



**PTTEP**

Member of  
**Dow Jones  
Sustainability Indices**

Powered by the S&P Global CSA

# Investor Presentation

13 May 2022



# Cautionary Statement



## **Forward-looking Information**

The information, statements, forecasts and projections contained herein reflect the Company's current views with respect to future events and financial performance. These views are based on assumptions subject to various risks. No assurance is given that these future events will occur, or that the Company's assumptions are correct. Actual results may differ materially from those projected.

## **Petroleum Reserves Information**

In this presentation, the Company discloses petroleum reserves that are not included in the Securities Exchange and Commission of Thailand (SEC) Annual Registration Statement Form 56-1 under "Supplemental Information on Petroleum Exploration and Production Activities". The reserves data contained in this presentation reflects the Company's best estimates of its reserves. While the Company periodically obtains an independent audit of a portion of its proved reserves, no independent qualified reserves evaluator or auditor was involved in the preparation of reserves data disclosed in this presentation. Unless stated otherwise, reserves are stated at the Company's gross basis.

This presentation may contain the terms "proved reserves" and "probable reserves". Unless stated otherwise, the Company adopts similar description as defined by the Society of Petroleum Engineers.

**Proved Reserves** - Proved reserves are defined as those quantities of petroleum which, by analysis of geological and engineering data, can be estimated with reasonable certainty to be commercially recoverable, from a given date forward, from known reservoirs and under current economic conditions, operating methods, and government regulations.

**Probable Reserves** - Probable reserves are defined as those unproved reserves which analysis of geological and engineering data suggests are more likely than not to be recoverable.



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# Company Introduction



# PTTEP Overview | E&P Flagship of PTT Group



## Operating Framework

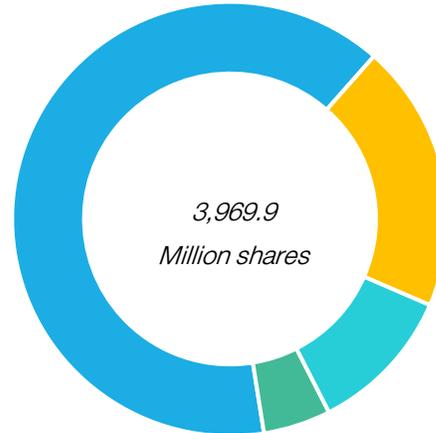


2014-2021    2016-2021    2016-2021



Level "A"    Level "B"

## Shareholding Structure



PTT Group 64%

Local Institutions 20%

Foreign Institutions 11%

Retails 5%

As of August 2021

Stock Quote  
Market Capitalization  
Sales Revenue  
Cash Cost

PTTEP  
> 15 Billion USD  
> 90% SEA & ME  
< 14 USD/BOE

## Business Strategy

### HPO & Thrive in Lower Carbon Future

- Sustainable E&P business
- Diversification beyond E&P
- Greenhouse Gas Management

### Sustain Business Integrity Excellence

- Smart Assurance
- GRC in Common Sense

### Optimize Resources and Create Shared Values

- Circular Model for E&P
- Ocean for Life





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# Business Update



# Transition | G1/61 and G2/61

**Note:** ARAA : Asset Retirement Access Agreement  
 ATA : Asset Transfer Agreement  
 OTA : Operations Transfer Agreement  
 PSC : Production Sharing Contract  
 SAA : Site Access Agreement



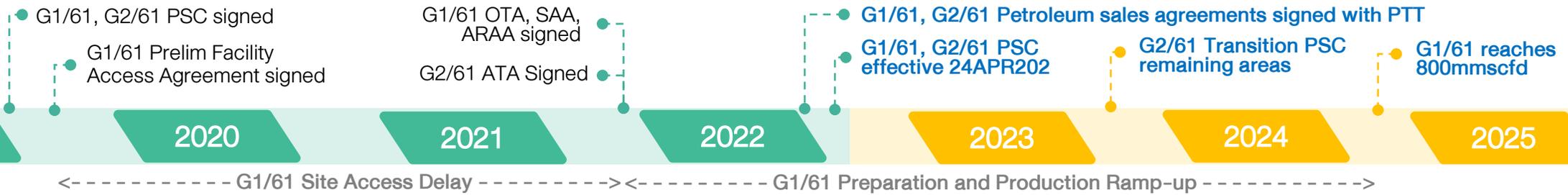
**G1/61 - Erawan**

- ▶ Operatorship transfer completed
- ▶ Initial production rate 200-250 mmscfd
- ▶ Sole Investment 100%

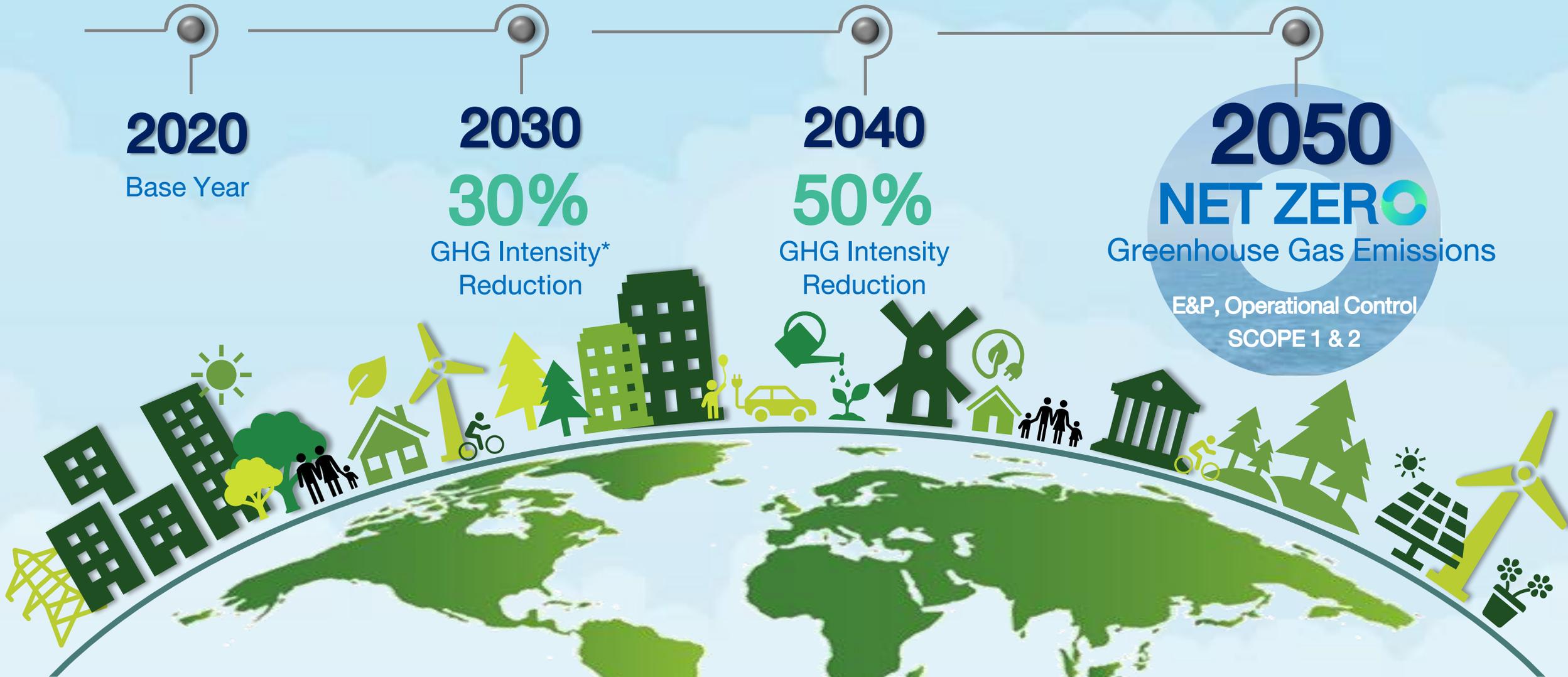


**G2/61 - Bongkot**

- ▶ Transition of 200mmscfd completed
- ▶ Proceed for additional 500mmscfd in Mar 2023
- ▶ Production rate 700mmscfd



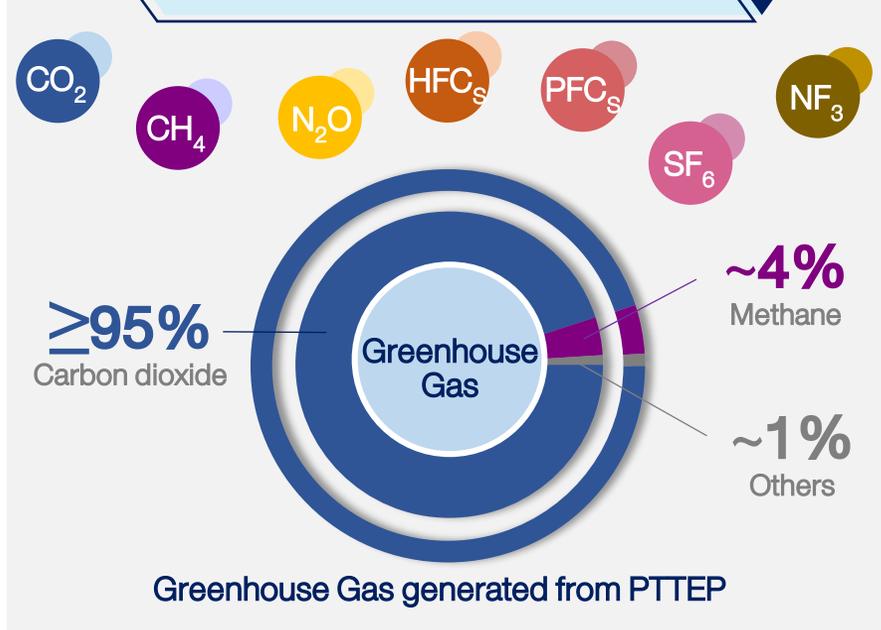
# Our Net Zero Ambition



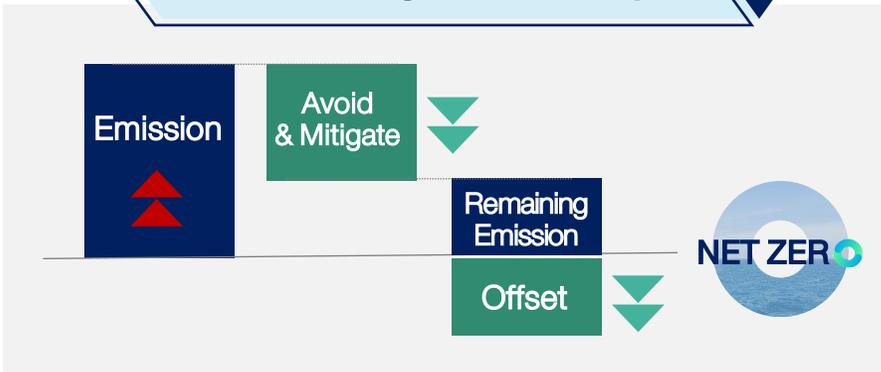
\*Intensity refers to GHG released in Tonne CO<sub>2</sub>e per thousand tonnes of hydrocarbon production

# Pathway to Net Zero GHG Emissions

## GHG Composition



## GHG Management Concept



## Net Zero Roadmap

Exploration for Lower Carbon E&P Portfolio



Production and Planet in Balance

### Roadmap & Key Milestones

2021

2030

2040

**2050**  
**NET ZERO**  
Greenhouse Gas Emissions  
E&P, Operational Control  
SCOPE 1 & 2





## Thailand

### G1/61

Transition and Operatorship transfer completed 24 APR 2022. Proceed to ramp-up activities to achieve 800MMSCFD in 24 months

### G2/61

Transition of 200MMSCFD completed  
On track for additional 500 MMSCFD in Mar 2023



## Malaysia

### SB412

Obtained new block SB412 from MY Bid Round 2021. PSC signed in March 2022.

### SK410B

Prepare to drill 1 more exploration well in 2022  
For LLB - FID expected in 2023



## Myanmar

### Yadana

Become new operator with 37% interest by  
20 July 2022



## UAE

### Sharjah Onshore Area C

25% stake acquisition completed 1 March 2022  
On progress of seismic activity



## Mozambique

### MZA 1

1<sup>st</sup> Cargo expected in 2025 awaiting local  
security situation



## Algeria

### HBR-Phase I

1<sup>st</sup> Oil expected in Q2/2022 at 4 KBOED

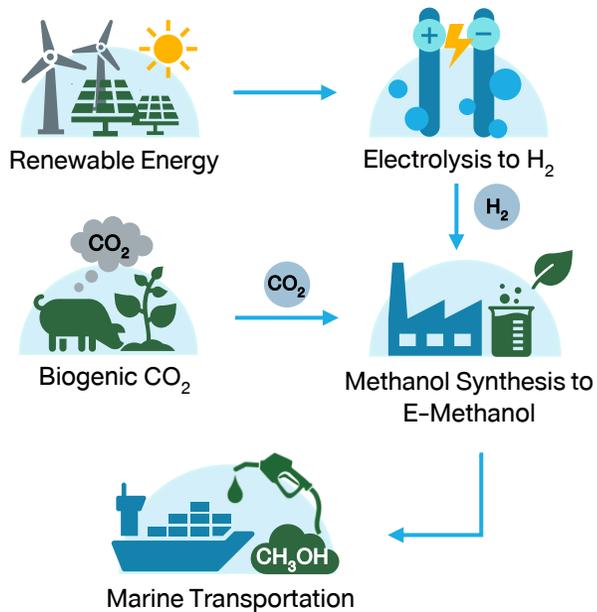


# Business Update | Beyond E&P

## Green Methanol

24 Jan 2022 : Signed a MOU with multiple international firms to explore Green Methanol value chain, with plan of 50KTPA methanol production plant in Singapore

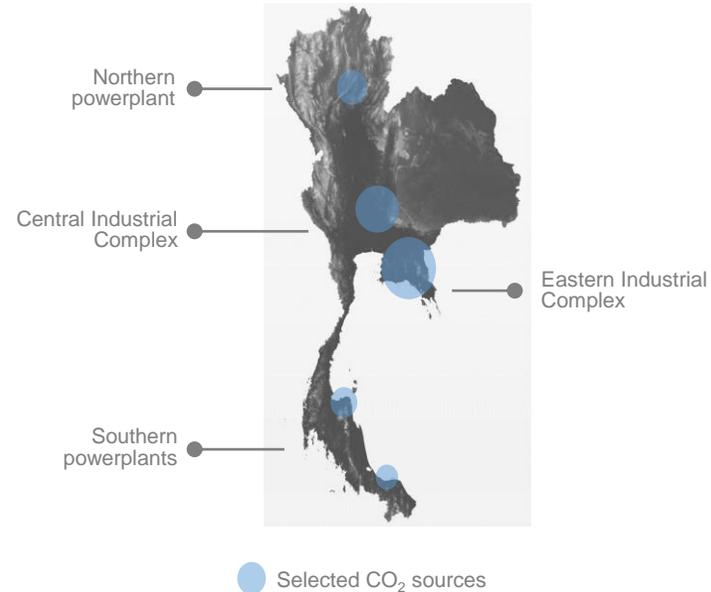
### What is Green Methanol?



## CCS

12 January 2022 : Established Thailand CCS Project Task Force to develop CCS initiatives

25 April 2022 : Signed a MOU with INPEX and JGC to explore on CCS project in Thailand



## Solar Farm

- 1<sup>st</sup> Pilot Solar energy project of PTTEP
- ~10 MWp, FID mid 2022 and COD early 2023
- 100% owned by FST, 100% offtake by S1
- Completed FEED and started application of permits and licenses



## ARV

- 21 April 2022 : Establishment of B-Med X, a JV between Cariva, a subsidiary of ARV, and BJC Healthcare, subsidiary of BJC
- To develop an aesthetic marketplace application and expand to healthcare business such as remote healthcare system





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# Financial Results & Guidance

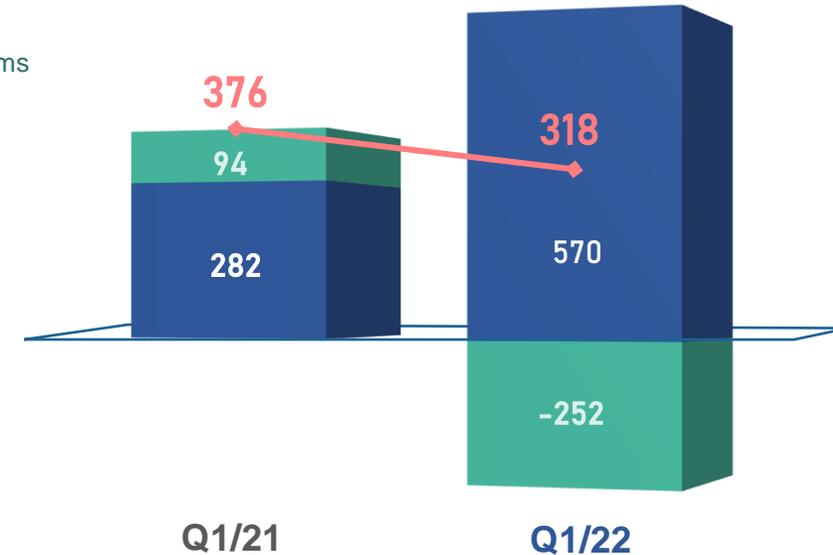
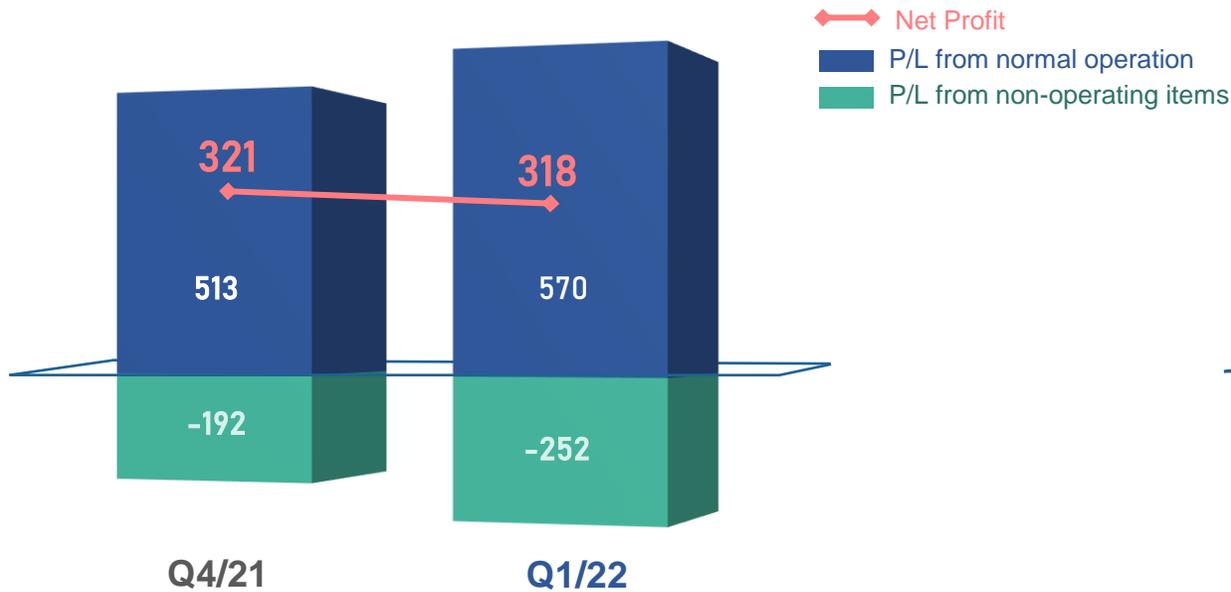


# Results | Profit and Loss

QoQ

YoY

Unit: million USD



**P/L from normal operation**  
+57m\$ (+10%)

- +2%** Increased DCQ for Arthit project (Average Sales Volume)
- +10%** Higher liquid price (Average Selling Price)
- 10%** Lower unit costs (Extra Gains)
- 113\$mil** Q4'21: Block K redet and BKT Decom. adj

**P/L from normal operation**  
+288m\$ (>100%)

- +12%** Oman Block 61 and Malaysia SB-H (Average Sales Volume)
- +27%** Higher liquid and gas price (Average Selling Price)
- 5%** Lower unit costs

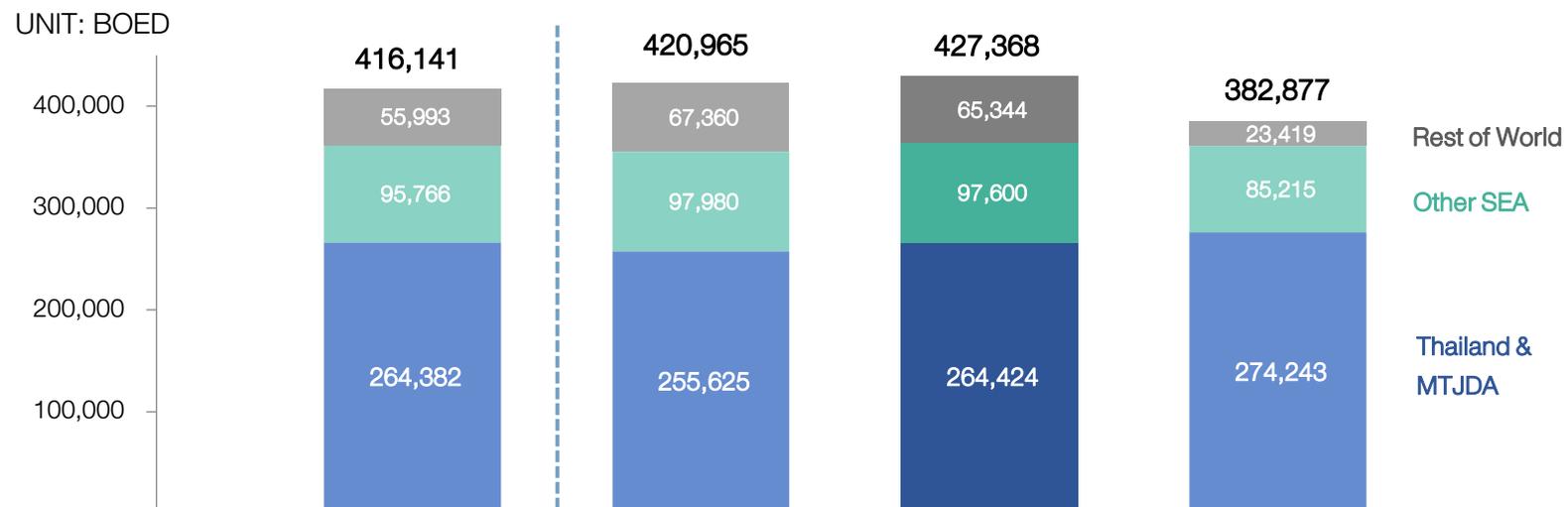
**Non-operating items**  
-60m\$ (-31%)

- Q1/22** Oil price hedging losses
- Q4/21** Impairment losses - Mozambique, and Yetagun

**Non-operating items**  
-346m\$ (>100%)

- Q1/22** Oil price hedging losses
- Q4/21** Gain from bargain purchase **offset with** Losses from Brazil assets write-off and oil price hedging

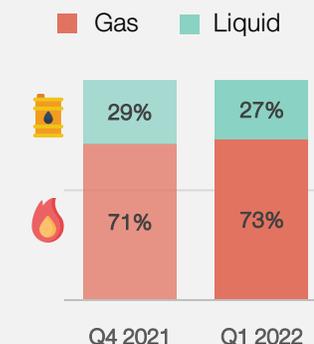
# Results | Sales Volume and Product Price



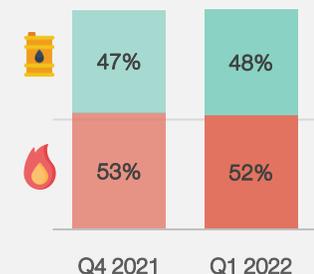
| Product Price                                 | 2021         | Q4 21        | Q1 22        | Q1 21        |
|---|--------------|--------------|--------------|--------------|
| Gas (\$/MMBTU)                                | 5.69         | 5.81         | 6.07         | 5.61         |
| Liquid (\$/BBL)                               | 66.70        | 76.17        | 91.19        | 56.59        |
| <b>ASP (\$/BOE)</b>                           | <b>43.49</b> | <b>46.87</b> | <b>51.35</b> | <b>40.38</b> |
| Avg. Dubai (\$/BBL)                           | 69.39        | 78.27        | 96.21        | 60.01        |
| Avg. HSFO (\$/BBL)<br>(High Sulphur Fuel Oil) | 64.42        | 71.38        | 87.96        | 56.74        |

**Note:** Include sales volume from ADNOC Gas Processing (AGP)  
 Exclude Oman Block 61 deemed sales volume from tax payment by government  
 ASP: Average Selling Price

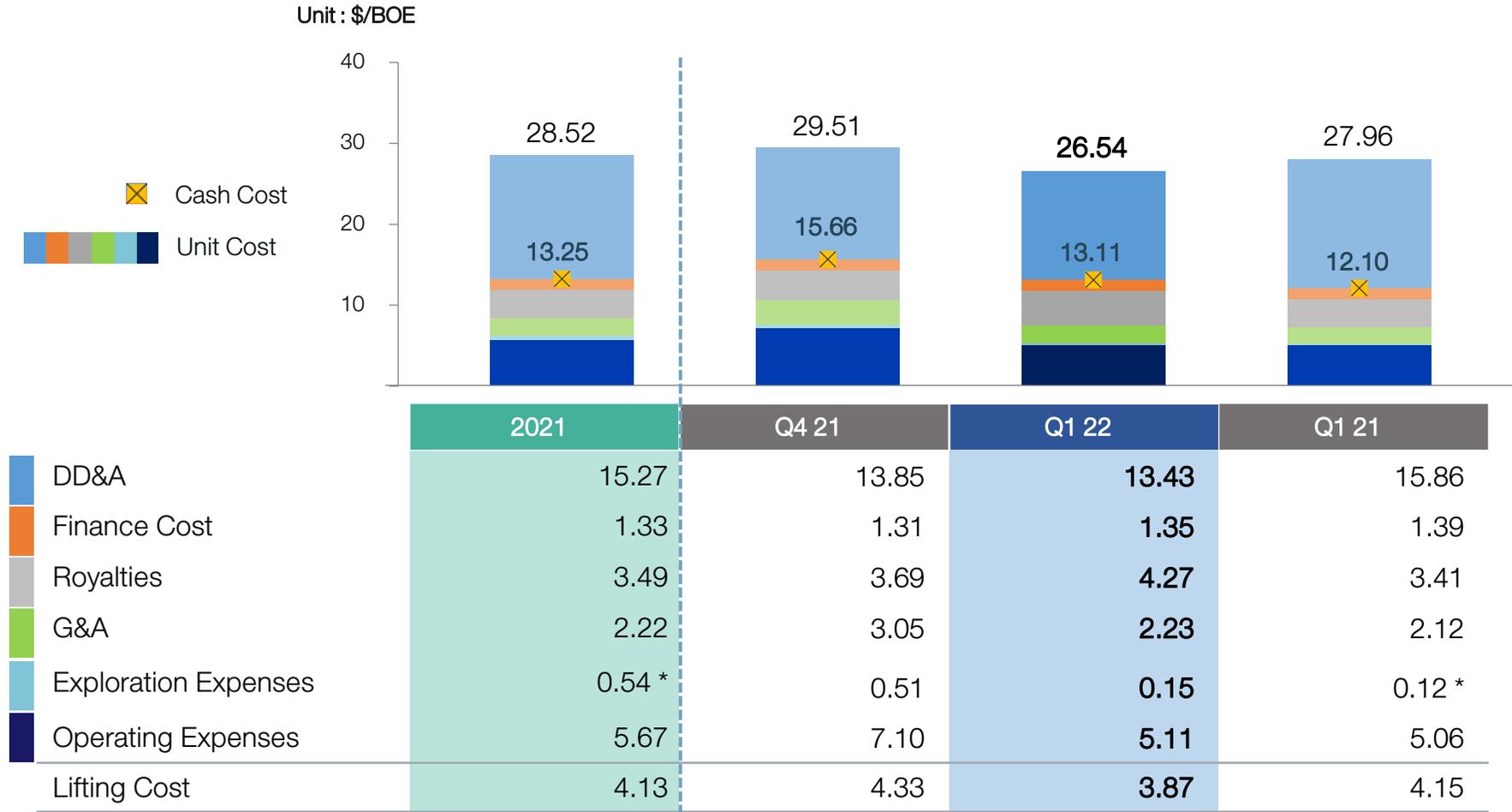
## Volume Mix



## Revenue Mix

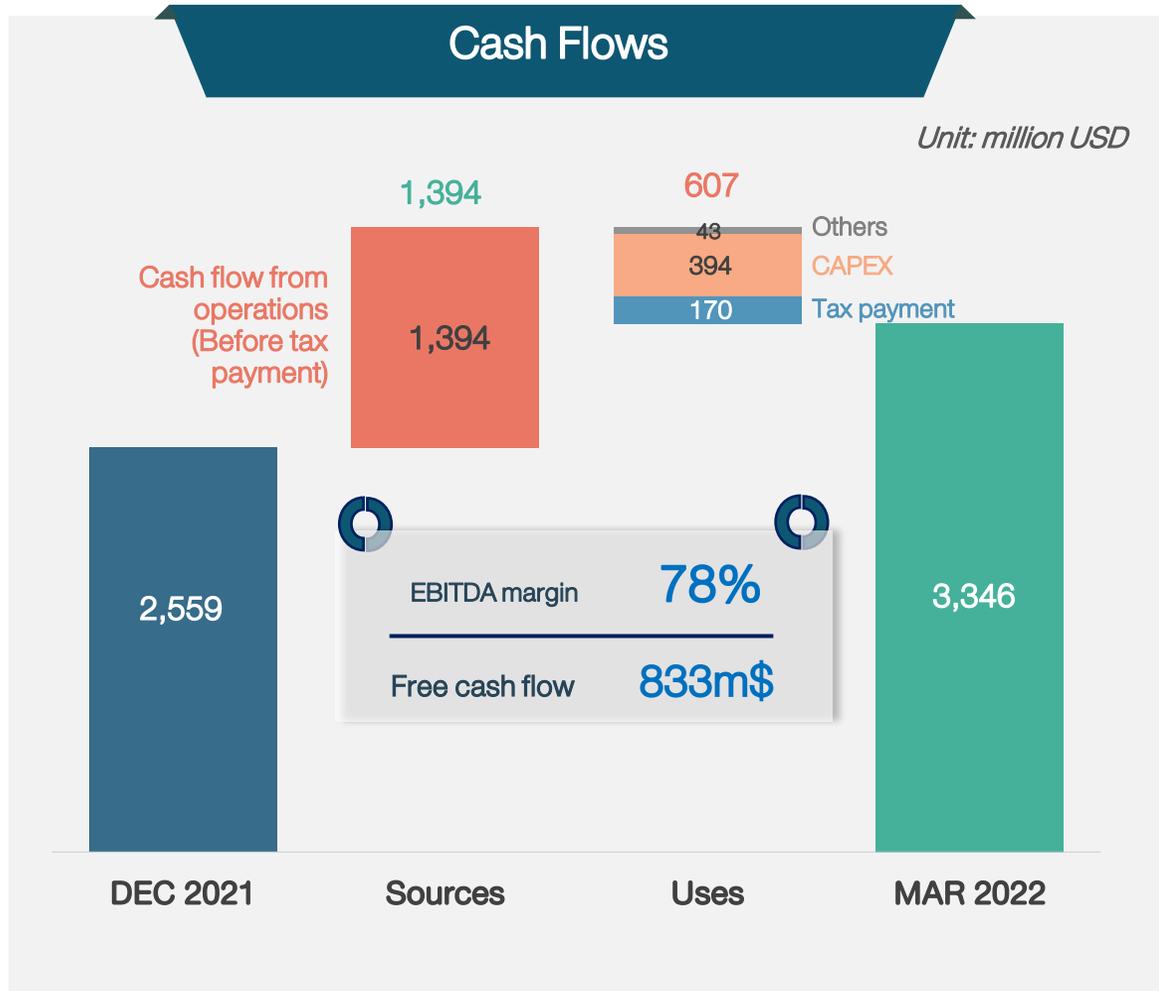


# Results | Unit Cost



**Note:** \* Exclude Exploration assets write-off in Brazil for Q1 21  
 All Unit Cost shown above exclude costs related to new business  
 The formulas for calculating ratios are provided in the supplementary section for your reference

# Results | Cash Flows and Financial Position



Note: \* Include Short-term investment  
 Net of adjustment for the effect of exchange rate changes on cash and cash equivalents

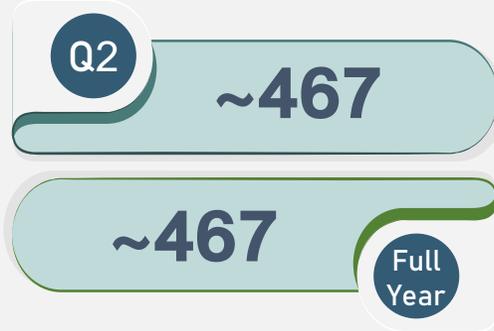
# Results | Financial Guidance and Debt Profile



## Financial Guidance

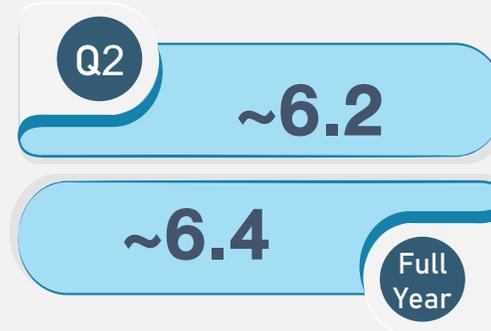
### Average Sales Volume

KBOED



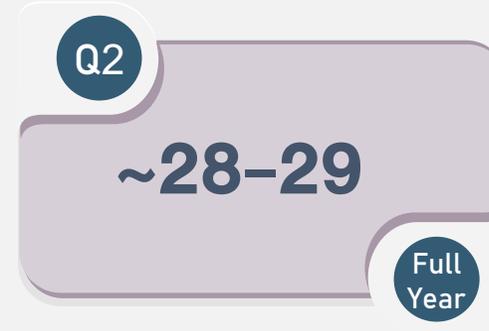
### Average Gas Price\*

USD/MMBTU



### Unit Cost

USD/BOE



### EBITDA Margin

% of Sales Revenue



\* Based on average Dubai oil price in 2022 at 96 \$/BBL, with sole investment in G1/61 (Erawan)

## Debt Profile

|                               | 2021     | Q1 2022  |
|-------------------------------|----------|----------|
| Debt to Equity                | 0.33     | 0.33     |
| Debt to EBITDA                | 0.80     | 0.72     |
| Average Cost of Debt          | 3.38%    | 3.38%    |
| Average Loan Life             | 12.7 Yrs | 12.4 Yrs |
| Interest Rate (Fixed : Float) | 83:17    | 83:17    |

Note: Debt excludes Hybrid bonds

## Credit Ratings





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# Thank you and Q&A



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## Supplementary information

|                              |       |
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# Results | Q1/22 Highlights



## Terminology Change

Recurring Net income  
Non-recurring Net income



Profit (Loss) from normal operation  
Profit (Loss) from non-operating items

### Q1'22 Highlights (QoQ)



**Average Selling price +10%**

- Liquid +20%
- Gas +4%



**Average Sales volume +2% (6KBOED)**  
mainly from increased DCQ of Arthit project from 220 mmscf to 280mmscf



**Outstanding Oil Price Hedging volume**  
Q1'22 : 11.55 mmbbl  
Q4'21 : 15.4 mmbbl

### Q4'21 Extra gains



Other income from Malaysia  
Block K redetermination

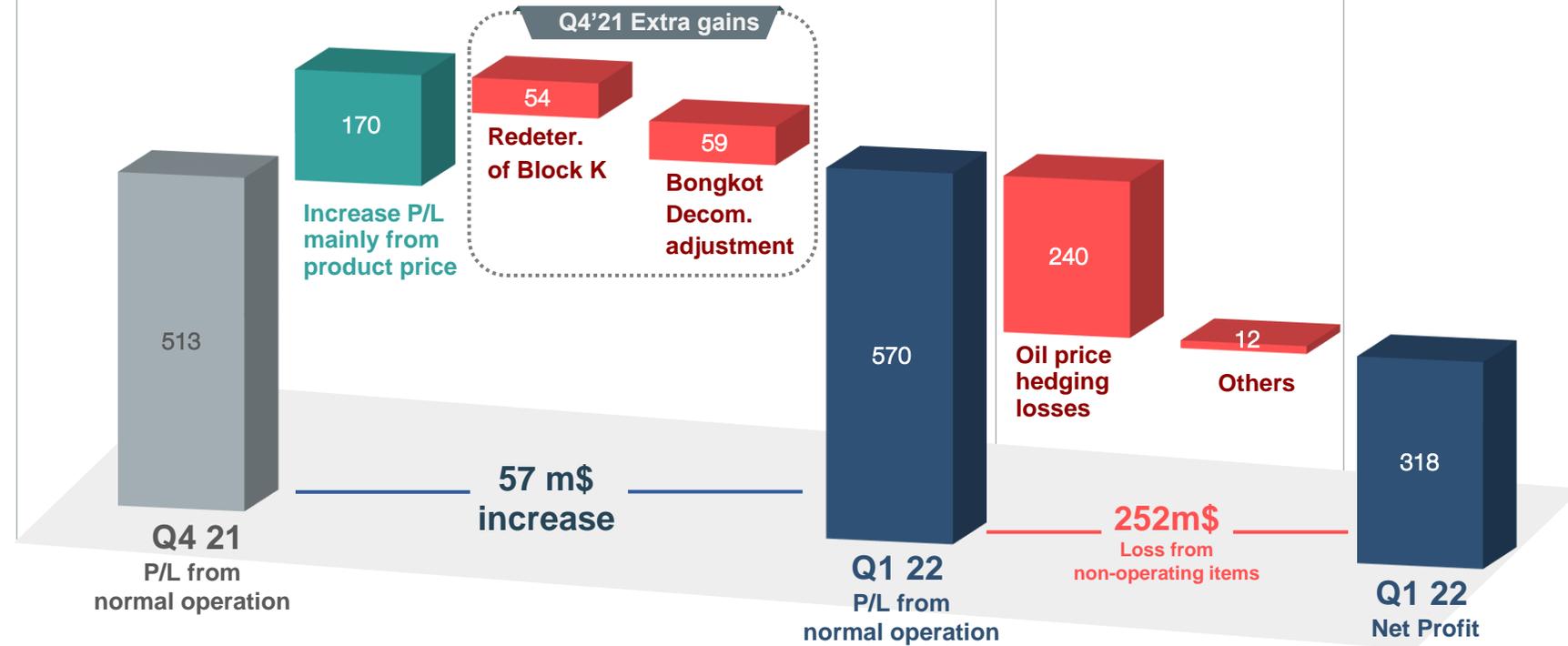


Reduction in DDA from  
Bongkot Decommissioning  
Liabilities adjustment

### Profit (Loss) from normal operation Q1'22 vs Q4'21

### Non-operating items in Q1'22

Unit : million USD



# Results | Profit and Loss Statement



Unit: million USD

|  | Q1 22        | Q4 21        | %QoQ            | Q1 21        | %YoY            | FY2021       |
|--|--------------|--------------|-----------------|--------------|-----------------|--------------|
| <b>Total Revenues</b>                                | <b>2,083</b> | <b>1,989</b> | <b>5%</b>       | <b>1,779</b> | <b>17%</b>      | <b>7,314</b> |
| Sales <sup>(1)</sup>                                 | 2,030        | 1,867        | 9%              | 1,391        | 46%             | 6,731        |
| Sales Volume (BOED) <sup>(2)</sup>                   | 427,368      | 420,965      | 2%              | 382,877      | 12%             | 416,141      |
| Sales Price (US\$/BOE)                               | 51.35        | 46.87        | 10%             | 40.38        | 27%             | 43.49        |
| Gain from a bargain purchase                         | -            | -            | -               | 350          | (100%)          | 342          |
| Others <sup>(3)</sup>                                | 53           | 122          | (57%)           | 38           | 39%             | 241          |
| <b>Total Expenses</b>                                | <b>1,776</b> | <b>1,671</b> | <b>6%</b>       | <b>1,405</b> | <b>26%</b>      | <b>6,118</b> |
| <b>Major Expenses:</b>                               |              |              |                 |              |                 |              |
| Operating Expenses                                   | 197          | 275          | (28%)           | 174          | 13%             | 861          |
| Exploration Expenses                                 | 6            | 20           | (70%)           | 149          | (96%)           | 226          |
| G&A  | 93           | 125          | (26%)           | 75           | 24%             | 355          |
| DD&A   | 517          | 420          | 23%             | 547          | (5%)            | 2,202        |
| Loss on Financial Instruments                        | 245          | 7            | >100%           | 98           | >100%           | 234          |
| Impairment Loss on Assets                            | -            | 183          | (100%)          | -            | -               | 183          |
| Income Tax Expenses                                  | 497          | 448          | 11%             | 192          | >100%           | 1,287        |
| <b>Share of profit (loss) from associates and JV</b> | <b>11</b>    | <b>3</b>     | <b>&gt;100%</b> | <b>2</b>     | <b>&gt;100%</b> | <b>15</b>    |
| <b>Net Profit</b>                                    | <b>318</b>   | <b>321</b>   | <b>(1%)</b>     | <b>376</b>   | <b>(15%)</b>    | <b>1,211</b> |
| Profit (Loss) from normal operation                  | 570          | 513          | 11%             | 282          | >100%           | 1,479        |
| Profit (Loss) from non-operating items               | (252)        | (192)        | (31%)           | 94           | (>100%)         | (268)        |
| <b>Non-operating items breakdown:</b>                |              |              |                 |              |                 |              |
| Oil Price Hedging                                    | (240)        | 5            | (>100%)         | (107)        | (>100%)         | (284)        |
| Tax from Effect of FX                                | (2)          | 1            | (>100%)         | (9)          | 78%             | (10)         |
| Effect from FX and others                            | (10)         | (15)         | 33%             | 5            | (>100%)         | 12           |
| Impairment Loss on Assets                            | -            | (183)        | 100%            | -            | -               | (183)        |
| Exploration assets write-off                         | -            | -            | -               | (145)        | 100%            | (145)        |
| Gain from a bargain purchase                         | -            | -            | -               | 350          | (100%)          | 342          |

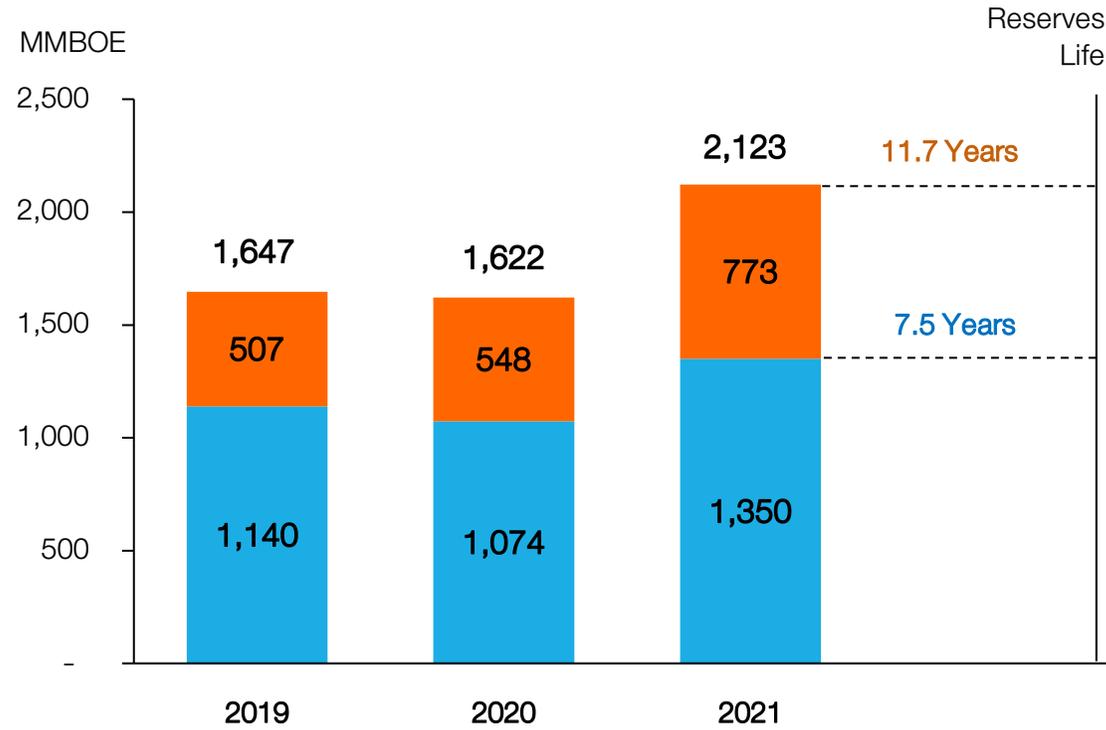
**Note:**

(1) Include Oman Block 61 deemed sales revenues from tax payment by government

(2) Exclude Oman Block 61 deemed sales volume from tax payment by government

(3) Consisted of Revenue from Pipeline, Gain from FX, Forward Contract, and Gain from Oil price Hedging, and Malaysia Block K redetermination of participating interest in Q4'21

# PTTEP Overview | Reserves



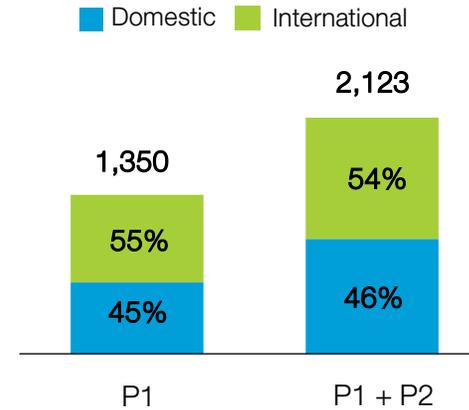
■ Proved (P1) ■ Probable (P2)

5-Year Average Proved Reserves Replacement Ratio (RRR)

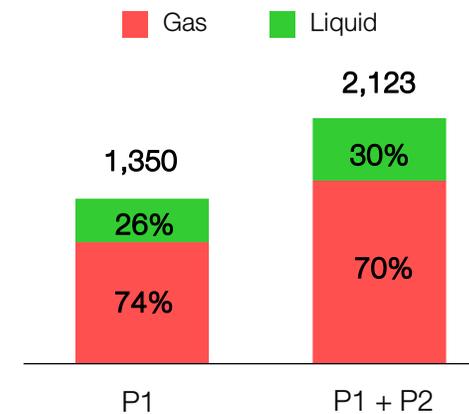
| 2019 | 2020 | 2021 |
|------|------|------|
| 1.5X | 1.5X | 1.9X |

- Based on total production of natural gas, condensate, and crude oil (including LPG) of 495 KBOED for the year ended December 31, 2021
- Figures include reserves from equity method

## 2021 by Geography



## 2021 by Product Type



# SD & ESG | Disclosure and Ratings



ESG Standards



Global Reporting Initiative Reporting Standards (GRI Standards)

Oil and Gas Sector Disclosures (OGSD)

ESG Ratings

**S&P Global**  
Ratings  
*ESG Rating*



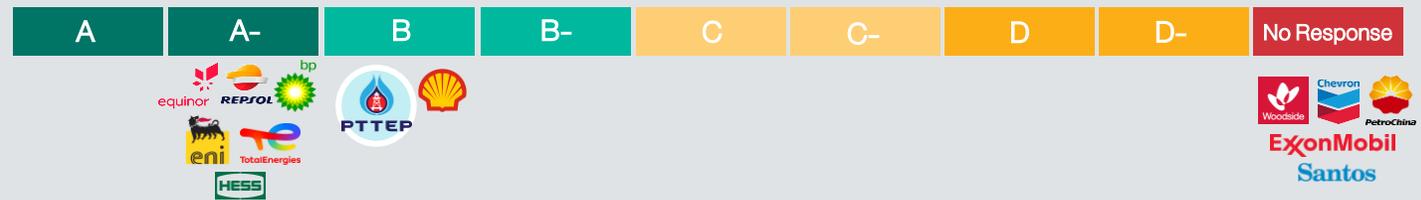
**MSCI**  
*ESG Rating*



**MOODY'S**  
*ESG Credit Impact*



**CDP**  
DISCLOSURE INSIGHT ACTION  
*Climate Change*



**SUSTAINALYTICS**  
a Morningstar company  
*ESG Risk Rating*



Source: S&P Global, MSCI, Moody's, CDP, SUSTAINALYTICS' websites

# SD & ESG | Targets and Progress Q1/2022

## GHG Management

GHG Intensity Reduction Target  
**25%** By 2030 (2012 base year)

**Net Zero** By 2050

### ◆ PROGRESS ◆

#### Reduction of GHG Emission Intensity

As of 2021, **24.1% Reduction** (2012 base year)  
 (2.35 MMTCO<sub>2</sub>e)

**Flare Gas Recovery**  
 Recover excess gas to production process

**Fugitive & Vent Leak monitoring and preventing**

**Energy Efficiency**  
 Operation efficiency and energy saving

**Smart Logistics**  
 Logistics operation efficiency improvement

**Carbon Capture Storage**  
 Trap from flare and inject it into suitable storage site

#### CCUS Study

**CNT from flare gas:** Ongoing FEED Study for CNT Pilot Unit at S1



**CO2 to carbonate-based product:** Ongoing to fabricate prototype testing unit



**CCS :** Ongoing CCS Pre-FEED at ART and LLB

## Circular Model

**Zero** Waste to Landfill by 2030

**≥50%** of Main Structure Reuse by 2030

### ◆ PROGRESS ◆

#### Waste to Landfill



#### Upcycling High Volume Waste

**Sand to Zeolite:** Successfully synthesized prototype zeolite from nano-silica and further identify potential use case (moisture absorbent)



**Oil sludge conversion to Graphene:** Complete prototype unit fabrication



## Ocean for Life

**Net Positive Impact**

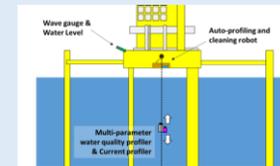
of Biodiversity & Ecosystem Services in Offshore Operations vs baseline by 2030

**≥50%** Increase in Local community income vs baseline by 2030

### ◆ PROGRESS ◆

#### Ocean Health & Biodiversity Monitoring

Pilot Project of Seagrass Plantation at Koh Samui and Koh Taen, Surat Thani



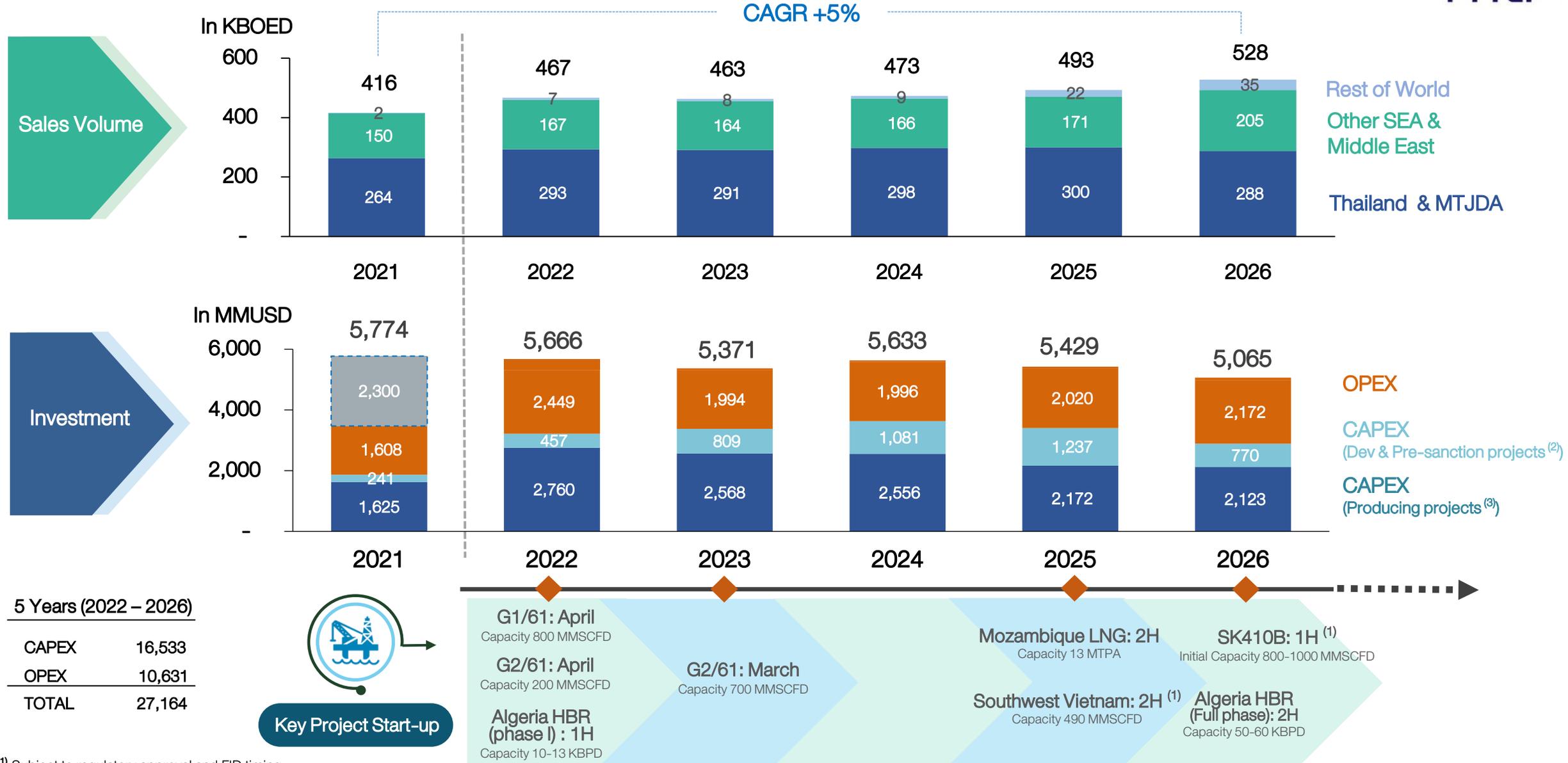
Develop Meteorological & Oceanographic (Met-Ocean) Data Station at ART

#### Ramp Up CSR around Ocean Flagship Projects



- 3 New Area Selection for Aquatic Animal Hatchery Learning Centers (Chonburi, Sumut Prakarn, Samut Sakorn)
- 4,000 Rais Mangrove Forestation Area Selection (Chumphon, Surat Thani and Nakhon Si Thammarat)
- Established 15 Conservation Areas & 7.8 km<sup>2</sup> Fish Home Areas

# Finance | 5-year Sales Volume & Investment Budget



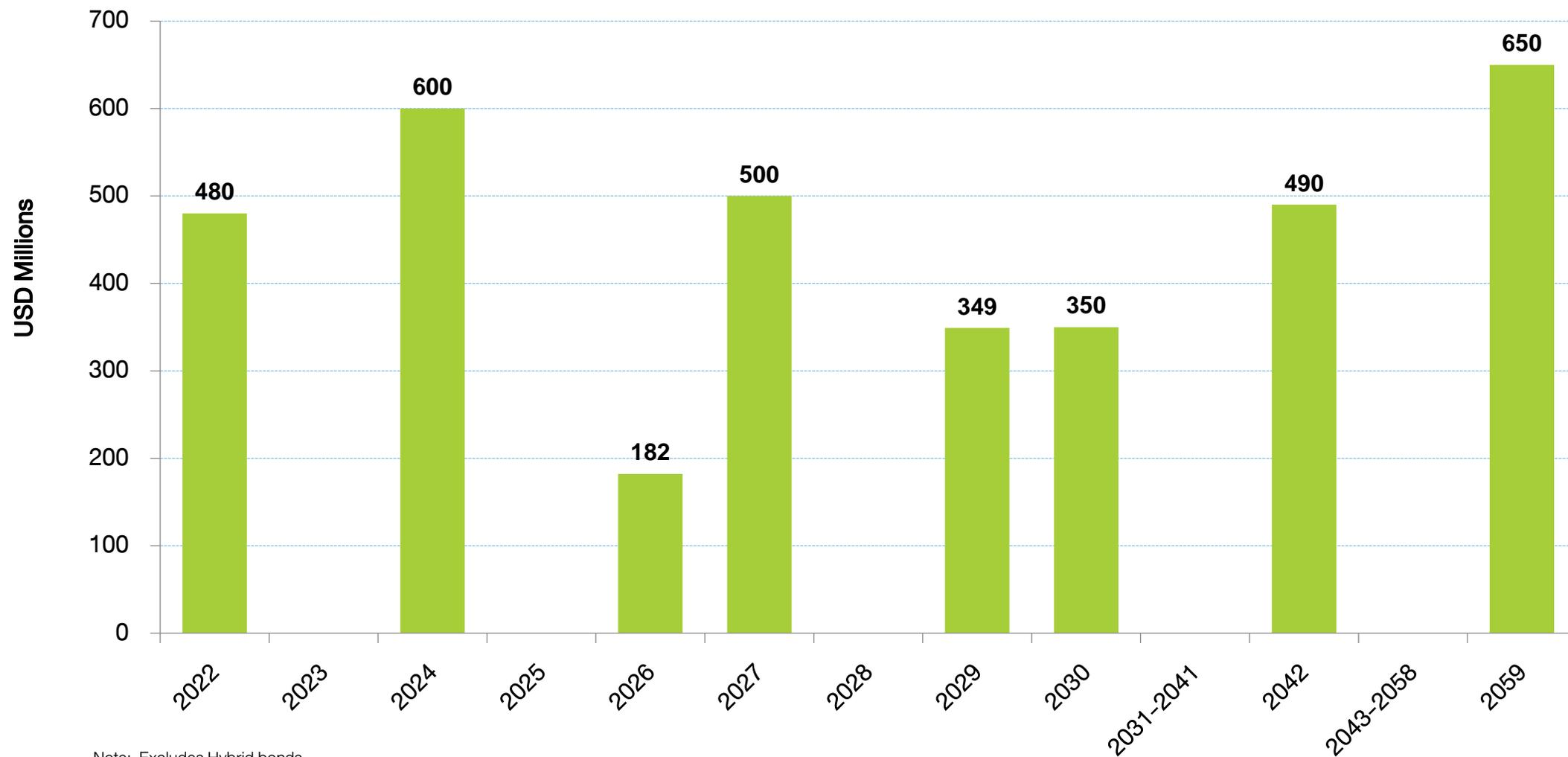
CAGR +5%

Note: <sup>(1)</sup> Subject to regulatory approval and FID timing

<sup>(2)</sup> Development & Pre-sanction projects include Mozambique LNG , Algeria HBR, SK410B and Southwest Vietnam

<sup>(3)</sup> Including exploration and appraisal in all projects and head office CAPEX, and new businesses

# Finance | Debt Maturity Profile



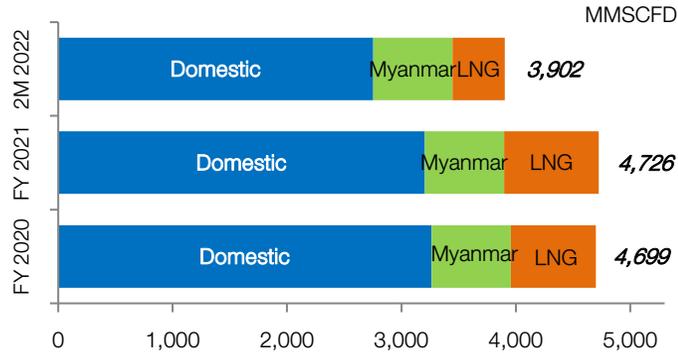
Note: Excludes Hybrid bonds

Unit: USD Millions or equivalent after cross currency swap

As of March 2022

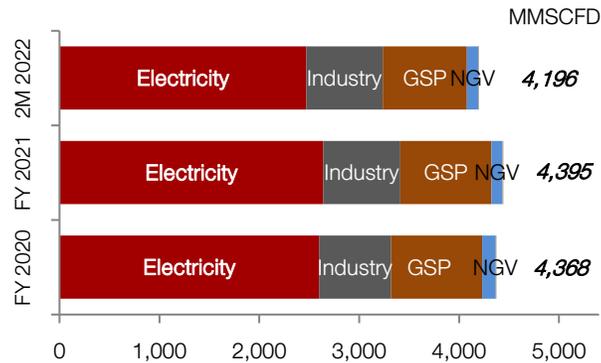
## Thailand Energy Overview

### Natural Gas Supply

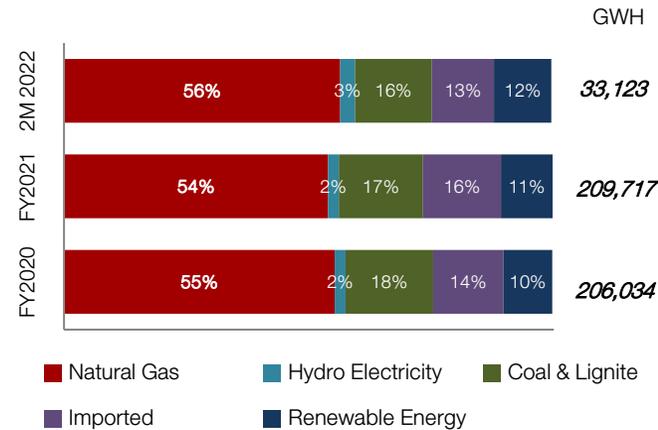


- Constant in energy demand, while the energy prices continue to soar
- As of February 2022, compared with the same period of last year: significantly declined in domestic supply and lower LNG imports.

### Natural Gas Consumption

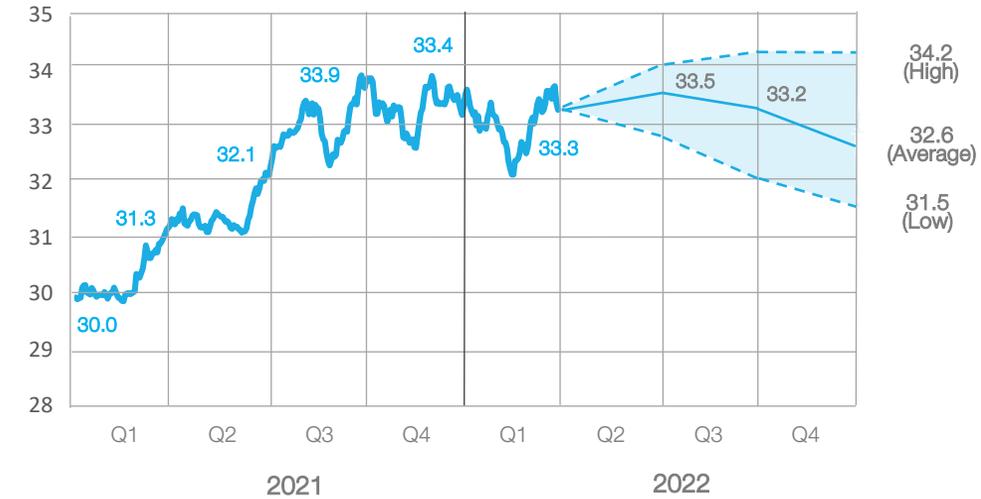


### Electricity Generation



Source: Energy Policy and Planning Office (EPPO)

## Exchange Rate Movement (USD/THB)



### Consensus on the exchange rate mostly depends on

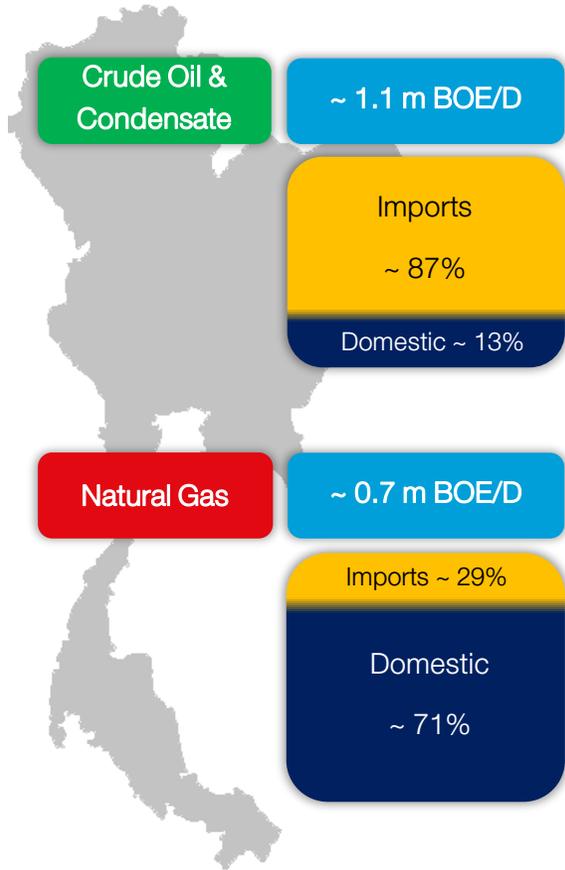
- Thailand economic recovery in particular the tourism sector
- Bank of Thailand and Federal Reserve monetary policy tightening schedule
- Geopolitical tensions and uncertainty from the Russia-Ukraine war

Source: Bank of Thailand, Bloomberg

Forecast based on Bloomberg Consensus as of 31 March 2022

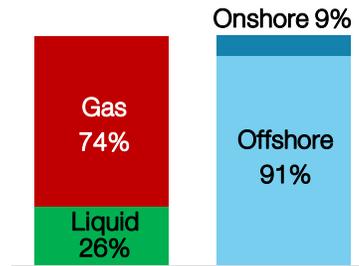
# Thailand | Energy Value Chain

## 2M 2021 Thailand's Oil and Gas Demand

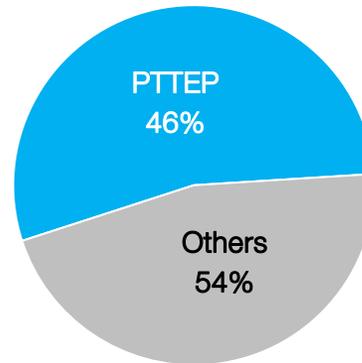


## 3M 2022 Thailand Petroleum Production

% by Petroleum Type and Area



% Production by Company

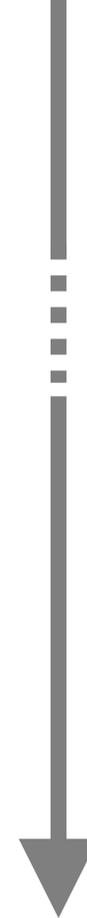


## Midstream

- Gas: operated by PTT
- Transmission Pipelines  
Gas Separation Plants
- Oil: PTT participates through subsidiaries
- Refineries

## Downstream

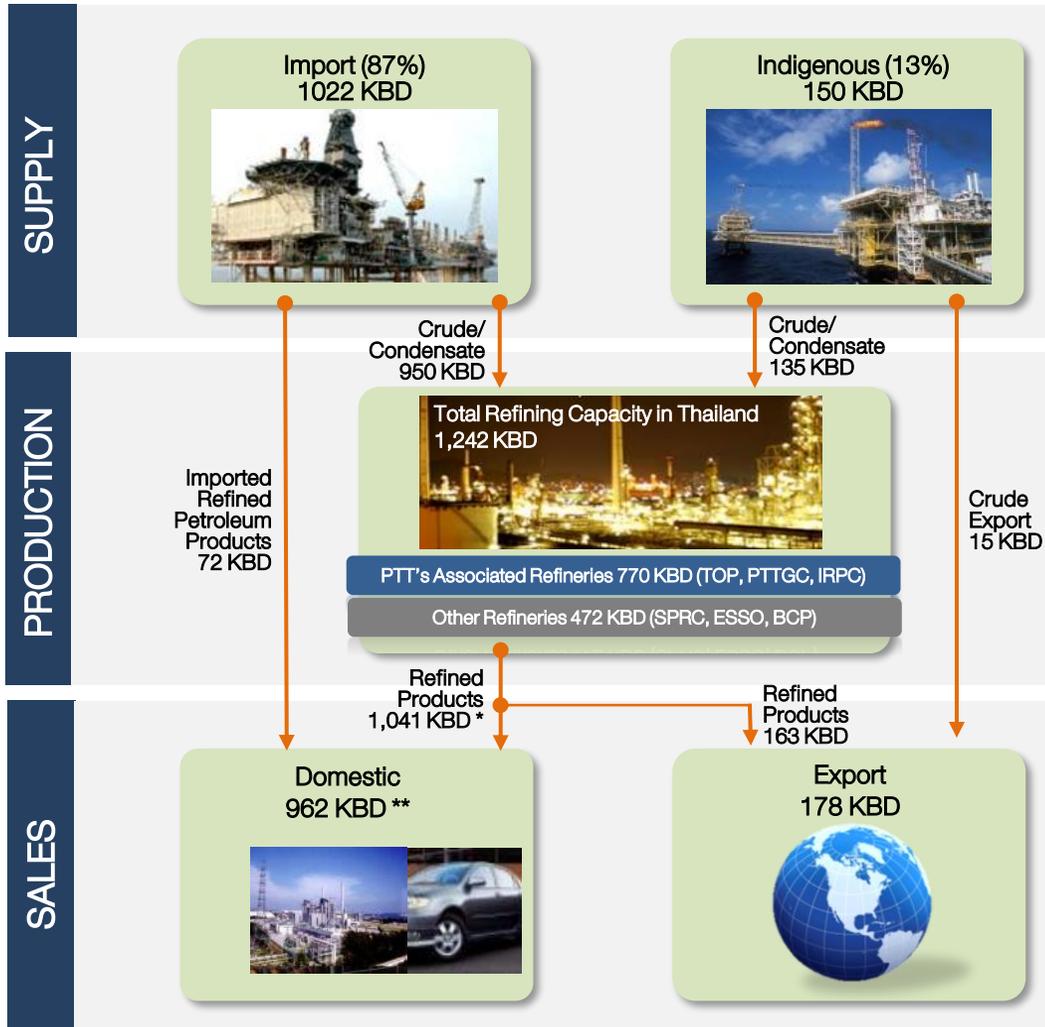
- Petrochemicals
- Oil and gas marketing



# Thailand | Oil and Gas Balance

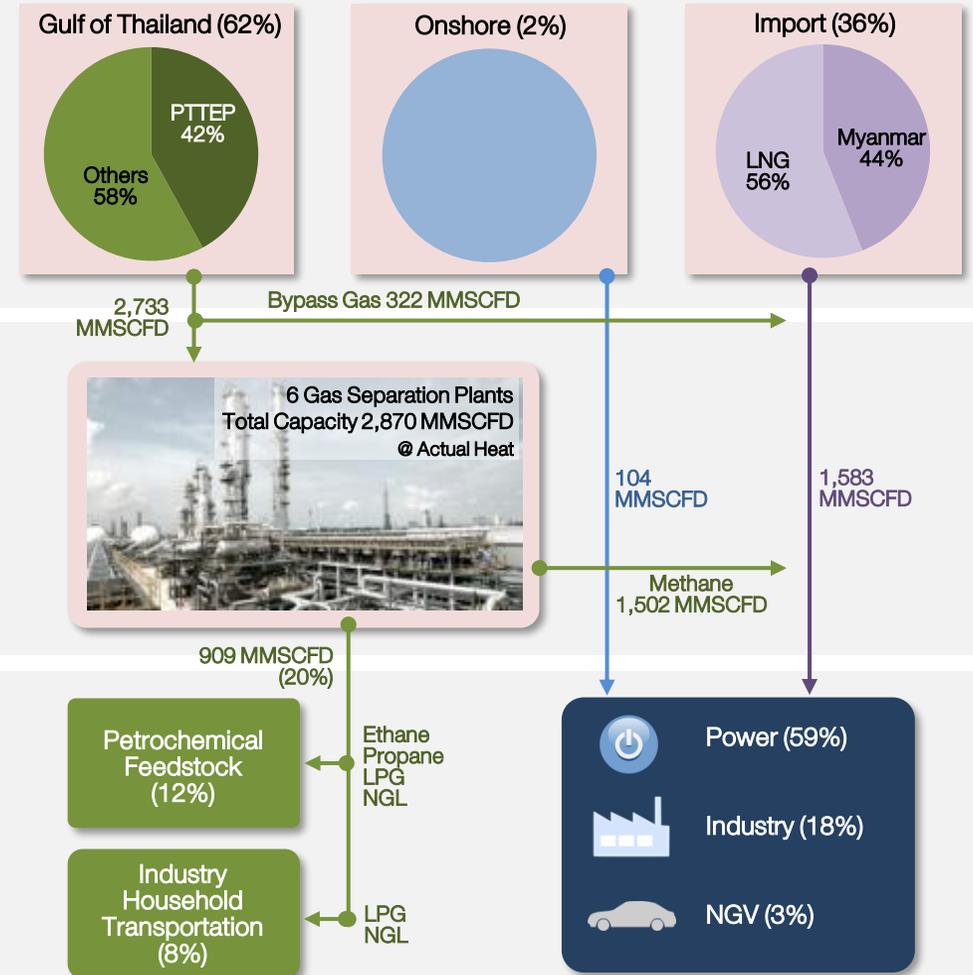
## Oil Balance\*\*\*

Maintains stability supply through adequate refining capacity



## Natural Gas Balance\*\*\*\*

Main driver of the Thailand economy



Source: PTT

Note: \* Refined product from refineries = 958 KBD, including domestic supply of LPG from GSPs and Petrochemical Plants = 83 KBD

\*\* Not included Inventory

\*\*\* Information as of 2M 2022

\*\*\*\* Information as of Year 2021

MMSCFD @ Heating Value 1,000 Btu/ft<sup>3</sup>

# Projects | Diversified portfolio



## Central Asia

- Kazakhstan**
- Dunga onshore oil field (acquired from Partex in 2019)

Oil sands

## North & South America

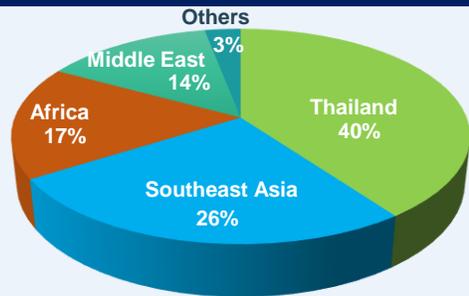
- Opportunities in an early phase:**
- Deepwater exploration in Brazil and Mexico

Oil

Oil

## Book Value of Assets by region

Total assets USD 24.14 billion



As of Mar 2022

Oil

## Africa

- An area for growth, key projects include:**
- Algeria's Bir Seba oil field with current flow rate of approximately 17 KBPD
  - Algeria's Hassi Bir Rakaiz oil field target 1st oil production in Q2/22.
  - Mozambique LNG project target 1<sup>st</sup> cargo in late 2025\*

## Middle East

- Strategic Area in Oman and UAE**
- 14% of total sales volume (3M2022)
  - Oman: 4 onshore blocks including PDO (Block 6), largest producing oil asset, and Block 61, largest tight gas development
  - UAE: 3 offshore and 1 onshore exploration blocks

## Thailand

- Home Base**
- 63% of total sales volume (3M2022)
  - Key producing assets include Bongkot, Arthit, Contract 4 and S1
  - G1/61 (Erawan) transition completed
  - G2/61 (Bongkot) transition in process (1<sup>st</sup> 200mmscf commenced in Apr 2022)

## Southeast Asia

- Strategic Area**
- 23% of total sales volume, mainly from Malaysia and Myanmar (3M2022)
  - Recent multiple petroleum discoveries in Malaysia including Lang Lebah
  - New exploration block in Malaysia, Sabah SB412
  - Other producing assets in Vietnam (oil) and Indonesia (gas)

Piped Gas

Oil GAS/LNG

## Australia

- Potential gas development**
- Sizable undeveloped gas resources in Timor Sea

Note: As of March 2022

\* Subject to local security situation

# Projects | Thailand, Myanmar and Malaysia

## Myanmar

- 3 producing gas fields supplying gas to both Thailand and Myanmar: Yadana, Yetagun and Zawtika
- Operate Zawtika project, start up in March 2014 with current gas supply of 326 MMSCFD for 3M2022

### Project Status

|            |                       |
|------------|-----------------------|
| Production | • Zawtika (80% WI)    |
|            | • Yadana (25.5% WI)   |
|            | • Yetagun* (19.3% WI) |
| FDP        | • M3 (100% WI)        |

## Thailand

### Production / Ramp-up Projects

#### Bongkot (66.6667% WI)

Average natural gas and condensate sales volume of 819 MMSCFD and 22 KBPD in 3M2022

#### S1 (100% WI)

The largest onshore crude oil production field in Thailand with 3M2022 average crude oil sales volume of 25 KBPD  
Arthit (80% WI)

Average sales volume in 3M2022 was 277 MMSCFD of natural gas and 15 KBPD of condensates

#### Contract 4 (60% WI)

Average sales rate of 403 MMSCFD for natural gas and 16 KBPD for condensate in 3M2022

#### G1/61 (60% WI)

- Operatorship transfer completed. Current production rate of 200-250MMSCFD.
- Sole investment 100%

#### G2/61 (100% WI)

- GBS transition completed at production rate of 200 MMSCFD.



- Production phase
- Exploration phase

## Malaysia

### Production

#### Block K Project :

Kikeh (56% WI), Siakap North-Petai (SNP) (22.4% WI) and Gumusut-Kakap (GK) (7.2% WI)

- Average production volume in 3M2022 was 32\* KBPD of crude oil and 27\* MMSCFD of natural gas

#### SK309 and SK311 Project : (59.5% WI)

For East Patricia field (42% WI)

- Average production volume in 3M2022 was 193\* MMSCFD of natural gas and 20\* KBPD of condensates and crude

#### Block H Project :

Rotan field (56% WI) Remaining Area (42% WI)

- First gas early February 2021 with average production volume in 3M2022 at 275 MMSCFD of natural gas
- Full capacity at 270 MMSCFD

*For Block K, gross production is net off utilization*

### Exploration

#### Sarawak SK410B Project (42.5% WI)

- Multi TCF gas discovery in Lang Lebah Field
- Expected to reach Final Investment Decision (FID) in 2023

#### Sarawak SK417 and Sarawak SK405B projects

- New Petroleum discoveries with additional well drilling to assess upside potential

#### Sabah SB412

- New block awarded from 2021 Malaysia Bid Round
- The project is under preparation for Exploration activities.

*Note: WI – working interest*



- Production projects
- Pre sanction projects

## Vietnam



### Vietnam 16-1 (28.5% WI)

- Average sales volume of crude oil was 13 KBPD in 3M2022
- In 2022, the project has plan to drill 2 development wells in Q3 - Q4/2022.



### Southwest Vietnam

- Vietnam B & 48/95 (8.5% WI)
- Vietnam 52/97 (7% WI)
- Field Development Plan was approved by Government
- The project is currently in the negotiation process on commercial terms to put forward FID, with production capacity approximately 490 MMSCFD

## Indonesia

### Natuna Sea A (11.5% WI)

- Average sales volume of natural gas was 199 MMSCFD in 3M2022



## UAE

### Abu Dhabi Offshore 1,2 and 3

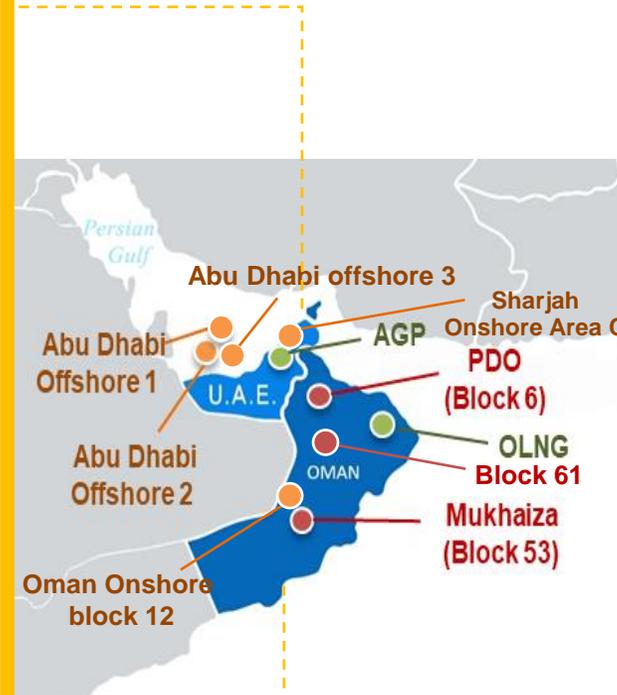
- High potential prospective resources with significant sizeable discoveries
- Located North-west of Abu Dhabi Emirates, United Arab Emirates
- Granted the award for exploration in January 2019 - 2020
- Operated by Eni Abu Dhabi B.V. (70% interest)

### Sharjah Onshore Area C

- High gas & condensate potential with the possibility of integrating with surrounding fields
- Located in the central part of Sharjah Emirate, United Arab Emirates
- Operated by Eni Abu Dhabi B.V. (50% interest)

### ADNOC Gas Processing (AGP)

- One of the largest gas processing complexes in the world (total capacity of 8 BCFD)
  - JV: 3 plants with capacity of 1.2 BCFD
  - ADNOC: 2 plants with capacity of 6.9 BCFD
- Essential to Abu Dhabi and UAE's economy
- Sizeable volumes of Propane, Butane and Naphtha offtake
- Operated by ADNOC (68% interest)



\*Block awarded in 2019  
\*\*Block awarded in 2020

- Production phase
- Exploration phase
- Midstream

## Oman

### PDO (Block 6)

- Largest asset covering around 1/3 of the country
- Long-life asset, produced only 15% of reserves in-place
- Average oil production volume of 660 KBPD for 3M2022
- Operated by Petroleum Development of Oman (Joint Operating Company)

### Oman Onshore Block 12

- Located onshore central part of the Sultanate of Oman
- Signed agreement with Oman's Ministry of Oil and Gas (MOG) for exploration and production rights in February 2020
- Operated by Total E&P Oman Block 12 B.V. (80% interest)

### Mukhaizna (Block 53)

- Largest single onshore producing field in Oman
- Average oil production volume of 94 KBPD for 3M2022
- Operated by Occidental Petroleum (47% interest)

### Oman Block 61

- Largest tight gas development in Middle East
- Gas and condensate production capacity of 1,500 MMSCFD and 69,000 BPD respectively
- Operated by BP Exploration (Epsilon) Limited (40% interest)

### Oman LNG

- The only LNG facility in Oman
- Processing capacity 10.4 MTPA
- Contracted LNG sales to international buyers: Japan and South Korea
- Government of Oman 51% (Operator)

# Projects | Rest of the World



## Algeria

### Bir Sebah

- Block 433a & 416b
- PVEP 40% (operator), PTTEP 35%

### Hassi Bir Rekaiz

- Blocks 443a, 424a, 414ext & 415ext for Crude Oil.
- Sonatrach 51% (operator), PTTEP 49%

## Mozambique

### Mozambique Area 1

- High quality reservoirs capable up to 200mmscfd per well
- LNG capacity 13.1 MTPA (2 trains)
- TotalEnergies 26.5% (operator), PTTEP 8.5%
- Construction phase

## Mexico

### Mexico block 12 (2.4)

- Non-operating partner with 20% participating interest
- Located in the Mexican Ridges, western Gulf of Mexico
- Currently evaluating the petroleum potential for further way forward

### Mexico block 29 (2.4)

- Non-operating partner with 16.67% participating interest
- Located in the Campeche, southern Gulf of Mexico
- 2 successful deep-water oil discoveries in May 2020
- Currently undergoing a pre-development study

## Brazil

### Barreirinhas AP1

- Operated by Shell Brasil (65% interest)
- Four offshore exploration blocks: BAR-M-215, BAR-M-217, BAR-M-252 and BAR-M-254
- Currently waiting for exploration wells drilling permit from the government

### BM-ES-23

- Acquired 20% interest from Shell in Q3 2014
- Partnered with Petrobras (65%, operator) and INPEX (15%)
- Currently evaluating the petroleum potential for further development



# Projects Details | Thailand



|   | Project Name              | Status   | Phase      | Participating Interest* (%)                              |   | Sales Vol Gas (MMSCFD) | Sales Vol Liquid (KBPD) | Latest Status   |
|---|---------------------------|----------|------------|--|---|------------------------|-------------------------|---|
| 1 | Arthit                    | Operator | Production | PTTEP<br>Chevron<br>MOECO                                | 80%<br>20%<br>4%                          | 277                    | 15                      | <ul style="list-style-type: none"> <li>Increase Sales Gas DCQ from 220 to 280 MMSCFD in Feb'22</li> </ul>   |
| 2 | B6/27                     | Operator | Production | PTTEP  | 100%                                      | -                      | -                       | <ul style="list-style-type: none"> <li>Prepare for decommissioning activities</li> </ul>  |
| 3 | B8/32 and 9A              | JV       | Production | PTTEP<br>Chevron<br>MOECO<br>KrisEnergy<br>Palang Sophon | 25.01%<br>51.66%<br>16.71%<br>4.63%<br>2% | 50                     | 11                      | <ul style="list-style-type: none"> <li>Ensure gas deliverability level at DCQ</li> <li>Drill development wells</li> <li>Preparation for wellhead platform reuse in 2022-23</li> </ul>   |
| 4 | Bongkot                   | Operator | Production | PTTEP<br>TotalEnergies                                   | 66.67%<br>33.33%                          | 819                    | 22                      | <ul style="list-style-type: none"> <li>Infills drilling for BKT Sole investment</li> <li>Maintain production level as planned</li> <li>Carry out wells plug and abandonment, Pipeline cleaning and Hg decontamination</li> <li>Wellhead platform &amp; sealine and FSO1 PLEM Decommissioning (Non-transferred asset)</li> </ul> |
| 5 | CT3 (formerly Unocal III) | JV       | Production | PTTEP<br>Chevron<br>MOECO                                | 5%<br>71.25%                              | 206                    | 13                      | <ul style="list-style-type: none"> <li>Decommissioning activities</li> </ul>  |
| 6 | CT4 (formerly Pailin)     | JV       | Production | PTTEP<br>Chevron<br>MOECO                                | 60%<br>35%<br>5%                          | 403                    | 16                      | <ul style="list-style-type: none"> <li>Ensure gas deliverability level at DCQ</li> <li>Drill development wells</li> <li>Topside reuse</li> </ul>  |
| 7 | E5                        | JV       | Production | PTTEP<br>EXXON MOBIL                                     | 20%<br>80%                                | 8                      | -                       | <ul style="list-style-type: none"> <li>Ensure gas deliverability level at DCQ</li> </ul>  |

Note: \* PTTEP denotes respective PTTEP subsidiaries participating in the project

\*\* Sales volume represent **average volume for 100% of the project during Q1/2022**

\*\*\* Status: OP = PTTEP operatorship / JOC = PTTEP joint operatorship/ JV = PTTEP Joint Venture Partner

\*\*\*\* DCQ = Daily Contractual Quantity

# Projects Details | Thailand



| ID | Project Name    | Status | Phase      | Participating Interest* (%) |            | Sales Vol Gas (MMSCFD) | Sales Vol Liquid (KBPD)             | Latest Status   |
|----|-----------------|--------|------------|-----------------------------|------------|------------------------|-------------------------------------|---|
|    |                 |        |            | Company                     | Percentage |                        |                                     |   |
| 8  | G4/43           | JV     | Production | PTTEP                       | 21.375%    | 1                      | 2                                   | <ul style="list-style-type: none"> <li>Deliver production volumes as nominated from the buyer and oil production as planned</li> </ul>  |
|    |                 |        |            | Chevron                     | 51%        |                        |                                     |   |
|    |                 |        |            | MOECO                       | 21.25%     |                        |                                     |   |
|    |                 |        |            | Palang Sophon               | 6.375%     |                        |                                     |   |
| 9  | G4/48           | JV     | Production | PTTEP                       | 5%         | 1                      | 0.1                                 | <ul style="list-style-type: none"> <li>Decommissioning activities</li> </ul>  |
|    |                 |        |            | Chevron                     | 71.25%     |                        |                                     |   |
|    |                 |        |            | MOECO                       | 23.75%     |                        |                                     |   |
| 10 | L53/43 & L54/43 | OP     | Production | PTTEP                       | 100%       | -                      | 0.5                                 | <ul style="list-style-type: none"> <li>On-going 5<sup>th</sup> drilled well</li> <li>Plan to complete 6 wells around mid of Apr'22 and commence 1<sup>st</sup> oil by Jul'22</li> <li>Plan for production facilities debottlenecking and relocation projects to handle additional gross production from new wells.</li> </ul> |
| 11 | PTTEP1          | OP     | Production | PTTEP                       | 100%       | -                      | 0.2                                 | <ul style="list-style-type: none"> <li>Maintain production plateau</li> <li>Relocate facilities from PTTEP1 to L54/43 to be minimized CAPEX cost</li> </ul>   |
| 12 | S1              | OP     | Production | PTTEP                       | 100%       | 8                      | Crude: 25 KBPD<br>LPG: 183 Mton/Day | <ul style="list-style-type: none"> <li>Production optimization and long-term development plan are on-going for business plan and work activities identification according to 10 years strategy</li> </ul>   |
| 13 | Sinphuhorm      | OP     | Production | PTTEP                       | 55%        | 95                     | 0.3                                 | <ul style="list-style-type: none"> <li>Ensure gas deliverability</li> <li>Preparing the drilling campaign for 2 wells during Q2 - Q4 2022</li> </ul>  |
|    |                 |        |            | Apico                       | 35%        |                        |                                     |   |
|    |                 |        |            | EXXON MOBIL                 | 10%        |                        |                                     |   |
| 14 | L22/43          | OP     | Production | PTTEP                       | 100%       | -                      | -                                   | <ul style="list-style-type: none"> <li>On-going execution plan of total 5 drilling wells scheduled in Q4 2022.</li> <li>Plan to prepare for the resume production or exit strategy in future after drilling results confirmed.</li> </ul>   |

Note: \* PTTEP denotes respective PTTEP subsidiaries participating in the project  
 \*\* Sales volume represent **average volume for 100% of the project during Q1/2022**  
 \*\*\* Status: OP = PTTEP operatorship / JOC = PTTEP joint operatorship/ JV = PTTEP Joint Venture Partner

# Projects Details | Thailand



|    | Project Name    | Status | Phase       | Participating Interest* (%) |            | Sales Vol Gas (MMSCFD) | Sales Vol Liquid (KBPD) | Latest Status  |
|----|-----------------|--------|-------------|-----------------------------|------------|------------------------|-------------------------|--|
|    |                 |        |             |                             |            |                        |                         |  |
| 15 | MTJDA           | JOC    | Production  | PTTEP<br>Petronas Carigali  | 50%<br>50% | 260                    | 10                      | <ul style="list-style-type: none"> <li>Facility Readiness for Additional Gas to DP1 (Thailand) for 30-50 MMSCFD</li> </ul>   |
| 16 | G9/43           | OP     | Exploration | PTTEP                       | 100%       | -                      | -                       | <ul style="list-style-type: none"> <li>Activity suspended</li> </ul>   |
| 17 | G1/61 (Erawan)  | OP     | Exploration | PTTEP<br>Mubadala           | 60%<br>40% | -                      | -                       | <ul style="list-style-type: none"> <li>Awarded as an operator for Erawan field (Contract 1, 2 and 3) under PSC (after concession-end in 2022)</li> <li>Preparing all transitional works including platform site survey under Site Access Agreement#2, construction of facilities, staff recruitment, and related procurement activities, aiming for successful transition and gas production as per commitment.</li> <li>Signed Gas, Crude and Condensate Sale agreements</li> </ul> |
| 18 | G2/61 (Bongkot) | OP     | Exploration | PTTEP                       | 100%       | -                      | -                       | <ul style="list-style-type: none"> <li>Awarded as a sole operator under PSC (after concession-end in 2022/2023)</li> <li>Signed Gas and Condensate Sale agreements</li> <li>Continue drilling development wells</li> </ul>   |

Note: \* PTTEP denotes respective PTTEP subsidiaries participating in the project

\*\* Sales volume represent **average volume for 100% of the project during Q1/2022**

\*\*\* Status: OP = PTTEP operatorship / JOC = PTTEP joint operatorship/ JV = PTTEP Joint Venture Partner

# Projects Details | Myanmar, Malaysia, Other SEA



| 1 | Project Name  | Status                      | Phase       | Participating Interest* (%)                          |   | Sales Vol Gas (MMSCFD) | Sales Vol Liquid (KBPD) | Latest Status  |
|---|---|-----------------------------|-------------|--|---|------------------------|-------------------------|--|
|   |   |                             |             |  |   |                        |                         |  |
| 1 | Block K (Malaysia)<br>- Kikeh<br>- Siakap-North Petai field (SNP)<br>- Gumusut-Kakap field (GK) | OP (Kikeh & SNP)<br>JV (GK) | Production  | PTTEP  | Kikeh 56%<br>SNP 22.4%<br>GK 7.17%            | 32 **                  | 27 **                   | <ul style="list-style-type: none"> <li>SNP Phase 2 development well commenced production. GK Phase 3 development drilling commenced by Unit Operator.</li> </ul>   |
| 2 | Sarawak SK309 and SK311 (Malaysia)  | OP                          | Production  | PTTEP  | 42 – 59.5%                                    | 193 **                 | 20 **                   | <ul style="list-style-type: none"> <li>Pemanis Gas Development and South Acis Satellite infill oil development drilling completed and commenced production</li> </ul>  |
| 3 | Block H (Malaysia)  | OP                          | Production  | PTTEP  | 42 – 56%                                      | 275 **                 | -                       | <ul style="list-style-type: none"> <li>Continue at higher production 280+ MMSCFD</li> </ul>  |
| 4 | Malaysia – Other projects   | OP                          | Exploration | PTTEP  | 42.5 – 80%<br>(varied by permits)             | -                      | -                       | <ul style="list-style-type: none"> <li><u>SK410B</u> : Plan to drill 1 exploration well in 200 and expected FID in 2023 for LLB</li> <li><u>SK417, SK405B, SK438</u> : Planning and preparing for the drilling of appraisal and exploration wells in 2022 exploration campaign.</li> <li><u>SB412</u> : Preparing for exploration activities.</li> </ul> |
| 5 | Yadana (Myanmar)  | JV                          | Production  | PTTEP<br>TotalEnergies<br>Chevron<br>MOGE            | 25.5%<br>31.24%<br>28.26%<br>15%              | 732                    | -                       | <ul style="list-style-type: none"> <li>Be appointed to be an Operator with effective in Jul'22.</li> <li>Under process of operatorship transfer</li> </ul>   |
| 6 | Yetagun (Myanmar)   | JV                          | Production  | PTTEP<br>Petronas-<br>Carigali<br>MOGE<br>Nippon Oil | 19.3178%<br>40.91018%<br>20.4541%<br>19.3178% | 44                     | -                       | <ul style="list-style-type: none"> <li>Maintain the production volume after resuming production in Oct'21.</li> </ul>  |
| 7 | Zawtika : M9 & a part of M11 (Myanmar)  | OP                          | Production  | PTTEP<br>Myanma Oil and<br>Gas Enterprise<br>(MOGE)  | 80%<br>20%                                    | 326                    | -                       | <ul style="list-style-type: none"> <li>Some activities are delayed and process under difficulty due to the COVID-19 and political situation in Myanmar.</li> </ul>   |

Note: \* PTTEP denotes respective PTTEP subsidiaries participating in the project  
 \*\* Sales volume represent **average volume for 100% of the project during Q1/2022** except Malaysia (Production volume 100%)/ For Block K, gross production is net off unitization  
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# Projects Details | Myanmar, Malaysia, Other SEA



|    | Project Name             | Status | Phase       | Participating Interest* (%)                                  |   | Sales Vol Gas (MMSCFD) | Sales Vol Liquid (KBPD) | Latest Status  |
|----|--------------------------|--------|-------------|--|---|------------------------|-------------------------|--|
| 8  | M3 (Myanmar)             | OP     | Exploration | PTTEP  | 100%                                      | -                      | -                       | <ul style="list-style-type: none"> <li>Waiting for approval of PSC Supplementary</li> </ul>  |
| 9  | MD-7 (Myanmar)           | OP     | Exploration | PTTEP<br>TotalEnergies                                       | 50%<br>50%                                | -                      | -                       | <ul style="list-style-type: none"> <li>Termination process in progress</li> </ul>  |
| 10 | 9-2 (Vietnam)            | JOC    | Production  | PTTEP<br>Vietnam Oil and Gas Group<br>Pharos Energy          | 25%<br>50%<br>25%                         | 12                     | 4                       | <ul style="list-style-type: none"> <li>Maintain production level</li> <li>Procurement for drilling campaign of 1 development well</li> </ul>   |
| 11 | 16-1 (Vietnam)           | JOC    | Production  | PTTEP<br>Vietnam Oil and Gas Group<br>Pharos Energy<br>OPECO | 28.5%<br>41%<br>28.5%<br>2%               | 2                      | 13                      | <ul style="list-style-type: none"> <li>Maintain production level</li> <li>Procurement for drilling campaign of 2 development wells</li> </ul>  |
| 12 | B & 48/95 (Vietnam)      | JV     | Exploration | PTTEP<br>Vietnam Oil and Gas Group<br>MOECO                  | 8.5%<br>65.88%<br>25.62%                  | -                      | -                       | <ul style="list-style-type: none"> <li>Monitoring Power Plants progress</li> <li>Negotiation process on commercial terms in order to push forward the Final Investment Decision (FID)</li> <li>The first production target at the end of 2025</li> </ul> |
| 13 | 52/97 (Vietnam)          | JV     | Exploration | PTTEP<br>Vietnam Oil and Gas Group<br>MOECO                  | 7%<br>73.4%<br>19.6%                      | -                      | -                       | <ul style="list-style-type: none"> <li>Monitoring Power Plants progress</li> <li>Negotiation process on commercial terms in order to push forward the Final Investment Decision (FID)</li> <li>The first production target at the end of 2025</li> </ul> |
| 14 | Natuna Sea A (Indonesia) | JV     | Production  | PTTEP<br>Premier Oil<br>KUFPEC<br>Petronas<br>Pertamina      | 11.5%<br>28.67%<br>33.33%<br>15%<br>11.5% | 199                    | 1                       | <ul style="list-style-type: none"> <li>Maintain production level</li> </ul>  |

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# Projects Details | Middle East



|   | Project Name                    | Status | Phase       | Participating Interest* (%)                            |                                | Sales Vol Gas<br>(MMSCFD) | Sales Vol Liquid<br>(KBPD) | Latest Status  |
|---|---------------------------------|--------|-------------|--|--------------------------------|---------------------------|----------------------------|--|
| 1 | Abu Dhabi Offshore 1<br>(UAE)   | JV     | Exploration | PTTEP<br>Eni Abu Dhabi                                 | 30%<br>70%                     | -                         | -                          | <ul style="list-style-type: none"> <li>Being evaluated for petroleum potential to support future exploration, including G&amp;G report</li> </ul>  |
| 2 | Abu Dhabi Offshore 2<br>(UAE)   | JV     | Exploration | PTTEP<br>Eni Abu Dhabi                                 | 30%<br>70%                     | -                         | -                          | <ul style="list-style-type: none"> <li>Continued drilling the first exploration well</li> </ul>  |
| 3 | Abu Dhabi Offshore 3<br>(UAE)   | JV     | Exploration | PTTEP<br>Eni Abu Dhabi                                 | 30%<br>70%                     | -                         | -                          | <ul style="list-style-type: none"> <li>G&amp;G study is on-going</li> </ul>  |
| 4 | Sharjah Onshore Area C<br>(UAE) | JV     | Exploration | PTTEP<br>Eni Abu Dhabi<br>SNOC                         | 25%<br>50%<br>25%              | -                         | -                          | <ul style="list-style-type: none"> <li>Completed the acquisition of 25% interest on 1 March 2022</li> <li>Seismic activity is on-going.</li> </ul> |
| 5 | PDO Block 6<br>(Oman)           | JOC    | Production  | PTTEP<br>Government of Oman<br>Shell<br>TotalEnergies  | 2%<br>60%<br>34%<br>4%         | -                         | 660 **                     | <ul style="list-style-type: none"> <li>Normal operations with daily production around 600 KBD</li> </ul>   |
| 6 | Mukhaizna<br>(Oman)             | JV     | Production  | PTTEP<br>Occidental<br>OOCEP<br>Indian Oil<br>Mubadala | 1%<br>47%<br>20%<br>17%<br>15% | -                         | 94 **                      | <ul style="list-style-type: none"> <li>Normal operations with daily production around 95 KBD</li> </ul>  |

Note: \* PTTEP denotes respective PTTEP subsidiaries participating in the project  
 \*\* Sales volume represent **average volume for 100% of the project during Q1/2022** except for PDO Block 6 and Mukhaizna (Production volume 100%)  
 \*\*\* Status: OP = PTTEP operatorship / JOC = PTTEP joint operatorship/ JV = PTTEP Joint Venture Partner

# Projects Details | Middle East



|   | Project Name          | Status | Phase       | Participating Interest* (%)   |                          | Sales Vol Gas (MMSCFD) | Sales Vol Liquid (KBPD) | Latest Status  |
|---|-----------------------|--------|-------------|---|--------------------------|------------------------|-------------------------|--|
| 7 | Oman Onshore Block 12 | JV     | Exploration | PTTEP<br>Total E&P Oman Block<br>12 B.V.  | 20%<br>80%               | -                      | -                       | <ul style="list-style-type: none"> <li>3D seismic reprocessing (original 3D) in progress</li> <li>3D seismic acquisition (new 3D) is in process for tendering</li> </ul> |
| 8 | Oman Block 61         | JV     | Production  | PTTEP<br>BP<br>Makarim Gas<br>Development LLC<br>PC Oman Ventures<br>Limited (PETRONAS) | 20%<br>40%<br>30%<br>10% | 1,471                  | 61                      | <ul style="list-style-type: none"> <li>Full production capacity of natural gas and condensate in according to the Sales and Purchase Agreement</li> </ul>                |

Note: \* PTTEP denotes respective PTTEP subsidiaries participating in the project

\*\* Sales volume represent **average volume for 100% of the project during Q1/2022**

\*\*\* Status: OP = PTTEP operatorship / JOC = PTTEP joint operatorship/ JV = PTTEP Joint Venture Partner

# Projects Details | Rest of the World



|   | Project Name                   | Status | Phase       | Participating Interest* (%) |           | Sales Vol Gas (MMSCFD) | Sales Vol Liquid (KBPD) | Latest Status  |
|---|--------------------------------|--------|-------------|-----------------------------|-----------|------------------------|-------------------------|--|
| 1 | PTTEP Australasia (PTTEP AA)   | OP     | Exploration | PTTEP                       | 90%-100%  | -                      | -                       | <ul style="list-style-type: none"> <li>AC/RL7 (Cash Maple) and Oliver (AC/RL12) Field : under way to define proper direction in order to increase development opportunities</li> <li>Tenacious and Oliver : On-going for well abandonment campaign</li> <li>Other exploration projects: G&amp;G studies</li> </ul>   |
| 2 | Mozambique Area 1              | JV     | Development | PTTEP                       | 8.5%      | -                      | -                       | <ul style="list-style-type: none"> <li>First Cargo is expected by 2025, subject to local security situation</li> <li>1<sup>st</sup> Debt drawdown in project Finance</li> <li>Force Majeure was declared by the operator for safety reason due to the security incident in Palma.</li> <li>Plan to resume construction activities after security and safety restored in Cabo Delgado province</li> </ul> |
|   |                                |        |             | TotalEnergies, Mitsui,      | 26.5%,20% |                        |                         |  |
|   |                                |        |             | ENH, OVL                    | 15%, 10%  |                        |                         |  |
|   |                                |        |             | OVRL & Oil India , Bharat   | 10%, 10%  |                        |                         |  |
| 3 | Algeria 433a & 416b (Bir Seba) | JOC    | Production  | PTTEP                       | 35%       | -                      | 17 **                   | <ul style="list-style-type: none"> <li>Drilling of 2 development wells are on-going in Q1 2022.</li> <li>Target to tie-in and produce 2 new wells in 2022</li> <li>Existing wells intervention</li> <li>Production respect OPEC+ policy</li> </ul>   |
|   |                                |        |             | PetroVietnam                | 40%       |                        |                         |  |
|   |                                |        |             | Sonatrach                   | 25%       |                        |                         |  |
| 4 | Algeria Hassi Bir Rekaiz       | OP     | Development | PTTEP                       | 49%       | -                      | -                       | <ul style="list-style-type: none"> <li>Continue drilling development wells</li> <li>Expected first oil production for the initial phase of around 10,000-13,000 barrels per day (BPD) in Q2 2022</li> <li>Groupement (JOC) establishment in Q2 2022</li> </ul>   |
|   |                                |        |             | Sonatrach                   | 51%       |                        |                         |  |
| 5 | Mariana Oil Sands (Canada)     | OP     | Exploration | PTTEP                       | 100%      | -                      | -                       | -  |
| 6 | Brazil Barreirinhas AP1        | JV     | Exploration | PTTEP                       | 25%       | -                      | -                       | <ul style="list-style-type: none"> <li>Waiting for exploration wells drilling permit from the government</li> </ul>  |
|   |                                |        |             | Shell Brasil                | 65%       |                        |                         |  |
|   |                                |        |             | Mitsui E&P Brasil           | 10%       |                        |                         |  |

Note: \* PTTEP denotes respective PTTEP subsidiaries participating in the project

\*\* Sales volume represent **average volume for 100% of the project during Q1/2022** except for Algeria 433a & 416b (production volume)

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# Projects Details | Rest of the World



|    | Project Name          | Status | Phase           | Participating Interest* (%) |        | Sales Vol Gas (MMSCFD) | Sales Vol Liquid (KBPD) | Latest Status   |
|----|-----------------------|--------|-----------------|-----------------------------|--------|------------------------|-------------------------|---|
| 7  | Brazil BM-ES-23       | JV     | Exploration     | PTTEP                       | 20%    | -                      | -                       | <ul style="list-style-type: none"> <li>Evaluating the petroleum potential for development concept</li> </ul>  |
|    |                       |        |                 | Petrobras                   | 65%    |                        |                         |   |
|    |                       |        |                 | INPEX                       | 15%    |                        |                         |   |
| 8  | Mexico block 12 (2.4) | JV     | Exploration     | PTTEP                       | 20%    | -                      | -                       | <ul style="list-style-type: none"> <li>Evaluating the petroleum potential for further way forward</li> </ul>  |
|    |                       |        |                 | PC Carigali Mexico          | 60%    |                        |                         |   |
|    |                       |        |                 | Ophir Mexico                | 20%    |                        |                         |   |
| 9  | Mexico block 29 (2.4) | JV     | Exploration     | PTTEP                       | 16.67% | -                      | -                       | <ul style="list-style-type: none"> <li>Field pre-development study is in progress.</li> </ul>   |
|    |                       |        |                 | Repsol Mexico               | 30%    |                        |                         |   |
|    |                       |        |                 | PC Carigali Mexico          | 28.33% |                        |                         |   |
|    |                       |        |                 | Wintershal DEA              | 25%    |                        |                         |   |
| 10 | Block 17/06 (Angola)  | JV     | Pre-development | PTTEP                       | 2.5%   | -                      | -                       | <ul style="list-style-type: none"> <li>Plan to FID in the middle of 2022 for the eastern area</li> <li>Finalized Internal committees and Stakeholders alignment leading to Begonia FID</li> <li>Launched Forsythia and Gardenia development study on 18 January 2022</li> </ul> |
|    |                       |        |                 | TotalEnergies               | 30%    |                        |                         |   |
|    |                       |        |                 | Sonangol                    | 30%    |                        |                         |   |
|    |                       |        |                 | SSI                         | 27.5%  |                        |                         |   |
|    |                       |        |                 | Acrep                       | 5%     |                        |                         |   |
|    |                       |        |                 | Falcon Oil                  | 5%     |                        |                         |   |
| 11 | Dunga (Kazakhstan)    | JV     | Production      | PTTEP                       | 20%    | 2                      | 11                      | <ul style="list-style-type: none"> <li>Procurement process Compression package and Gathering Lines</li> <li>Engineering of Separation Upgrade, Flare package and facilities</li> <li>Facilities modification works</li> </ul>   |
|    |                       |        |                 | TotalEnergies               | 60%    |                        |                         |   |
|    |                       |        |                 | OOCEP                       | 20%    |                        |                         |   |

Note: \* PTTEP denotes respective PTTEP subsidiaries participating in the project

\*\* Sales volume represent **average volume for 100% of the project during Q1/2022**

\*\*\* Status: OP = PTTEP operatorship / JOC = PTTEP joint operatorship/ JV = PTTEP Joint Venture Partner

# Projects Details | Mid-stream

Note: PTTEP denotes respective PTTEP subsidiaries participating in the project

Sales volume represent **average volume for 100% of the project during Q1/2022**



|   | Project Name               | Status      | Phase      | Participating Interest* (%) |       | Sales Vol Gas (MMSCFD) | Sales Vol Liquid (KBPD) | Latest Status  |
|---|----------------------------|-------------|------------|-----------------------------|-------|------------------------|-------------------------|--|
| 1 | Oman LNG [OMAN]            | Shareholder | Production | PTTEP                       | 2%    | -                      | -                       | <ul style="list-style-type: none"> <li>Normal Operations</li> </ul>  |
|   |                            |             |            | Government of Oman          | 51%   |                        |                         |  |
|   |                            |             |            | Shell                       | 30%   |                        |                         |  |
|   |                            |             |            | TotalEnergies               | 5.54% |                        |                         |  |
|   |                            |             |            | Korea LNG                   | 5%    |                        |                         |  |
|   |                            |             |            | Mitsubishi                  | 2.77% |                        |                         |  |
|   |                            |             |            | Mitsui                      | 2.77% |                        |                         |  |
|   |                            |             |            | Itochu                      | 0.92% |                        |                         |  |
| 2 | ADNOC Gas Processing [UAE] | JV          | Production | PTTEP                       | 2%    | -                      | -                       | <ul style="list-style-type: none"> <li>Perform midstream operation activities</li> <li>Maintain production and plant integrity with maintenance work as planned</li> </ul> |
|   |                            |             |            | ADNOC                       | 68%   |                        |                         |  |
|   |                            |             |            | Shell                       | 15%   |                        |                         |  |
|   |                            |             |            | TotalEnergies               | 15%   |                        |                         |  |

Note: \* PTTEP denotes respective PTTEP subsidiaries participating in the project

\*\* Sales volume represent **average volume for 100% of the project during Q1/2022**

\*\*\* Status: OP = PTTEP operatorship / JOC = PTTEP joint operatorship/ JV = PTTEP Joint Venture Partner

# Organization Chart



# Ratio and Formula



|                                   |   |
|-----------------------------------|---|
| <b>Lifting Cost (\$/BOE)</b>      | (Operating Exp. – Transportation Cost – Stock Variation – Other expenses not related to lifting) / Production Volume  |
| <b>Cash Cost (\$/BOE)</b>         | (Operating Exp. + Exploration Exp. + G&A + Royalties + Finance Cost) / Sales Volume   |
| <b>Unit Cost (\$/BOE)</b>         | (Operating Exp. + Exploration Exp. + G&A + Royalties + Finance Cost + DD&A) / Sales Volume  |
| <b>Reserves</b>                   | 5-Yr Additional Proved Reserves / 5-Yr Production Volume  |
| <b>Replacement Ratio</b>          |   |
| <b>Reserves Life Index (Year)</b> | Proved Reserves / Production Volume   |
| <b>Success Ratio</b>              | Number of wells with petroleum discovery / Total number of exploration and appraisal wells  |
| <b>Sales Revenue</b>              | Sales + Revenue from pipeline transportation  |
| <b>EBITDA</b>                     | (Sales + Revenue from pipeline transportation) - (Operating expenses + Exploration expenses + Administrative expenses + Petroleum royalties and remuneration + Management's remuneration)                                 |
| <b>EBITDA Margin</b>              | EBITDA / Sales Revenue  |
| <b>Return on Equity</b>           | Trailing-12-month net income / Average shareholders' equity between the beginning and the end of the 12-month period  |
| <b>Return on Capital Employed</b> | (Trailing-12-month net income + Trailing-12-month Interest Expenses & Amortization of Bond Issuing Cost) / (Average shareholders' equity and average total debt between the beginning and the end of the 12-month period) |
| <b>Simple Effective Tax Rate</b>  | Income tax expenses / Income before income taxes  |
| <b>Total debt</b>                 | Short-term loans from financial institution + Current portion of long-term debts + Bonds + Long-term loans from financial institution   |

|                                       |  |
|---------------------------------------|--|
| <b>Net debt</b>                       | Total debt – Liquidity   |
| <b>Debt to Equity</b>                 | Total debt / Shareholders' equity  |
| <b>Net Debt to Equity</b>             | Net debt / Shareholders' equity  |
| <b>Total Debt to Capital</b>          | Total debt / (Total debt + Shareholders' equity)   |
| <b>Total Debt to EBITDA</b>           | Total debt / Trailing-12-month EBITDA  |
| <b>Net Debt to EBITDA</b>             | Net debt / Trailing-12-month EBITDA  |
| <b>EBITDA Interest Coverage Ratio</b> | Trailing-12-month EBITDA / Trailing-12-month Interest Expenses & Amortization of Bond Issuing Cost |

| Crude oil       | To convert      |            |         |            |             |
|-----------------|-----------------|------------|---------|------------|-------------|
|                 | Tonnes (metric) | Kilolitres | Barrels | US gallons | Tonnes/year |
| From            | Multiply by     |            |         |            |             |
| Tonnes (metric) | 1               | 1.165      | 7.33    | 307.86     | -           |
| Kilolitres      | 0.8581          | 1          | 6.2898  | 264.17     | -           |
| Barrels         | 0.1364          | 0.159      | 1       | 42         | -           |
| US gallons      | 0.00325         | 0.0038     | 0.0238  | 1          | -           |
| Barrels/day     | -               | -          | -       | -          | 49.8        |

| Natural gas and LNG              | To convert              |                       |                               |                    |              |       |
|----------------------------------|-------------------------|-----------------------|-------------------------------|--------------------|--------------|-------|
|                                  | Billion cubic Metres NG | Billion cubic feet NG | Million tonnes oil equivalent | Million tonnes LNG | Trillion BTU | MBOE  |
| From                             | Multiply by             |                       |                               |                    |              |       |
| 1 billion cubic metres NG        | 1.000                   | 35.315                | 0.860                         | 0.735              | 34.121       | 5.883 |
| 1 billion cubic feet NG          | 0.028                   | 1.000                 | 0.024                         | 0.021              | 0.966        | 0.167 |
| 1 petajoule NG                   | 0.028                   | 0.981                 | 0.024                         | 0.021              | 0.952        | 0.164 |
| 1 million tonnes oil equivalent  | 1.163                   | 41.071                | 1.000                         | 0.855              | 39.683       | 6.842 |
| 1 million tonnes oil LNG         | 1.360                   | 48.028                | 1.169                         | 1.000              | 46.405       | 8.001 |
| 1 trillion British thermal units | 0.029                   | 1.035                 | 0.025                         | 0.022              | 1.000        | 0.172 |
| 1 million barrels oil equivalent | 0.170                   | 6.003                 | 0.146                         | 0.125              | 58.000       | 1.000 |