

# Presentation on Results for FY2021

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May 10, 2022  
Idemitsu Kosan Co.,Ltd.

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## ■ Highlights

# FY 2021 Financial Results

## ■ Summary

- ✓ Operating and equity income increased by ¥349.2 billion y-o-y, mainly due to inventory impact and time-lag following a surge in crude oil price in Jan-Mar in Petroleum segment and income increase in Resources segment
- ✓ Net income increased due to an increase in operating and equity income, despite reporting a loss on write-down of long-term loans receivable of ¥55.9 billion to Nghi Son (NSRP)

[¥ billions]

	FY2020	FY2021	Change
<b>Operating Income + Equity Income</b>	100.3	449.5	349.2
<i>Inventory impact</i>	7.5	233.2	225.8
<i>Exc. inventory impact</i>	92.8	216.2	123.4
<b>Net Income</b>	34.9	279.5	244.6
<i>Exc. inventory impact</i>	29.7	117.7	87.9

# FY 2022 Financial Forecast

## ■ Summary

- ✓ Operating and equity income is forecasted to decrease y-o-y despite an increase in refinery utilization ratio and increased income from Resources segment, due to decreases in inventory impact as well as time-lag and an oil E&P subsidiary turning into an equity-method affiliate
- ✓ Despite the decrease in operating and equity income, net income excluding inventory impact is forecasted to increase due to a decrease in extraordinary losses, etc.

[¥ billions]

	FY2021	FY2022	Change
<b>Operating Income + Equity Income</b>	449.5	210.0	(239.5)
<i>Inventory impact</i>	233.2	50.0	(183.2)
<i>Exc. inventory impact</i>	216.2	160.0	(56.2)
<b>Net Income</b>	279.5	165.0	(114.5)
<i>Exc. inventory impact</i>	117.7	130.0	12.3

# Shareholder Returns

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## ■ Shareholder returns policy in the revised mid-term management plan

- ✓ Total payout ratio of over 50% on cumulative net income from FY2020–22 excluding inventory impact
- ✓ Stable dividends of ¥120 per share

## ■ FY2021 shareholder returns/dividends

- ✓ Net income (exc. inventory impact) is exceeded the target of ¥85.0 billion in the mid-term management plan by about ¥30.0 billion
- ✓ Additional return through a memorial dividend in line with the shareholder return policy and to celebrate Idemitsu's 110th anniversary (interim dividend: ¥60; FY-end dividend: ¥110 [inc. ¥50 memorial dividend], FY total: ¥170 per share)

## ■ FY2022 shareholder returns/dividends forecast

- ✓ Based on the above, we forecast FY2022 dividends of ¥120 per share (interim dividend: ¥60; FY-end dividend: ¥60; FY total: ¥120 per share)
- ✓ We consider share buyback at FY end in case net income exceeds the target in the revised mid-term management plan

# Progress in the Mid-term Management Plan

## ■ Summary

- ✓ Cumulative operating and equity income is expected to increase due to an increase in resource prices, despite increased fuel cost in Petroleum segment which is well beyond the impact of positive time-lag
- ✓ Net income is expected to increase due to gains on assets sales in addition to the above
- ✓ ROIC FY2022 is expected to achieve the target of 4% in the mid-term plan, while 6% was achieved for FY2021 due to positive time-lag from the spike in crude oil price

[¥ billions]

	Revised Medium-term Plan	<b>Current Forecast</b>	Change
Operating income + equity income (FY20-22)	410.0	<b>469.1</b>	59.1
Net income (FY20-22)	220.0	<b>277.4</b>	57.4
ROIC (FY22)	4%	<b>4%</b>	0%
ROE (FYE22) (inc. inventory impact)	8% (8%)	<b>9% (11%)</b>	1% (3%)

\*Management indicators exclude inventory impact

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## ■ Results for FY2021



# Key Topics

## ■ Trends in petroleum demand

- ✓ Despite progress in COVID-19 vaccinations, FY2021 demand for the core products remained unchanged y-o-y due to a rapid spread of COVID-19 during the sixth infectious wave and as a decrease in heating demand, etc.
- ✓ Jet fuel sales grew about by 30% y-o-y with gradual recovery from the loss of COVID-19

[%]

	FY20	FY21 Result	FY22 Forecast	FY22 (vs FY19)
Core products	94.6	<b>98.6</b>	99.9	93.2
<i>Gasoline</i>	<i>90.4</i>	<b>99.6</b>	<i>100.5</i>	<i>90.5</i>
Jet fuel	54.2	<b>126.0</b>	131.9	90.1

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

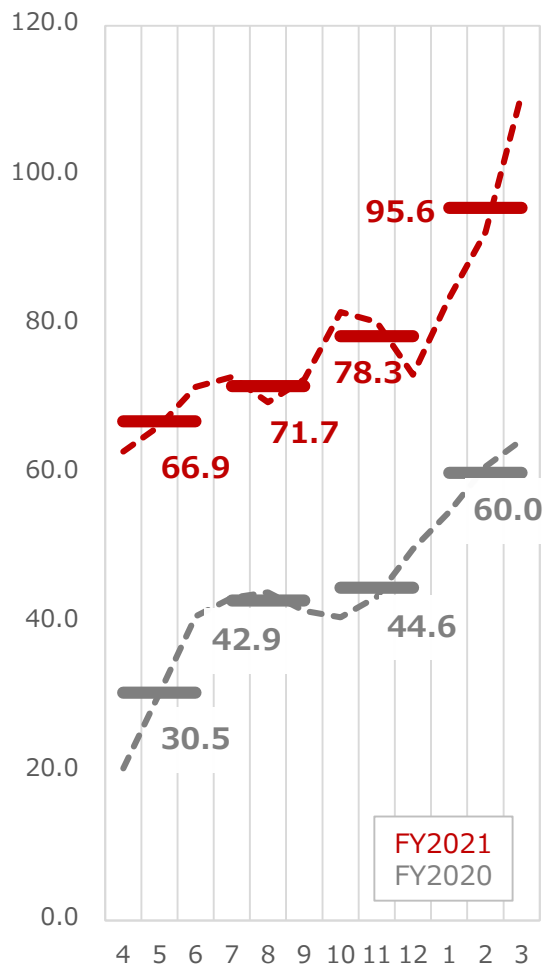
## ■ Situation of Nghi Son Refinery, Vietnam

- ✓ Income improved significantly in FY2021 due to inventory and time-lag factors despite weak product market in Singapore in Jan-Jun and demand shrink from the spread of COVID-19 in Vietnam
- ✓ On the other hand, extraordinary losses of ¥55.9 billion were recorded in FY2021 based on an evaluation of collectability of long-term loans

# Operating Environment

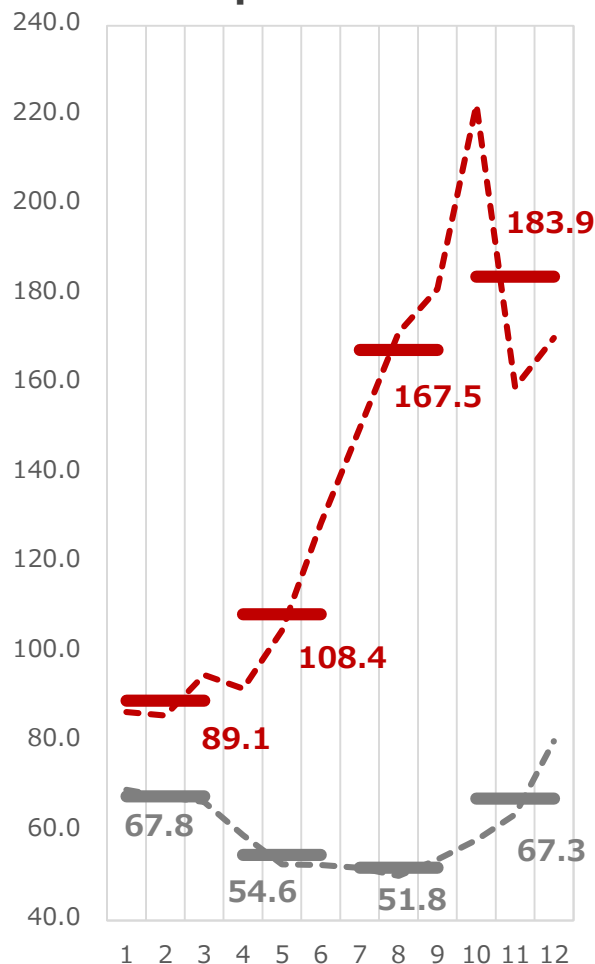
## Dubai Crude Oil Price

[USD/bbl]



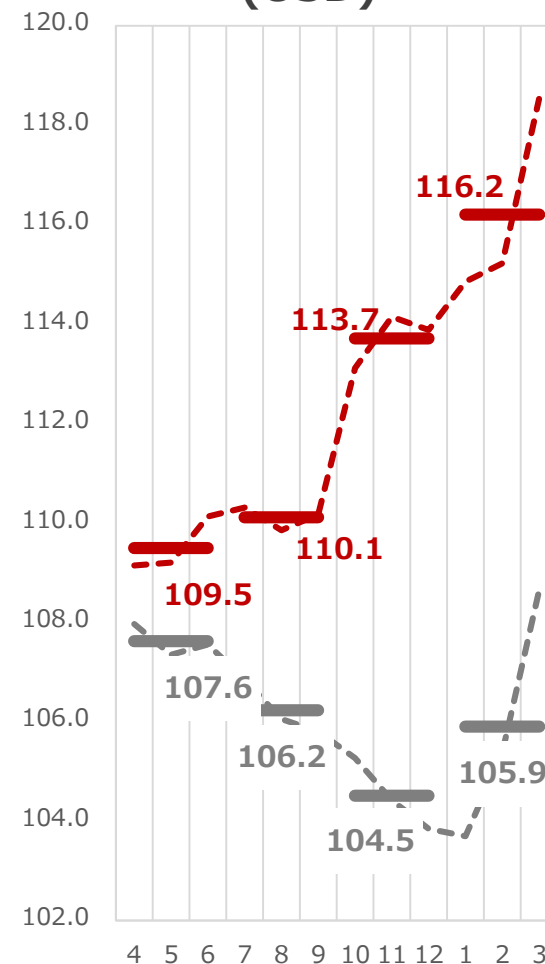
## Australian Coal Spot Price

[USD/ton]



## Exchange Rate (USD)

[JPY/USD]



# Financial Results Overview

## ■ Crude Oil/Coal/Exchange Rates

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

	FY2020	FY2021	Change	
Crude Oil (Dubai)	44.5	78.1	33.6	75.5%
Crude Oil (Brent)*	41.7	70.7	29.1	69.7%
Thermal Coal *	60.4	137.3	76.9	127.3%
Exchange Rate (TTM)	106.1	112.4	6.3	5.9%

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

## ■ Consolidated Income Statement(Summary)

[¥ billions]

	FY2020	FY2021	Change	
Net Sales	4,556.6	6,686.8	2,130.1	46.7%
Operating Income	140.1	434.5	294.4	210.2%
<i>Inventory impact</i>	7.5	233.2	225.8	—
Equity Income	(39.8)	15.0	54.8	—
<b>Operating Income + Equity Income</b>	<b>100.3</b>	<b>449.5</b>	<b>349.2</b>	<b>348.3%</b>
<i>Exc. inventory impact</i>	<b>92.8</b>	<b>216.2</b>	<b>123.4</b>	<b>133.0%</b>
Ordinary Income	108.4	459.3	350.9	323.8%
Extraordinary Gain/Loss	(43.8)	(71.2)	(27.4)	—
<b>Net Income Attributable to Owners of the Parent</b>	<b>34.9</b>	<b>279.5</b>	<b>244.6</b>	<b>700.4%</b>
<i>Exc. inventory impact</i>	<b>29.7</b>	<b>117.7</b>	<b>87.9</b>	<b>295.6%</b>

# Segment Information

## ■ Operating Income + Equity Income

[¥ billions]

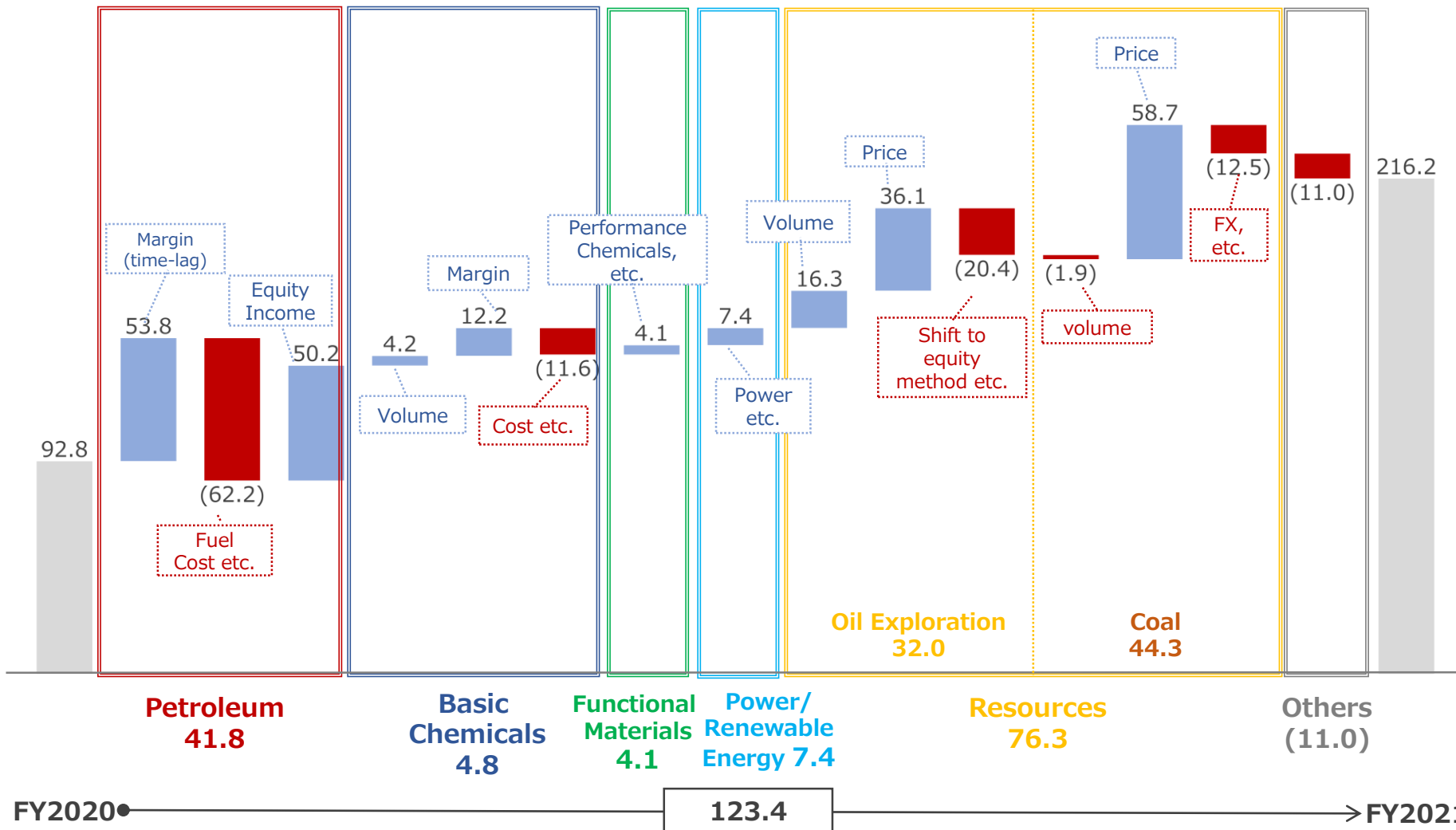
	FY2020	FY2021	Change	
<b>Petroleum</b>	102.1	369.7	267.6	262.1%
<i>Exc. inventory impact</i>	94.7	136.5	41.8	44.2%
<b>Basic Chemicals</b>	3.4	8.2	4.8	140.2%
<b>Functional Materials</b>	13.0	17.1	4.1	31.8%
<b>Power and Renewable Energy</b>	(17.3)	(9.9)	7.4	—
<b>Resources*</b>	4.7	81.0	76.3	—
<i>Oil E&amp;P</i>	6.8	38.7	32.0	473.4%
<i>Coal</i>	(2.0)	42.3	44.3	—
<b>Others/Reconciliation</b>	(5.7)	(16.6)	(11.0)	—
<b>Total</b>	100.3	449.5	349.2	348.3%
<i>Exc. inventory impact</i>	92.8	216.2	123.4	133.0%

\*Fiscal year for Australian coal operations and Oil Exploration included in the Resources Segment end in December

# Segment Information

## ■ Factors affecting operating and equity income(exc. inventory impact, y-o-y)

[¥ billions]



FY2020

123.4

FY2021

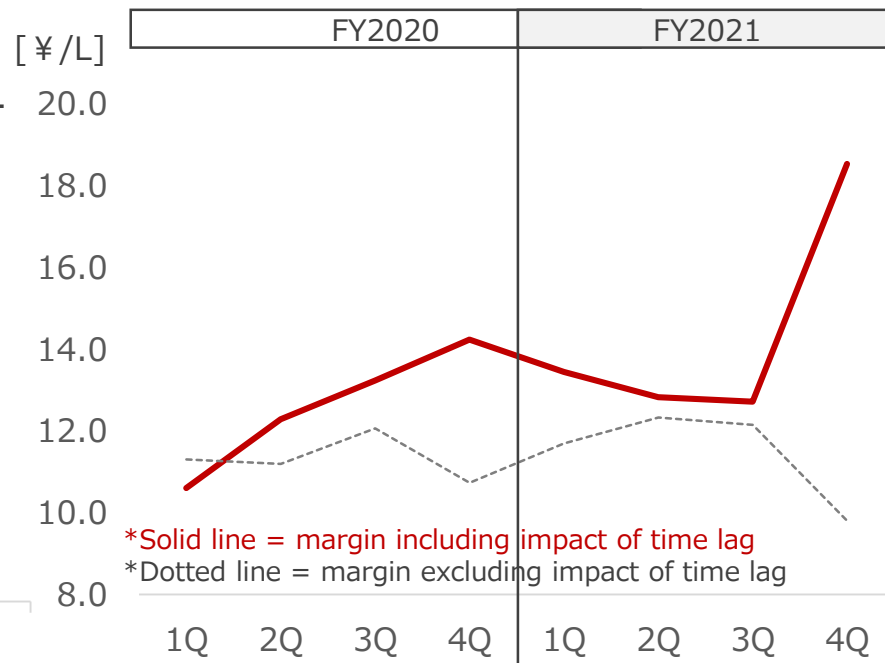
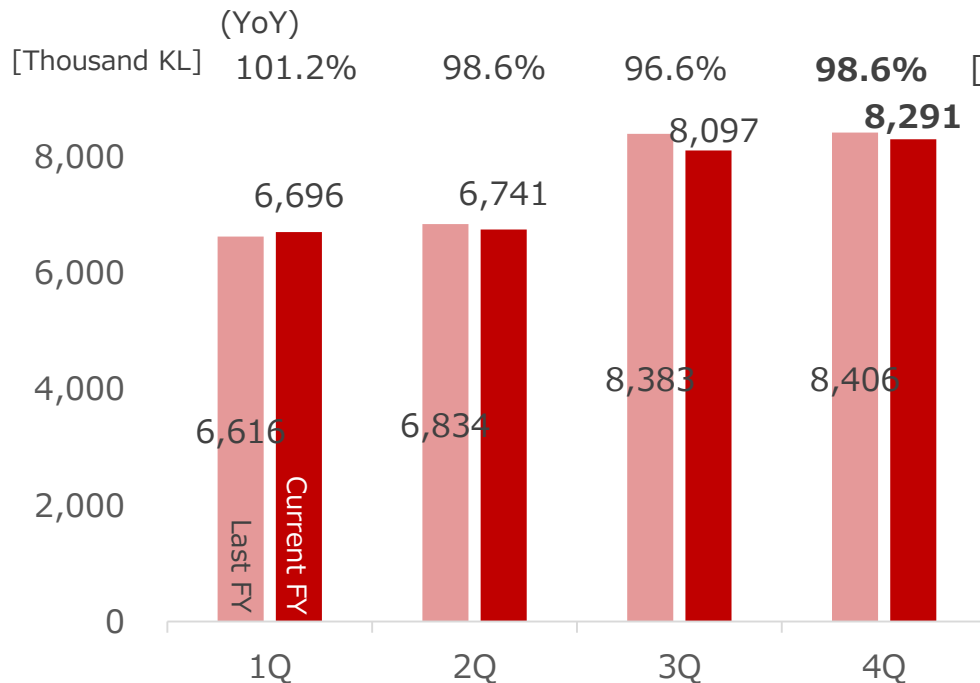
# Segment Information

[Petroleum] YoY +¥41.8 bn (FY20: ¥94.7bn ➔ FY21: ¥136.5 bn)

[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)



- ✓ Core product sales remained flat y-o-y on the back of decreased heating demand in the second half
- ✓ Time-lag for product margin rose sharply due to the surge in 4Q crude oil price, but fuel cost burdens and non-core products such as heavy fuel and so on also increased
- ✓ The segment income as a whole achieved growth, supported by the improvement in equity income including Nghi Son

# Segment Information

[Basic Chemicals] YoY +¥4.8 bn (FY20: ¥3.4 bn ➔ FY21: ¥8.2 bn)

- ✓ Income increased y-o-y despite weak product market in 4Q

[USD/ton]

Product	FY20		FY21		Change	
	Price	Margin	Price	Margin	Price	Margin
PX	592	<b>183</b>	940	<b>214</b>	348	<b>31</b>
MX	491	<b>82</b>	828	<b>102</b>	337	<b>20</b>
SM	827	<b>418</b>	1,231	<b>505</b>	404	<b>87</b>

[Functional Materials] YoY+¥4.1 bn (FY20: ¥13.0 bn ➔ FY21: ¥17.1 bn)

- ✓ Functional chemicals improved due to higher product margin
- ✓ Income from electronic materials increased due to a recovery in sales volume
- ✓ Lubricants earnings fell due to delays in reflecting increased oil prices in selling prices

[Power and Renewable Energy] YoY +¥7.4 bn (FY20: -¥17.3 bn ➔ FY21 : -¥9.9 bn)

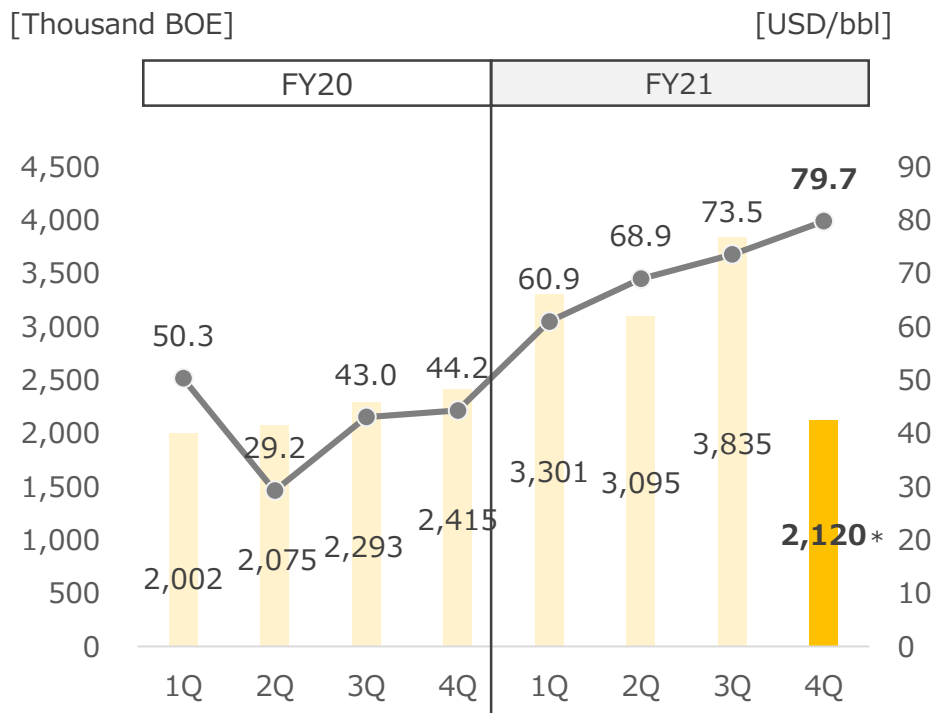
- ✓ Segment loss reduced due to a decrease in procurement cost in 4Q y-o-y

# Segment Information

**[Oil E&P]** YoY +¥32.0 bn

(FY20: ¥6.8 bn → FY21: ¥38.7 bn)

**[Oil and gas production and Brent Crude Oil Price]**



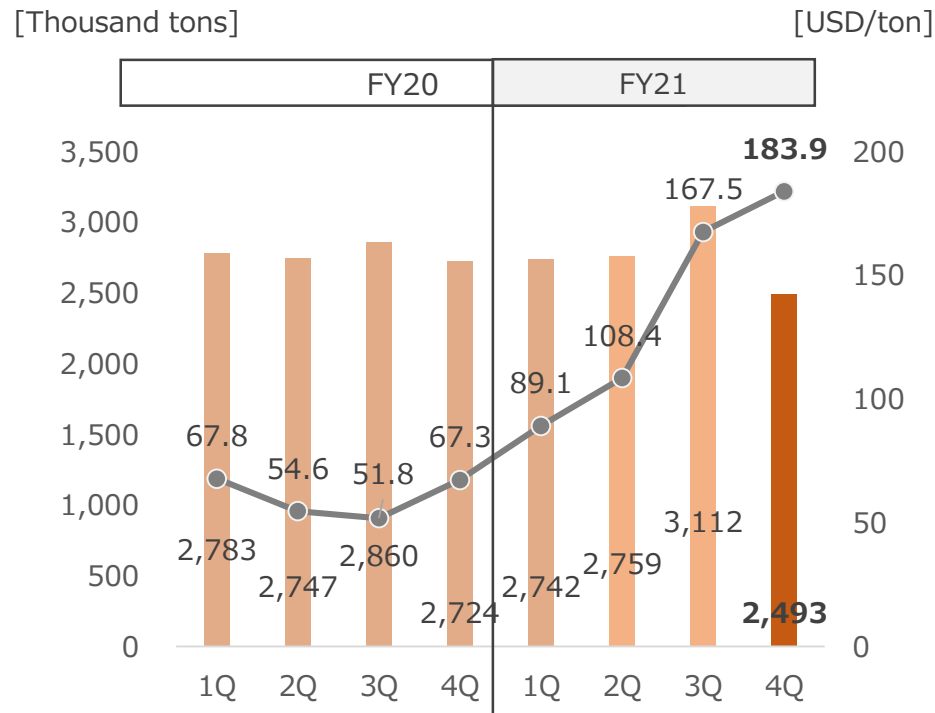
- ✓ Income improved due to increased production and higher Brent crude oil price
- ✓ Norwegian sub turned into an equity-method affiliate in 4Q

\*Production volume reflects Idemitsu's share of equity in INPEX Idemitsu Norge

**[Coal]** YoY +¥44.3 bn

(FY20: -¥2.0 bn → FY21: ¥42.3 bn)

**[Coal Production Volume and Australian Coal Spot Price Trends]**



- ✓ Income rose sharply due to a surge in the coal market partially offset by strong Australian dollar



# Balance Sheet

[¥ billions]

	3/31/2021	3/31/2022	Change		3/31/2021	3/31/2022	Change
Cash and Deposits	131.3	140.3	8.9	Total Current Liabilities	1,621.3	2,061.3	440.0
Receivables, Inventory, etc.	1,534.2	2,227.8	693.6	Total Fixed Liabilities	1,118.0	1,103.4	(14.6)
Total Current Assets	1,665.5	2,368.1	702.6	Total Liabilities	2,739.3	3,164.7	425.4
Tangible Fixed Assets	1,521.9	1,437.8	(84.1)	Shareholders' Equity and Other Comprehensive Income	1,150.9	1,412.1	261.2
Other Fixed Assets	767.0	795.3	28.3	Noncontrolling Interests	64.2	24.4	(39.8)
Total Fixed Assets	2,288.9	2,233.1	(55.8)	Total Net Assets	1,215.1	1,436.5	221.4
Total Assets	3,954.4	4,601.2	646.7	Total Liabilities and Net Assets	3,954.4	4,601.2	646.7

Net D/E ratio	1.02	0.87	(0.16)
Total Interest-bearing debt	13,08.9	1,364.9	56.0
Equity ratio	29.1%	30.7%	1.6%

# Cash Flows

[¥ billions]

<b>Cash Flow from Operating Activities</b>	<b>146.1</b>
Net income before tax	388.1
Depreciation Expense	104.8
Change in Working Capital	(313.9)
Others	(32.8)
<b>Cash Flow from Investing Activities</b>	<b>(111.6)</b>
Purchase of tangible fixed assets	(94.7)
Others	(16.9)
<b>Cash Flow from Financing Activities</b>	<b>(30.0)</b>
Change in borrowings	32.9
Dividend payments	(35.7)
Others	(27.1)
Translation gains/losses	3.6
Change in cash and deposits	8.1
<b>Cash and Cash Equivalents-Beginning Balance</b>	<b>131.0</b>
<b>Cash and Cash Equivalents-Ending Balance</b>	<b>139.0</b>

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## ■ Forecast for FY2022

# Key Topics

## ■ Assumptions for FY2022

- ✓ While crude oil price trends remain uncertain due to the Russia/Ukraine situation, we assume Dubai crude oil price at \$100/bbl and Australian coal spot price at \$180/ton.

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

	Apr-Sep 2021	Oct-Dec 2021	Jan-Mar 2022	FY2022 assumptions	Apr 2022
Dubai crude oil	69.3	78.3	95.6	<b>100.0</b>	102.8
Australian thermal coal	138.0	183.9	264.0	<b>180.0</b>	330.8
Exchange rate	109.8	113.7	116.2	<b>120.0</b>	126.0

\* FY2022 Australian coal spot price assumption is the average from Jan to Dec, actual for Jan-Mar 2022

## ■ Situation of Nghi Son Refinery, Vietnam

- ✓ FY2022 income is expected to improve due to higher refinery margin in spite of a decrease in inventory and time-lag impact.
- ✓ Equity income will remain flat, with a reversal of loss on write-down of long-term loans receivable recorded in FY2021.

## ■ Impact of Idemitsu Snorre Oil Development Co., Ltd. (current INPEX Norway Co., Ltd.) turning into an equity-method affiliate

- ✓ A decrease of about ¥20 billion is reflected in segment income of the resources business in FY2022 due to the Norwegian sub's shift to an equity-method affiliate (negligible impact to Idemitsu's total net income).

# Forecast Overview

## ■ Crude oil/Coal/Exchange Rates

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

	FY2021	FY2022	Change	
Crude Oil (Dubai)	78.1	100.0	21.9	28.0%
Crude Oil (Brent)*	70.7	102.5	31.8	45.0%
Thermal Coal *	137.3	180.0	42.7	31.1%
Exchange Rate (TTM)	112.4	120.0	7.6	6.8%

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

## ■ Consolidated Income Statement(Summary)

[¥ billions]

	FY2021	FY2022	Change	
Net Sales	6,686.8	8,600.0	1,913.2	28.6%
Operating Income	434.5	190.0	(244.5)	(56.3%)
<i>Inventory impact</i>	233.2	50.0	(183.2)	(78.6%)
Equity Income	15.0	20.0	5.0	33.1%
<b>Operating Income + Equity Income</b>	<b>449.5</b>	<b>210.0</b>	<b>(239.5)</b>	<b>(53.3%)</b>
<i>Excluding inventory impact</i>	<b>216.2</b>	<b>160.0</b>	<b>(56.2)</b>	<b>(26.0%)</b>
Ordinary Income	459.3	210.0	(249.3)	(54.3%)
Extraordinary Gain/Loss	(71.2)	10.0	81.2	-
<b>Net Income Attributable to Owners of the Parent</b>	<b>279.5</b>	<b>165.0</b>	<b>(114.5)</b>	<b>(41.0%)</b>
<i>Excluding inventory impact</i>	<b>117.7</b>	<b>130.0</b>	<b>12.3</b>	<b>10.5%</b>

# Segment Information

## ■ Operating and equity income

[¥ billions]

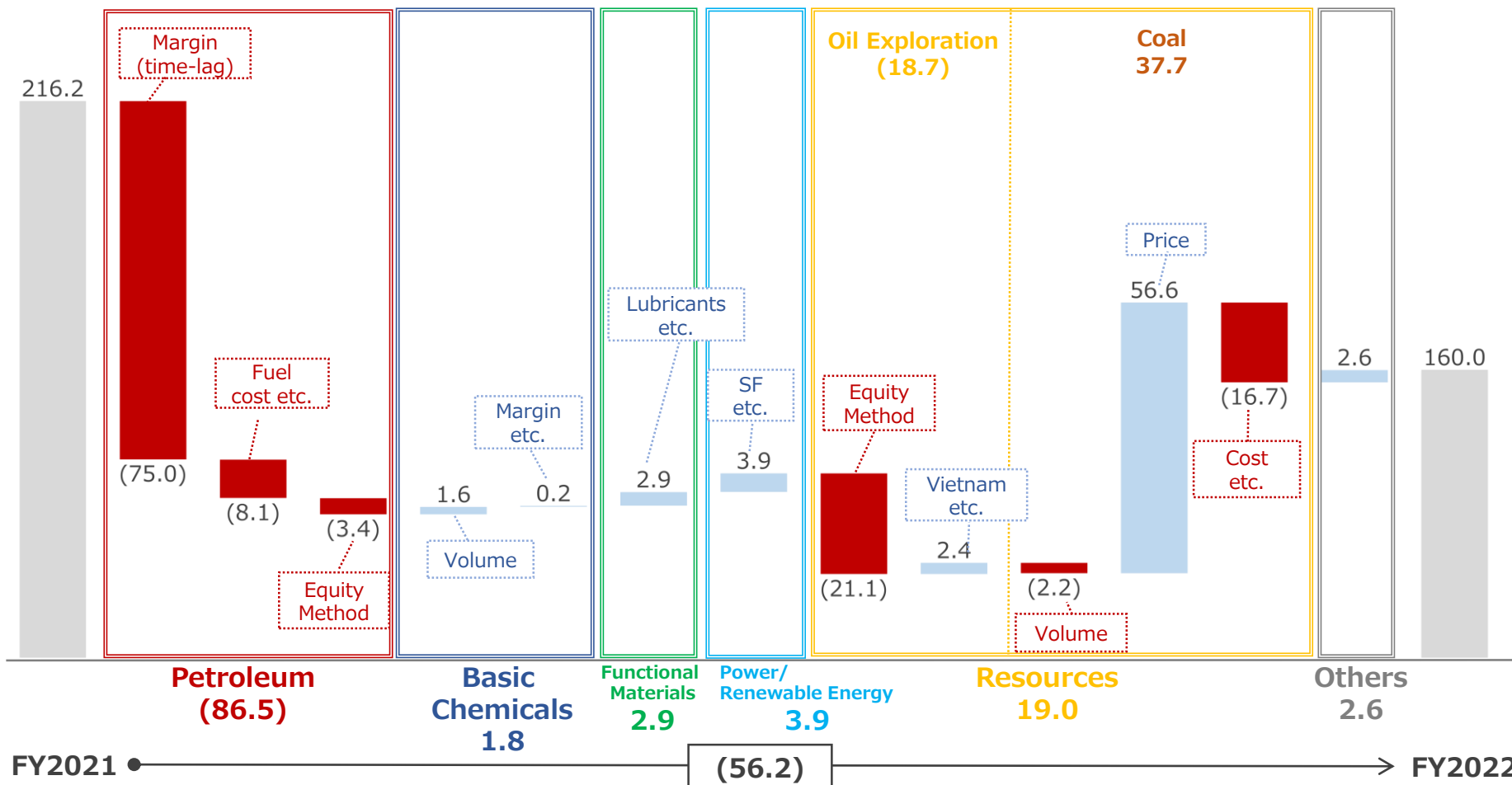
	FY2021	FY2022	Change	
<b>Petroleum</b>	369.7	100.0	(269.7)	(73.0%)
<i>Exc. inventory impact</i>	136.5	50.0	(86.5)	(63.4%)
<b>Basic Chemicals</b>	8.2	10.0	1.8	22.4%
<b>Functional Materials</b>	17.1	20.0	2.9	16.7%
<b>Power and Renewable Energy</b>	(9.9)	(6.0)	3.9	—
<b>Resources*</b>	81.0	100.0	19.0	23.4%
<i>Oil E&amp;P</i>	38.7	20.0	(18.7)	(48.4%)
<i>Coal</i>	42.3	80.0	37.7	89.2%
<b>Others/Reconciliation</b>	(16.6)	(14.0)	2.6	—
<b>Total</b>	449.5	210.0	(239.5)	(53.3%)
<i>Exc. inventory impact</i>	216.2	160.0	(56.2)	(26.0%)

\*Fiscal year for Australian coal operations and Oil Exploration included in the Resources Segment end in December

# Segment Information

## ■ Factors affecting operating and equity income (exc. inventory impact, y-o-y)

[¥ billions]



# Segment Information

**[Petroleum]** YoY -¥86.5 bn (FY21: ¥136.5bn ➔ FY22: ¥50.0 bn)

- ✓ Expected to decrease due to reduced time-lag and cost increase in refining fuel and non-core products such as heavy fuel in spite of higher refinery utilization ratio
- ✓ Export margin is expected unchanged; recent market spike is considered

**[Basic Chemicals]** YoY +¥1.8 bn (FY21: ¥8.2 bn ➔ FY22: ¥10.0 bn)

- ✓ Expected to improve due to sales volume growth

[USD/ton]

Product	FY21		FY22		Change	
	Price	Margin	Price	Margin	Price	Margin
PX	940	<b>214</b>	1,160	<b>240</b>	220	<b>26</b>
MX	828	<b>102</b>	1,030	<b>110</b>	202	<b>8</b>
SM	1,231	<b>505</b>	1,360	<b>440</b>	129	<b>(65)</b>

**[Functional Materials]** YoY+¥2.9 bn (FY21: ¥17.1 bn ➔ FY22: ¥20.0 bn)

- ✓ Lubricants is expected to recover from the troubles at Chiba Complex and delays in passing on costs to customers in the previous FY
- ✓ Performance chemicals is expected to fell by lower product margin; electronic materials expected to remain strong as sales volume grow



# Segment Information

[Power and Renewable Energy] YoY +¥3.9 bn (FY21: -¥9.9 bn ➔ FY21 : -¥6.0 bn)

- ✓ Power: expected to increase from a better sales portfolio and reduced procuring costs
- ✓ Solar Frontier: expected to improve due to business restructuring

[Oil E&P] YoY -¥18.7 bn (FY21: ¥38.7 bn ➔ FY22: ¥20.0 bn)

- ✓ Operating and equity income is expected to decrease, mainly due to the Norwegian subsidiary's shift to an equity-method affiliate

[Coal] YoY +¥37.7 bn (FY21: ¥42.3 bn ➔ FY22: ¥80.0 bn)

- ✓ Income is expected to improve due to higher market price, partially offset by some increase of fuel and labor cost
- ✓ Equity income is expected to decrease due to the sale of equity to Malinau mines (shares in PT Mitrabara Adiperdana Tbk) in FY21

# Investments

[¥ billions]

	FY2021			FY2022		
	Strategic	Maintenance Renewal	Total	Strategic	Maintenance Renewal	Total
Petroleum, Basic Chemicals	5.8	61.0	66.8	6.0	66.0	72.0
Power/Renewable Energy, Functional Materials, etc.	21.0	13.1	34.1	35.0	23.0	58.0
Resources	30.9	16.2	47.1	21.0	19.0	40.0
M&A, etc.				30.0		30.0
<b>Total</b>	<b>57.7</b>	<b>90.3</b>	<b>148.0</b>	<b>92.0</b>	<b>108.0</b>	<b>200.0</b>

- ✓ Strategic items for FY2022 are mainly featured by investments related to exploration in Vietnam and Lithium solid-state electrolytes in Functional Materials

# Balance Sheet/Cash Flows(FY2022 Forecast)

[¥ billions]

	03/31/2022		03/31/2023
<b>Current Assets</b>	2,420.0	<b>Liabilities</b>	3,110.0
<b>Fixed Assets</b>	2,240.0	<b>Net Assets</b>	1,550.0
<b>Total Assets</b>	4,660.0	<b>Total Liabilities and Net Assets</b>	4,660.0

<b>Cash Flow from Operating Activities</b>	<b>130.0</b>
Net income	165.0
Depreciation Expense	118.0
Others	(153.0)
<b>Cash Flow from Investing Activities</b>	<b>(102.0)</b>
Strategic/M&A	(92.0)
Maintenance/Renewal	(108.0)
Others	98.0
<b>Cash Flow from Financing Activities</b>	<b>(69.0)</b>
Shareholder returns	(51.0)
Others	(18.0)
<b>Balance</b>	<b>(41.0)</b>

<b>Net D/E ratio</b>	<b>0.81</b>
<b>Total interest-bearing debt</b>	<b>1,340.0</b>
<b>Equity ratio</b>	<b>32.8%</b>

✓ In spite of plus CF of ¥130.0 bn expected from operating activities, cash balance will be negative to -¥41.0 bn due to negative CF from investing activities including portfolio transformation and M&A as well as CF from financing activities such as shareholder returns, both of which are based on the mid-term management plan.

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## ■ Progress in the mid-term management plan

# Basic Strategy towards 2030 (FY2021 2H initiatives)

## ■ Promote ROIC management



- ✓ Regular starting, review KPIs
- ✓ ROIC in FY2021 exceeded the mid-term management plan target to 6%, in part due to time-lag and ¥30 billion in sales of non-operating assets

## ■ Evolve the business platform



Enhanced  
governance

- ✓ Dialogue with external directors and the market (e.g. ESG top seminar)
- ✓ Started review of officers' compensation (target introduction in FY23)

## ■ Create an Open-Flat-Agile corporate culture



Awareness of  
corporate  
principles/  
vision

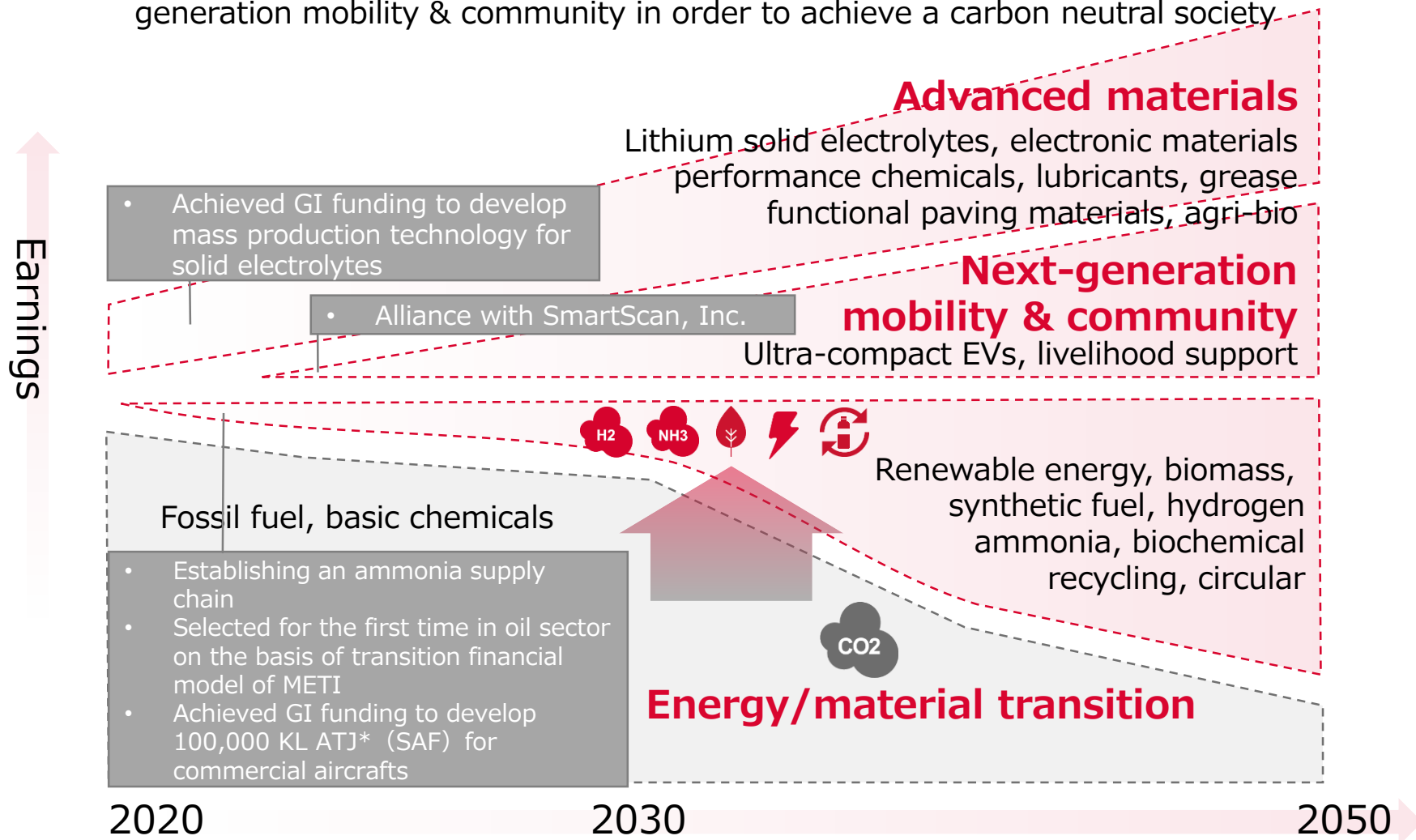
Organization  
reform

Workstyle  
reform

- ✓ Employees' awareness of corporate principles increased to 98.1% (as of 2/2022)
- ✓ Integrated back-office functions (4/2021 22 departments ➔ 4/2022 17 departments)
- ✓ Selected as health and productivity management company

# Portfolio Evolution towards Carbon Neutrality

Implementing initiatives aimed at energy/material transition, advanced materials, and next-generation mobility & community in order to achieve a carbon neutral society



Based on P16, 5/11 medium-term plan review

# Initiatives on business strategy

- **Turning refineries and complexes into CNX (Carbon Neutral Transformation) centers** ① (Petroleum, Basic Chemicals)
  - ✓ Continuous efforts for establishing an ammonia supply chain ②
  - ✓ Achieved GI funding to develop 100,000 KL ATJ\* (SAF) for commercial aircrafts ③
- **Financing initiatives supporting carbon neutrality**
  - ✓ Selected for the first time in oil sector on the basis of transition financial model of METI ④
- **Turning apollo station outlets into a smart one-stop shop** (Petroleum)
  - ✓ Will provide new services related to ultra-compact EV through Idemitsu Tajima EV from 2022
- **Accelerating Development for advanced materials** (Functional Materials)
  - ✓ Establishing an internal company enhancing rapid and precise decisions, involving corporate restructuring based on technologies
  - ✓ Achieved GI funding to develop mass production technology for solid electrolytes and accelerated efforts towards mass production
- **Shift to gas exploration and CCS initiatives** (Resources)
  - ✓ Partially sold shares of Idemitsu Snorre Oil Development Co., Ltd. and shifted to an equity method affiliate
- **Shift to low-carbon solution business** (Coal)
  - ✓ Enhance plans to construct a manufacturing plant for Idemitsu Green Energy Pellets in Vietnam (120,000 t/year)

# Energy Material Transition for CN

## ① Example of the CNX Center concept (Shunan Complex)

### ■ Significant potential demand for black pellet/ammonia with Japanese largest coal-fired power

- ✓ Establish new biomass generator (expected completion: 12/2022)

Supply power for 100,000 households  
Promote use of wood biomass materials with Shunan City

- ✓ Mixed combustion of black pellets

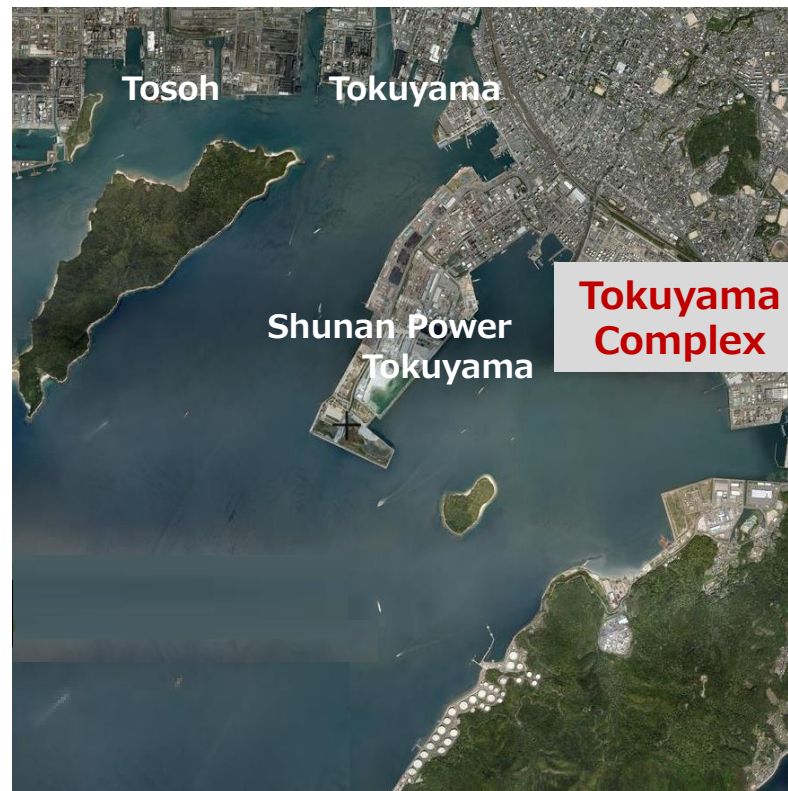
Mixed combustion tests conducted at Tokuyama Complex and nearby companies (-11/2021)

- ✓ Ammonia base concept

Import base using storage facilities and petrochemical equipment

Mixed combustion tests with existing naphtha crack furnaces

Import blue/green ammonia and supply to nearby companies



Map : GSI Map (GIAJ)



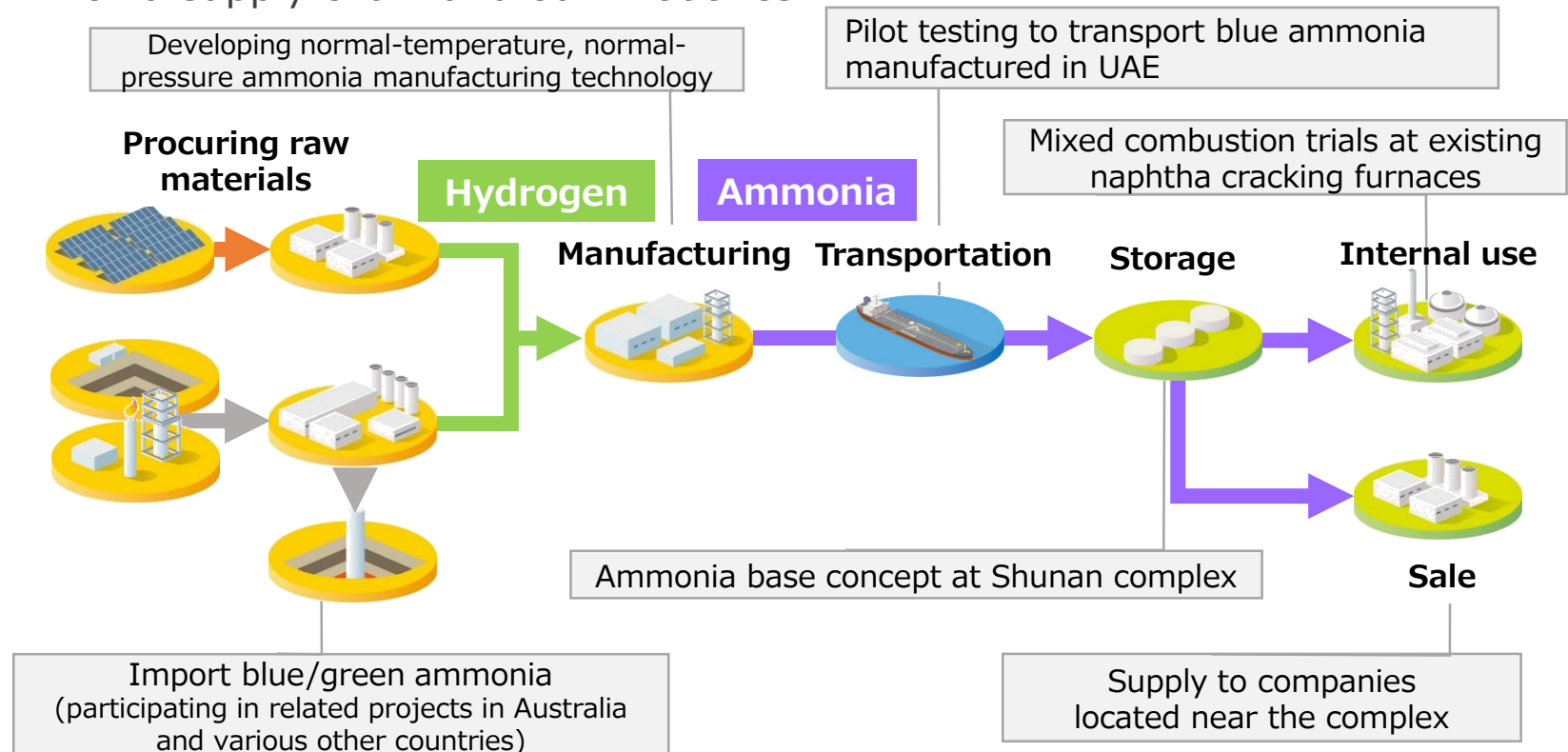
# Energy Material Transition for CN

## ② Ammonia-related initiatives

### ■ Background and purpose

- ✓ Ammonia does not emit CO2 during combustion and is a promising next-generation energy source for a decarbonized society
- ✓ Idemitsu is engaging in various initiatives to establish manufacturing technology and to rapidly establish a supply chain for ammonia

### Ammonia supply chain and our initiatives



# Energy Material Transition for CN

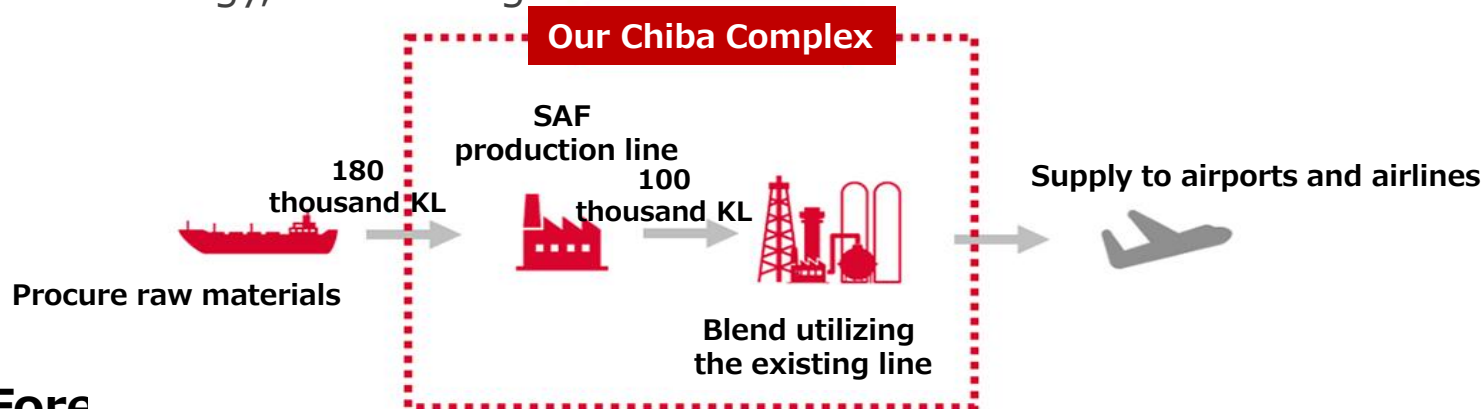
## ③ SAF production facility adopted by GI Fund Projects

### ■ Details

- ✓ Establish SAF\* production line in Chiba Complex using the state-of-the-art ATJ\* process technology in 2025 and supply from 2026 (adopted by the GI Fund Projects)

### ■ Background and purpose

- ✓ Growing demand for stable domestic SAF supply in line with airlines' target for reduced CO<sub>2</sub> emission
- ✓ Establish a competitive production line with the state-of-the-art ATJ process technology, considering the future second line



### ■ Fore

- ✓ Target domestic production capacity of 500 thousand KL per year by 2030
- ✓ Consider a bio-chemical business from ethanol



\*SAF : Sustainable Aviation Fuel

\*ATJ : Alcohol to JET, recognized as SAF international specification "ASTM D7566 Annex5"

# Financing initiatives supporting CN

## ④ Selected as METI's transition financing model for the first time in the oil industry

### ■ Details

- ✓ Planning to issue transition bonds to projects for reducing GHG emissions
- ✓ The transition bond is the first bond in the oil industry to be selected as METI's "FY2021 climate transition finance model business\*1"

\*1 A METI project which reduces information dissemination and appraisal costs of model cases to promote transition financing. Cases which are consistent with "Basic Policies relating to Climate Transition Financing" set forth jointly by METI, MOE, and FSA are selected.

[https://www.meti.go.jp/shingikai/energy\\_environment/climate\\_transition/012.html](https://www.meti.go.jp/shingikai/energy_environment/climate_transition/012.html)

### ■ Overview of transition bonds

Size	JPY 20 billion (planned)
Issuance date	FY2022 (planned)
Uses of funds	Projects which meet the qualifying criteria set forth in the Idemitsu Kosan Co., Ltd. green/transition bond framework (new expenditures and refinancing of existing expenditures)  CNX Center concept*2 (SAF*3 etc.) project, power/renewable energy project, low-carbon solution project for coal-fired power generation

\*2 CNX (Carbon Neutral Transformation) Center concept: concept involving converting refineries and factories to a supply base for renewable energy and next-generation energy such as ammonia and bio/synthetic fuels

\*3 SAF: Sustainable Aviation Fuel

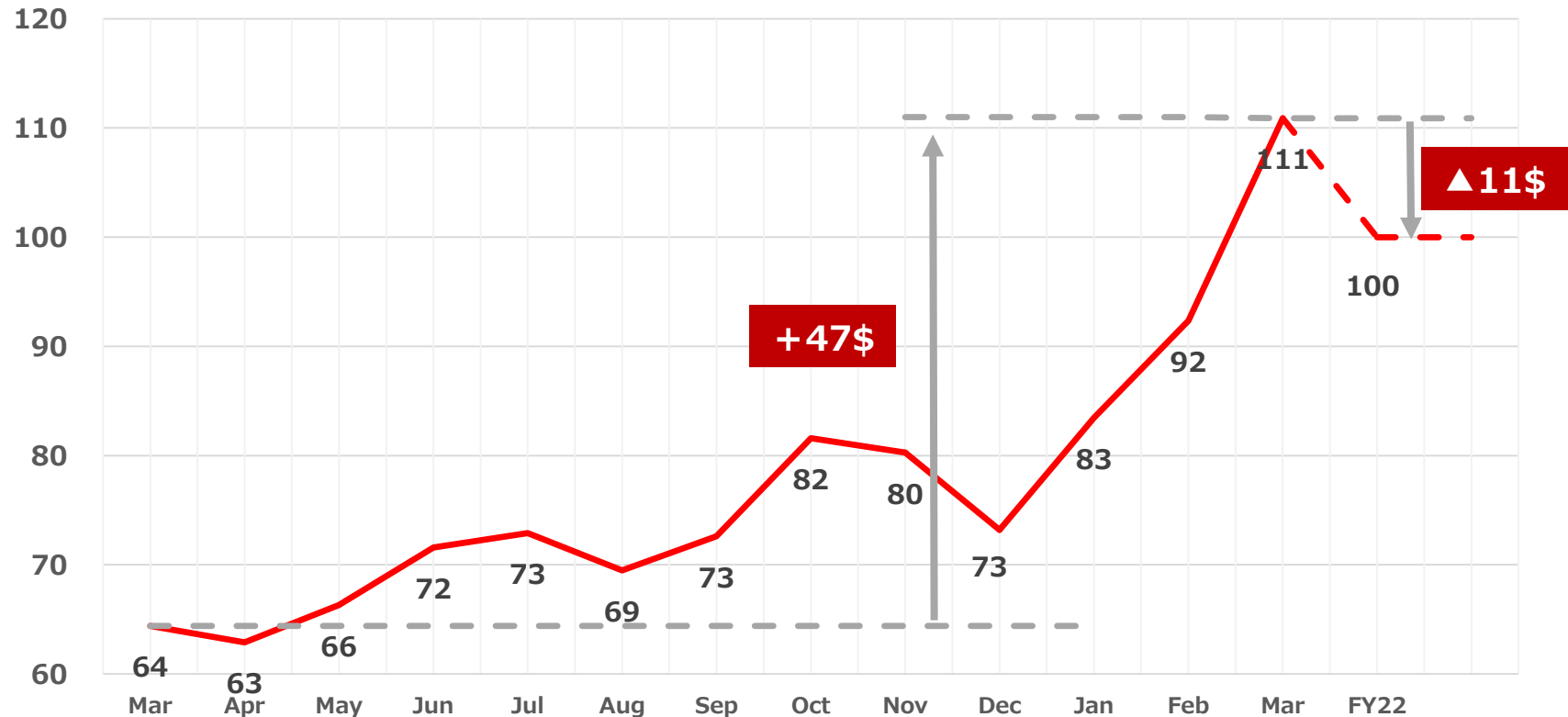
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## ■ Reference Materials

# Time-lag impact

[USD/bbl]

Dubai crude oil price transition since March 2021



- ✓ Positive time-lag impact from the upward crude oil price movement contributed to results FY2021, while negative time-lag impact from the downward oil price assumption for FY 2022 from the previous FYE expects to bring net loss of ¥110.0 bn

# Net Sales by segment

[¥ billions]

	FY2020	FY2021	Change	
<b>Petroleum</b>	3,593.4	5,219.4	1,626.0	45.3%
<b>Basic Chemicals</b>	329.0	563.5	234.5	71.3%
<b>Functional Materials</b>	332.6	421.4	88.8	26.7%
<b>Power and Renewable Energy</b>	123.7	138.3	14.5	11.8%
<b>Resources*</b>	172.0	338.8	166.8	97.0%
<i>Oil E&amp;P</i>	32.9	75.4	42.5	128.9%
<i>Coal</i>	139.0	263.4	124.3	89.4%
<b>Others/Reconciliation</b>	5.9	5.3	(0.5)	(9.2%)
<b>Total</b>	<b>4,556.6</b>	<b>6,686.8</b>	<b>2,130.1</b>	<b>46.7%</b>

\*Fiscal year for Australian coal operations and Oil Exploration included in the Resources Segment end in December

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

Appendix  
(Results)

[¥ billions]

	FY2020				FY2021			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Petroleum	(9.4)	27.3	64.9	94.7	29.6	45.1	73.7	136.5
Equity income	(27.2)	(28.8)	(37.2)	(41.1)	6.0	8.6	12.4	9.2
Basic Chemicals	0.1	(2.0)	(1.0)	3.4	6.7	10.9	7.6	8.2
Equity income	0.3	0.4	0.7	0.4	0.1	0.7	0.8	1.2
Functional Materials	4.8	6.2	9.5	13.0	4.3	10.2	14.2	17.1
Equity income	0.1	(0.3)	(0.1)	0.8	0.6	1.4	1.5	1.6
Power and Renewable Energy	0.1	(0.5)	(1.7)	(17.3)	(1.0)	(2.8)	(7.6)	(9.9)
Equity income	(0.1)	(0.2)	(0.1)	(0.1)	(0.0)	(0.1)	0.0	(1.7)
Resources								
-Oil Exploration and Production	2.2	2.5	5.2	6.8	12.4	17.3	34.9	38.7
Equity income	-	-	-	-	-	-	-	2.6
-Coal	1.0	1.1	(0.7)	(2.0)	0.6	4.2	21.5	42.3
Equity income	0.4	0.7	0.6	0.6	0.4	0.8	1.4	3.1
Others/Reconciliation	(1.9)	(2.1)	(3.5)	(5.7)	(2.3)	(3.6)	(10.2)	(16.6)
Equity income	(0.4)	(0.0)	0.1	(0.4)	1.2	1.3	2.1	(1.0)
<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>134.2</b>	<b>216.2</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>	<b>18.2</b>	<b>15.0</b>

\*Equity income of Others/Reconciliation in FY20 1Q figure turned out to be incorrect and actual figure is (0.3)

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

Appendix  
(Results)

[¥ billions]

	FY2020				FY2021			
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
Petroleum	(9.4)	36.7	37.6	29.7	29.6	15.4	28.6	62.8
Equity income	(27.2)	(1.6)	(8.4)	(3.9)	6.0	2.6	3.8	(3.2)
Basic Chemicals	0.1	(2.2)	1.0	4.4	6.7	4.2	(3.3)	0.5
Equity income	0.3	0.1	0.3	(0.3)	0.1	0.5	0.1	0.5
Functional Materials	4.8	1.4	3.3	3.5	4.3	5.9	4.1	2.9
Equity income	0.1	(0.4)	0.2	0.9	0.6	0.8	0.1	0.1
Power and Renewable Energy	0.1	(0.5)	(1.3)	(15.6)	(1.0)	(1.8)	(4.8)	(2.3)
Equity income	(0.1)	(0.1)	0.0	0.1	(0.0)	(0.0)	0.1	(1.7)
Resources								
-Oil Exploration and Production	2.2	0.2	2.7	1.5	12.4	5.0	17.6	3.8
Equity income	-	-	-	-	-	-	-	2.6
-Coal	1.0	0.2	(1.8)	(1.3)	0.6	3.6	17.3	20.8
Equity income	0.4	0.2	(0.0)	(0.0)	0.4	0.4	0.6	1.7
Others/Reconciliation	(1.9)	(0.2)	(1.4)	(2.1)	(2.3)	(1.3)	(6.6)	(6.4)
Equity income	(0.4)	0.3	0.2	(0.6)	1.2	0.1	0.9	(3.1)
<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>52.9</b>	<b>82.1</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>	<b>5.6</b>	<b>(3.2)</b>

\*Equity income of Others/Reconciliation in FY20 1Q figure turned out to be incorrect and actual figure is (0.3)



# Sensitivity

## ■ FY earnings impact

item	range	impact
Crude Oil	1 \$/bbl increase [decrease]	Petroleum ¥3.5bn[(¥3.5bn)] Fuel cost (¥1.0bn) [¥1.0bn] Inventory impact ¥4.5bn[ (¥4.5bn) ]
		Oil E&P ¥0.2bn[(¥0.2bn)]
Foreign Exchange JPY/USD	1 JPY/\$ depreciation [appreciation]	Petroleum(Domestic) ¥2.5bn[(¥2.5bn)] Fuel cost (¥0.5bn) [¥0.5bn] Inventory impact ¥3.0bn[(¥3.0bn)]
		Basic Chemicals ¥0.5bn[(¥0.5bn)]

\*In addition to the above, the resources businesses are affected by fluctuations in exchange rates with other currencies such as NOK

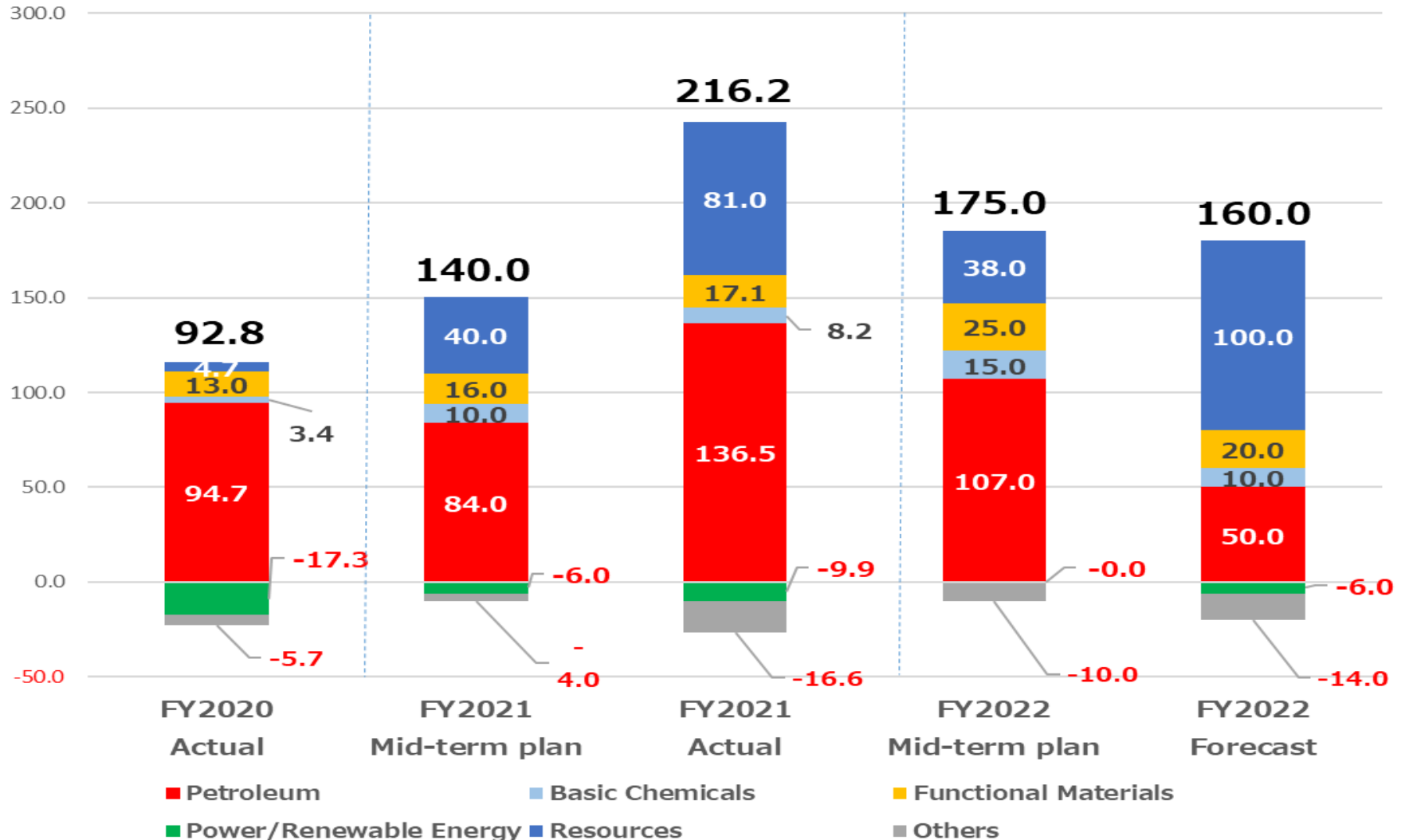
# Assumptions

item/ segment	Index	unit	FY2021 Revised mid-term plan			FY2022 current forecast		
			FY2020 Actual	FY2021 Plan	FY2022 Plan	FY2020 Actual	FY2021 Actual	FY2022 Forecast
Crude Oil	Dubai	\$/BBL	44.5	60.0	60.0	44.5	78.1	100.0
	Brent	\$/BBL	41.7	61.0	61.0	41.7	70.7	102.5
Naphtha	Customs	\$/t	400	560	560	400	701	940
Coal	Thermal Coal	\$/t	60.4	80.0	75.0	60.4	137.3	180.0
Exchange Rate	USD	¥/\$	106.1	105.0	105.0	106.1	112.4	120.0
Basic Chemicals -Asian Market	Para-xylene	\$/t	592	800	800	592	940	1,160
	Styrene Monomer	\$/t	827	910	920	827	1,231	1,360
Performance Chemicals	Poly- carbonates	\$/t	2,325	2,350	2,350	2,325	3,353	2,750

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

# Segment operating + equity income

[¥ billions]



## Segment income (FY2022)

[¥ billions]

	Announced in May 21 Mid-term plan FY2022	Current Forecast FY2022	Change	Factors
Petroleum	107.0	50.0	(57.0)	Negative time-lag, volume decrease in core products, cost increase of refining fuel and related product
Basic Chemicals	15.0	10.0	(5.0)	Delay in aromatics market recovery
Functional Materials	25.0	20.0	(5.0)	Delay in income recovery from lubricants
Power/Renewable Energy	0.0	(6.0)	(6.0)	Procurement cost increase due to higher JEPX spot market price
Resources	38.0	100.0	62.0	
<i>Oil E&amp;P</i>	32.0	20.0	(12.0)	Norwegian sub turned into an equity-method affiliate
<i>Coal</i>	6.0	80.0	74.0	Coal market price increase
Others	(10.0)	(14.0)	(4.0)	
Operating +equity income (exc. inventory impact)	175.0	160.0	(15.0)	
Net income (exc. inventory impact)	100.0	130.0	30.0	

## Segment income (3-year cumulative)

[¥ billions]

	Announced in May 21 Mid-term plan	Current Forecast	Change	Factors
	FY2022	FY2022		
Petroleum	285.7	281.1	(4.7)	Positive time-lag, volume decrease in core products and jet, cost increase of refining fuel and related product
Basic Chemicals	28.4	21.6	(6.9)	Delay in aromatics market recovery
Functional Materials	54.0	50.1	(3.9)	(Lubricants)delay in passing on costs to customers (Functional Chemicals)BPA market price increase (Electronic materials)OLED sales volume increase
Power/Renewable Energy	(23.3)	(33.2)	(9.9)	Procurement cost increase due to higher JEPX spot market price
Resources	82.8	185.7	103.0	
Oil E&P	71.7	65.5	(6.2)	Crude and gas price rise, and Norwegian sub turning into an equity-method affiliate
Coal	11.0	120.3	109.3	Coal market price increase
Others	(19.6)	(36.3)	(16.7)	Asset for research turning into an expense
Operating +equity income (exc. inventory impact)	410.0	469.1	59.1	
Net income (exc. inventory impact)	220.0	277.4	57.4	

## Investment Plan (3-year cumulative)

[¥ billions]

	Mid-term management plan announced in May 2021			Current forecast		
	Strategic	Maintenance Renewal	Total	Strategic	Maintenance Renewal	Total
Petroleum, Basic Chemicals	26.0	194.0	220.0	21.6	163.5	185.1
Power/Renewable Energy, Functional Materials	40.0	56.0	96.0	74.0	55.9	129.9
Resources	104.0	50.0	154.0	86.3	49.3	135.6
M&A, etc.	100.0	-	100.0	30.0	-	30.0
Total	270.0	300.0	570.0	211.9	268.7	480.6

# Sales Volume

## ■ Petroleum

[thousand KL,%]

	FY2020	FY2021	Change	
Gasoline	12,764	12,711	(53)	(0.4%)
Naphtha	305	266	(39)	(12.8%)
Jet fuel	1,372	1,729	356	26.0%
Kerosene	4,287	3,920	(367)	(8.6%)
Diesel Oil	9,872	9,926	54	0.5%
Heavy Fuel Oil A	3,316	3,267	(49)	(1.5%)
Heavy Fuel Oil C	2,128	2,551	423	19.9%
<b>Domestic fuel subtotal</b>	<b>34,045</b>	<b>34,370</b>	<b>325</b>	<b>1.0%</b>
Fuel exports	4,990	6,165	1,175	23.5%
<b>Total</b>	<b>39,035</b>	<b>40,535</b>	<b>1,500</b>	<b>3.8%</b>

# Sales volume

## ■ Basic Chemicals

[kt,%]

	FY2020	FY2021	Change	
Basic Chemicals	3,607	3,744	+136	+3.8%

## ■ Functional Materials

[KKL,kt,%]

	FY2020	FY2021	Change	
Lubricants*	1,089	1,183	+94	+8.6%
Performance Chemicals	628	759	+130	+20.7%

\*includes sales overseas

## ■ Power/Renewable Energy

[Mkwh,%]

	FY2020	FY2021	Change	
Power retail sales	3,789	5,197	+1,408	+37.2%



# Production Volume

## ■ Resources (Oil E&P)

[KBOED,%]

	FY2020	FY2021	Change	
Norway	23.1	23.3	0.2	0.9%
Vietnam	0.9	10.5	9.6	—
Production total (KBOED)	24.0	33.8	9.8	40.8%
Production total (KBOE)	8,785	12,351	3,566	40.6%

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

## ■ Resources (Coal)

[kt,%]

	FY2020	FY2021	Change	
Ensham	3,853	3,649	(204)	(5.3%)
Muswellbrook	985	1,090	105	10.7%
Boggabri	5,074	5,193	119	2.4%
<b>Australia subtotal</b>	<b>9,911</b>	<b>9,932</b>	<b>21</b>	<b>0.2%</b>
Malinau	1,203	1,174	(30)	(2.5%)
<b>Coal Total</b>	<b>11,115</b>	<b>11,106</b>	<b>(9)</b>	<b>(0.1%)</b>

\*Fiscal year for Australian coal operations and Oil Exploration included in the Resources Segment end in Dec.

\*The numbers reflect our rights and ownership ratios

# Sales Volume(Forecast)

## ■ Petroleum

[KKL,%]

	FY2021	FY2022	Change	
Gasoline	12,711	12,780	69	0.5%
Naphtha	266	230	(36)	(13.5%)
Jet fuel	1,729	2,280	551	31.9%
Kerosene	3,920	3,770	(150)	(3.8%)
Diesel Oil	9,926	10,150	224	2.3%
Heavy Fuel Oil A	3,267	3,100	(167)	(5.1%)
Heavy Fuel Oil C	2,551	2,180	(371)	(14.5%)
<b>Domestic fuel subtotal</b>	<b>34,370</b>	<b>34,490</b>	<b>119</b>	<b>0.3%</b>
Fuel exports	6,165	9,460	3,295	53.5%
<b>Total</b>	<b>40,535</b>	<b>43,950</b>	<b>3,415</b>	<b>8.4%</b>

# Sales Volume(Forecast)

## ■ Basic Chemicals

[kt,%]

	FY2021	FY2022	Change	
Basic Chemicals	3,744	3,870	126	3.4%

## ■ Functional Materials

[KKL,kt,%]

	FY2021	FY2022	Change	
Lubricants*	1,183	1,230	47	4.0%
Performance Chemicals	759	780	22	2.8%

\*includes sales overseas

## ■ Power/Renewable Energy

[Mkwh,%]

	FY2021	FY2022	Change	
Power retail sales	5,197	2,960	(2,237)	(43.0%)

# Production Volume(Forecast)

## ■ Resources (Oil E&P)

[KBOED,%]

	FY2021	FY2022	Change	
Norway	23.3	14.8	(8.5)	(36.7%)
Vietnam	10.5	14.6	4.1	38.8%
Production total (KBOED)	33.8	29.3	(4.5)	(13.2%)
Production total (KBOE)	12,351	10,700	(1,651)	(13.5%)

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

## ■ Resources (Coal)

[kt,%]

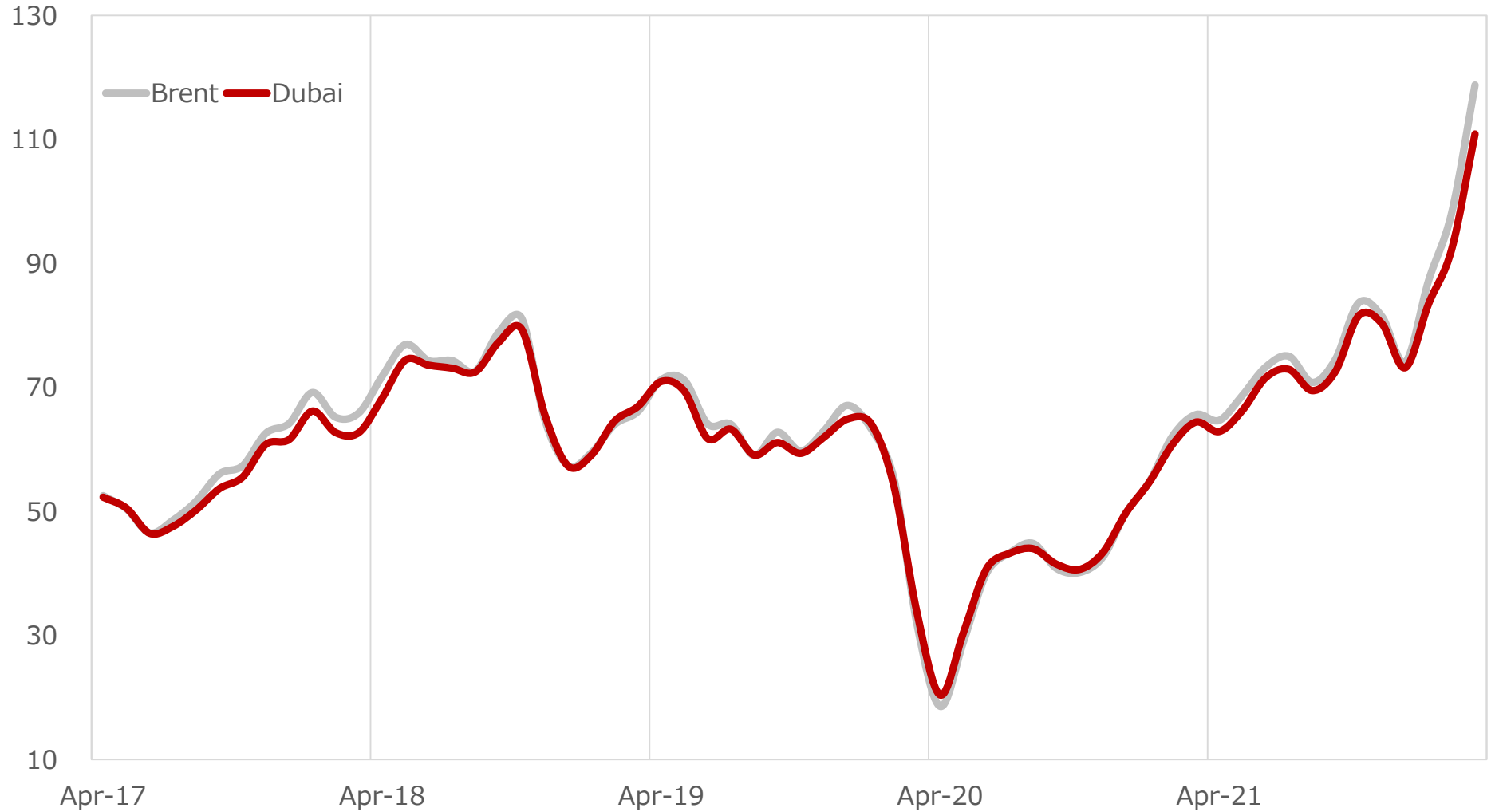
	FY2021	FY2022	Change	
Ensham	3,649	3,450	(199)	(5.5%)
Muswellbrook	1,090	760	(330)	(30.3%)
Boggabri	5,193	5,560	367	7.1%
<b>Australia subtotal</b>	<b>9,932</b>	<b>9,770</b>	<b>(162)</b>	<b>(1.6%)</b>
Malinau	1,174	-	(1,174)	(100.0%)
<b>Coal Total</b>	<b>11,106</b>	<b>9,770</b>	<b>(1,336)</b>	<b>(12.0%)</b>

\*Fiscal year for Australian coal operations and Oil Exploration included in the Resources Segment end in Dec.

\*The numbers reflect our rights and ownership ratios

# Crude Oil Prices(Dubai and Brent)

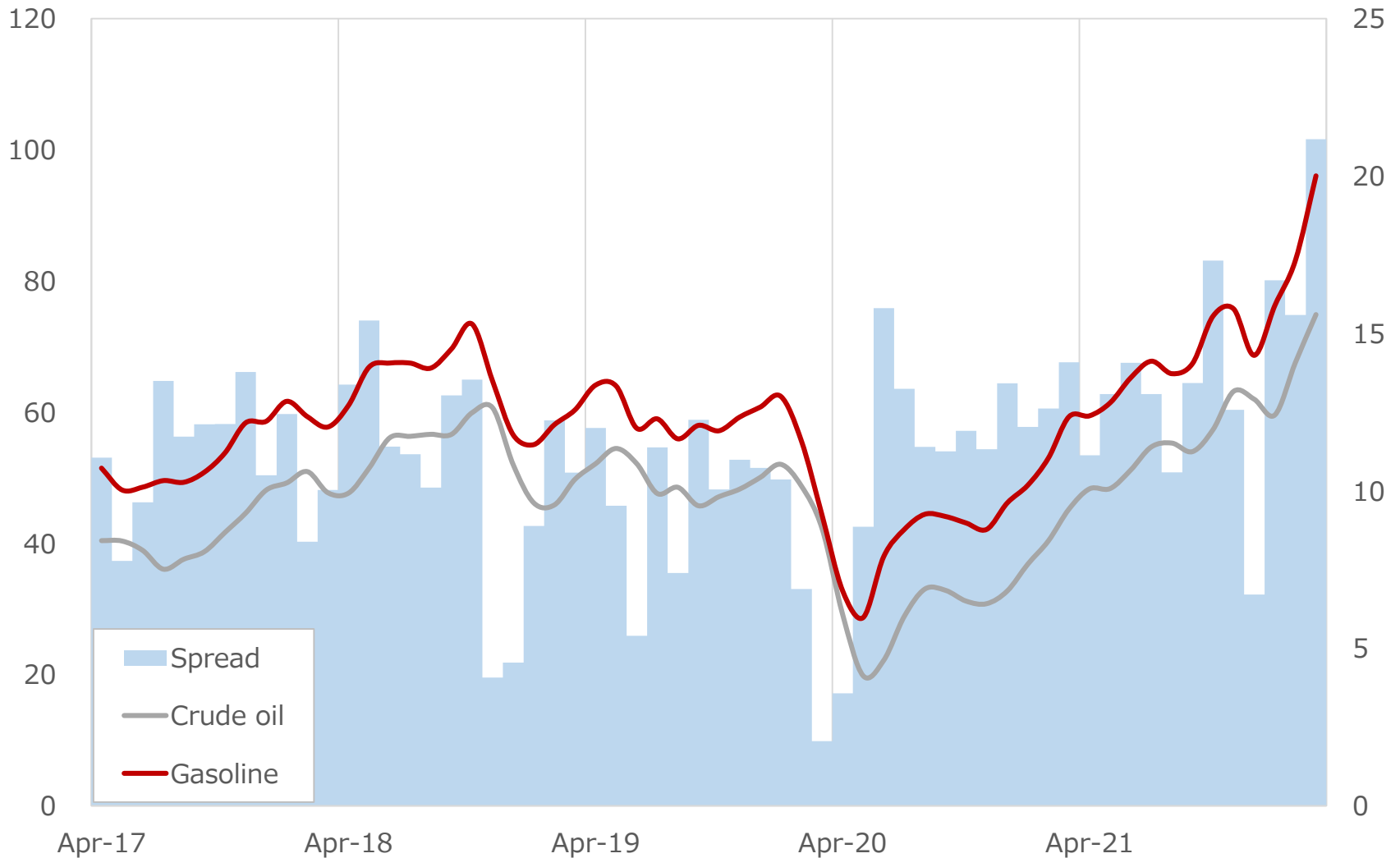
[USD/bbl]



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

[Price : JPY/L]

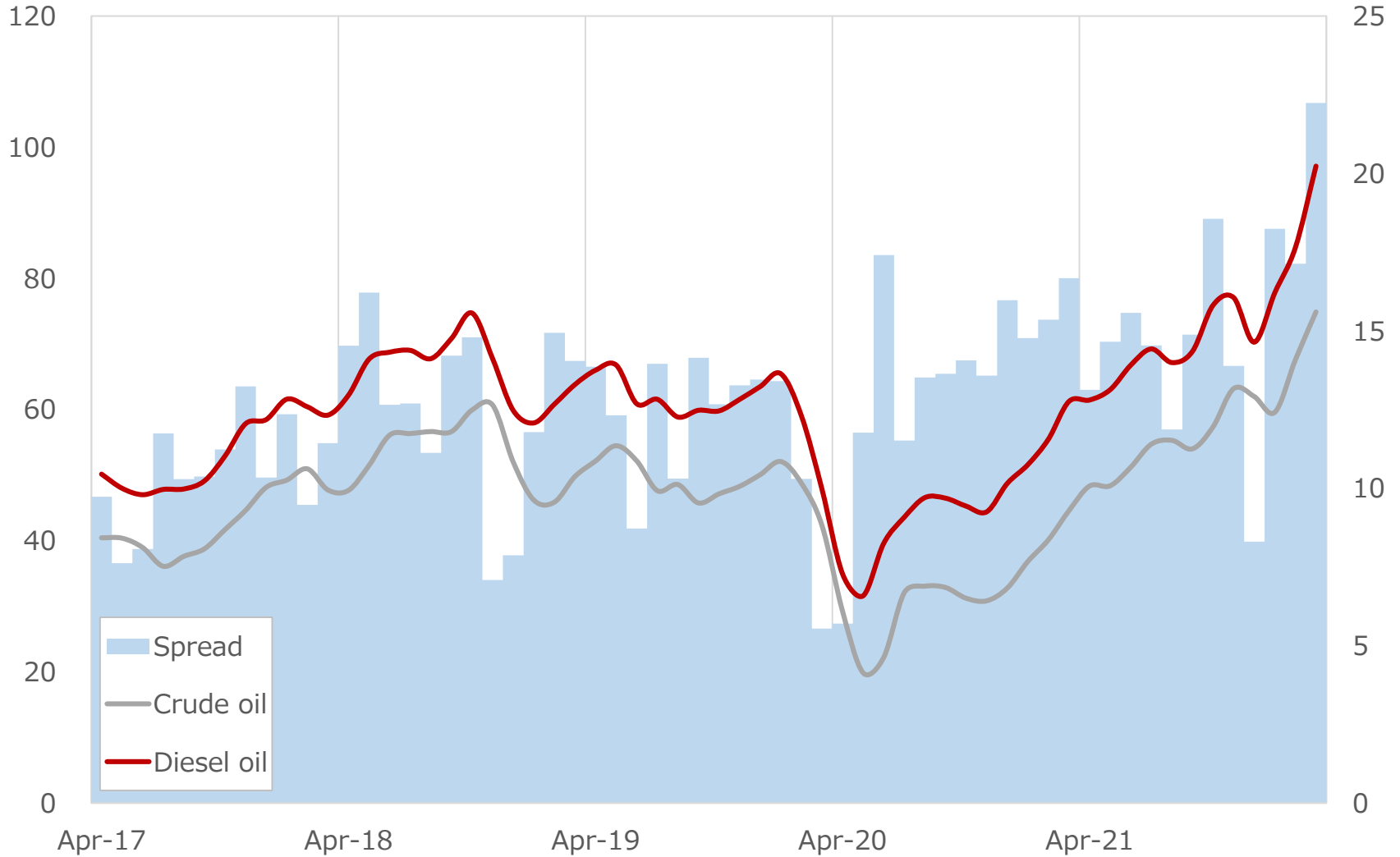
[Spread : JPY/L]



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

[Price : JPY/L]

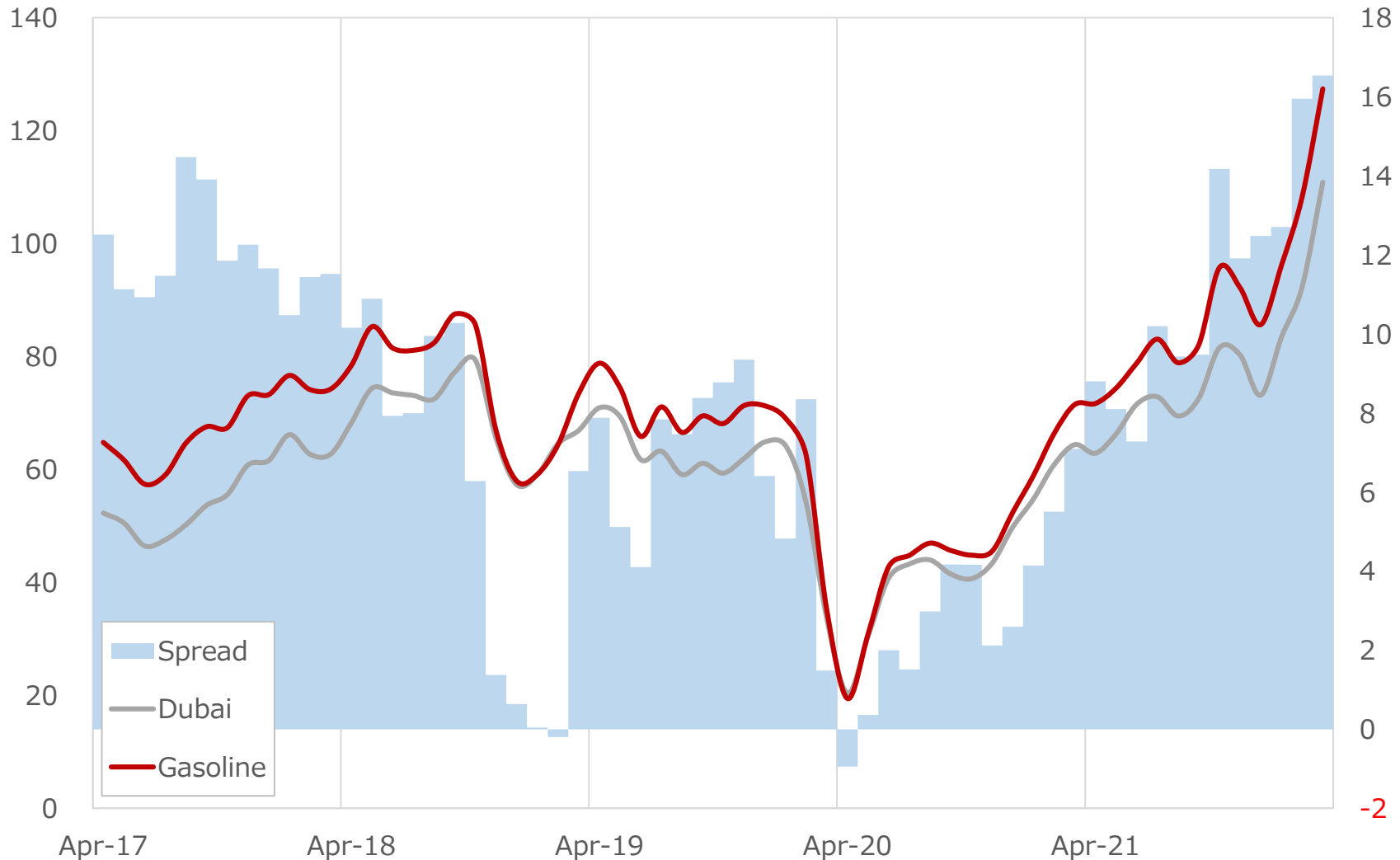
[Spread : JPY/L]



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

[Price : USD/bbl]

[Spread : USD/bbl]

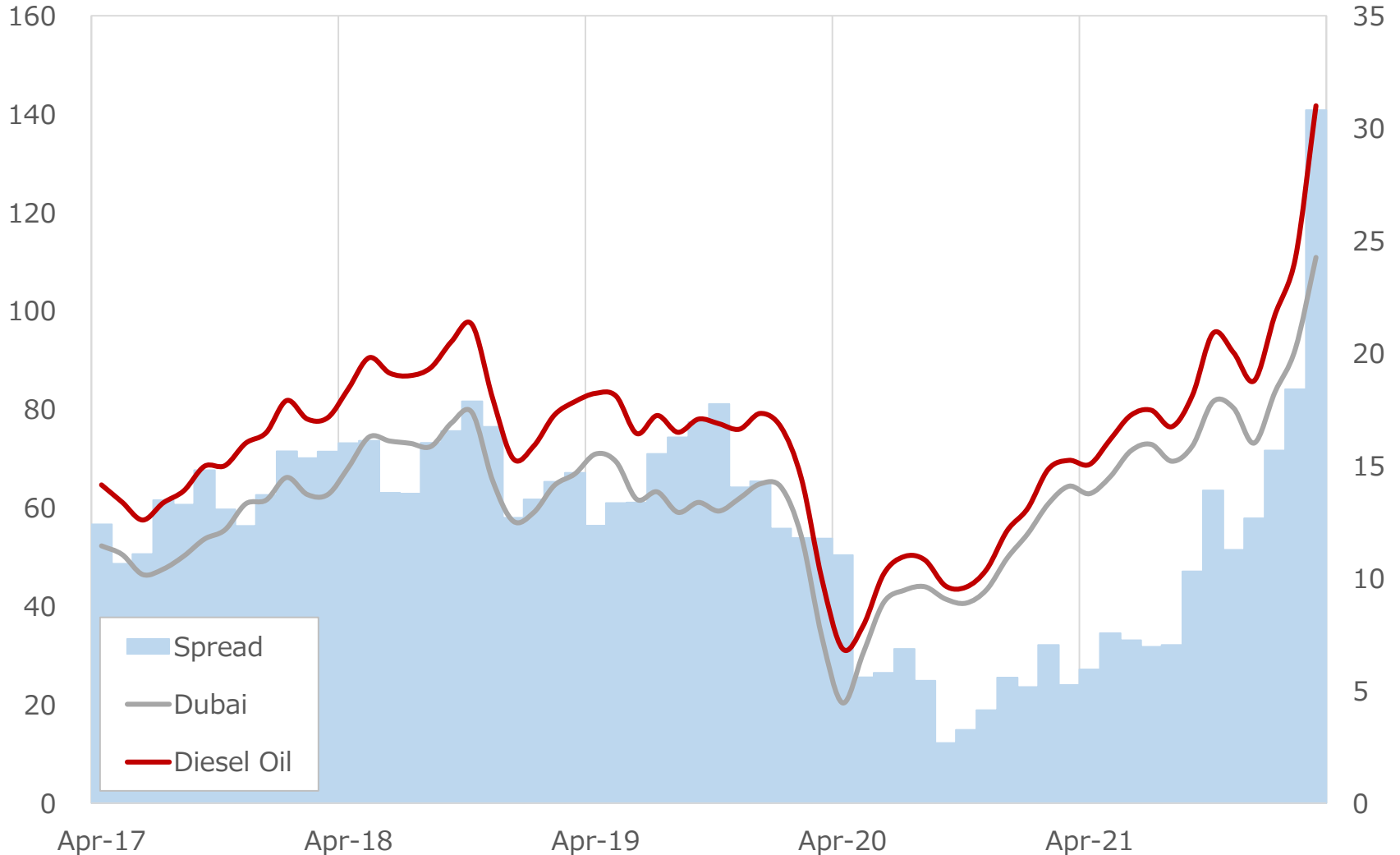




# Diesel-Crude Oil (Singapore spot price and spread)

[Price : USD/bbl]

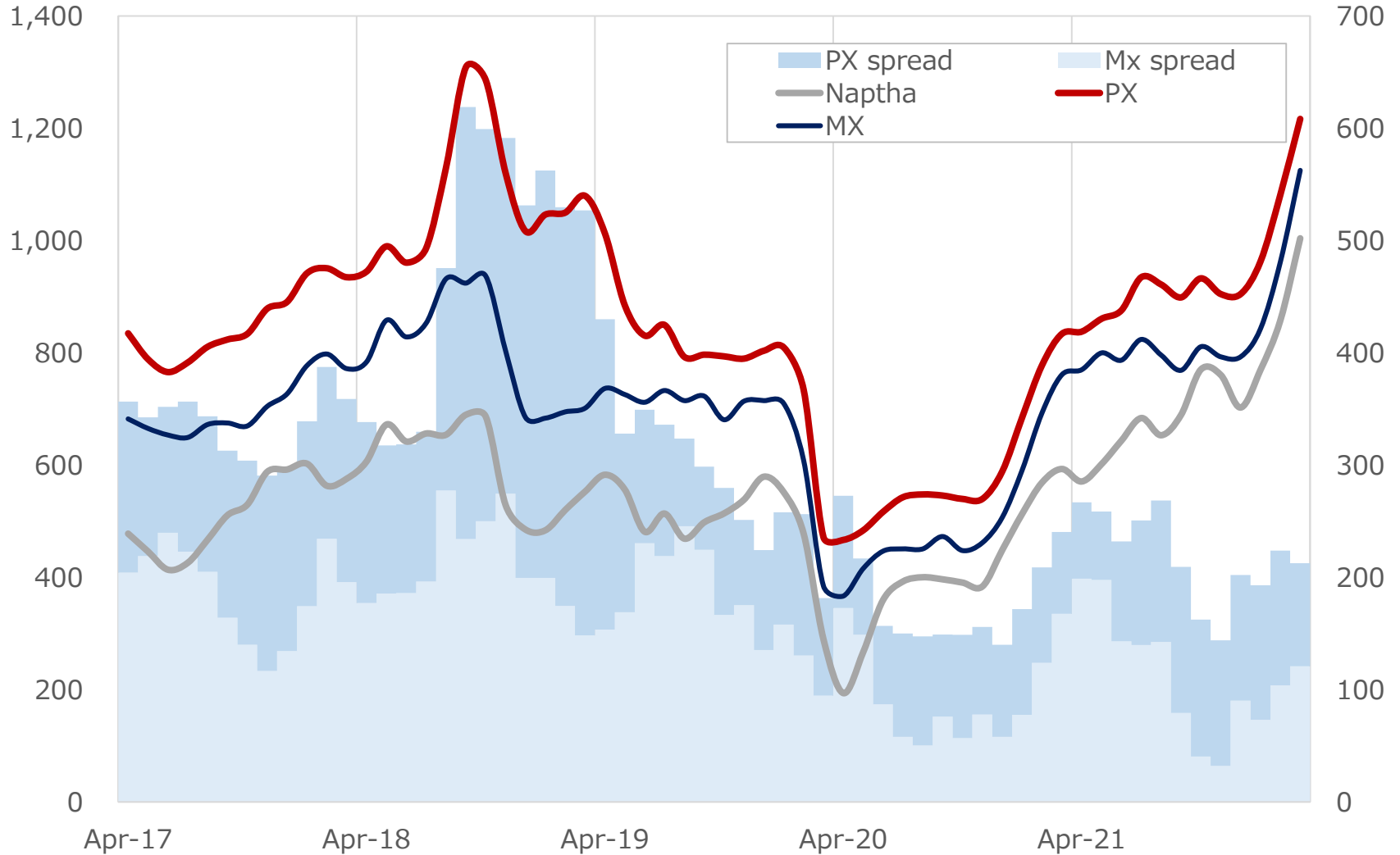
[Spread : USD/bbl]



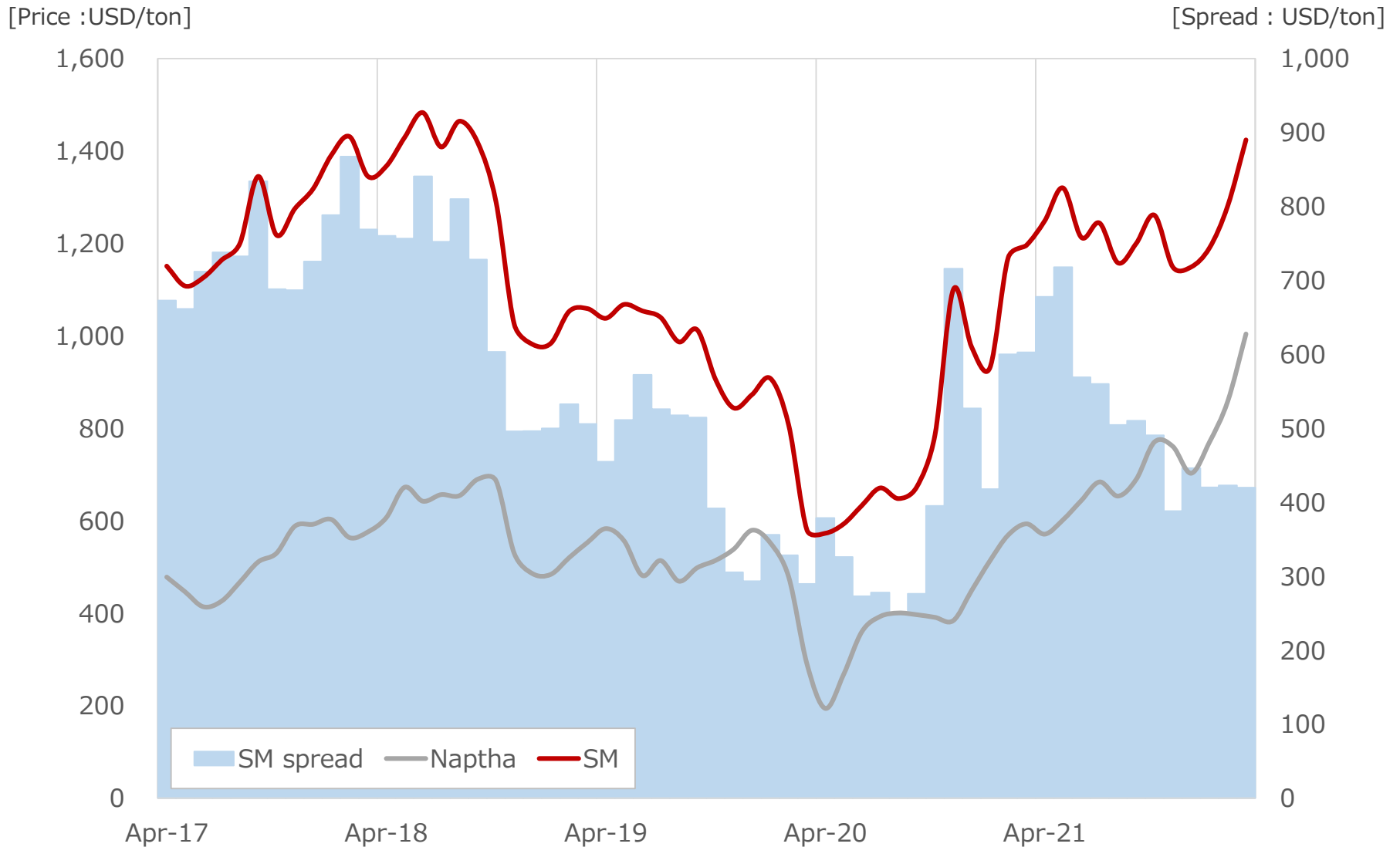
# Para-Xylene, Mixed Xylene-Naphtha (price and spread)

[Price : USD/ton]

[Spread : USD/ton]



# Styrene Monomer-Naphtha (price and spread)



# Operational Data

## ■ Refineries Utilization

	FY2017	FY2018	FY2019	FY2020	<b>FY2021</b>
Idemitsu Kosan	88%	88%	87%	78%	<b>77%</b>
Former Showa Shell	88%	93%			

## ■ Number of Service Stations

	FY2017	FY2018	FY2019	FY2020	<b>FY2021</b>
Idemitsu Kosan	3,545	3,501	3,446	3,426	<b>3,382</b>
Former Showa Shell	3,028	2,964	2,938	2,885	<b>2,834</b>
Total	6,573	6,465	6,384	6,311	<b>6,216</b>

# Overview of the Company

as of the end of March, 2022

## ■ Petroleum Segment

- Refining Capacity **945 KBD** \*1)
- Domestic fuel oil sales volume  
**34 million KL/year** \*2)
- Number of service stations **6,200**

## ■ Basic Chemicals Segment

(Production Capacity)

- Ethylene **1 mil tons/year**
- Para-Xylene **0.48 mil tons/year**
- Mixed Xylene **0.94mil tons/year**
- Styrene monomers **0.79 mil tons/year**

## ■ Power and Renewable Energy Segment

- Power generation capacity **1.8GW**  
- Renewable energy **0.7GW**

## ■ Functional Materials Segment

(Lubricants, Performance chemicals, Electronic materials, Functional asphalt, Agri-bio, Lithium solid-state electrolytes)

- Lubricants (sales volume): **1.2 mil KL/year**
- Engineering plastics(sales volume): **150,000 tons/year**
- Adhesive materials(production capacity):  
**75,000 tons/year**
- OLED materials(production capacity):  
**26 tons/year**

## ■ Resources Segment

- Crude oil production **29,000 BD**
- Thermal coal production **11 mil tons/year**  
\*3)

\*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 Sold our right for Indonesian coal(1 mil tons/year)

# Petroleum Segment

[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	50.1%
Seibu Oil	Yamaguchi	120	52	30			38.0%
		<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 Refining capacity of 945,000 BD on p.61 excludes that of Nghi Son Refinery.


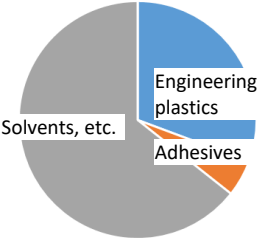
# Basic Chemicals Segment

[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	0.37	0.27		0.21	
	Aichi			0.17		
	Tokuyama	0.62	0.21		0.34	
Showa Yokkaichi Sekiyu	Yokkaichi			0.52		75.0%
Seibu Oil	Yamaguchi			0.25		38.0%
	<b>Total</b>	<b>1.00</b>	<b>0.48</b>	<b>0.94</b>	<b>0.55</b>	
Idemitsu SM (Malaysia) Sdn. Bhd.	<b>Overseas</b> Pasir Gudang (Johor, Malaysia)				0.24	70.0%
	Nghi Son Refinery and Petrochemical LLC	Nghi Son※1 (Thanh Hoa, Vietnam)		0.70		35.1%
	<b>Total</b>		<b>0.70</b>		<b>0.24</b>	

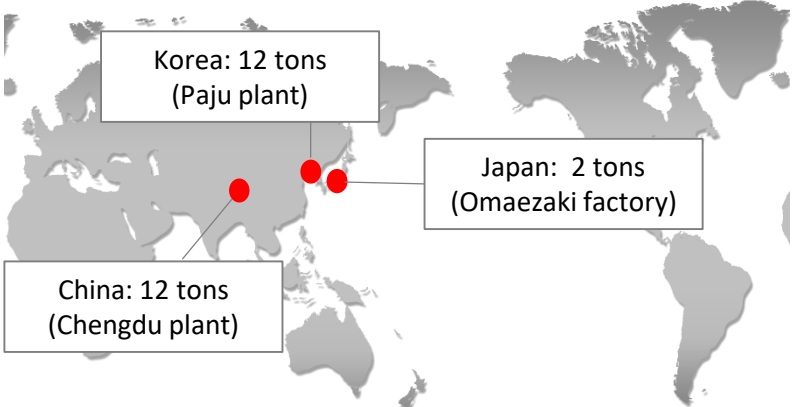


\*1 Para-Xylene capacity of 0.48mil tons/year on p.61 excludes that of Nghi Son Refinery.

# Functional Materials Segment

Lubricants	Performance Chemicals
<ul style="list-style-type: none"> <li>◆ Product categories                             <ul style="list-style-type: none"> <li>• Automotive lubricants (engine oil, etc.)</li> <li>• Grease</li> <li>• Industrial lubricants (hydraulic actuation oil, cutting oil, etc.)</li> </ul> </li>   <li>◆ Global business with a focus on automotive lubricants                             <ul style="list-style-type: none"> <li>• #8 global share</li> <li>• Over 50% overseas sales</li> </ul> </li>   <li>◆ R&amp;D centers                             <ul style="list-style-type: none"> <li>• Japan and overseas (US, China, etc.)</li> </ul> </li>   <li>◆ Global lubricant network                             <div style="text-align: center; margin: 10px 0;">  </div> <ul style="list-style-type: none"> <li>• Manufacturing/sales/R&amp;D network in 28 countries</li> <li>• Strengthening existing facilities and developing new facilities</li> </ul> </li> </ul>	<div style="text-align: right; margin-bottom: 20px;">  </div> <ul style="list-style-type: none"> <li>◆ Product categories                             <ul style="list-style-type: none"> <li>• Engineering plastics</li> <li>• Adhesives</li> <li>• Solvents, etc.</li> </ul> </li>   <li>◆ Breakdown (major uses)                             <ul style="list-style-type: none"> <li>• Engineering plastics Polycarbonates, SPS (automotives, information communication device)</li>   <li>• Adhesives Hydrogenated petroleum resins (diapers and other hygiene products)</li>   <li>• Solvents, etc. Solvents Isoparaffin, DIB, MEK</li>   <li>• <math>\alpha</math>-olefin, bisphenol A (lubricants, surfactant agents)</li>   <li>• Electronic materials Special polycarbonate resins</li> </ul> </li> </ul>



# Functional Materials Segment

Electronic Materials	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>◆ 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>
 <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>	<h3 data-bbox="1335 619 1483 654">Agri-bio</h3> <ul style="list-style-type: none"> <li>◆ Product categories                             <ul style="list-style-type: none"> <li>• Fodder-related materials (Ruminap *1 etc.)</li> <li>• Microorganism control agent/land improvement materials</li> <li>• Environment/greenification materials</li> <li>• Agrichemicals (through SDS Biotech)</li> </ul> </li> </ul>   <ul style="list-style-type: none"> <li>• Acquired 100% of SDS Biotech in August 2021 to further strengthen the agrichemical business</li> </ul>

\*1) Fodder including cashew nut shell liquid, which reduces methane gas contained in cow burp

# Power /Renewable Energy Segment

## Power

Category	Power Plant	Operating Company	Stake Owned (%)	Power generation capacity* (10,000 KW)
Solar	34 domestic locations	Idemitsu, other	—	18.1
Biomass	Keihin Biomass Power Plant (Kanagawa)	Keihin Biomass Power	100	4.9
	Tosa Power Plant (Kochi)	Tosa Green Power	50	0.3
Wind	Rokkasho Village Village Wind Farm (Aomori)	Futamata Wind Development	40	2.0
Geothermal	Takigami Binary Power Plant (Oita)	Idemitsu Oita Geothermal	100	0.5
Renewable (Japan)				25.8
Fire	Ohgishima Power Station	Ohgishima Power	25	30.5
	Mizue Thermal Power Plant	Toa Oil	50.1	27.6
	Aichi Refinery Power Plant	Idemitsu	—	25.0
<b>Domestic</b>				<b>108.9</b>
Solar	Overseas (North America, Vietnam, etc.)		—	44.8
Fire	Overseas			27.1
<b>Overseas</b>				<b>71.9</b>
<b>Total</b>				<b>180.8</b>

\*Reflects Idemitsu's stake, except that 100% of Mizue Thermal Power Plant's capacity is included.

- ◆Owning 706 thousand KL(Japan:258, Overseas:448) 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. For the portion of power beyond capacity, compensating from procurement thorough direct negotiation or JEPX market

## Solar

- ◆As announced in October 2021, panel production will be terminated in June 2022 with transition to a system integrator which engages in solar power generator design, construction, maintenance and recycling

# Resources Segment (Oil E&P, Gas)

## Business Overview

1. Producing crude oil/gas in Norwegian North Sea and selling them mainly in Europe

2. Commencing gas field development 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

	Rights owned (%) <sup>*1</sup>	Destination
<b>Norway</b>		
Snorre	9.6	Europe
Tordis/Vigdis	9.6	
Statfjord/East	4.8	
Sygna	4.32	
Fram	15	
H-Nord	28.8	
Byrding	15	
Vega gas field	3.3	
Knarr oil field	25	
Duva oil/gas field	30	
<b>Vietnam</b>		
Sao Vang and Dai Nguyet gas field	43.08	Asia

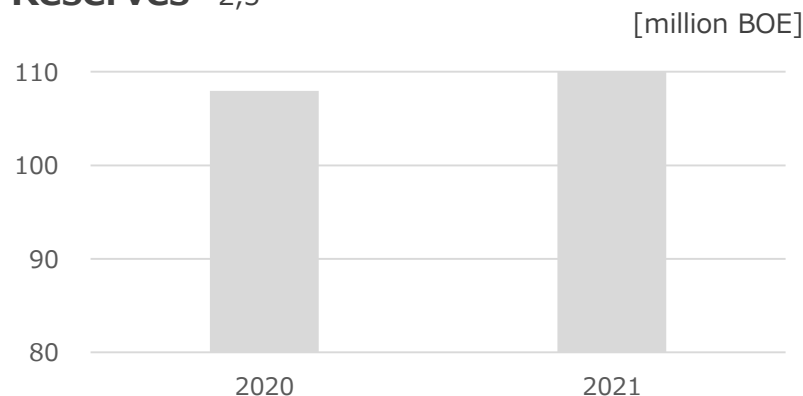
<sup>\*1</sup> Companies in which Idemitsu owns rights

Norway: INPEX Idemitsu Norge AS (49.5% stake)

Vietnam: Idemitsu Gas Production (Vietnam) Co., Ltd. (100% stake)

## Production Oil/Gas Reserves

### ◆ Reserves <sup>\*2,3</sup>



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

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

### ◆ CCS<sup>\*4</sup> initiatives

Considering applying technologies developed to date to CCS, a promising method of reducing CO<sub>2</sub> emissions

<sup>\*4</sup> Carbon capture and storage: Technology which recover emitted CO<sub>2</sub> and isolates/stores it underground or undersea

# Reserve Estimates

## ◆ 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

# Resources Segment (Coal)

Business Overview	Low-carbon Solutions
<p>1. Owns Australian coal mines and has an integrated supply chain from production to sales to provide a stable supply of low-cost coal to Asia</p> <p>2. Provides high-efficiency combustion technology and other services through the only domestic research laboratory devoted to coal in the private sector</p> <p>3. Proactively pursuing reduction of CO<sub>2</sub> emissions through low-carbon solutions such as Idemitsu Green Energy Pellets</p> <p>◆ <b>Overview of Australian Coal Mines</b></p>  <div data-bbox="529 779 948 975" style="border: 1px solid black; padding: 5px;"> <p><b>Ensham Coal Mine</b> Location: Queensland Grade: Coal for export Harbor: Gladstone Harbour (~350 km by train)</p> </div> <div data-bbox="86 1072 513 1305" style="border: 1px solid black; padding: 5px;"> <p><b>Boggabri Coal Mine</b> Location: New South Wales Grade: Process raw coal for export (SS/PCI), coal for export Harbor: Newcastle Harbour (~360 km by train)</p> </div> <div data-bbox="529 1072 948 1305" style="border: 1px solid black; padding: 5px;"> <p><b>Muswellbrook Coal Mine</b> Location: New South Wales Grade: Coal for export Harbor: Newcastle Harbour (~30 km by truck → ~110 km by train)</p> </div>	<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 fuel for coal-fired power generators with black pellets</li> <li>• Succeeded in mixed combustion tests which replace 20-30% of coal fuel with black pellets</li> <li>• Planning to commence operations of a commercial plant with annual production capacity of 120,000 tons in Vietnam in 2022. Aiming to achieve an infrastructure to supply 2 million tons by 2030</li> </ul>  

# Precaution statement about forecast

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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.