

# **JAPEX Management Plan 2022-2030**

Improving Profitability and Building Medium-to Long -Term Business Foundation with Focus on Contributing to Realization of Carbon-neutral Society

March 28, 2022

Japan Petroleum Exploration Co., Ltd. (Security Code: 1662)

# **Introduction: Review of Current Vision and Business Plan**

## Progress in the past 4 years, but significant changes in business environment

#### Formulated in May 2018

#### Long-term Vision 2030 : Growth strategy towards FY2030

Growth to the Comprehensive Energy Company Utilizing our Oil and Gas E&P<sup>\*1</sup> and its Supply Basis

**Medium-term Business Plan 2018-2022 : Business direction and priority initiatives for 5 Years** Improve profitability to ROE≥5%, Optimize business portfolio and improve financial soundness, materialize new projects

	✓ Proceeded with additional development in E&P projects, acquired new E&P projects overseas
➤ Main	<ul> <li>Expanded non-E&amp;P business field, including commercial operation of Fukushima Natural Gas Po Plant<sup>*2</sup> and launched activities of renewable energy development</li> </ul>
Progress	✓ Started feasibility studies for CCS/CCUS*3 projects in and outside Japan
	✓ Improved financial soundness by optimizing business portfolio, mainly projects in Canada
	✓ Expanded shareholder returns by share buybacks
	. ( Irroversible changes in energy supply demand structure due to meyoment toward decarbonization
Response	<ul> <li>Irreversible changes in energy supply-demand structure due to movement toward decarbonization</li> <li>Lowered crude oil price assumption for medium-to-long term to 50USD/bbl in March 20</li> </ul>

\*1: Exploration, development, and Production of oil and gas

\*2: FGP=Fukushima Gas Power Co., Ltd. (33% of JAPEX shareholds), a company that operates Fukushima Natural Gas Power Plant

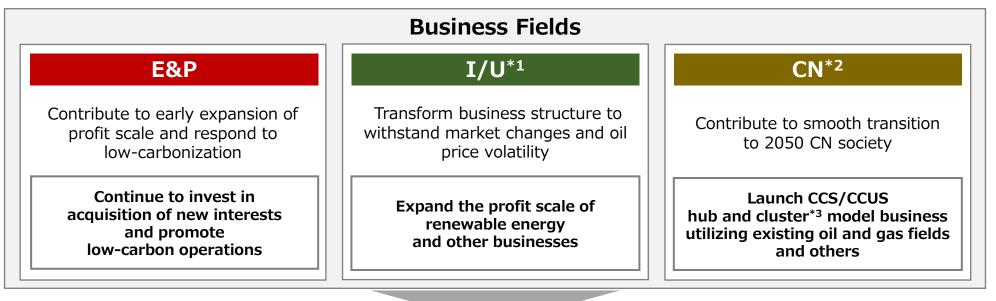
\*3: CCS=Carbon dioxide Capture and Storage, CCUS=Carbon dioxide Capture, Utilization, and Storage



# **Assumption of Formulation and Basic Policy**

## Formulated as Medium- to Long-term Management Plan for FY2022-2030

- Assumption: New management plan to respond to business environment quickly and flexibly
  - > Changes in our balance sheet (decrease in business assets and interest-bearing debt)
  - Long-term vision for transition of business structure based on "JAPEX 2050"
- Basic Policy: Improve profitability and build business foundation for 2030 and beyond



### Achieve profit levels appropriate to capital costs and enhance shareholder returns

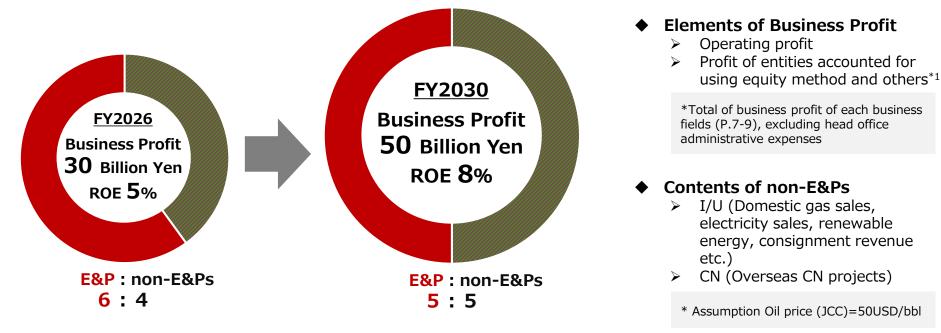
- \*1: Infrastructure & Utility \*2: CN = Carbon Neutral
- \*3: CCS/CCUS network that connects multiple CO<sub>2</sub> emitter and CO<sub>2</sub> storage sites



## **Management Goals**

## Long-term Target for FY2030 and Mid-term Target for FY2026

• Quantitative target: Business Profit, ROE, Profit Composition



- Carbon-Neutral Related Targets
  - Launch CCS/CCUS prototype projects by hub and cluster model in our domestic oil and gas fields
    - Prospect for realization by FY2026, launch as model business by FY2030

#### • Reduce GHG emission intensity of JAPEX by 40% compared to FY2019

Start pilot trial at domestic oil and gas field by FY2026, and achieve target in FY2030

\*1:Including profits to be distributed under limited liability investment partnership and silent partnership agreements



# **Fund Allocation**

## Allocate 500 billion yen to growth investments and shareholder returns

• **Outlook of fund allocation** (Cumulative of 9 years)

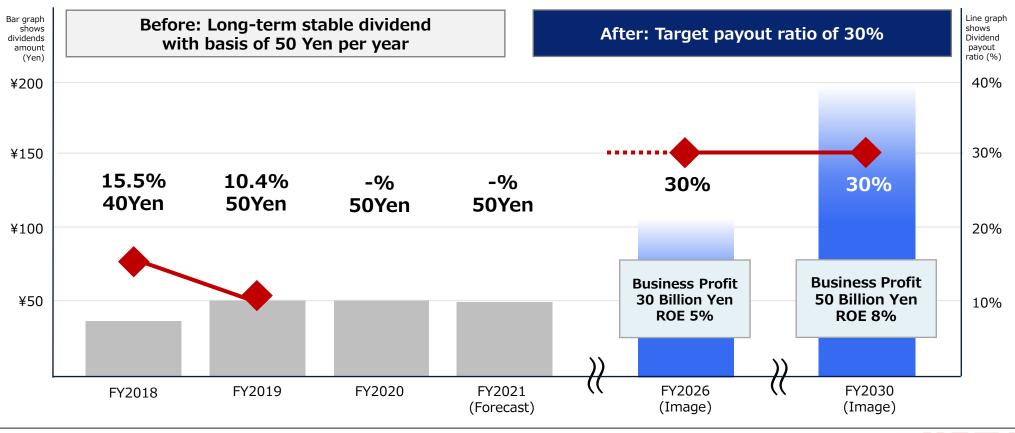
Cash In	Fund Allocation	Breakdown of Growth Investment		
			Additional development in Japan	30 billion yen
			Overseas projects acquisition	200 billion yen
Operating CF 380 billion yen	Growth Investments	E&P 230 billion yen		
	450 billion yen	I/U 170 billion yen	Domestic gas supply (Including existing infrastructures) Overseas LNG supply infrastructures Renewable energy development	40 billion yen 40 billion yen 90 billion yen
Cash on Hand + Bank Loans		CN 50 billion yen	CN business development	50 billion yen
120 billion yen	Shareholder Returns 50 billion yen			



## Adopt a consolidated dividends payout ratio to enhance shareholder returns

### • Change in Basic policy

- > Pay dividends in line with financial results each fiscal year with a **target payout ratio of 30%** from FY2022
- > Strive to maintain annual dividends of ¥50 per share even in a temporary downturn in business performance



## **Priority Items by Business Field**

## **Invest to Grow and Promote Existing Projects in Each Business Field**

* New initiatives	are <u>underlined</u>	Japan	Overseas
E&P		<ul> <li>Stable production in existing oil and gas fields</li> <li>Additional development in and around existing oil and gas fields</li> <li>Reduce GHG emission from operations</li> </ul>	<ul> <li>Promote existing projects</li> <li><u>Acquire new interests</u></li> </ul>
	Gas Supply	Maintain and expand gas supply volumes	Participate in projects of LNG supply infrastructure development
I/U	Gas Power Generation	<ul> <li>Continue stable operation of FGP power plant</li> </ul>	
	Renewable Energy	<ul> <li>Steady progress in projects under development</li> <li><u>Add more projects</u></li> </ul>	<u>Consider participation in projects</u>
CN	CO₂ Storage	<ul> <li>Launch CCS/CCUS prototype projects by hub and cluster model utilizing existing oil and gas fields, etc.</li> <li>Examine CO<sub>2</sub> storage capacity in existing oil and gas fields etc.</li> </ul>	<ul> <li><u>Participate in CCS projects in systematically</u> <u>advanced areas</u></li> <li><u>Participate in feasibility studies on</u> <u>CCS/CCUS in emerging countries</u></li> </ul>
	Others	<u>Consider next generation energy supply</u> infrastructure etc.	



# **Priority Item-1: E&P**

## Contribute to early profit scale expansion and respond to low-carbonization

<u>Japan</u>	
<ul> <li>Continue to seek potentials</li> <li>Additional development in existing fields and surroundings including offshore exploration</li> </ul>	<ul> <li>Acquire new in</li> <li>Consider main with experient</li> <li>Prioritize projection</li> </ul>
<ul> <li>Reduce GHG emissions from operations</li> <li>Consider underground storage of associated CO<sub>2</sub> generated in domestic E&amp;P field operation</li> </ul>	<ul> <li>Diversify busin</li> <li>Continuously a own various t</li> </ul>
<ul> <li>Collaborate with consideration in other</li> <li>business fields</li> <li>Considerations of CCUS in existing oil and gas fields etc.</li> </ul>	<ul> <li>Pursue carbon</li> <li>Prefer to acqu with CCS/CCU</li> </ul>
Steady operation of existing oil and gas fields	<ul> <li>Contribution to Existing project development p</li> </ul>

### **Overseas**

### nterests

- nly in North America and North Sea ces from existing projects
- ects with early profit contribution

### iess risks

acquire assets with a certain scale, type assets, use price hedging

### neutral measure

- uire natural gas assets, collaborate JS etc.
- o steady operation of cts including projects in phase

## E&P Profit Target: FY2026 23 Billion Yen $\rightarrow$ FY2030 27 Billion Yen



# **Priority Item-2: I/U (Infrastructure/Utility)**

## Transform business structure to withstand market and oil price volatility

### <u>Japan</u>

- Response to gas supply diversification
  - Provide energy services collaborating with city gas suppliers and others

### Renewable energy

- Add new projects: mainly biomass other candidates such as offshore wind, photovoltaic, and geothermal energies
- > Steadily progress projects under development
- Stable gas supply and increase its volume by maintaining domestic supply network
- Contribute to profit in electricity sales by FGP power plant
- Competitive LNG Procurement and sales

### **Overseas**

- LNG supply infrastructure development
  - Launch ongoing projects and add new projects
  - Mainly target Southeast Asia with strong gas demands

### Renewable energy

Consider to participate in overseas projects

#### Our gas supply infrastructure applicable in overseas







LNG facilities construction and operation including LNG terminals

High pressure gas pipelines construction and operation

Various LNG satellite supply method such as LNG tank trucks and railways

## I/U Profit Target: FY2026 12 Billion Yen $\rightarrow$ FY2030 27 Billion Yen



# **Priority Item-3: CN (Carbon Neutral)**

## Contribute to a smooth transition for a Carbon-neutral Society in 2050

### <u>Japan</u>

- Launch CCS/CCUS prototype projects by hub & cluster model
  - Mainly collaborate with existing oil and gas fields and business entities emitting/utilizing CO2
  - Consider next-gen energy supply infrastructure such as CO<sub>2</sub>, hydrogen, and ammonia
- Examine CO<sub>2</sub> storage capacity in existing oil and gas fields etc.

#### **Ongoing Feasibility Studies**

- Yufutsu Oil and Gas Field: Carbon recycling project with the sector-coupling in Tomakomai
- Higashi-Niigata Gas Field: Collaborate with methanol production using emitted CO2 at an adjacent plant (Injection of their surplus CO2 into the gas field)

### **Overseas**

- Participate in CCS/CCUS projects for early profit earning and knowledge acquisition
  - Mainly in systematically advanced areas including North America and Europe
- Participate in CCS/CCUS feasibility studies in emerging countries
  - Consider mainly Southeast Asia, where demand is expected to grow

#### **Ongoing Feasibility Studies**

- CCUS joint feasibility study at Sukowati Oil Field in Indonesia with Pertamina and LEMIGAS
- CCS joint feasibility study in Malaysia with Petronas

## CN Profit Target: FY2026 1 Billion Yen $\rightarrow$ FY2030 2 Billion Yen



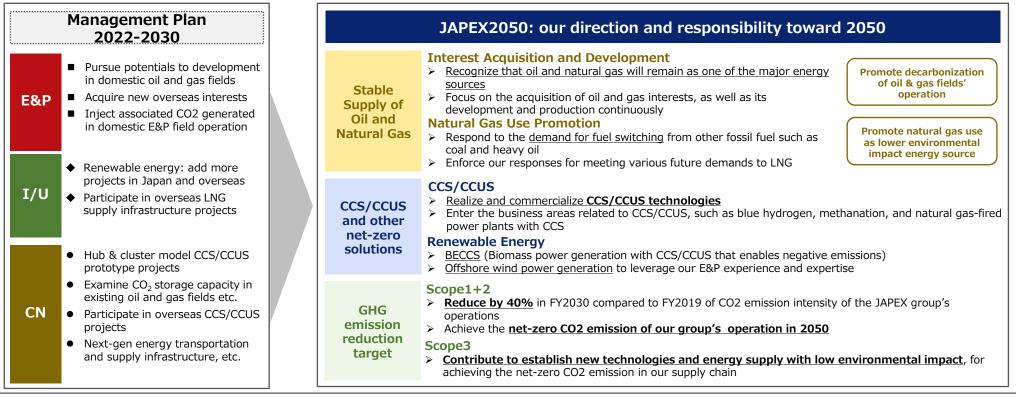
# **Positioning of the Plan toward 2050**

## Contribute to CN-Society by oil & gas supply, renewable energy, and CCS/CCUS

### • Future image from the Plan toward 2050 based on "JAPEX2050"

- > Recognize that oil & gas will play a major role now and future: aim for both its stable supply and CN Society realization, not de-escalation
- FY2030: Expand I/U field businesses including renewable energy, prospect for realization of various energy supply by establishment of CCS/CCUS business
- CN Society in 2050: As a comprehensive energy company, play a center role by CO<sub>2</sub> storage in collaboration with other business operators for capture, transportation, and utilization

### Priority items of the Plan and contributing fields in JAPEX2050 promotion



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# Timeline on each business field by FY2030

## Aiming to strengthen E&P and I/U as well as to launch CCS/CCUS in CN

	FY2026		FY2030			
	Major actions of business fields on	the Management Plan 2022	-2030	Imag	Reference : JAPEX2050 ges of realization and collaboration	on
	Pursue potentials to development in Additional development in Katagai Gas Field	n domestic oil and gas fields Consider other domestic additional developmen	it		<ul> <li>Stable supply of oil &amp; gas</li> <li>Pursue domestic potentials</li> <li>Proceed with overseas projects</li> </ul>	Sou
E&P	Acquire new overseas interests Examine for overseas interests acquisition/	Contribute revenue and profit from acquired int	terests	١r	<ul> <li>Decarbonization</li> <li>Promotion of Gas &amp; LNG use</li> <li>Response to fuel switching</li> </ul>	ce supply
	Inject associated CO <sub>2</sub> generated in c	domestic E&P field operation Start a pilot operation		Ŧ	<ul> <li>demands from other fossil fuels</li> <li>Operate overseas LNG supply infrastructure</li> </ul>	7
T /11	Renewable energy: add more project Contribute a certain scale of revenue and profit	cts in Japan and overseas Become a main profit factor in	n non E&P	┢	<ul> <li>CCS/CCUS as business</li> <li>Hub &amp; cluster type CCS/CCUS in Japan</li> </ul>	Collabora
I/U	Participate in overseas LNG supply Launch operations in advanced projects	infrastructure projects Launch more proje	ects		CCS/CCUS in emerging countries	tion
	Hub & cluster model CCS/CCUS pro Prospect for the 1 <sup>st</sup> case realization	totype projects Start CO2 injection in th	he 1 <sup>st</sup> case	₩	<ul> <li>Zero-emission electricity</li> <li>Expand renewable energy source</li> <li>Thermal power generation with CCS</li> </ul>	
	• Examine CO2 storage capacity in ex	<b>isting oil and gas fields etc.</b> Prospect a certain level to	oward 2050	┝╋	<ul> <li>Negative-emission electricity</li> <li>BECCS (Biomass power with CCS)</li> </ul>	
CN	Participate overseas CCS/CCUS proj Start earning profit from advanced projects	jects Pilot test/commercialization on sever	ral projects		<ul> <li>Next-gen Energy Supply etc.</li> <li>Construct supply infrastructure for CO<sub>2</sub>, hydrogen, and ammonia</li> <li>Collaborate with production of hydrogen and ammonia</li> </ul>	Mix or alternative
	• Next-gen energy transportation and Prospect for managing CO <sub>2</sub>		d ammonia	L	<ul><li>Net-zero in 2050</li><li>Achieve net-zero in our operation</li></ul>	yldns

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## **Measures for Human Resource and Organization**

## HR management and organization for new business structure and fields

Enhance human capital management	Organization changes as of April 1, 2022				
<ul> <li>Secure and assign human resources following business changes</li> <li>Secure human resources with skills required in new business fields, and reassign to growth areas</li> <li>Develop human resources for new fields</li> <li>Encourage each autonomous career development</li> <li>Introduce career consulting, expand internal personnel recruitment system, etc.</li> <li>Reskilling program</li> <li>Enable to develop and deploy human resources for various business fields</li> </ul>	<ul> <li>Reorganize business units to promote new management plan</li> <li>Reorganize Overseas Project Divisions</li> <li>Two division structures to develop new projects and promote existing projects, etc.</li> <li>Reorganize in Technical division</li> <li>Establish Carbon Neutral Technology Office</li> <li>Reorganize Research Center</li> <li>Reorganize Gas Supply and Facilities Division</li> <li>Consolidate functions of operations and management of surface facilities in our business</li> </ul>				
<ul> <li>Utilize human resources considering their improvement in engagement</li> <li>✓ Based on the Diversity, Equity &amp; Inclusion (DE&amp;I) policy</li> <li>&gt; Promotion of women, youngers, and seniors</li> </ul>	<ul> <li>Strengthen company-wide support for business deal execution and management</li> <li>✓ Establish Deal Execution/PMI Support Dept.</li> <li>&gt; Centralize corporate departments' expertise</li> <li>&gt; Support new investment cases both engagement procedures and investment value realization</li> </ul>				
Secure and develop human resources for DX	Promote DX based on business issues				
DX (Digital transformation) Measures					

IAPEX

## **Addressing Climate Change**

## Link business and other contributions to management responsibility

### Our commitment under "JAPEX2050"

#### <u>Contribute to the CN society realization</u> <u>through our business</u>

Under the consideration that transition to a CN society is our business opportunity, aim to contribute to its realization by promoting our business

#### [Priority action items]

- Expansion of renewable energy sources
- Early realization of CCS/CCUS

#### Reduce GHG emissions from business ourselves

Reduce 40% of CO<sub>2</sub> emission intensity in FY2030 (compared to FY2019 of Scope1+2)

#### [Priority action items]

- $\blacktriangleright$  Consider CO<sub>2</sub> injection emitting from our oil and gas fields
- Consider using zero-emission electricity at head office

Reflect annual results of our climate change response to executive compensation

Add the achievement level of company-wide climate change response objectives

to an annual evaluation items of executive officers from FY2022



# Appendix

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- P16 ② Current plan: Progress status of business profit
- P17 ③ Management targets as of FY2026/2030 and sensitivity
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- P24 <sup>(1)</sup> Our capabilities and possibilities in CCS/CCUS
- P25 1 Diversity, Equity & Inclusion (DE&I) Policy



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#### $\textbf{Appendix} \ \textcircled{1}$

# **Current plan: Progress status of targets and indicators**

### • Targets and Indicators toward FY2022 and progress in FY2018-2021

Target items	FY2022 Targets	FY2018	FY2019	FY2020	FY2021 Forecast <sup>*1</sup>	Estimates at FY2021 end
ROE	5% or more	3.5	6.5	(0.7)	N/A	Unachieved
Domestic gas transaction volume	1.60 million tons	1.13	1.20	1.48	1.40	Unachieved
Electricity sales volume	2.8 billion kWh	0	0	3.0	3.0	Achieved
Interest-bearing debt	Reduce by 100~120 billion yen	151.7	140.8	118.7	5.7	Achieved
Debt-to-EBITDA ratio	Less than 2.0 times	3.6	2.4	3.2	0.1	Achieved
Reserve Replacement Ratio*2	(Long-term target) Exceeded by 1	4.9	(0.1)	(0.7)	N/A	-

### • Progress on funding allocation for FY2019-2022 (4 years)

(billion ven)

Items	Allocated amount	FY2019	FY2020	FY2021 Forecast <sup>*1</sup>	Estimated Cumulative total for 3 years
Improve profitability of existing projects	Approx.60 billion yen	7.0	13.4	12.0	32.5
Reduce interest-bearing debt	Approx.55 billion yen	11.0	9.3	60.5	81.0
Growth investments	Approx.65 billion yen	1.0	8.8	15.6	25.4
Shareholder returns	Approx.9 billion yen or more	3.1	2.8	6.8	12.8

\*1: Figures are based on business forecasts as of February 9, 2022 with recent performance-based adjustments.

\*2: The ratio of growth in volume of proved reserves against production volume in a single fiscal year or other specific period of time.

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#### $\textbf{Appendix}\ \textcircled{2}$

# **Current plan: Progress status of business profit**

### • Business Profit by business field (FY2019 onwards\*1)

Business field	FY2019	FY2020	FY2021 Forecast *2
E&P	37.1	3.8	35.1
Infrastructure/Utility	(5.1)	11.9	1.6
Others	(5.7)	(5.7)	(6.9)
Total	26.2	10.0	29.8

#### • Business Profit by segment

Segment	FY2018	FY2019	FY2020	FY2021 Forecast *2
Japan	19.5	18.9	21.6	22.2
North America	(9.7)	3.4	(9.3)	1.7
Europe	(0.1)	(0.1)	(0.1)	(0.1)
Middle East	0.9	0.6	0.1	1.7
Others	12.3	11.8	6.1	13.6
Adjustments and Eliminations	(8.0)	(8.4)	(8.4)	(9.3)
Total	14.8	26.2	10.0	29.8

#### • Reference: Crude Oil Price Trend

Item	FY2018	FY2019	FY2020	FY2021 Forecast *2
Crude Oil Price (JCC)	71.95	68.11	42.91	70.21

\*1: Disclosures began in FY 2019. \*2: Figures are based on the earnings forecast as of February 9, 2022.



(USD/bbl)

16

(billion yen)

(billion yen)

#### Appendix 3

# Management targets for FY2026/2030 and sensitivity

<ul> <li>Management targets</li> <li>Business profit: billion yen (Operating profit + equity in earnings of affiliates and other<sup>*2</sup>)</li> </ul>		FY2021 Forecast <sup>*1</sup>	FY2026 targets	FY2030 targets
		29.8	30.0	50.0
(Breakdown)	E&P	35.1	23.0	27.0
	I/U	1.6	12.0	27.0
	CN	-	1.0	2.0
	Others <sup>*3</sup>	(6.9)	(6.0)	(6.0)
ROE		-	Approx.5%	Approx. <b>8</b> %
Profit com	position ratio (E&P : Non-E&Ps)	9:1	6:4	5:5
Assumption of	f crude oil price (JCC: USD/bbl)	70.21	50.00	50.00
Exchange rate	assumption (JPY/USD)	109.97	110.00	110.00

• Oil price sensitivity in business profit target		Business profit as of FY2026	Business profit as of FY2030
Impact of a 1USD/bbl change in oil price : billion yen	-	0.7	0.9

\*1: Figures are based on earnings forecast as of February 9, 2022.

\*2: Including profits to be distributed under limited partnership and silent partnership agreements

\*3: Other revenue (contract service and oil products sales, etc.) less head office administrative expenses



#### Appendix ④

# Fund allocation breakdown as of FY2026/2030

Cash-in assumption (billion yen)	Cumulative total for FY2022-2026 (5 years)	Cumulative total for FY2022-2030 (9 years)	
Operating cash flow	200.0	380.0	
Cash on hand + Bank loans	100.0	120.0	
Cash-in total	300.0	500.0	

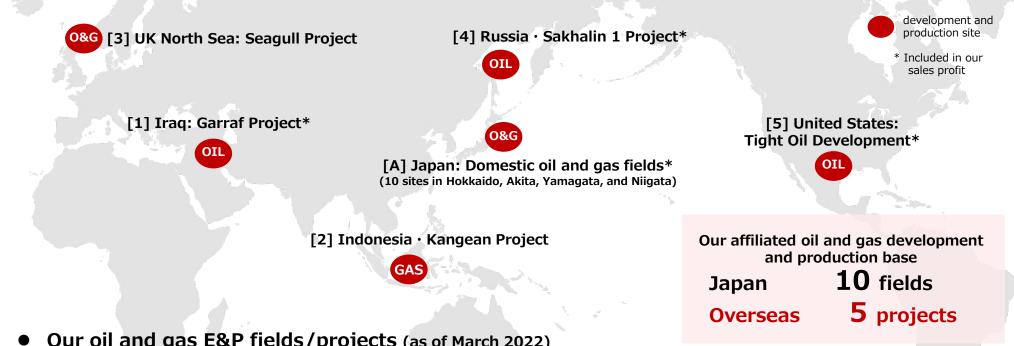
Cash-out assur	Cash-out assumption (billion yen)		Cumulative total for FY2022-2026 (5 years)	Cumulative total for FY2022-2030 (9 years)	
Growth investment	50.5	Japan -Additional development etc.	25.0	30.0	
	E&P	Overseas- new project acquisitions	120.0	200.0	
		Domestic gas supply (including existing facilities)	20.0	40.0	
	I/U	Overseas LNG supply infrastructure development	30.0	40.0	
		Renewable energy development	60.0	90.0	
	CN	CN business development	20.0	50.0	
	total Shareholder returns Cash-out total		275.0	450.0	
Shareholder r			25.0	50.0	
			300.0	500.0	

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#### Appendix 5

# **Business overview: Our oil and gas E&P sites**



#### Our oil and gas E&P fields/projects (as of March 2022)

No.	Oil and gas field/Project title (operator)	Interest (JAPEX net)	production type	Status	Gross Production volume <sup>*1</sup>
А	Japan: Domestic oil and gas fields (Total of 10 locations in Hokkaido, Akita, Yamagata, and Niigata)	Differ by interest	Crude oil / natural gas	Production/ Additional Development	Undisclosed
1	Iraq: Garraff Project (PETRONAS Carigali Iraq Holding B.V.)	30% (16.5%)	Crude oil	Production/ Additional Development	80,000bbl/d
2	Indonesia: Kangean Project (Kangean Energy Indonesia Ltd.)	100% (25%)	Natural gas	Production	4,560,000m <sup>3</sup> (28,000boed)
3	UK North Sea: Seagull Project (Neptune E&P UK Limited)	15% (15%)	Crude oil / natural gas	Development	-
4	Russia: Sakhalin 1 Project (Exxon Neftegas Ltd.*2)	30% (4.59%)	Crude oil	Production/ Development	Undisclosed
5	North America: Tight Oil Development (Marathon Oil Corporation and several other interests)	Differ by interest	Crude oil	Production/ Development	Undisclosed

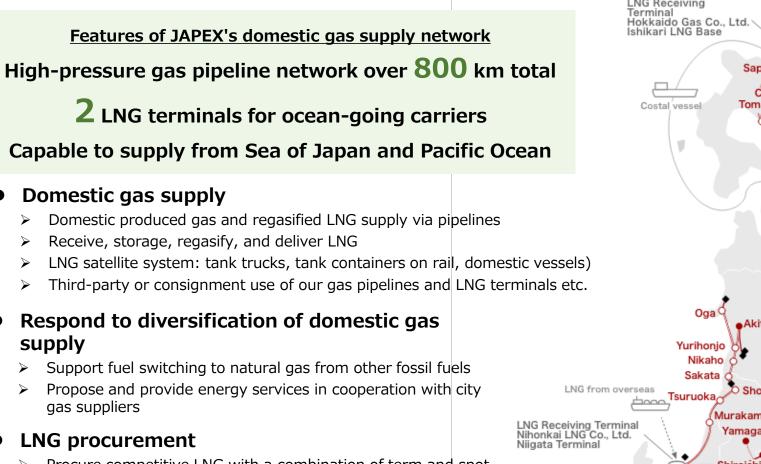
\*1:Average daily production for FY2021 (Jan-Dec 2021 for overseas projects). \*2: On March 1, 2022 (local time) Exxon Mobil, parent company of operator Exxon Neftegas Limited, announced its exit policy.

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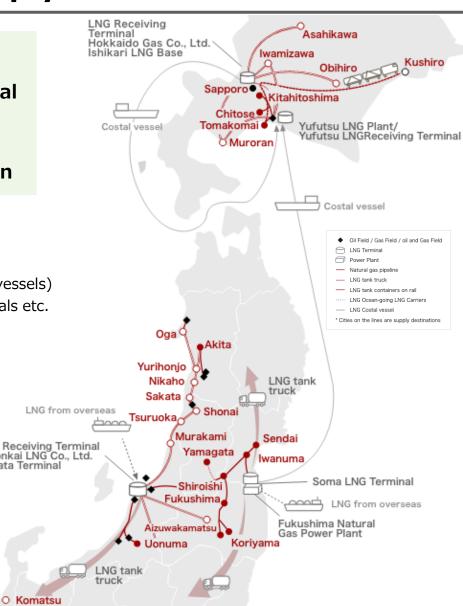


#### Appendix 6

## **Business overview: I/U - Gas supply**



- Procure competitive LNG with a combination of term and spot contracts
- Overseas LNG supply infrastructure
  - Launch new projects or other process mainly in Southeast Asia with stronger demands for gas
    - ✓ Ongoing feasibility study: Northern Vietnam LNG terminal project



#### $\textbf{Appendix} \ \bigcirc \\$

# **Business overview: I/U - Electricity**

Total6 sites(Renewable energy 5 sites)

Total output 1,339,550kw Renewable energy 159,550kw) [1] Abashiri Biomass Power Plant No.2&3 BIO

[2] Mega solar power generation at JAPEX Hokkaido District Office\*

PV

[3] Yufutsu Solar Power Plant PV

LNG



### • Power plants in development and operation (as of March 2022)

No.	Power plant	Location	Туре	Capacity (kW)	Share	Status
Α	Fukushima Natural Gas Power Plant	Shinchi Town, Fukushima	Natural gas (LNG)	1,180,00 0	33%	In operation
1	Abashiri Biomass Power Plant No.2&3	Abashiri City, Hokkaido	Biomass (wood chip)	19,800	94.3%	In development
2	Mega solar power generation at Japex Hokkaido District Office	Tomakomai City, Hokkaido	PV	1,800	100%	In operation
3	Yufutsu Solar Power Plant	Tomakomai City, Hokkaido	PV	13,000	20%	In operation
4	Ozu Biomass Power Plant	Ozu City, Ehime	Biomass (wood pellet)	50,000	35%	Development Decided
5	Chofu Biomass Power Plant	Shimonoseki City, Yamaguchi	Biomass (wood pellet)	74,950	39.9%	Development Decided

#### [A] Fukushima Natural Gas Power Plant



### • Other renewable energy project

 PHOTON Sustainable Solar Investment Limited Partnership (funding up to 10 billion yen in PV generation projects including non-FIT projects; 50% of our investment ratio)

[4] Ozu Biomass Power Plant



[5] Chofu Biomass Power Plant

BIO



Gas power plant

\* Included in our

sales profit

Renewable power plant

#### Appendix (8)

# **Business overview: CN - CCS/CCUS**

### • Required factors to realize a hub & cluster CCS/CCUS

### Verification and Establishment of Technology

- Survey of suitable sites for CO<sub>2</sub> storage and amounts that can be stored
- > CO<sub>2</sub> capture and transportation technology
- $\succ$  CO<sub>2</sub> indention and storage technology
  - Including stored CO<sub>2</sub> monitoring

### Inter-company and Cross-industry Collaboration

- $\succ$  Collection of CO<sub>2</sub> from emitting sites
- CO<sub>2</sub> transportation network construction
   Transportation to utilization destinations and collection surpluses
- > Underground storage of surplus  $CO_2$

# Examination and Development of Legal Systems, etc.

- > Legal system for CO<sub>2</sub> underground storage
- Appropriate system of CO<sub>2</sub> transportation infrastructures with publicness
- ➢ CO2 trading system
  - Including collaboration with overseas CO<sub>2</sub> trading
- Ongoing CCS/CCUS initiatives to promote/participate in (as of March 2022)

### Japan Realize hub & cluster model by FY2030

#### Consideration in JAPEX

Common

- $\checkmark\,$  Examination of  $\rm CO_2$  storage capacity in our oil and gas fields, etc.
- $\checkmark\,$  Study of re-injection of associated  $\rm CO_2$  from our oil and gas field operations
- Feasibility study with companies/cross-industry
  - ✓ Feasibility study on carbon recycling business utilizing interindustry collaboration in the Tomakomai area with Deloitte Tohmatsu Consulting as a NEDO-commissioned project
  - $\checkmark\,$  Feasibility study of a business in the Niigata area that makes effective use of CO2 with Mitsubishi Gas Chemical

# **Overseas** Early profit earning in advanced countries & consideration in emerging countries

- Consideration in JAPEX
  - ✓ Consideration for participation in CCS/CCUS projects in North America, Europe and other systematically advanced areas
- > Feasibility study on companies/cross-industry

+

- ✓ Joint feasibility study of a CCUS project in Indonesia's Sukowati oil field utilizing bilateral credits with Pertamina Group and Remigas
- ✓ Joint CCS study in Malaysia including a survey of suitable sites and technical studies with a view to implementing CO<sub>2</sub> underground storage with PETRONAS

#### Technical and other related study

✓ Study on technical issues of energy transportation infrastructure for the realization of a CN society with JFE Engineering



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Appendix (9)
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# **Corporate structure for CN business promotion**

- Establish CN Business Promotion Committee on April 1, by the executives of related divisions
  - Promote company-wide initiatives for CN-related businesses with a focus on CO2 underground storage-related businesses, including renewable energy



#### Appendix

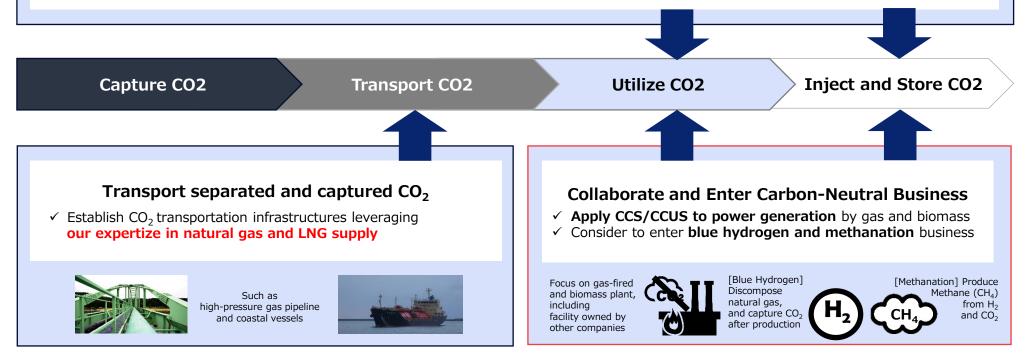
# Our capabilities and possibilities in CCS/CCUS



#### Select candidate locations for CCS/CCUS, and execute CO<sub>2</sub> injection, storage, and monitoring

Technical capabilities to complete all elements in the JAPEX group for realization including exploration, drilling, and monitoring

 $\checkmark$  Utilize the data concerning deep saline aquifers<sup>\*</sup>, acquired by our investigations and explorations in Japan



Note) \* Sandstone layer in deep underground that includes ancient sea water (salt water) which are not suitable for drinking. Its geographical distributions are broader compared to oil and natural gas reservoirs, and CO<sub>2</sub> storage capacity is anticipated.

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#### Appendix ①

# **Diversity, Equity & Inclusion (DE&I) Policy**

### Basic Policy (Established in December 2021)

> JAPEX diversity policy established in 2016 revised to incorporate the concepts of equity and inclusion

### JAPEX Diversity, Equity & Inclusion (DE&I) Policy (Established in December 2021)

In order to respond to changes in the business environment and achieve further growth as a comprehensive energy company, we regard the promotion of diversity, equity and inclusion (DE&I) as an important management issue, and aim to strengthen our corporate competitiveness and achieve sustainable development. To this end, we enable our diverse employees to create new value by encouraging each and every one to play their active role and grow their careers through fully demonstrating their inherent capabilities.

By respecting diversity in terms of gender, nationality, age, disability, career, personality, and values, and by correcting social imbalances caused by these characteristics and differences, we will realize an organizational culture in which all employees can be productive and active.

#### • Foster an organizational culture that makes the most of diversity

We seek to improve productivity and create innovation by fostering an organizational culture to make the most of their individual characteristics and qualities of all employees, with positively accepting diversity and respecting differences.

#### Promote the activities of diverse human resources

By securing outstanding talents regardless of gender, nationality, age, etc., and by providing timely and appropriate placement and training as well as providing support for career and skill development tailored to each employee, we put in place a system that allows all human resources to demonstrate their capabilities and play their active role as self-directed professionals, thereby increasing individual engagement.

#### ♦ Create an environment that respects diversity

We promote the development of a work environment that allows employees to exert themselves to the fullest in all situations, taking into consideration the circumstances and characteristics of each individual, including childcare, nursing care, disabilities, and LGBTQ+.

### • Targets under the DE&I Policy

#### **Promotion of women**

- Number of female managers: <u>25 or more</u> by the end of FY2025
- Ratio of female new graduates : <u>30% or more</u> each year

#### **Career recruitment**

- Ratio of mid-career hires in management positions : maintain 20% or more until FY2025
- Ratio of mid-career hires to total hires : <u>50% or more</u> each year

### Ratio of childcare leave

Ratio of male employees taking childcare leave : <u>80% or more</u> by FY2025





## **Essential Energies for Essential Needs**



## Japan Petroleum Exploration Co., Ltd.