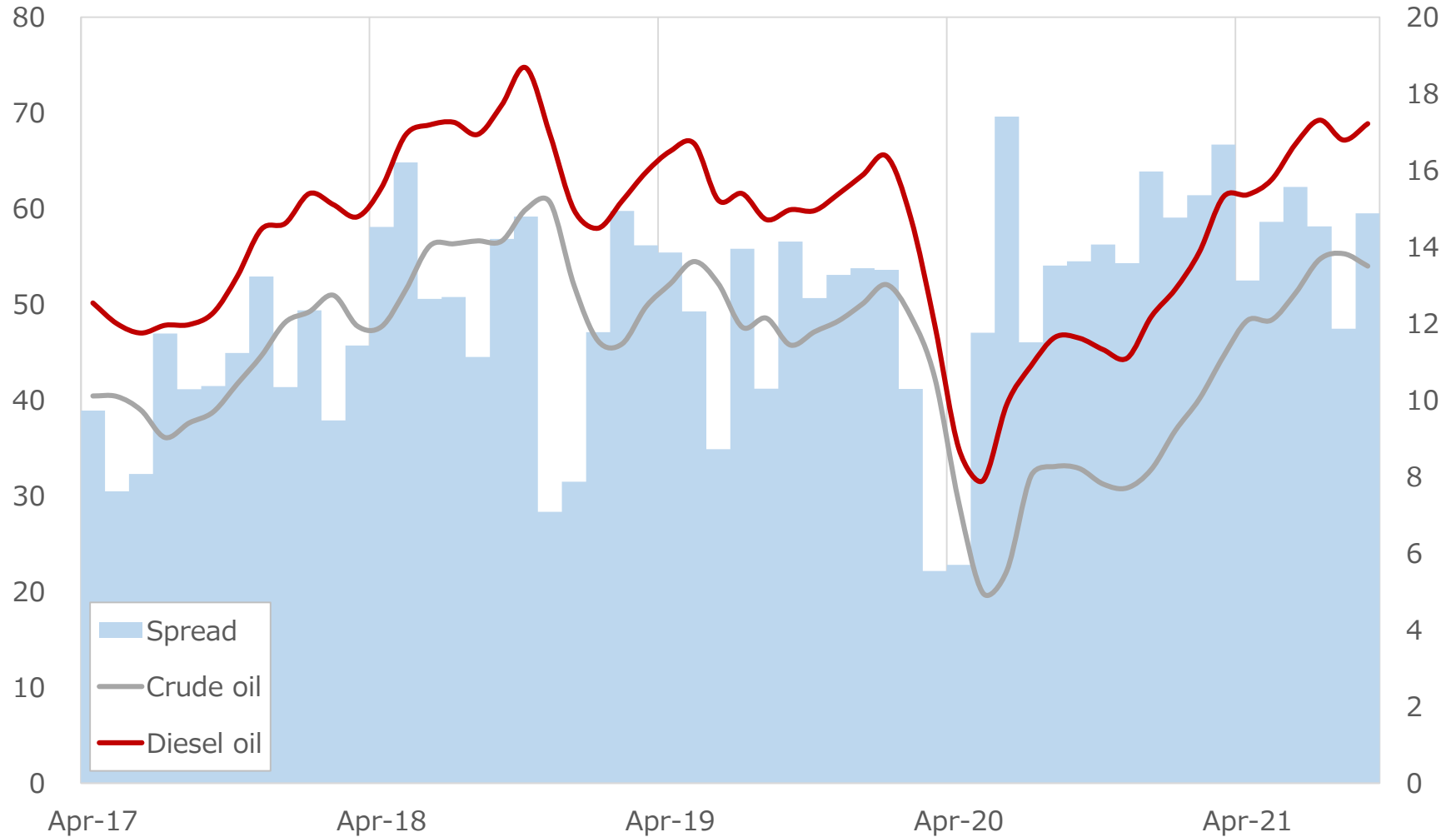
Spreads [JPY/L]



# Diesel Oil – Crude Oil (Domestic spot prices and Spreads)

[JPY/L] Prices

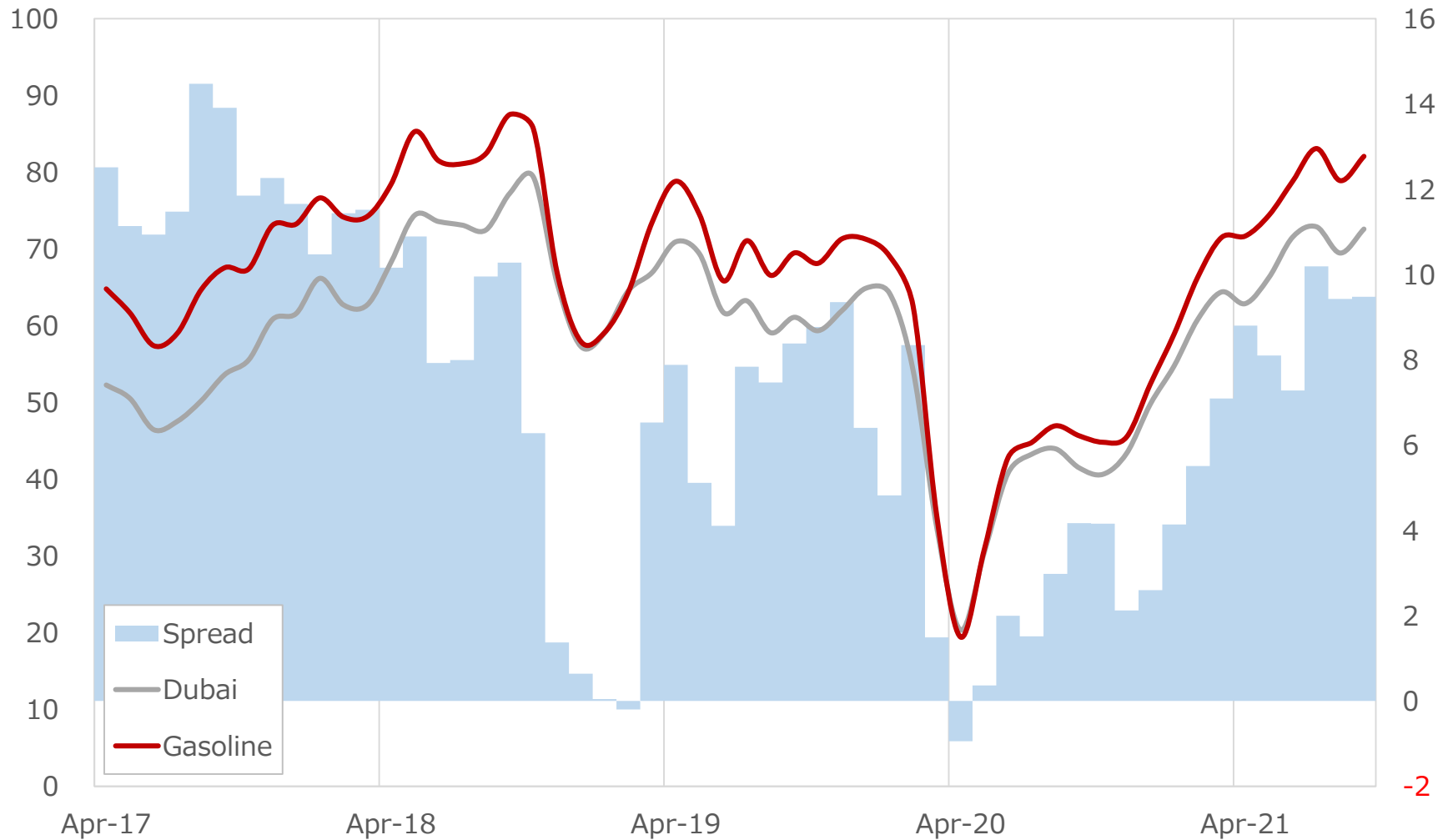
Spreads [JPY/L]



# Gasoline – Crude Oil (Singapore spot prices and Spreads)

[USD/bbl] Prices

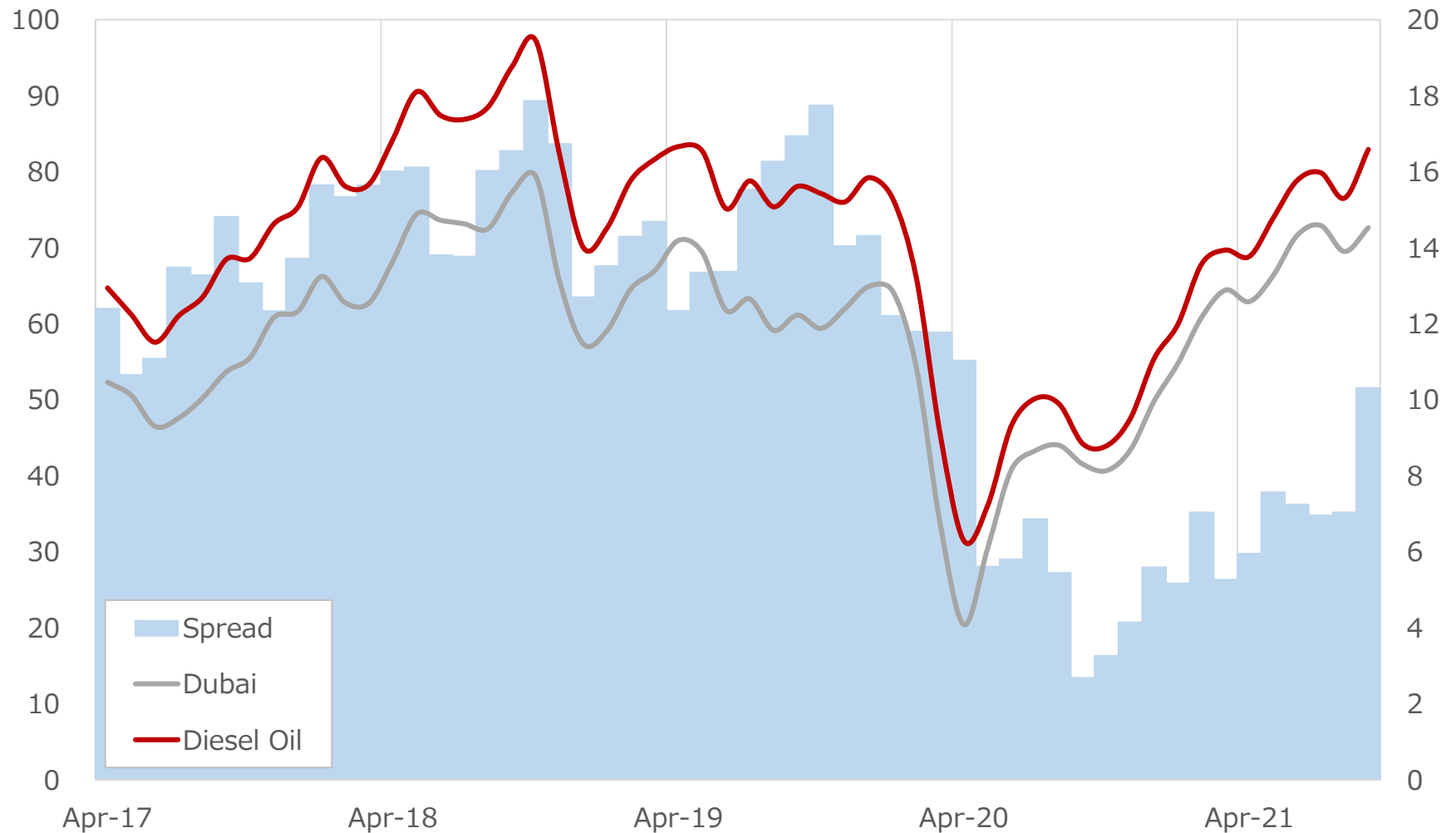
Spreads [USD/bbl]



# Diesel Oil – Crude Oil (Singapore Spot prices and Spreads)

[USD/bbl] Prices

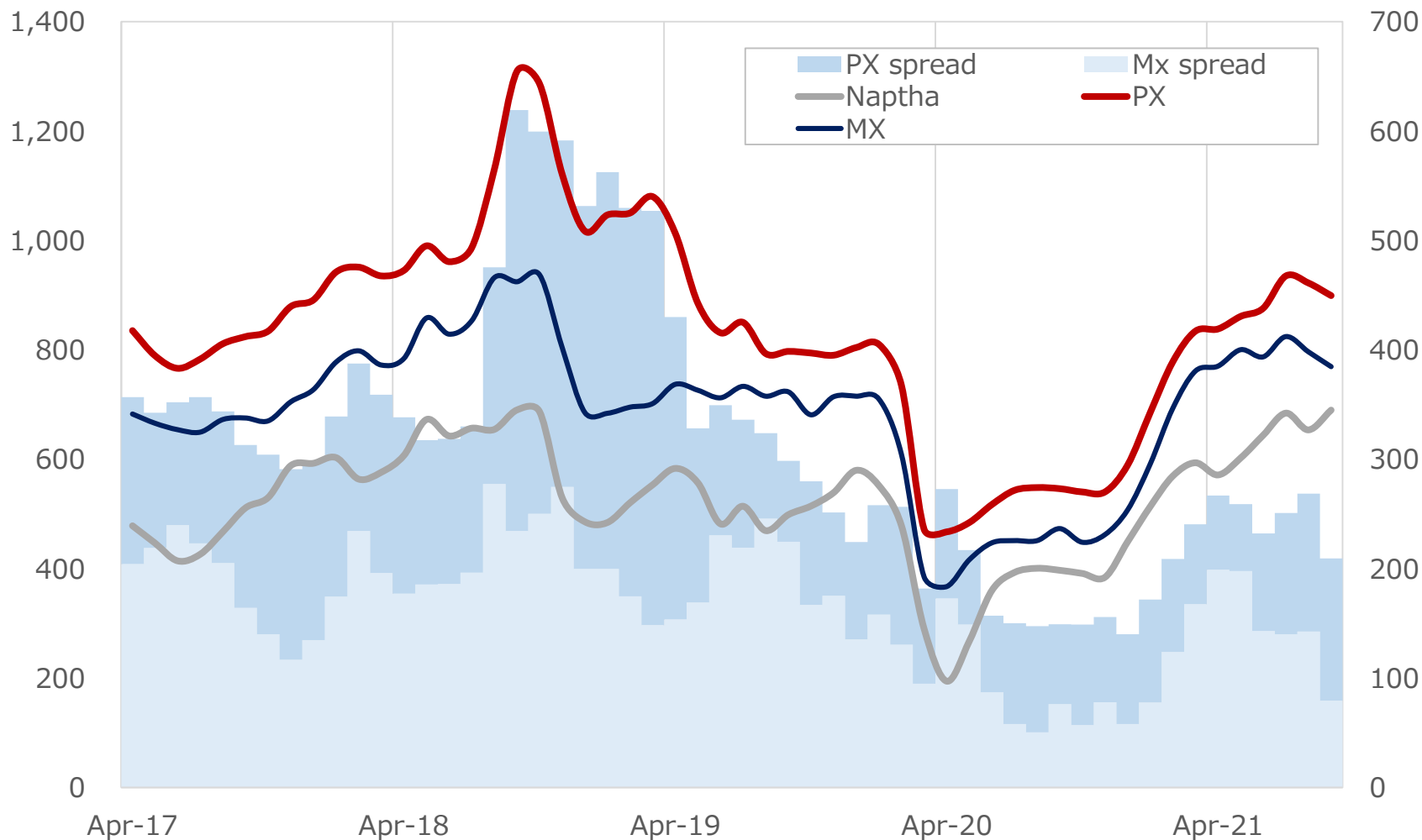
Spreads [USD/bbl]



# Paraxylene, Mixed xylene – Naphta (Prices and Spreads)

[USD/ton] Prices

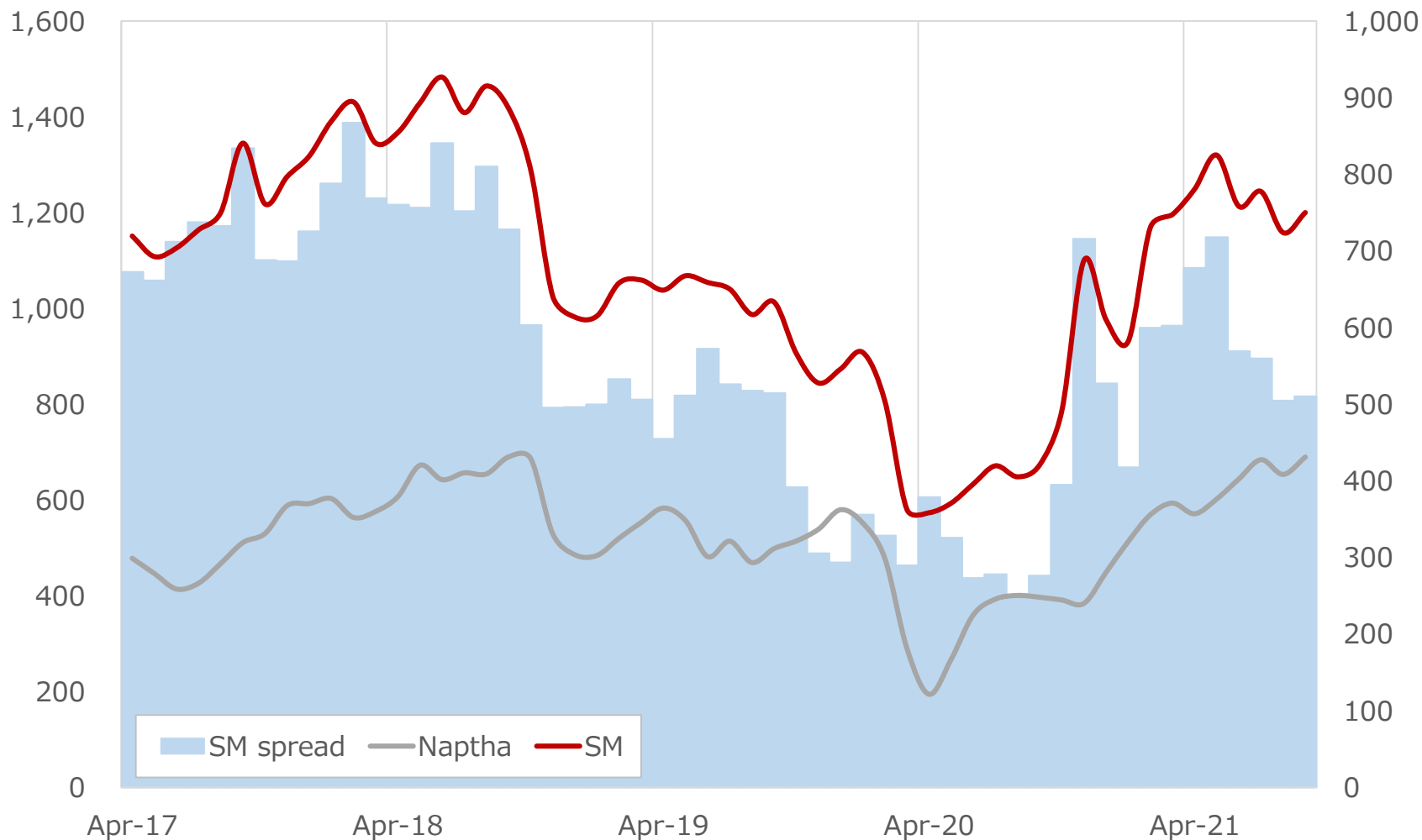
Spreads [USD/ton]



# Styrene Monomer – Naptha (Prices and Spreads)

[USD/ton] Prices

Spreads [USD/ton]



# Operational data

## ■ Refineries Utilization

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021 2Q
Idemitsu Kosan	88%	88%	87%	78%	73%
Former Showa Shell	88%	93%			

\* Utilization rate based on BCD

## ■ Number of Service Stations

	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021 2Q
Idemitsu Kosan	3,545	3,501	3,446	3,426	3,405
Former Showa Shell	3,028	2,964	2,938	2,885	2,860
Total	6,573	6,465	6,384	6,311	6,265

## 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.