



Investor Presentation

PTT Group Investor Day 2023

14 July 2023



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.

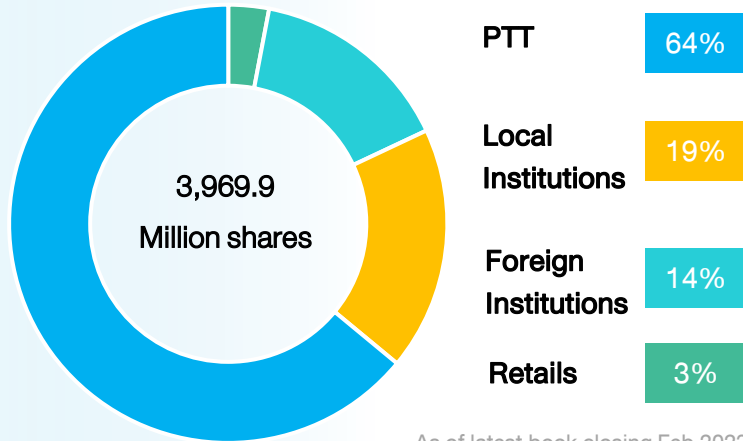
Probable Reserves - Probable reserves are defined as those unproved reserves which analysis of geological and engineering data suggests are more likely than not to be recoverable.



Company Information



E&P Flagship of PTT Group



As of latest book closing Feb 2023

~17

Billion USD

Market Capitalization
In SET

90%

Of Sales Rev

Generated from
SEA & ME

~15

USD/BOE

Competitive
Cash Cost



Sustainability
Yearbook Member
S&P Global ESG Score 2022
S&P Global Sustainable1

THSI
THAILAND
SUSTAINABILITY
INVESTMENT 2022
2016-2022


FTSE4Good
2016-2022

MSCI
Level "AA"

CDP
DISCLOSURE INSIGHT ACTION
Level "B"

Strategy for Sustainable Growth

1 DRIVE VALUE

- Strengthen E&P and ensure Thailand energy security
 - Maximize production
 - Expedite development
 - Monetize discovery
- Enhance competitiveness of unit cost
- Expand gas-weighted portfolio and LNG business



2 DECARBONIZE

- Manage E&P for lower carbon portfolio
- Execute GHG emission reduction plan
- Accelerate CCS projects
- Maximize use of renewable and future energy in operation
- Pursue emission offsetting and Ocean for life

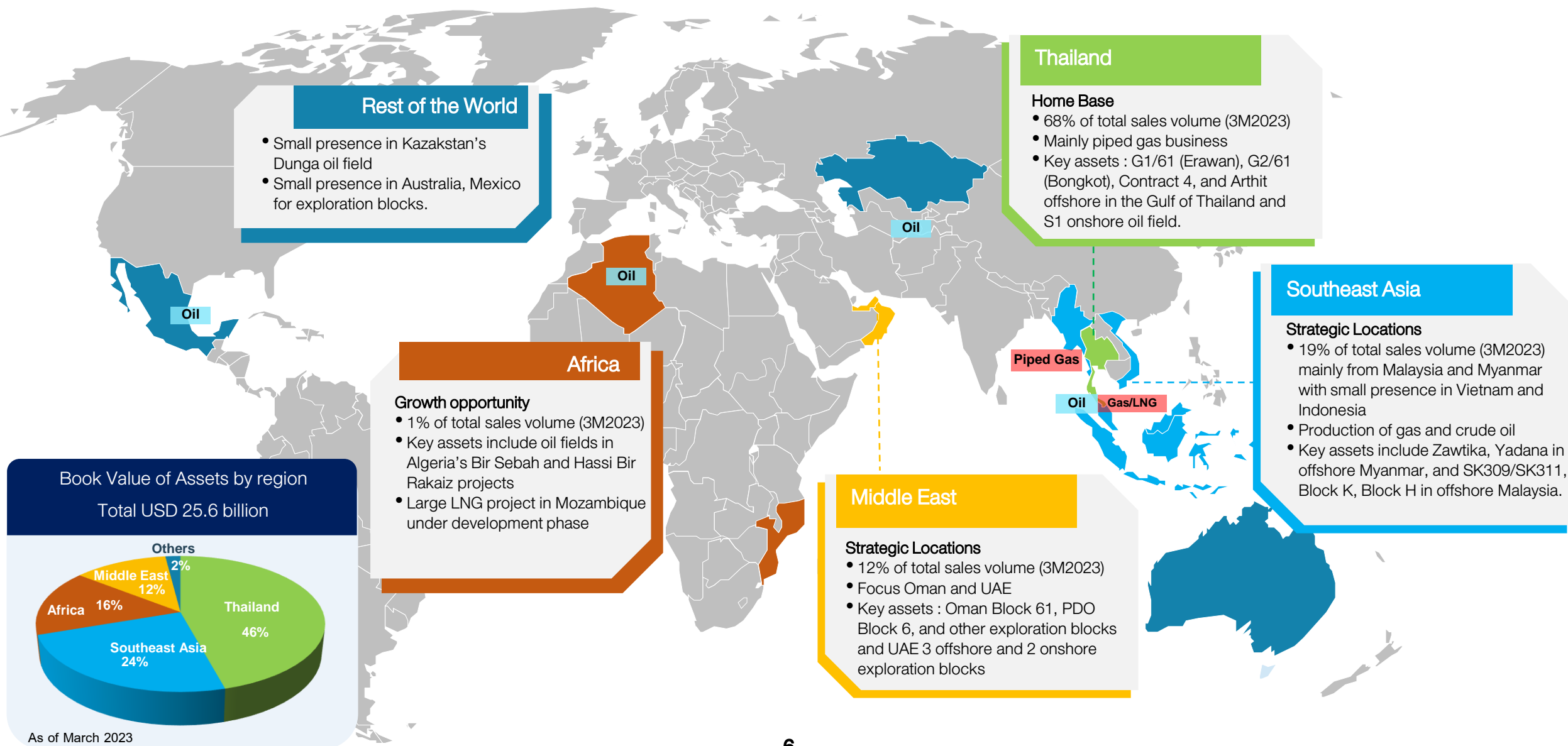


3 DIVERSIFY

- Scale-up AI & Robotic Ventures (ARV)
- Capture gas-to-power and renewable energy opportunity
- Explore CCUS, H₂ and future energy
- Commercialize in-house technology



Diversified E&P Asset Portfolio



Target Net Zero

2020

Base Year

2030

30%

GHG Intensity*
Reduction

2040

50%

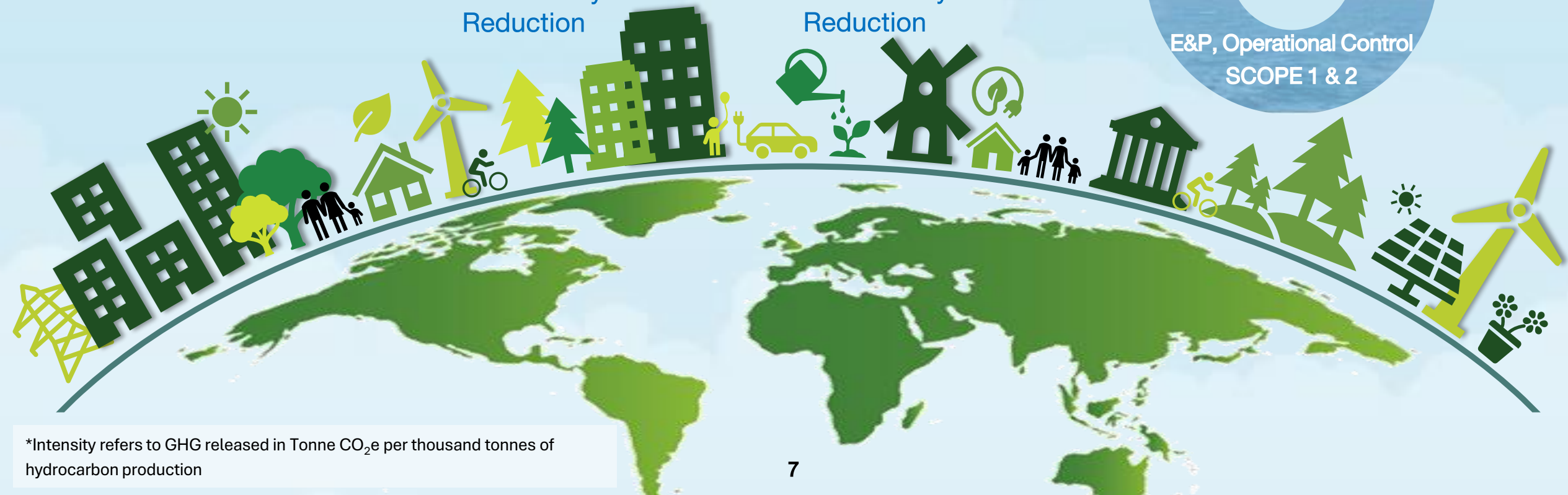
GHG Intensity
Reduction

2050

NET ZERO

Greenhouse Gas Emissions

E&P, Operational Control
SCOPE 1 & 2



*Intensity refers to GHG released in Tonne CO₂e per thousand tonnes of hydrocarbon production

Growing Beyond E&P

Decarbonization

New Energies

Advanced Technology

Corporate Venture Capital (CVC)
Technology Enabler



Carbon Capture & Utilization (CCU)
CO₂-to-Methanol

Value-added Technology



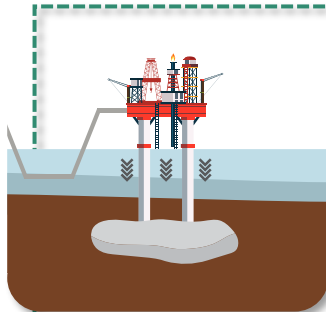
Hydrogen / Power-to-X

Act now for Future Energy / Fuel



In-house Tech

Commercialize in-house technology



Carbon Capture & Storage (CCS) Initiative

Support Decarbonization Demand



Power Business

- Gas-to-Power
- Renewables

Foundation for new energies



AI AND ROBOTICS VENTURES



AI & Robotic

Growth in Technology Business



Business Update



Q1/2023 Highlights



E&P

G1/61 Erawan

Ramping-up in progress

G2/61 Bongkot

Full transition to PSC completed

G1/65, G3/65

New exploration blocks in Thailand

SK410B Lang Lebah

FEED in-progress for FID

SK325

New exploration block in Malaysia

UAE Offshore 2

Potential to accelerate development

Mozambique LNG

Aiming for site re-access

Algeria HBR

Operating at 14KBPD,
aim towards 17KBPD



Decarbonization Efforts



CCS Arthit

At 1 MtCO₂e/yr. capacity. FEED in-progress.

Solar S1

9.98 MW solar farm, construction in progress for COD

GHG Reduction initiatives

Flare Gas Recovery, Process optimization / Energy efficiency initiatives / WHP Jacket re-use / Offset portfolio (Re-forestation, Blue Carbon)



Beyond E&P



Green e-methanol

Feasibility study for e-methanol plant.

CCS As-A-Service

Explore CCS business potential in GOT
MOU feasibility study within PTT Group

ARV – Varuna

Launched a pilot project in carbon farming to reduce greenhouse gas emissions and promote sustainable agriculture.

GHG Reduction Roadmap

Exploring for Lower Carbon E&P Portfolio

- Partnership on decarbonization pathway
- GHG criteria for investment decision
- Balance production and emissions

Production and Planet in Balance

Production

- Zero Routine Flare for new projects
- Carbon Capture Utilization and Storage (CCUS)
- Digitalization of operations
- Maximize use of renewable energy
- Explore future clean energy

Planet in Balance

- Manage carbon credit
- Leave “No Footprint” in countries we operate
- Explore offsetting opportunities

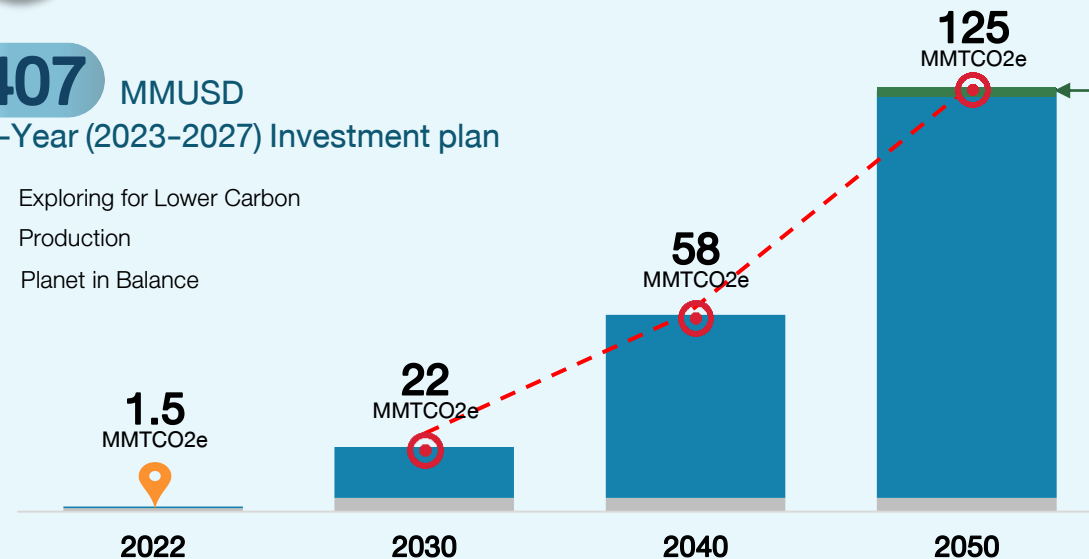


Accumulated GHG Reduction

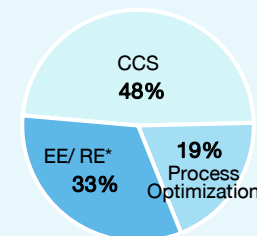
407 MMUSD

5-Year (2023-2027) Investment plan

- Exploring for Lower Carbon
- Production
- Planet in Balance



Partially used for Net Zero GHG Emissions in 2050



2050 GHG Reduction Initiatives

* EE/RE: Energy Efficiency, Renewable Energy

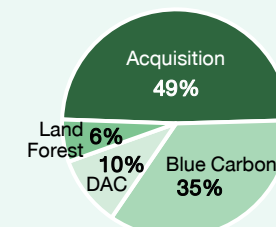
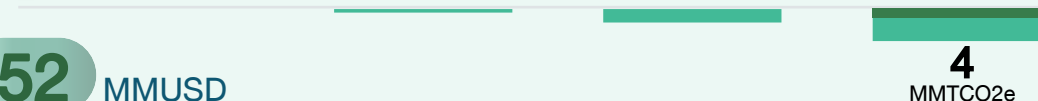


Accumulated Carbon Credit Portfolio*

52 MMUSD

5-Year (2023-2027) Investment plan

*Secure offset for net zero and use for compliance



2050 Carbon Credit Portfolio



Financial Results



Q1/2023 Results



Q1 2023 Key events

Bongkot
End of Concession

Completion of
Brazil Divestment

Court Approval
Montara Settlement

↔ Net Profit
■ P/L from normal operation
■ P/L from non-operating items

Profit from Normal Operations



Sales Volume



Average Selling Price

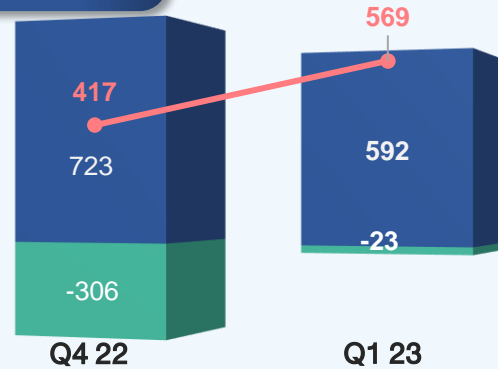


Unit Cost

Major Non-operating items (in million USD)

Oil Price Hedging
Impairment / Asset Write-off
Others

QoQ



-8%

Mainly from Oman B61, Sabah-H, Arthit

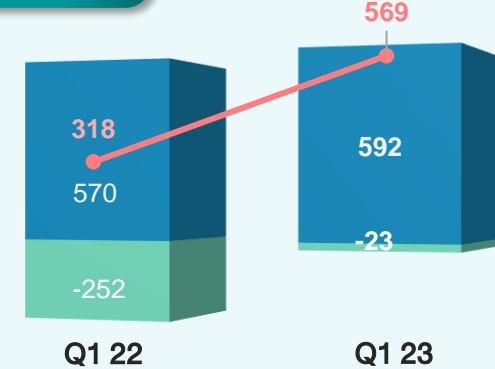
-5%

Lower liquid price and gas price

-11%

Lower DD&A and G&A, Higher finance cost

YoY



+8%

Higher G1/61, G2/61 offset with lower Oman B61

-3%

Lower liquid price offset with higher gas price

-2%

Lower DD&A and Royalty, Higher OPEX

Q4 22

Q1 23

Oil Price Hedging	-2	+1
Impairment / Asset Write-off	-205 Moz. / Angola	-
Others	-58 Montara / Oman B61	-

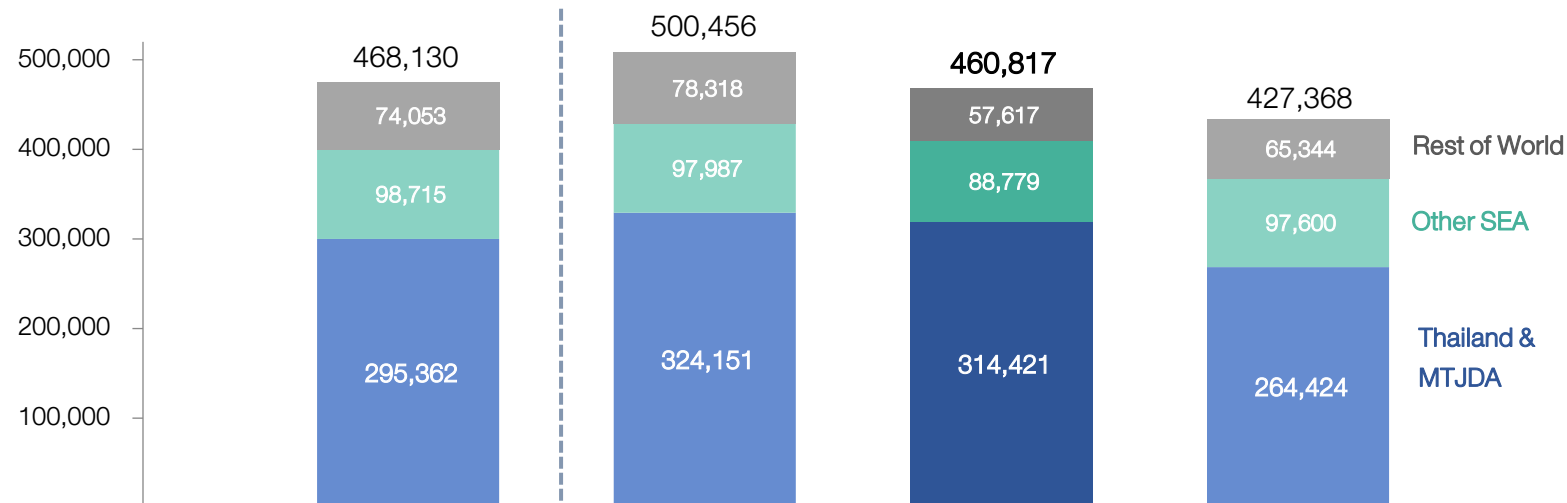
Q1 22

Q1 23

Oil Price Hedging	-240	+1
Impairment / Asset Write-off	-	-
Others	-	-

Volume and Price

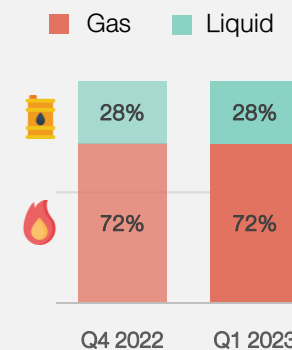
UNIT: BOED



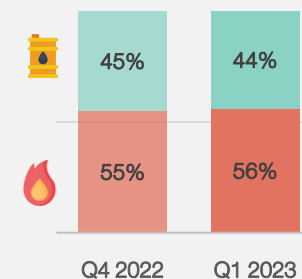
Product Price	2022	Q4 22	Q1 23	Q1 22
Gas (\$/MMBTU)	6.27	6.70	6.52	6.07
Liquid (\$/BBL)	94.89	85.40	78.14	91.19
Weighted Avg. (\$/BOE)	53.39	52.76	50.01	51.35
Avg. Dubai (\$/BBL)	96.38	84.77	80.23	96.21
Avg. HSFO (\$/BBL) (High Sulphur Fuel Oil)	82.38	62.44	64.22	87.96

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

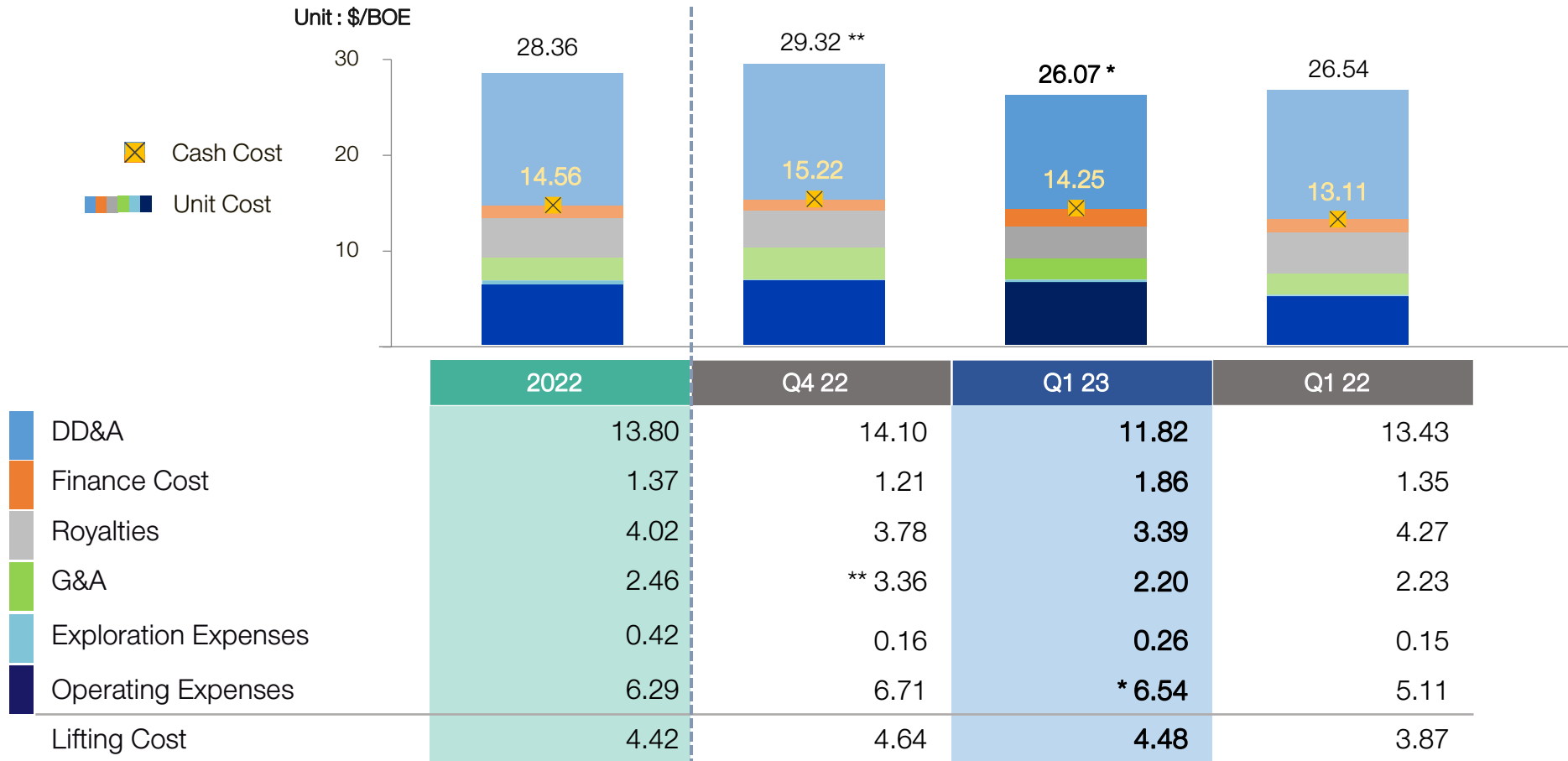
Volume Mix



Revenue Mix



Unit Cost



Note: * Exclude Bongkot Goodwill write-off (OPEX)

** Exclude Montara Class action settlement (G&A)

All Unit Cost shown above exclude costs related to new business

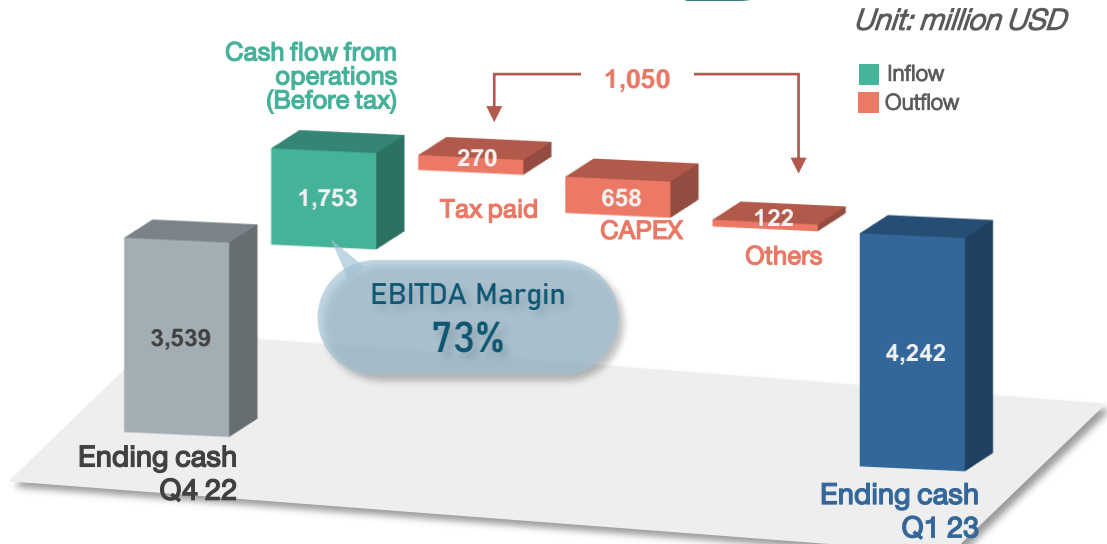
The formulas for calculating ratios are provided in the supplementary section for your reference

Cashflows & Financial Position

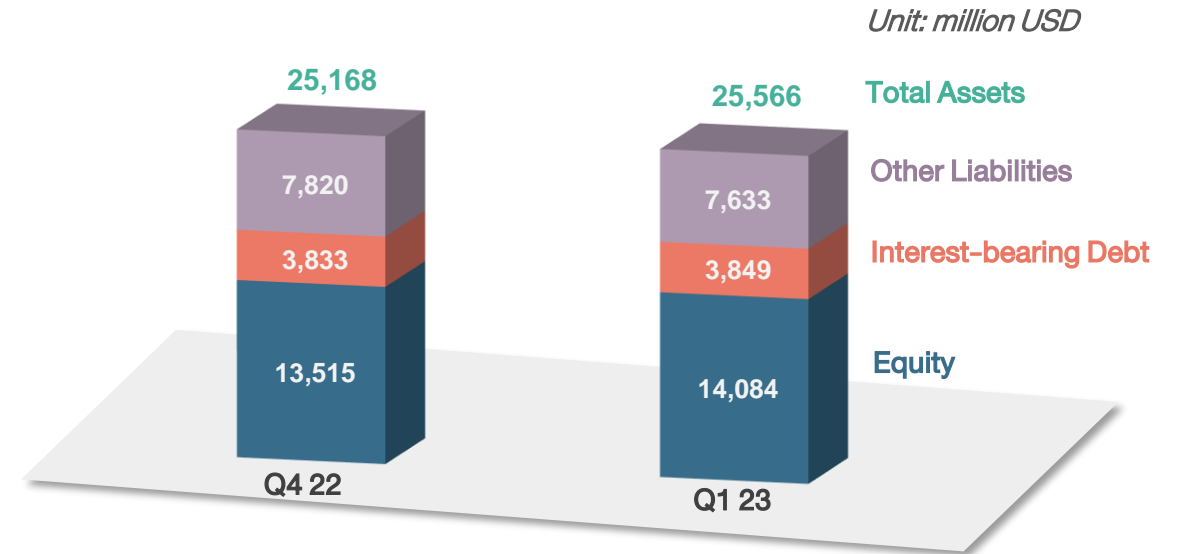


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Cashflow & Financial Position



Note: Net of adjustment for the effect of exchange rate changes on cash and cash equivalents



Debt Profile

	Q4 22	Q1 23		Q4 22	Q1 23
Debt to Equity	0.28	0.27	Average Cost of Debt	3.99% p.a.	3.99% p.a.
Debt to EBITDA	0.56	0.56	Average Loan Life	15.2 Yrs	14.9 Yrs

Interest Rates
100%
Fixed rate

Results Guidance



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Outlook

Q2 2023

FY 2023

 Sales Volume
(KBOED)

~437

~456

 Gas Price
(US\$/MMBTU)

~5.9

~6.0

 Unit Cost
(US\$/BOE)

~27-28

 Profitability
(EBITDA Margin)


70-75%

Ratings

 **TRIS**
RATING

AAA
Stable

BBB+
Stable

 **STANDARD & POOR'S**
RATINGS SERVICES
McGRAW HILL FINANCIAL
BBB stand-alone rating

MOODY'S
Baa2 stand-alone rating

Baa1
Stable

BBB+
Stable

FitchRatings
bbb+ stand-alone rating

* Based on average Dubai oil price in 2023 at 75-80 \$/BBL

Thank you and Q&A



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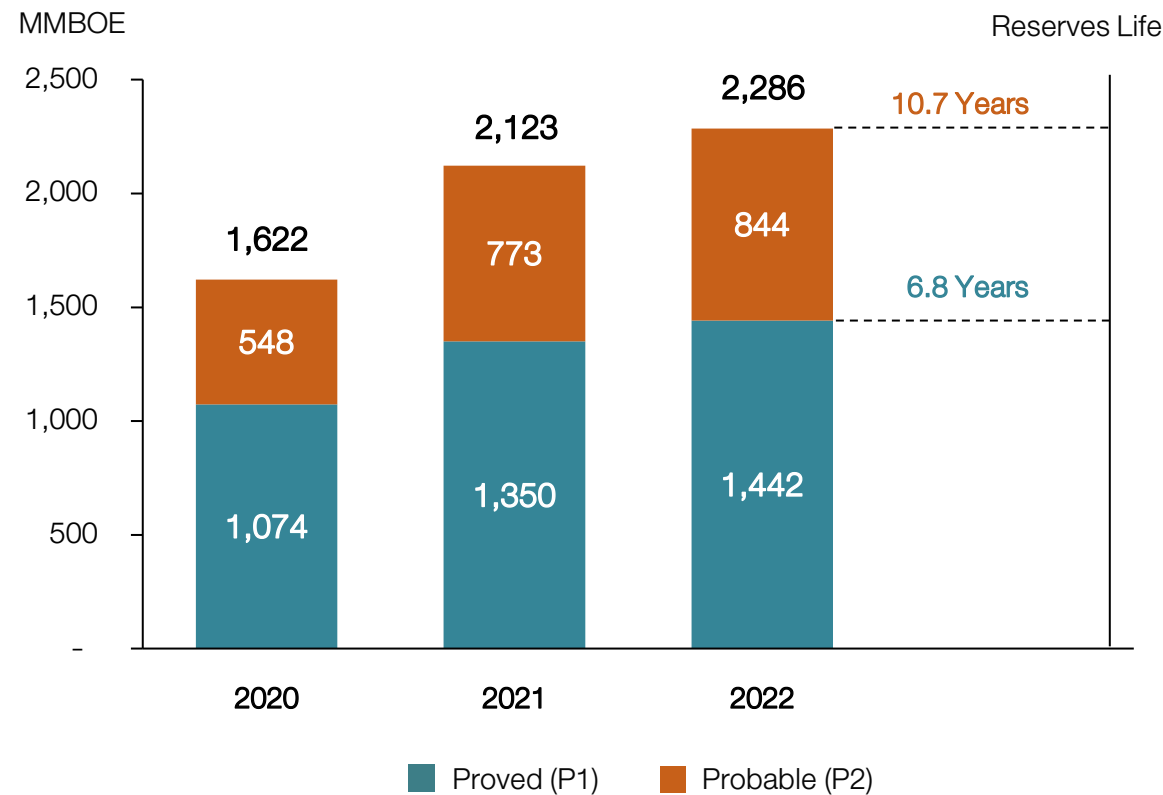
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Reserves

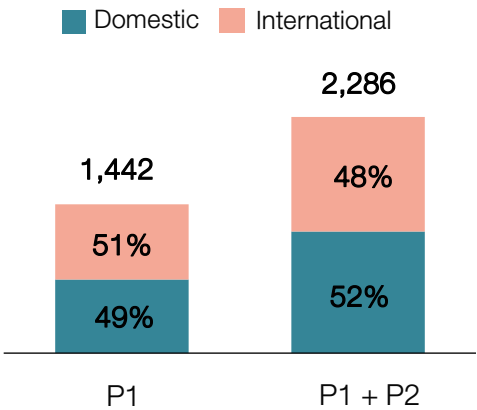


5-Year Average Proved Reserves Replacement Ratio (RRR)

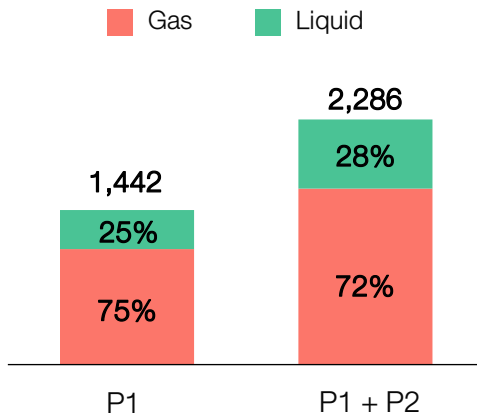
2020	2021	2022
1.5X	1.9X	2.0X

- Based on average production per day of natural gas, condensate, and crude oil (including LPG) of 585 KBOED for the year ended December 31, 2022
- Figures include reserves from equity method

2022 by Geography



2022 by Product Type



Profit and Loss Statement

Unit: million USD



	2022	Q1 23	Q4 22	%QoQ	Q1 22	%YoY
Total Revenues	9,660	2,314	2,697	(14%)	2,083	11%
Sales ⁽¹⁾	9,270	2,193	2,469	(11%)	2,030	8%
Sales Volume (BOED) ⁽²⁾	468,130	460,817	500,456	(8%)	427,368	8%
Sales Price (US\$/BOE)	53.39	50.01	52.76	(5%)	51.35	(3%)
Others ⁽³⁾	390	121	228	(47%)	53	>100%
Total Expenses	7,681	1,757	2,294	(23%)	1,776	(1%)
Major Expenses:						
Operating Expenses	1,110	360	321	12%	197	83%
Exploration Expenses	72	11	8	38%	6	83%
G&A	578	100	293	(66%)	93	8%
DD&A	2,363	492	650	(24%)	517	(5%)
Loss on Financial Instruments	184	42	100	(58%)	245	(83%)
Impairment Loss on Assets	300	-	205	(100%)	-	-
Income Tax Expenses	2,061	535	487	10%	497	8%
Share of profit (loss) from associates and JV	20	12	14	(14%)	11	9%
Net Profit	1,999	569	417	36%	318	79%
Profit (Loss) from normal operation	2,647	592	723	(18%)	570	4%
Profit (Loss) from non-operating items	(648)	(23)	(306)	92%	(252)	91%
Non-operating items breakdown:						
Oil Price Hedging	(186)	1	(2)	>100%	(240)	>100%
Tax from Effect of FX	(15)	-	12	(100%)	(2)	(>100%)
Effect from FX and others	(89)	(24)	(53)	55%	(10)	100%
Impairment Loss on Assets	(300)	-	(205)	100%	-	-
Montara Mediation agreement on Class Action	(129)	-	(129)	100%	-	-
Gain from a bargain purchase / Reversal of Contingent Liab.	71	-	71	(100%)	-	-

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, Gain from reversal of Oman Block 61 Contingent Liabilities

Five-year Investment Budget

2023-2027 E&P Budget

29.1 bnUS\$

CAPEX 18.1 bnUS\$

OPEX 11 bnUS\$

2023 Exploration Budget

223 mUS\$

CAPEX 193 mUS\$

OPEX 30 mUS\$



11 wells in Malaysia



5 wells in Thailand

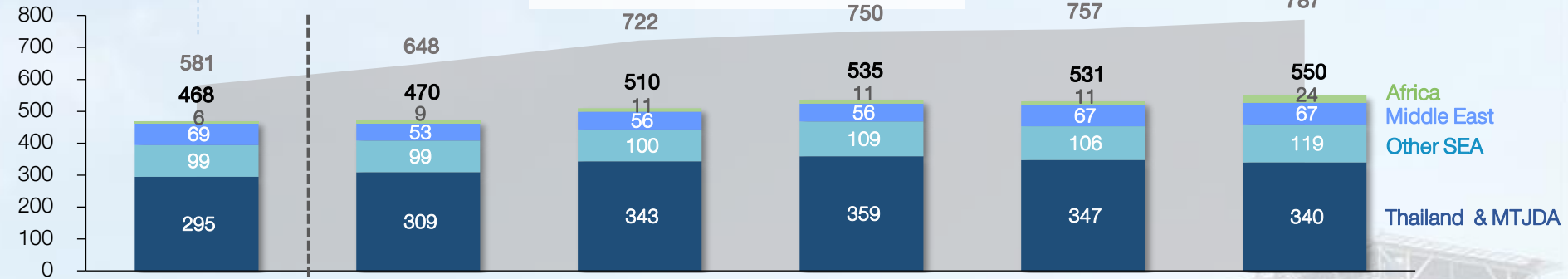


1 well in Oman

in KBOED

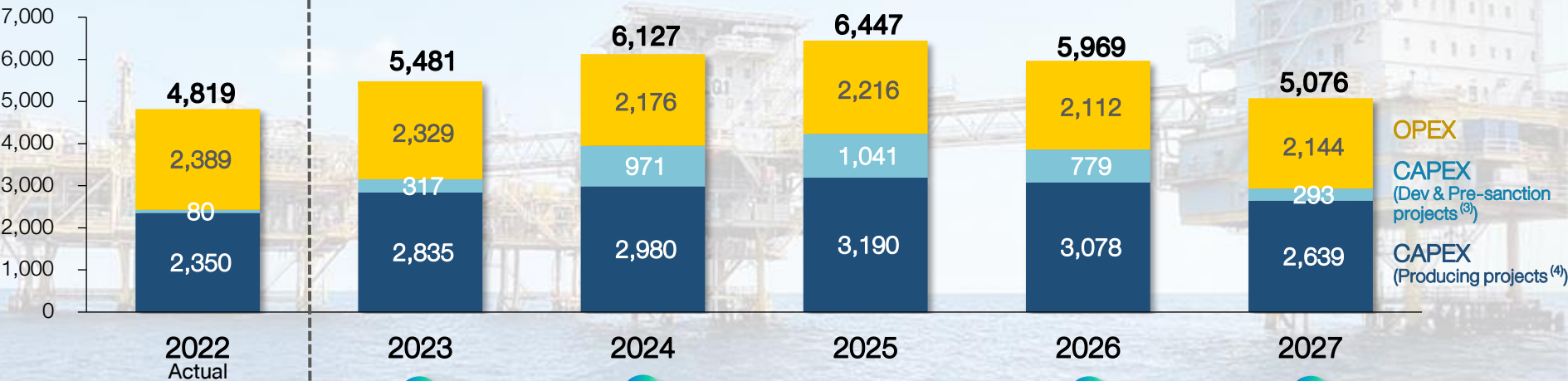
Sales Volume

Production CAGR +6.3%



MMUSD

Investment



- Note: (1) Subject to site re-entering and resume construction timing
 (2) Subject to regulatory approval and FID timing
 (3) Development & Pre-sanction projects include Mozambique LNG, SK410B, and Southwest Vietnam
 (4) Including exploration and appraisal in all projects and head office CAPEX, and new businesses



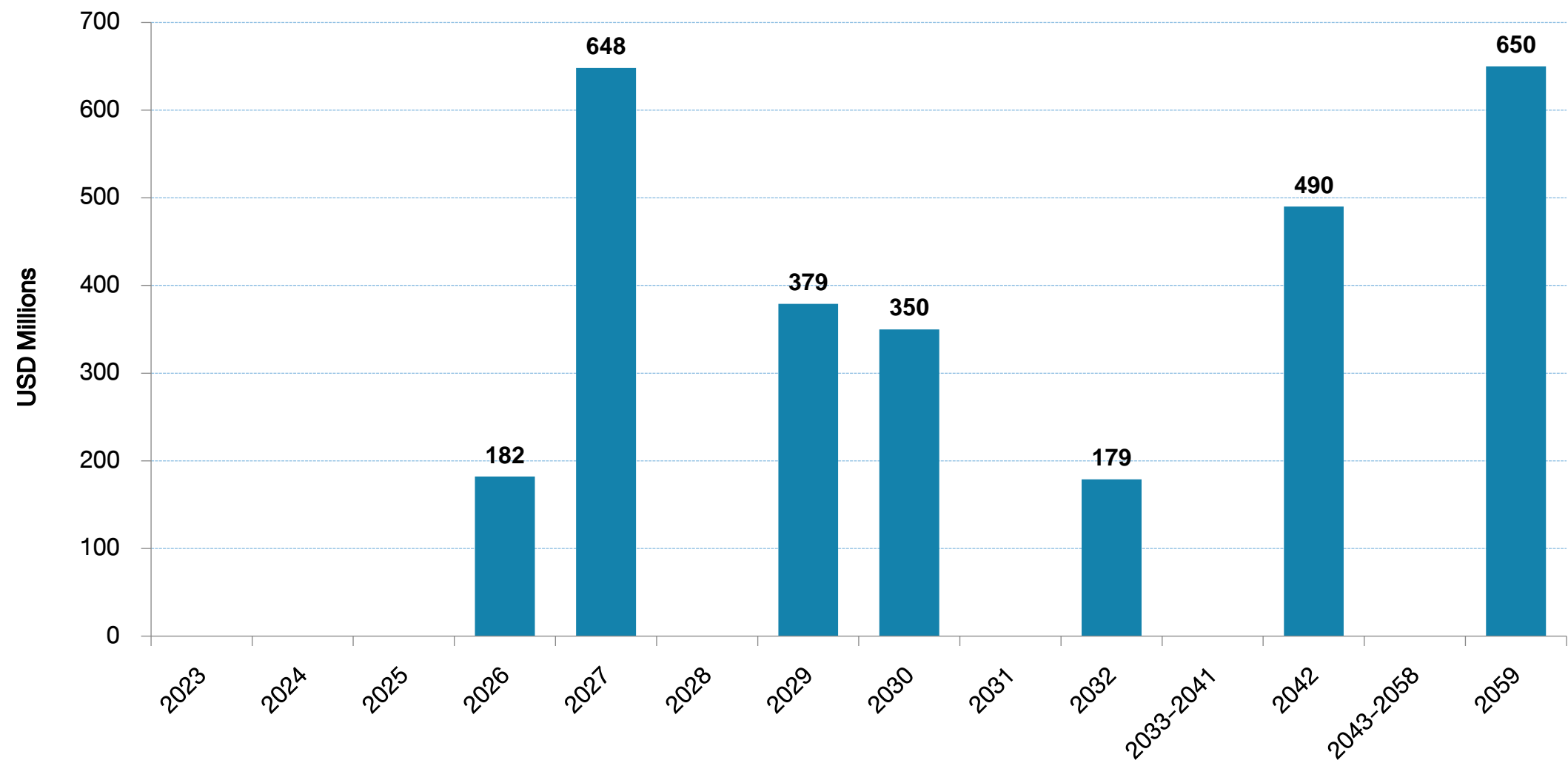
G2/61 : March
Capacity 700 MMSCFD
(Apr'22: 200 MMSCFD
Mar'23: 500 MMSCFD)

G1/61 : April
Full Capacity 800 MMSCFD

Southwest
Vietnam: 2H ⁽²⁾

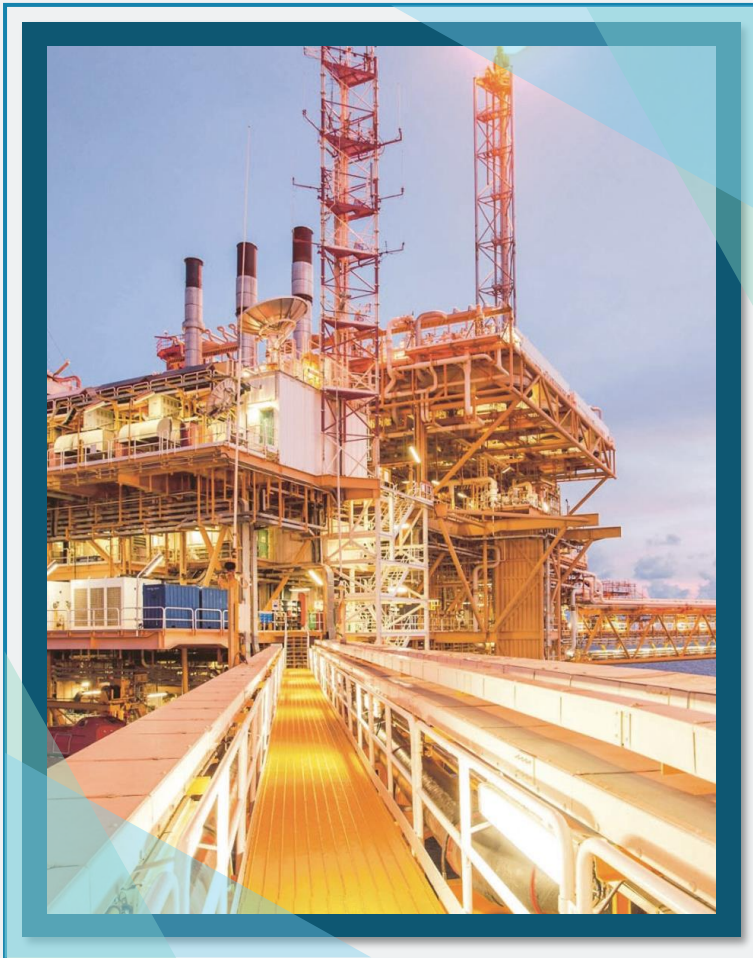
MZA1 LNG : 1H ⁽¹⁾
HBR (Full phase) : 2H ⁽²⁾
SK410B : 2H ⁽²⁾
SK405B : 1H ⁽²⁾

Debt Profile



Unit: USD Millions or equivalent after cross currency swap
As of March 2023

Key Financial Ratios



		Q4 2022	Q1 2023
Profitability Ratios (%)	EBITDA Margin	73%	73%
	Return on Equity	15%	17%
	Net Profit Margin	21%	22%
Leverage Ratios (Times)	Debt to Equity	0.28	0.27
	Debt to EBITDA	0.56	0.56
Liquidity Ratio (Times)	Current Ratio	1.72	2.11

E&P Portfolio | Thailand, Myanmar, Malaysia



Myanmar

Production

Zawtika (WI 80%)

- Production Volume gas 324 MMSCFD (3M2023)

Yadana (WI 37.1%)

- Production Volume gas 538 MMSCFD (3M2023)

Exploration

M3 (WI 100%)

- Pending development

Malaysia

Production

Block K (WI Kikeh 56%, SNP 22.4%, GK 7.2%)

- Production Volume crude 25 KBPD and gas 18 MMSCFD (3M2023)

Block H (WI Rotan 56%, Others 42%)

- Production Volume gas 174 MMSCFD (3M2023)

SK309 and SK311 (WI 42-59.5%)

- Including East Patricia field
- Production Volume gas 223 MMSCFD, and crude 15 KBPD (3M2023)

Exploration

- SK410B (LLB), SK417, SK314A, SK438, SK405B
- PM415, PM407, SK325



● Production ● Exploration

Thailand

Production

G1/61 Erawan (WI 60%)

- 3M2023 daily gas production 210 MMSCFD
- Ramp-up in progress to 800 MMSCFD in Apr 2024
- Sole investment 100%

G2/61 Bongkot (WI 100%)

- PSC transition completed since 8 Mar 2023.
- Daily gas production at more than 800MMSCFD (will be producing at 700MMSCFD from Jan 2024 onward)

Arthit (WI 80%)

- Production Volume gas 290 MMSCFD and condensate 15 KBPD (3M2023)

Contract 4 (WI 60%)

- Production Volume gas 420 MMSCFD and condensate 15 KBPD (3M2023)

S1 (WI 100%)

- Production Volume crude oil 25 KBPD (3M2023)

MTJDA (WI 50%)

- Production Volume gas 330 MMSCFD (3M2023)
- Supplying to Thailand at least 30 MMSCFD

Exploration

- G1/65 and G3/65

E&P Portfolio | Middle East



UAE

Exploration

Abu Dhabi Offshore 1, 2, 3 (WI 30%)

- High potential prospective resources with significant sizeable discoveries
- Operated by ENI (WI 70%)

Sharjah Onshore Area A (WI 25%)

- Completely signed a Farm-in/Farm-out Agreement
- Operated by ENI (WI 50%)

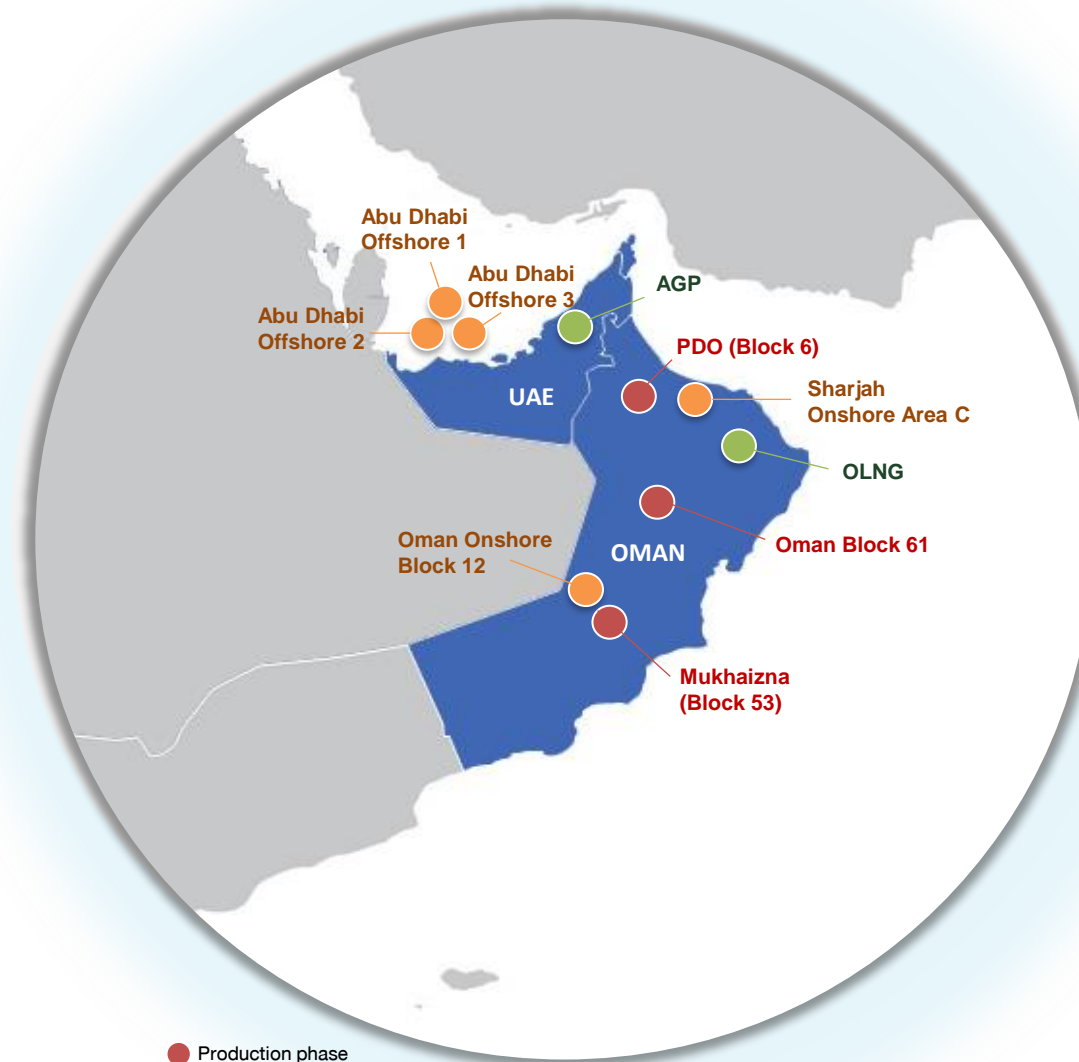
Sharjah Onshore Area C (WI 25%)

- High gas & condensate potential with the possibility of integrating with surrounding fields
- Operated by ENI (WI 50%)

Midstream

ADNOC Gas Processing (WI 2%)

- AGP is 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 economy
- Sizable volume of Propane, Butane and Naphtha
- Operated by ADNOC (WI 68%)



- Production phase
- Exploration phase
- Midstream

OMAN

Production

Block 6 (PDO) (WI 2%)

- Largest asset covering around 1/3 of the country. Average oil production volume of 648 KBPD (3M2023)
- Operated by Petroleum Development of Oman

Block 53 (WI 1%)

- Largest single onshore producing field in Oman. Average oil production volume of 86 KBPD (3M2023)
- Operated by Occidental (WI 47%)

Block 61 (WI 20%)

- Largest tight gas development in Middle East
- Gas and condensate daily production rate of 1,460 MMSCFD and 56 KBPD (3M2023).
- Operated by BP (WI 40%)

Exploration

Onshore Block 12 (WI 20%)

- Operated by Total E&P Oman (WI 80%)

Midstream

OMAN LNG (WI 2%)

- The only LNG facility in Oman.
- Operated by Government of Oman (WI 51%)

Algeria

Production

433a & 416b (WI 35%)

- Oil production consisting of block 433a, 416b
- Operated by PVEP (WI 40%)
- Average Daily Production volume of crude at 17 KBPD

Hassi Bir Rekaiz (WI 49%)

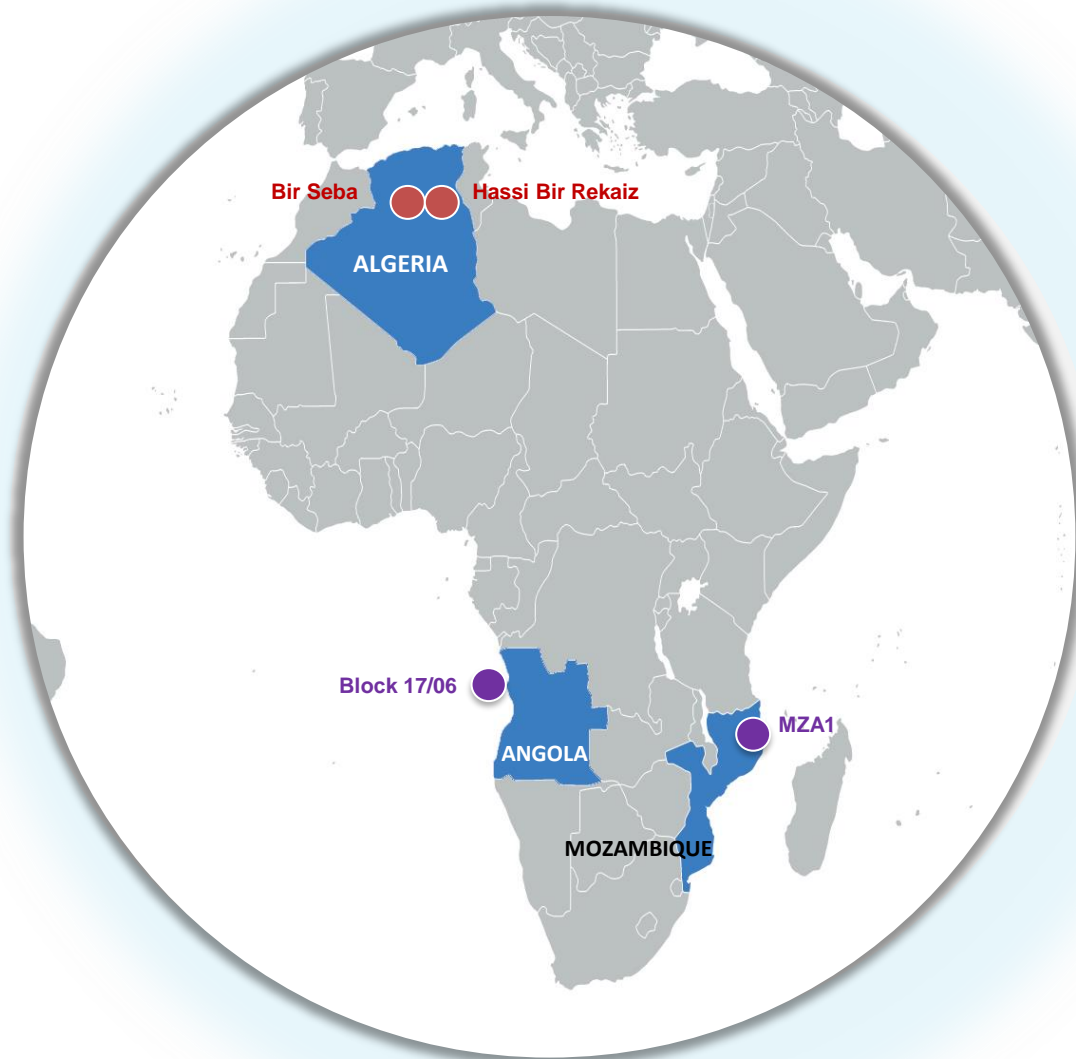
- HBR oil field consisting of block 443a, 424a and 415ext
- 1st Oil in June 2022 and started delivering sales volume in Q4/2022.
- Operated by Groupment (WI 51%)
- Average Daily Production volume of crude at 14 KBPD

Angola

Development

Block 17/06 (WI 2.5%)

- FID in July 2022 for Begonia offshore oil field in the Lower Congo Basin.
- Operated by TotalEnergies (WI 30%)
- Divestment in progress estimate completion in 2023



Mozambique

Development

Area 1 (WI 8.5%)

- High quality reservoirs capable up to 200 MMSCFD per well
- Construction phase for LNG facility with capacity 13.1 MTPA (2 trains).
- Currently under Force Majeure due to local security situation
- Operated by TotalEnergies (WI 26.5%)

● Production ● Development



AI AND ROBOTICS VENTURES

VENTURES BUILDER

ARV is a Ventures Builder principally engaged in the research, development and provision of solutions using Artificial Intelligence and Robotics technologies, as well as ventures ideation, incubation, development and commercialization.

BUSINESS UNITS

ARV has successfully spun-off start-ups into separate legal entities focused on further commercialization and development of their respective deep-tech domains.



ROVULA

Unmanned Robotic Technologies and Data Analytics for Marine, Offshore and Underwater Assets



SKYLLER

AI-driven and Autonomous Aerial Drone Technologies, Operations and Data Analytics for Various Industries and Operations



varuna

One-Stop Agriculture and Climate Technology Solutions



CARIVA

Health Solutions Platform that Simplifies Data Access, Manage Security and Accelerates the Creation of Digital Health Solutions



bind

Software Solutions for Security, Privacy, and Data Controlling in the Web 3.0



bedrock

Geospatial Location Intelligence Platform and AI Technology to provide advanced location insights



XGATEWAY

Unmanned Surface Vehicle for Hydrographic Survey and Surveillance



XPLOER

Autonomous Underwater Vehicle for Subsea Pipeline Inspection



NAUTILUS

Underwater Robotic System for Inspection, Repair & Maintenance of Subsea Pipelines



XSPECTOR

IA cloud-based data management platform specifically tailored for subsea inspection and survey operations



HORRUS

Autonomous Nested Drone Systems for Asset Inspection, Surveillance and Mapping



SKYLLER PLAFORM

Data Platform for Fleet Management, Data Visualization and Analytics



SKYLLER AI ML

AI-Assisted anomalies detection for fast and accurate decision making



UAV LOGISITIC

Drone Delivery Solutions for intra-city, long range and remote delivery of critical cargo and parts



AIANG SPRAYER UAV

UAV for blanket and precision-spraying services for various crops



SMART FOREST

Green Area management platform and carbon credit solution



KANNA

Carbon Farming and nature Based climate action



MAKARA

Data management platform with satellite analytics



HEALTH APPLICATIONS

Variety of completed health applications for Health and wellness solutions



HARDWARE SOLUTIONS

Seamless integrate to software with IoT and Robotics solutions



BUILDING BLOCKS

Data management and software API platforms for building the custom-made digital health solutions.



Automatic and Seamless Verification of Digital Signature with E-Power of Attorney and National Identities of the Singers in any corporate transactions with global interoperability



TRUSTME

Secured Wallet that keeps all identities and personal data



CITY DIGITAL DATA PLATFORM

Platform to supporting cities to operate urban infrastructure components and services efficiently with data connectivity



MUNICIPAL TAX PLATFORM

One-stop tax collection & valuation intelligent system to facilitate citizens for submission of online petition form, payment check and status tracking



BUILDING PERMIT PLATFORM

The integration of AI and GIS to streamline rive accurate, quick and convenient permission processes for officer and citizen



ASSET MANAGEMENT PLATFORM

Allows government offices to monitor, review and update assets' status for informed evaluation and decision making

JOINT VENTURES ROVULA

JOINT VENTURES SKYLLER

JOINT VENTURES VARUNA

JOINT VENTURES CARIVA

JOINT VENTURES BIND

JOINT VENTURES BEDROCK

ZEAOQUEST

S2 ROBOTICS



28



Sustainability Highlights



PTTEP and ONEP join forces to tackle climate and biodiversity crises

Signing ceremony of a Memorandum of Understanding to
launch joint actions on climate change and biodiversity
conservation of Thailand
on 14 March 2023



Remark: ONEP; Office of Natural Resources and Environmental Policy and Planning

Objectives



Drive Thailand towards the carbon neutrality and low-carbon society goals involving to support the private sector on the measures and financial mechanisms to reduce GHG emissions i.e., CCUS, DAC



Conserve and rehabilitate natural resources and biodiversity as well as establish a link of biodiversity data sources with national database



Systematically integrate the collaboration of public-private activities in the national, regional and international levels and the building of public awareness

ESG Disclosure & Ratings

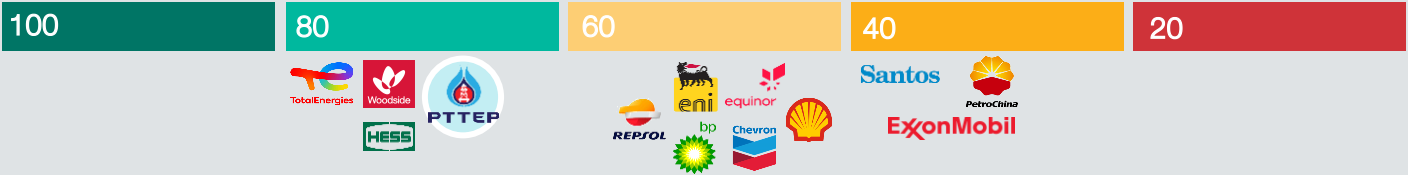


Global Reporting Initiative Reporting Standards (GRI Standards)

Oil and Gas Sector Disclosures (OGSD)

ESG Ratings

S&P Global Ratings



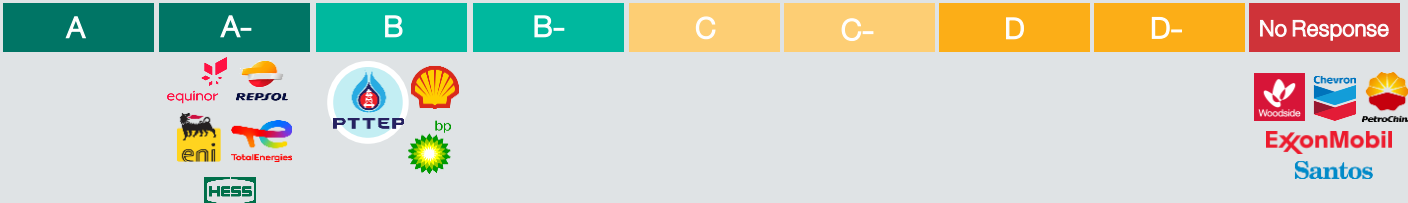
MSCI



Moody's



CDP
DISCLOSURE INSIGHT ACTION



SUSTAINALYTICS
a Morningstar company

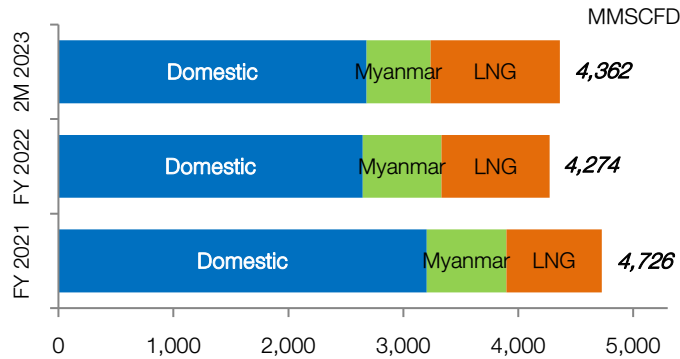


Thailand Energy Market

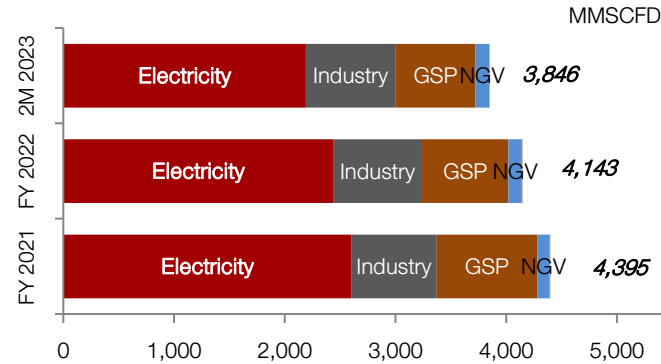


OVERVIEW

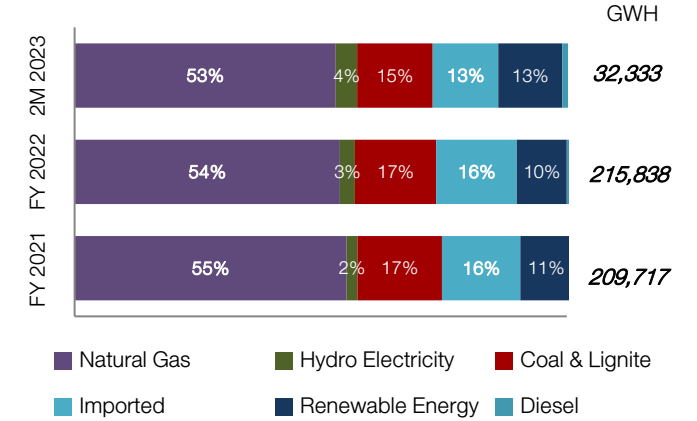
Natural Gas Supply



Natural Gas Consumption

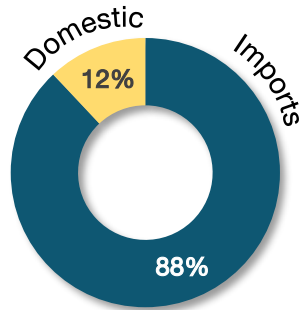


Electricity Generation

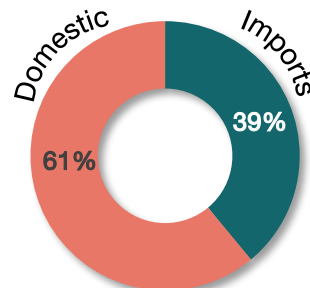


2M 2023 Thailand's Oil and Gas Demand

Crude Oil & Condensate
~ 1.2 m BOE/D

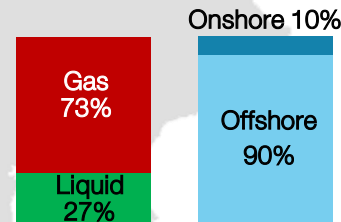


Natural Gas
~ 0.8 m BOE/D

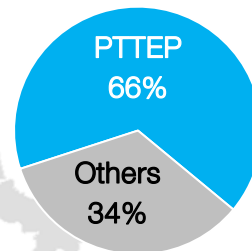


2M 2023 Thailand Petroleum Production

% by Petroleum Type and Area



% Production by Company



Midstream

Gas: operated by PTT

Oil: PTT participates through subsidiaries

Transmission Pipelines
Gas Separation Plants

Refineries

Downstream

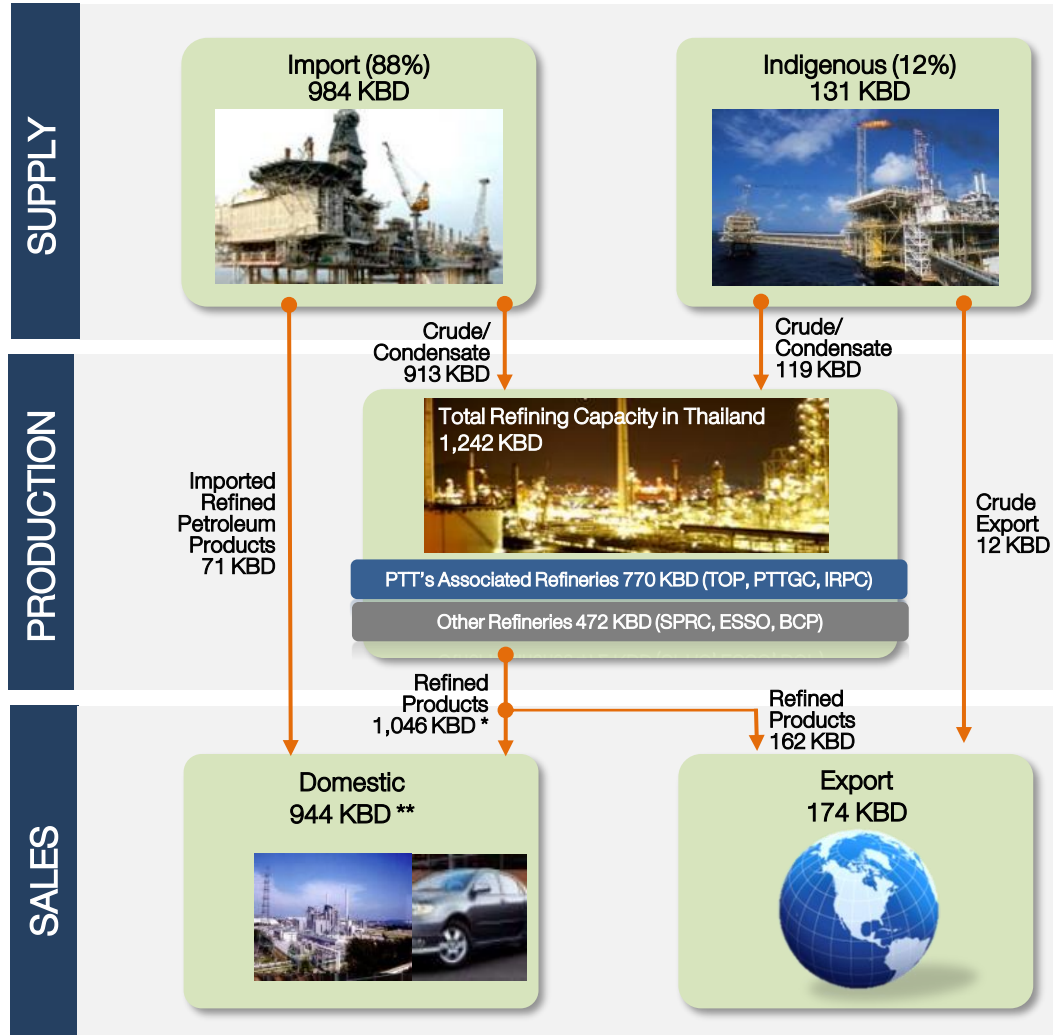
Petrochemicals
Oil and gas marketing

VALUE CHAIN

Thailand Energy Market | Oil & Gas Balance

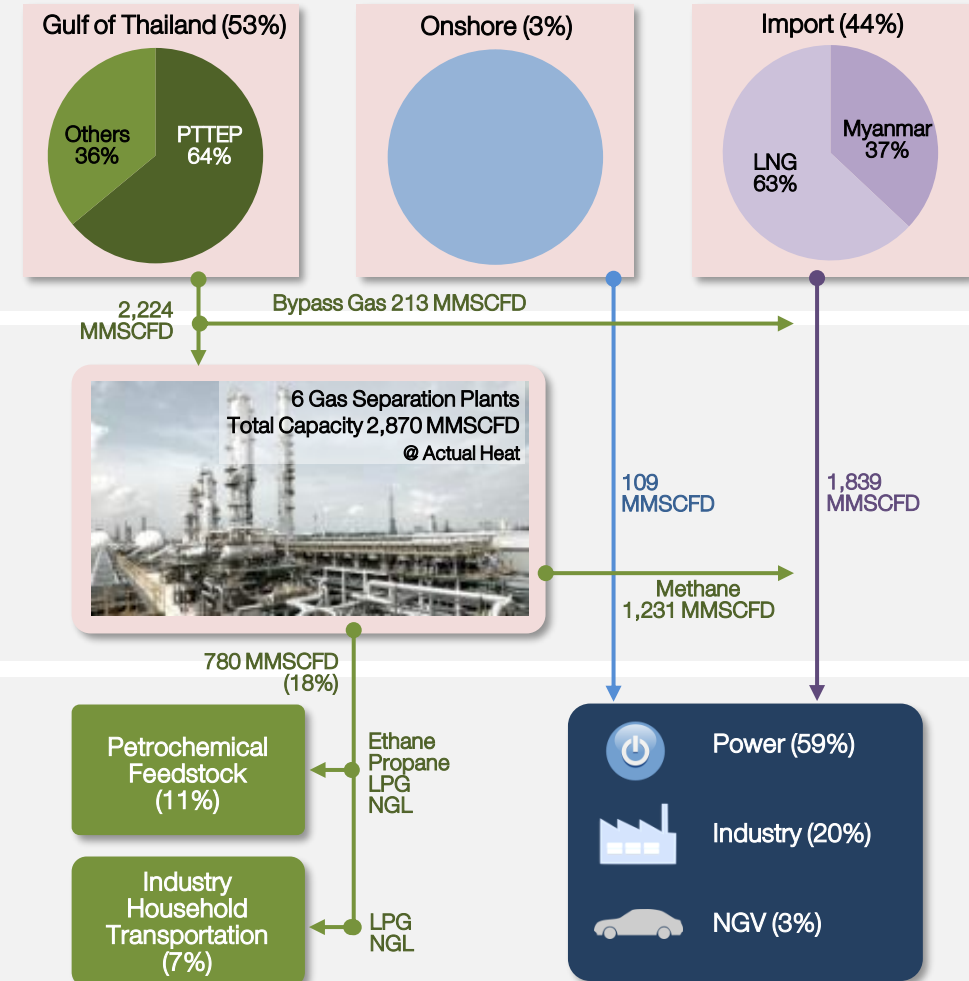
Oil Balance***

Maintains stability supply through adequate refining capacity



Natural Gas Balance****

Main driver of the Thailand economy



Source: PTT

Note: * Refined product from refineries = 968 KBD, including domestic supply of LPG from GSPs and Petrochemical Plants = 78 KBD

** Included Inventory

*** Information as of 12M 2022

**** Information as of 12M 2022

MMSCFD @ Heating Value 1,000 Btu/ft³

Projects Details | Thailand

	Project Name	Status	Phase	Participating Interest* (%)		Sales Vol Gas (MMSCFD)	Sales Vol Liquid (KBPD)	Latest Status
1	Arthit	OP	Production	PTTEP	80%	280	15	<ul style="list-style-type: none"> Ensure gas delivery at the highest DCQ
				Chevron	16%			
				MOECO	4%			
2	B6/27	OP	Production	PTTEP	100%	-	-	<ul style="list-style-type: none"> Prepare for decommissioning activities The Final Decommissioning Plan (FDP) and Decommissioning Cost Estimation (DCE) were approved by DMF
3	B8/32 & 9A	JV	Production	PTTEP	25.00%	40	12	<ul style="list-style-type: none"> Normal operations
				Chevron	51.66%			
				MOECO	16.71%			
				KrisEnergy	4.63%			
				Palang Sophon	2%			
4	Bongkot	OP	Production	PTTEP	66.67%	508	17	<ul style="list-style-type: none"> The remaining block was ended on 7 Mar 2023 and transitioned to G2/61 under PSC.
				TotalEnergies	33.33%			
5	G12/48	OP	Production	PTTEP	66.67%	9	-	<ul style="list-style-type: none"> Normal operations
				TotalEnergies	33.33%			
6	Contract 4 (Pailin)	JV	Production	PTTEP	60%	405	15	<ul style="list-style-type: none"> Ensure gas deliverability level at DCQ. On-going drilling additional development wells activities.
				Chevron	35%			
				MOECO	5%			
7	E5	JV	Production	PTTEP	20%	7	-	<ul style="list-style-type: none"> Maximize gas potential at CDC level.
				ExxonMobil	80%			

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

** Sales volume represent **average volume for 100% of the project during 3M2023**

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

**** DCQ = Daily Contractual Quantity

Projects Details | Thailand



	Project Name	Status	Phase	Participating Interest* (%)		Sales Vol Gas (MMSCFD)	Sales Vol Liquid (KBPD)	Latest Status
8	G4/43	JV	Production	PTTEP	21.375%	1	2	• Normal operations
				Chevron	51%			
				MOECO	21.25%			
				Palang Sophon	6.375%			
9	G4/48	JV	Production	PTTEP	5%	1	-	• Decommissioning activities in progress
				Chevron	71.25%			
				MOECO	23.75%			
10	L53/43 & L54/43	OP	Production	PTTEP	100%	-	1	• Completed drilling campaign. • Plan to start 1st oil production in 2023.
11	PTTEP 1	OP	Production	PTTEP	100%	-	0.2	• Maintain production plateau
12	S1	OP	Production	PTTEP	100%	4	Crude: 25 KBPD LPG: 159 MTon/Day	• On-going drilling development wells activities. • On-going production optimization and long-term development according to proposed business plan and work plan's activities.
13	Sinphuhorm	OP	Production	PTTEP	55%	89	0.2	• Maximize gas potential at CDC level. • In process to preparing drilling campaign in 2023.
				Apico	35%			
				ExxonMobil	10%			
14	L22/43	OP	Production	PTTEP	100%	-	-	• On-going evaluation of drilling results to determine further production/ development plans.

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

** Sales volume represent **average volume for 100% of the project during 3M2023**

*** 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 CPOC	50% 50%	310	7	<ul style="list-style-type: none"> Normal operations Installed 2 WHPs On-going drilling activities on development and exploration/appraisal wells.
16	G9/43	OP	Exploration	PTTEP	100%	-	-	<ul style="list-style-type: none"> Activity suspended
17	G1/61 (Erawan)	OP	Production	PTTEP Mubadala	60% 40%	214	Condensate: 4 KBPD Crude: 8 KBPD	<ul style="list-style-type: none"> All 6 rigs are in operations On-going drilling activities on existing and new platforms
18	G2/61 (Bongkot)	OP	Production	PTTEP	100%	379	11	<ul style="list-style-type: none"> The remaining blocks of Bongkot was transitioned on 8 Mar 2023. Installed 1 sealine and 1 WHPs. On-going drilling activities on existing and new platforms.
19	G1/65	OP	Exploration	PTTEP	100%	-	-	<ul style="list-style-type: none"> PSC signed. To start exploration phase.
20	G3/65	OP	Exploration	PTTEP	100%	-	-	<ul style="list-style-type: none"> PSC signed. To start exploration phase.

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

** Sales volume represent **average volume for 100% of the project during 3M2023**

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

Projects Details | Southeast Asia



	Project Name	Status	Phase	Participating Interest* (%)		Sales Vol Gas (MMSCFD)	Sales Vol Liquid (KBPD)	Latest Status
1	Malaysia Block K - Kikeh - Siakap-North Petai field (SNP) - Gumusut-Kakap field (GK)	OP (Kikeh & SNP) JV (GK)	Production	PTTEP	Kikeh 56% SNP 22.4% GK 7.17%	18 **	25 **	<ul style="list-style-type: none"> Continued inspection and maintenance activities.
2	Malaysia SK309 and SK311	OP	Production	PTTEP	42 – 59.5%	223 **	15 **	<ul style="list-style-type: none"> On-going well hookup activities
3	Malaysia Block H	OP	Production	PTTEP	42 – 56%	174 **	-	<ul style="list-style-type: none"> Ensure gas delivery at DCQ Preparing for exploration wells drilling in early 2023
4	Malaysia – Other projects	OP	Exploration	PTTEP	42.5 – 80% (varied by permits)	-	-	<ul style="list-style-type: none"> <u>SK410B</u> : Under evaluating the drilled result. For LLB, expect FID 2023. <u>SK417</u> : Preparing to drill an appraisal well and evaluating prospects well. <u>SK405B</u> : On-going drilling 1 exploration well. <u>SK438</u> : Preparing to drill 2 exploration wells. <u>SK314A</u> : Under evaluating the drilled result. <u>SB412</u> : On-going 3D seismic reprocessing, evaluating prospects well and G&G study.
5	Yadana (Myanmar)	OP	Production	PTTEPI Chevron MOGE	37.1% 41.1% 21.8%	524	-	<ul style="list-style-type: none"> Major activities were completed as planned. On-going to infill drilling study and preparation
6	Zawtika : M9 & a part of M11 (Myanmar)	OP	Production	PTTEP Myanma Oil and Gas Enterprise (MOGE)	80% 20%	315	-	<ul style="list-style-type: none"> Maintain operations Completed 4 additional wellhead platforms and 5 appraisal wells to support the development of future phase

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

** Sales volume represent **average volume for 100% of the project during 3M2023** except Malaysia (Production volume 100%)/ For Block K, gross production is net off unitization

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

Projects Details | Southeast Asia



	Project Name	Status	Phase	Participating Interest* (%)		Sales Vol Gas (MMSCFD)	Sales Vol Liquid (KBPD)	Latest Status
7	Myanmar M3	OP	Exploration	PTTEP	100%	-	-	<ul style="list-style-type: none"> Pending for development
8	Vietnam 9-2	JOC	Production	PTTEP Vietnam Oil and Gas Group Pharos Energy	25% 50% 25%	10	3	<ul style="list-style-type: none"> Completed drilling the first development well Prepare proposal for Petroleum Contract Extension (5 yrs.)
9	Vietnam 16-1	JOC	Production	PTTEP Vietnam Oil and Gas Group Pharos Energy OPECO	28.5% 41% 28.5% 2%	5	12	<ul style="list-style-type: none"> Prepare proposal for Petroleum Contract Extension (5 yrs.)
10	Vietnam B & 48/95	JV	Exploration	PTTEP Vietnam Oil and Gas Group MOECO	8.5% 65.88% 25.62%	-	-	<ul style="list-style-type: none"> In the negotiation process on commercial terms in order to push forward the Final Investment Decision (FID)
11	Vietnam 52/97	JV	Exploration	PTTEP Vietnam Oil and Gas Group MOECO	7% 73.4% 19.6%	-	-	<ul style="list-style-type: none"> In the negotiation process on commercial terms in order to push forward the Final Investment Decision (FID)
12	Natuna Sea A (Indonesia)	JV	Production	PTTEP Harbour Energy KUFPEC Petronas Pertamina	11.5% 28.67% 33.33% 15% 11.5%	112	-	<ul style="list-style-type: none"> Continue further compression project activities

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

** Sales volume represent **average volume for 100% of the project during 3M2023**

*** 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
1	Abu Dhabi Offshore 1 (UAE)	JV	Exploration	PTTEP Eni	30% 70%	-	-	<ul style="list-style-type: none"> G&G study is ongoing
2	Abu Dhabi Offshore 2 (UAE)	JV	Exploration	PTTEP Eni	30% 70%	-	-	<ul style="list-style-type: none"> Completed drilling appraisal well Under development plan preparation for the discovery area
3	Abu Dhabi Offshore 3 (UAE)	JV	Exploration	PTTEP Eni	30% 70%	-	-	<ul style="list-style-type: none"> G&G study is on-going
4	Sharjah Onshore Area A (UAE)	JV	Exploration	PTTEP Eni SNOC	25% 50% 25%	-	-	<ul style="list-style-type: none"> In progress of exploration well drilling preparation
5	Sharjah Onshore Area C (UAE)	JV	Exploration	PTTEP Eni SNOC	25% 50% 25%	-	-	<ul style="list-style-type: none"> Seismic processing in progress
6	Oman Block 6 (PDO)	JOC	Production	PTTEP Government of Oman Shell TotalEnergies	2% 60% 34% 4%	-	648 **	<ul style="list-style-type: none"> Normal operations

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

** Sales volume represent **average volume for 100% of the project during 3M2023**
except for Oman Block 6 (PDO) (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 Block 53	JV	Production	PTTEP	1%	-	86 **	• Normal operations
				Occidental	47%			
				OOCEP	20%			
				Indian Oil	17%			
				Mubadala	15%			
8	Oman Onshore Block 12	JV	Exploration	PTTEP	20%	-	-	• G&G study is on-going
				Total E&P Oman Block 12 B.V.	80%			• Plan for exploration wells drilling in 2023-2024
9	Oman Block 61	JV	Production	PTTEP	20%	1,442	55	• Normal operations
				BP	40%			
				Makarim Gas Development LLC	30%			
				Petronas	10%			

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

** Sales volume represent **average volume for 100% of the project during 3M2023** except for Oman Block 53 (Mukhaizna) (Production volume 100%)

*** 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	OP	Exploration	PTTEP	90%-100%	-	-	<ul style="list-style-type: none"> Cash Maple (AC/RL7) : Defining proper direction in order to increase development opportunities Tenacious (AC/RL4) and Oliver (AC/RL12) : Well abandonment in progress
2	Mozambique Area 1	JV	Development	PTTEP TotalEnergies, Mitsui, ENH, OVL OVRL & Oil India , Bharat	8.5% 26.5%,20% 15%, 10% 10%, 10%	-	-	<ul style="list-style-type: none"> The project is still under Force Majeure and suspension The current security situation has improved greatly and more manageable Plan to resume construction activities after security and safety restored
3	Algeria 433a & 416b (Bir Seba)	JOC	Production	GBRS PetroVietnam Sonatrach	35% 40% 25%	-	17 **	<ul style="list-style-type: none"> On-going drilling activities Continue produce new wells and intervention existing wells.
4	Algeria Hassi Bir Rekaiz	OP	Production	GHBR Sonatrach	49% 51%	-	9	<ul style="list-style-type: none"> On-going well performance evaluation & subsurface study
5	Mariana Oil Sands (Canada)	OP	Exploration	PTTEP	100%	-	-	<ul style="list-style-type: none"> Reclamation activities in progress to return the area to Canadian government

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

** Sales volume represent **average volume for 100% of the project during 3M2023** except for Algeria 433a & 416b (production volume)

*** 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
6	Mexico block 12 (2.4)	JV	Exploration	PTTEP	20%	-	-	• Evaluating the remaining petroleum potential
				Petronas	60%			
				Ophir Mexico	20%			
7	Mexico block 29 (2.4)	JV	Exploration	PTTEP	16.67%	-	-	• Pre-development study in progress
				Repsol	30%			
				PC Carigali Mexico	28.33%			
				Wintershal DEA	25%			
8	Block 17/06 (Angola)	JV	Pre-development	PTTEP	2.5%	-	-	• In process of SPA to sell all interest, the completion expected by mid-2023
				TotalEnergies	30%			
				Sonangol	30%			
				SSI	27.5%			
				Acrep	5%			
				Falcon Oil	5%			
9	Dunga (Kazakhstan)	JV	Production	PTTEP	20%	1	11	• Normal operations
				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 3M2023**

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

Projects Details | Rest of the World

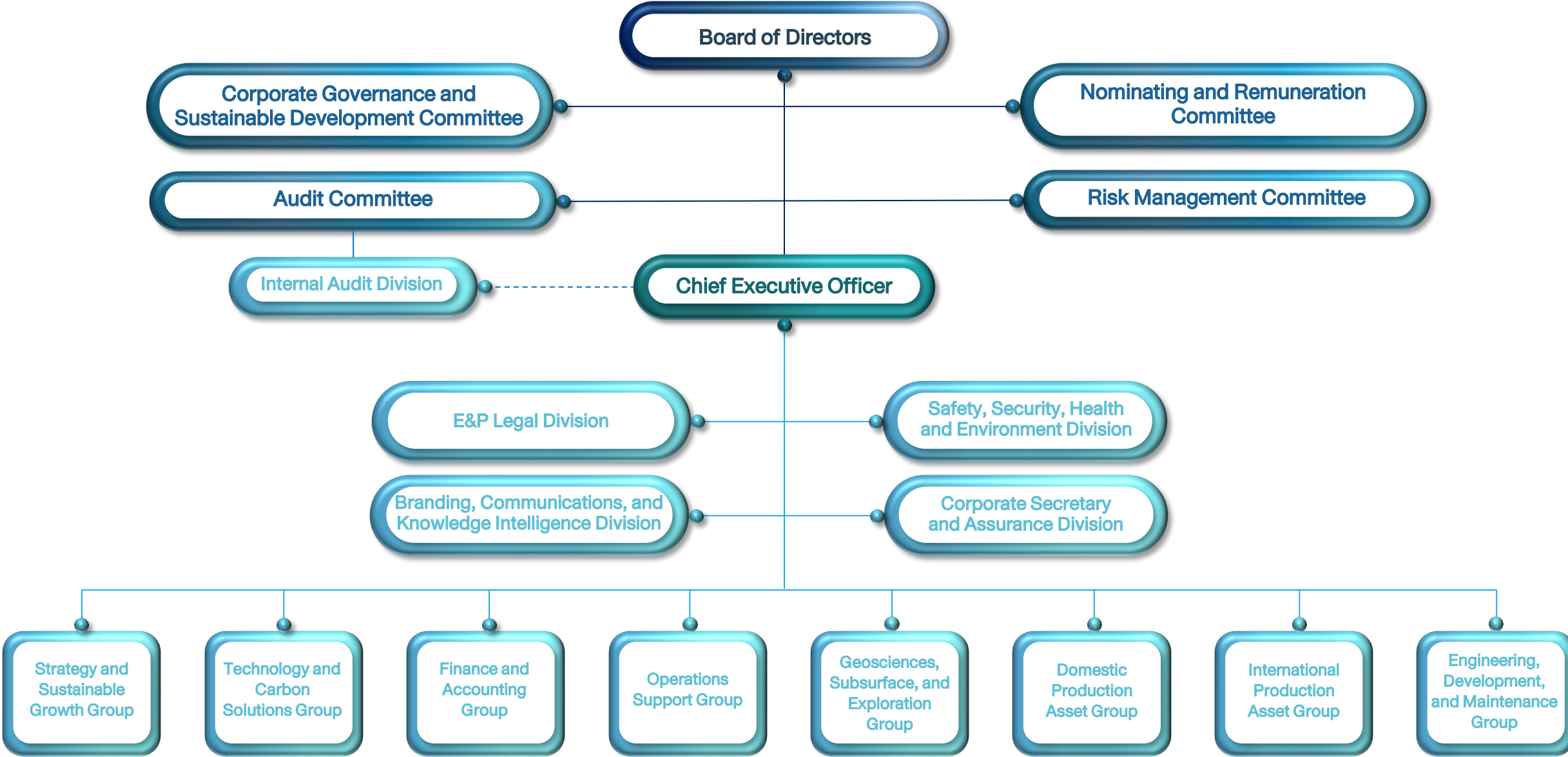
	Project Name	Status	Phase	Participating Interest* (%)		Sales Vol Gas (MMSCFD)	Sales Vol Liquid (KBPD)	Latest Status
1	Oman LNG	Shareholder	Production	PTTEP	2%	N/A	N/A	<ul style="list-style-type: none"> Normal Operations Total capacity 10.4 MTPA
				Government of Oman	51%			
				Shell	30%			
				TotalEnergies	5.54%			
				Korea LNG	5%			
				Mitsubishi	2.77%			
				Mitsui	2.77%			
				Itochu	0.92%			
2	ADNOC Gas Processing (AGP) [UAE]	JV	Production	PTTEP	2%	N/A	N/A	<ul style="list-style-type: none"> Normal Operations Total capacity 8 BCFD
				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 3M2023**

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

Organization Structure



Ratios and Formula

Oil and Gas Reserves	Reserves Replacement Ratio	5-Yr Additional Proved Reserves / 5-Yr Production Volume
	Reserves Life Index (Year)	Proved Reserves / Production Volume
	Success Ratio	Number of wells with petroleum discovery / Total number of exploration and appraisal wells
Profitability	Sales Revenue	Sales + Revenue from pipeline transportation
	Lifting Cost (\$/BOE)	(Operating Exp. – Transportation Cost – Stock Variation – Other expenses not related to lifting) / Production Volume
	Cash Cost (\$/BOE)	(Operating Exp. + Exploration Exp. + G&A + Royalties + Finance Cost) / Sales Volume
	Unit Cost (\$/BOE)	(Operating Exp. + Exploration Exp. + G&A + Royalties + Finance Cost + DD&A) / Sales Volume
	EBITDA	(Sales + Revenue from pipeline transportation) – (Operating expenses + Exploration expenses + Administrative expenses + Petroleum royalties and remuneration + Management's remuneration)
	EBITDA Margin	EBITDA / Sales Revenue
	Return on Assets (ROA)	Trailing-12-month net income / Average assets between the beginning and the end of the 12-month period
Leverage	Return on Equity (ROE)	Trailing-12-month net income / Average shareholders' equity between the beginning and the end of the 12-month period
	Total debt	Short-term loans from financial institution + Current portion of long-term debts + Bonds + Long-term loans from financial institution
	Net debt	Total debt – Liquidity
	Debt to Equity	Total debt / Shareholders' equity
	Net Debt to Equity	Net debt / Shareholders' equity
	Total Debt to Capital	Total debt / (Total debt + Shareholders' equity)
	Total Debt to EBITDA	Total debt / Trailing-12-month EBITDA
	Net Debt to EBITDA	Net debt / Trailing-12-month EBITDA
	EBITDA Interest Coverage Ratio	Trailing-12-month EBITDA / Trailing-12-month Interest Expenses & Amortization of Bond Issuing Cost

Conversion Table

Crude Oil	To Convert				
	Tonnes (metric)	Kiloliters	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	1.1364	0.159	1	42	-
US Gallons	0.00325	0.0038	0.0235	1	-
Barrels/day	-	-	-	-	49.8

Natural Gas and LNG	To Convert					
	Billion cubic meters NG	Billion cubic feet NG	Million tonnes oil equivalent	Million tonnes LNG	Trillion BTU	MBOE
From	Multiply by					
1 billion cubic metres NG	1	35.315	0.86	0.735	34.121	5.883
1 billion cubic feet NG	0.028	1	0.024	0.021	0.966	0.167
1 million tonnes oil equivalent	1.163	41.071	1	0.855	39.683	6.842
1 million tonnes LNG	1.36	48.028	1.169	1	46.405	8.001
1 trillion BTU	0.029	1.035	0.025	0.022	1	0.172
1 MBOE	0.17	6.003	0.146	0.125	58	1