



## Executive Summary

During Q2/2022, average Dubai price stood at 108.2 USD/barrel, increased by 12% from Q1/2022 where the Dubai price was averaged at 96.2 USD/barrel. The increase was underpinned by concerns over crude demand-supply imbalance, caused by rising demand from countries' reopening after Covid-19, while the supply was tight as a result of western embargo on Russian oil, missing barrels from oil producers such as Libya and Ecuador due to unrest in the countries, and the OPEC+ failure to meet its production ramp-up targets. In the beginning of the quarter, crude price went down due to a decline in crude demand forecast from Covid-19 lockdown measure in China, with an increase in supply outlook from the announcement by U.S. and member states of the IEA, to release crude supply from its strategic reserves. In May, the EU countries had announced significant curb of oil imports from Russia. When China lockdown also ended, the tight supply situation re-emerged and oil price elevated to an average of 108.1 USD/barrel. Despite the fear of global recession and GDP outlook slash, crude demand tends to rise for the coming driving season in U.S. and Europe, as well as demand recovery from China. In June, the oil price continued its upward trend to the average of 113.2 USD/barrel. For the year 2022, the average Dubai price is expected to be around 90-105 USD/barrel.

For the progress of E&P operations, in Q2/2022, PTTEP has become the operator and safely commenced the petroleum production under G1/61 (Erawan) Production Sharing Contracts since April 24, 2022 according to the development plan, which was jointly developed by PTTEP and the Department of Mineral Fuels, and maintain gas production capacity according to the nomination from buyer. Moreover, the installation of two new producing platforms is currently underway, with additional six platforms to be further installed for the remaining of this year, as well as infill wells drilling campaign starting from July onwards. For Yadana project in Myanmar, PTTEP has been appointed as the new operator after TotalEnergies EP Myanmar withdrawn effective on July 20, 2022. For Yetagun project, PTTEP has withdrawn from the project, including pipeline business under Taninthayi Pipeline Company LLC (TPC) effective on May 31, 2022. Also in this quarter, the Algeria Hassi Bir Rekaiz project has also commenced the first oil production of Phase 1 since June 1, 2022 with production capacity at 10,000-13,000 barrel per day.

In terms of business strategy, PTTEP adheres to the sustainable value creation to wider society (From We to World), in line with the global practices and UN principles. With the vision to become the "Energy Partner of Choice", that takes conscious consideration of all stakeholders' interests, as well as maintains energy security for the nation, PTTEP has established a strategic framework with three strategies. Firstly, the E&P Growth Strategy aims to create additional value from existing projects, together with the expansion of E&P business in the key strategic areas. Secondly, the Decarbonization Strategy enables the company to achieve "Net Zero Greenhouse Gas Emission" by the year 2050, namely "EP Net Zero 2050" target. Lastly, the Beyond E&P Business Strategy, which sets PTTEP's path into the new businesses. All of these strategies will be supported by several in-house resourced preparedness enablers.

On the financial performance front, during Q2/2022, the global oil price rally had caused the average selling price to rise 16% from the previous quarter to stand at 55.61 USD/BOE, with 9% increase in average sales volume per day to 465,459 BOED. Unit cost increased to stand at 28.79 USD/BOE. In this quarter, PTTEP had recognized oil price hedging loss amounting to 38 MMUSD. Net income for Q2/2022 was then reported at 600 MMUSD. As at the end of the quarter, PTTEP had total assets of 24,189 MMUSD, of which 2,806 MMUSD was cash on hand, while total liabilities were reported at 11,365 MMUSD, of which 4,243 MMUSD was interest-bearing debt. Total shareholders' equity stood at 12,824 MMUSD with debt-to-equity ratio at 0.33 reflecting healthy financial structure and robust financial position.

### Table of key financial results

(Unit: Million US Dollar)	Q1 2022	Q2 2022	Q2 2021	% Inc. (Dec.) QoQ	% Inc. (Dec.) YoY	6M 2022	6M 2021	% Inc. (Dec.) YTD
Total Revenues	2,083	2,469	1,767	19%	40%	4,543	3,546	28%
Revenue from sales *	2,030	2,383	1,729	17%	38%	4,413	3,120	41%
EBITDA **	1,601	1,816	1,328	13%	37%	3,417	2,369	44%
Profit (Loss) for the period	318	600	222	89%	>100%	918	598	54%
Basic earnings (loss) per share (Unit: US Dollar)	0.08	0.15	0.06	88%	>100%	0.23	0.15	53%
Profit (Loss) from normal operation	570	647	349	14%	85%	1,217	631	93%
Profit (Loss) from non-operating items	(252)	(47)	(127)	81%	63%	(299)	(33)	>(100%)

\* Included deemed income for tax payment by Oman government but were excluded in the average sales volume and selling price calculation

\*\* Excluded gain from a bargain purchase of Oman Block 61 Project and partial write-off of exploration and evaluation assets of the exploration project in Brazil which were recognized during 2021



## Economic Overview in the second quarter of 2022

### *Crude Oil Price*

Dubai crude price in Q2/2022 advanced to an average of 108.2 USD/barrel, increased from Q1/2022 which was at average price of 96.2 USD/barrel. Price escalation was mainly due to Russia-Ukraine war spurred growing concerns on crude supply shortage as a result of western embargo on Russian oil and missing barrels from oil producers such as Libya and Ecuador. In contrast, after 2 years of COVID-19 lockdown, international borders are reopened, pushing oil demand back towards its pre pandemic level.

In April, Shanghai and Beijing launched lockdown to curb a surge in COVID-19 infections, prompting renewed fears of demand destruction. On supply side, U.S. and member states of the IEA comprising of 31 countries such as U.K. and EU tried to quell price gains by announcing 180 million barrels crude release from strategic reserves from May to October 2022. April's Dubai crude price subsequently ended lower to an average of 102.8 USD/barrel from 110.9 USD/barrel in March, outweighing supply tight from prolonged Russia-Ukraine war.

Russia oil sanctions continued to burden strained supplies as EU leaders agreed in principle to cut 90% of oil imports from Russia by the end of 2022. Price gained support as China announced an end to its 2-month long COVID-19 lockdown in Shanghai and Beijing from June 1, which could boost demand in an already tight market. Dubai crude price in May, hence, elevated to an average of 108.1 USD/barrel.

Russia-Ukraine crisis caused record-high inflation in decades worldwide, prompting many organizations such as IMF, World Bank, and the Organization for Economic Co-operation and Development (OECD) to slash their 2022 global GDP outlook with warning of recession possibility. However, high summer fuel demand, prospects for demand recovery in China as well as supply outages from force majeure declaration by Libya and Ecuador together with OPEC+ failure to meet its production targets fueled up June's Dubai crude price to an average of 113.2 USD/barrel with 119.0 USD/barrel peak.

### *Liquefied Natural Gas (LNG)*

For LNG Market in Q2/2022, the average Asian Spot LNG price remained at a high level from Q1/2022 at an average of 27.06 USD/MMBTU from high gas demand caused by below-normal temperatures. In addition, uncertainty regarding the supply of Russian gas into Europe from Russia-Ukraine conflict also affected the overall global energy prices. The price has maintained in the range of 19-43 USD/MMBTU until the end of June.

### *Thailand's Energy Demand*

According to the Energy Policy and Planning Office (EPPO), Ministry of Energy, domestic energy demand from January to April 2022 is approximately 2 million BOED, which has increased 0.2% comparing to the same period of the previous year. This figure is becoming closer to the domestic demand in the first four months of 2020 which was before the COVID-19 pandemic in Thailand. An economic rebound leads to the increase in the domestic energy demand in the form of petroleum consumption, coal consumption, and imported electricity for transportation and industrial uses.

### *Exchange Rates (Thai Baht against US Dollar)*

The THB against USD depreciated from 33.30 at end of Q1/2022 to 35.30 at end of Q2/2022. The major factor impacting this trend is the Federal Reserve's hawkish policy which saw rate hikes totaling 1.25% over Q2 to combat US inflation which reached a 40-year high in May. In addition, investors also expect further rate hikes from the Fed during the remainder of this year. Under this backdrop, the Bank of Thailand continued its dovish monetary policy and voted to maintain the policy rate in Q2/2022 which significantly contributed to the depreciation of THB. In addition to monetary policy, Thailand's slow tourism recovery is also another major factor impacting the THB as it relied heavily on Chinese tourists before the pandemic as China continues to be in lockdown. Seasonal profit repatriation of foreign investors also contributed to the depreciation of THB in Q2/2022.



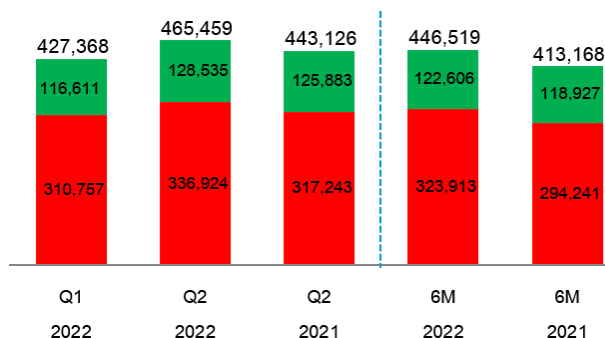
## Financial Performance

### Average Sales Volume and Selling Price

Unit: Barrels of Oil Equivalent per Day

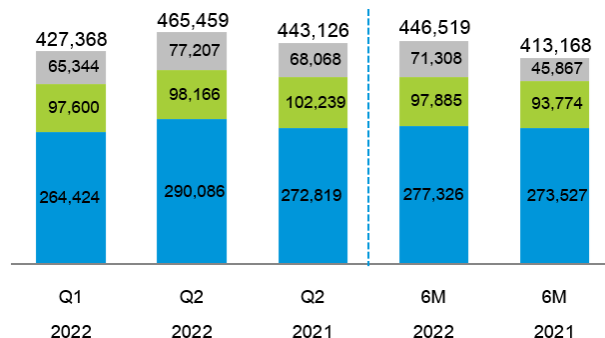
#### By Product Type

Gas Liquid



#### By Geographical Region

Thailand Other Southeast Asia Rest of the World



Average selling price and Dubai crude oil price (Unit : US Dollar)	Q1 2022	Q2 2022	Q2 2021	% Inc. (Dec.) QoQ	% Inc. (Dec.) YoY	6M 2022	6M 2021	% Inc. (Dec.) YTD
Average selling price (/BOE)	51.35	55.61	42.19	8	32	53.59	41.35	30
Liquid price (/BOE)	91.19	105.47	63.98	16	65	98.72	60.52	63
Gas price (/MMBTU)	6.07	6.10	5.59	0	9	6.08	5.60	9
Average Dubai crude oil price (/BBL)	96.21	108.22	67.02	12	61	102.17	63.62	61

Remark: The average sales volume and selling price were excluded deemed income for tax payment by Oman government.

#### For the Second quarter of 2022 compared with the First quarter of 2022

In Q2/2022, the average sales volume of PTTEP and its subsidiaries (the "Group") increased to 465,459 BOED when compared with Q1/2022 of 427,368 BOED, primarily from first production of G1/61 Project since the end of April 2022, together with Oman Block 61 Project due to higher gas sales volume. The average selling price in Q2/2022 increased 8% to 55.61 USD/BOE (Q1/2022: 51.35 USD/BOE).

#### For the Second quarter of 2022 compared with the Second quarter of 2021

When compared the average sales volume for Q2/2022 to Q2/2021 of 443,126 BOED, the average sales volume increased primarily from first production of G1/61 Project since the end of April 2022, together with Arthit Project due to higher gas nomination from buyer and Oman Block 61 Project from higher gas sales volume. The average selling price increased 32% to 55.61 USD/BOE (Q2/2021: 42.19 USD/BOE).

### *For the six-month period ended June 2022 compared with 2021*

The average sales volume for the six-month period ended June 2022, increased to 446,519 BOED when compared with the same period of 2021 (for the six-month period ended June 2021 : 413,168 BOED). The increase was primarily due to the acquisition of Oman Block 61 Project in March 2021 and first production of G1/61 Project in April 2022, together with Arthit Project due to higher gas nomination from buyer. The average selling price for the six-month period ended June 2022 increased 30% to 53.59 USD/BOE (for the six-month period ended June 2021: 41.35 USD/BOE).

### *Overall Operating Results*

#### *For the Second quarter of 2022 compared with the First quarter of 2022*

In Q2/2022, the Group had net profit of 600 MMUSD, an increase of 282 MMUSD or 89% from a net profit in Q1/2022 of 318 MMUSD was primarily from higher revenue from sales and lower loss from oil price hedging instruments. The net profit for Q2/2022 of 600 MMUSD can be separated as following.

The profit from normal operation in Q2/2022 was 647 MMUSD, an increase of 77 MMUSD when compared with a profit in Q1/2022 of 570 MMUSD was due to an increase in revenue from sales of 353 MMUSD from 9% increase in average sales volume and 8% increase in average selling price. However, income taxes increased by 104 MMUSD mainly from projects in Thailand, projects in Oman and Malaysia Project from higher earnings before tax. In addition, operating expenses increased by 94 MMUSD primarily from first production of G1/61 Project and G2/61 Project, together with Malaysia Project due to higher sales volume and more maintenance activities. Moreover, depreciation, depletion and amortization increased by 48 MMUSD primarily from first production of G1/61 Project, along with Malaysia Project due to higher sales volume. However, there was a decrease in depreciation, depletion and amortization from Bongkot Project.

The loss from non-operating items in Q2/2022 was 47 MMUSD, a decrease of 205 MMUSD when compared with a loss in Q1/2022 of 252 MMUSD was from gain on financial instruments mainly due to a decrease in loss from oil price hedging instruments of 202 MMUSD (included a decrease in unrealized loss from mark-to-market of 172 MMUSD), resulting from less upward trend of forward oil price than Q1/2022.

#### *For the Second quarter of 2022 compared with the Second quarter of 2021*

In Q2/2022, the Group had net profit of 600 MMUSD, an increase of 378 MMUSD or more than 100% from a net profit in Q2/2021 of 222 MMUSD was primarily from higher revenue from sales, together with decreases in depreciation, depletion and amortization and loss from oil price hedging instruments. The net profit for Q2/2022 of 600 MMUSD can be separated as following.

The profit from normal operations in Q2/2022 was 647 MMUSD, an increase of 298 MMUSD when compared with a profit in Q2/2021 of 349 MMUSD was from an increase in revenue from sales of 654 MMUSD from 32% increase in average selling price and 5% increase in average sales volume. In addition, depreciation, depletion and amortization decreased by 64 MMUSD primarily from Bongkot Project. However, income taxes increased by 278 MMUSD mainly from projects in Thailand and Oman from higher profit. Operating expenses also increased by 98 MMUSD primarily from first production of G1/61 Project and G2/61 Project, along with Malaysia Project due to higher sales volume and more maintenance activities. Moreover, petroleum royalties increased by 42 MMUSD mainly from higher domestic sales.

The loss from non-operating items in Q2/2022 was 47 MMUSD, a decrease of 80 MMUSD when compared with a loss in Q2/2021 of 127 MMUSD was from gain on financial instruments mainly due to a decrease in loss from oil price hedging instruments of 103 MMUSD (included a decrease in unrealized loss from mark-to-market of 96 MMUSD), resulting from less upward trend of forward oil price than Q2/2021.

### *For the six-month period ended June 2022 compared with 2021*

For the six-month period ended June 2022, the Group had net profit of 918 MMUSD, an increase of 320 MMUSD or 54% from a net profit for the six-month period ended June 2021 of 598 MMUSD was primarily from higher revenue from sales, together with lower depreciation, depletion and amortization. In addition, there was a partial write-off of exploration and evaluation assets of the exploration project in Brazil, offset with gain from a bargain purchase of Oman Block 61 Project recognized in the six-month period in 2021. The net profit for the six-month period ended June 2022 of 918 MMUSD can be separated as following.

The profit from normal operation for the six-month period ended June 2022 was 1,217 MMUSD, an increase of 586 MMUSD when compared with a profit for the six-month period ended June 2021 of 631 MMUSD was due to an increase in revenue from sales of 1,293 MMUSD from 30% increase in average selling price and 8% increase in average sales volume. In addition, depreciation, depletion and amortization decreased by 94 MMUSD primarily from Bongkot Project. However, income taxes increased by 589 MMUSD mainly from projects in Thailand and Oman from higher profit. Operating expenses also increased by 121 MMUSD primarily from first production of G1/61 Project and G2/61 Project, along with Malaysia Project and petroleum royalties increased by 88 MMUSD mainly from higher domestic sales.

The loss from non-operating items for the six-month period ended June 2022 was 299 MMUSD, an increase of 266 MMUSD when compared with a loss for the six-month period ended June 2021 of 33 MMUSD was due to gain from a bargain purchase of Oman Block 61 Project amounting 350 MMUSD, offset with partial write-off of exploration and evaluation assets of the exploration project in Brazil amounting 145 MMUSD in the six-month period in 2021 while no such transaction recognized in the six-month period in 2022.

### Operating Results by Segments

Net Profit (loss)	Q1 2022	Q2 2022	Q2 2021	% Inc. (Dec.) QoQ	% Inc. (Dec.) YoY	6M 2022	6M 2021	% Inc. (Dec.) YTD
(Unit: Million US Dollar)								
Exploration and production	631	682	395	8	73	1,313	934	41
Southeast Asia	584	632	382	8	65	1216	706	72
- Thailand	418	480	307	15	56	898	577	56
- Other Southeast Asia	166	152	75	(8)	>100	318	129	>100
Middle East	54	56	6	4	>100	110	357	(69)
Australia	(1)	(1)	(0.5)	-	(100)	(2)	(1)	(100)
America	(7)	(4)	(2)	43	(100)	(11)	(148)	93
Africa	(3)	(6)	6	(100)	>(100)	(9)	13	>(100)
Others	4	5	3	25	67	9	7	29
Head office and others	(313)	(82)	(173)	74	53	(395)	(336)	(18)
<b>Total</b>	<b>318</b>	<b>600</b>	<b>222</b>	<b>89</b>	<b>&gt;100</b>	<b>918</b>	<b>598</b>	<b>54</b>

#### For the Second quarter of 2022 compared with the First quarter of 2022

For Q2/2022, the Group reported a net profit of 600 MMUSD, an increase of 282 MMUSD or 89% when compared with a net profit of 318 MMUSD in Q1/2022 was primarily from an increase in Head Office and Others segment of 231 MMUSD and Exploration and Production segment in Southeast Asia (Thailand increased by 62 MMUSD).

#### Head Office and Others segment

In Q2/2022, Head Office and Others segment reported a net loss of 82 MMUSD, a decrease of 231 MMUSD or 74% when compared with a net loss of 313 MMUSD in Q1/2022 was primarily from lower loss from oil price hedging instruments due to less upward trend of forward oil price than Q1/2022.

#### Exploration and Production segment

- Southeast Asia
  - Thailand

In Q2/2022, Thailand reported a net profit of 480 MMUSD, an increase of 62 MMUSD or 15% when compared with a net profit of 418 MMUSD in Q1/2022 was primarily from an increase in revenue from sales due to higher average selling price and average sales volume which included first production of G1/61 Project and G2/61 Project since the end of April 2022 while operating expense, depreciation, depletion and amortization increased in line with increased sales volume and income taxes increased in accordance with higher profit.

#### For the Second quarter of 2022 compared with the Second quarter of 2021

For Q2/2022, the Group reported a net profit of 600 MMUSD, an increase of 378 MMUSD or more than 100% when compared with a net profit of 222 MMUSD in Q2/2021 was primarily from an increase of Exploration and Production segment in Southeast Asia (Thailand increased by 173 MMUSD and Other Southeast Asia increased by 77 MMUSD), Middle East of 50 MMUSD and Head Office and Others segment of 91 MMUSD.

### Exploration and Production segment

- Southeast Asia
  - Thailand

In Q2/2022, Thailand reported a net profit of 480 MMUSD, an increase of 173 MMUSD or 56% when compared with a net profit of 307 MMUSD in Q2/2021 was primarily from an increase of revenue from sales due to higher average selling price and average sales volume which included first production of G1/61 Project and G2/61 Project since the end of April 2022, together with a decrease in depreciation, depletion and amortization, mainly from Bongkot Project while income taxes increased in accordance with higher profit.

- Other Southeast Asia

In Q2/2022, Other Southeast Asia reported a net profit of 152 MMUSD, an increase of 77 MMUSD or more than 100% when compared with a net profit of 75 MMUSD in Q2/2021 was primarily from an increase in revenue from sales due to higher average selling price while income taxes increased in accordance with higher profit.

- Middle East

In Q2/2022, Middle East reported a net profit of 56 MMUSD, an increase of 50 MMUSD or more than 100% when compared with a net profit of 6 MMUSD in Q2/2021 was primarily from an increase of revenue from sales due to higher average selling price while income taxes increased in accordance with higher profit.

### Head Office and Others segment

In Q2/2022, Head Office and Others segment reported a net loss of 82 MMUSD, a decrease of 91 MMUSD or 53% when compared with a net loss of 173 MMUSD in Q2/2021 was primarily from lower loss from oil price hedging instruments due to less upward trend of forward oil price than Q2/2021.

### *For the six-month period ended June 2022 compared with 2021*

For the six-month period ended June 2022, the Group reported a net profit of 918 MMUSD, an increase of 320 MMUSD or 54% when compared with a net profit for the six-month period ended June 2021 of 598 MMUSD was primarily from an increase in Exploration and Production segment in Southeast Asia (Thailand increased by 321 MMUSD and Other Southeast Asia increased by 189 MMUSD), America of 137 MMUSD, offset with a decrease in Middle East of 247 MMUSD.

### Exploration and Production segment

- Southeast Asia
  - Thailand

For the six-month period ended June 2022, Thailand reported a net profit of 898 MMUSD, an increase of 321 MMUSD or 56% when compared with a net profit of 577 MMUSD for the six-month period ended June 2021 was primarily from an increase in revenue from sales due to higher average selling price together with a decrease in depreciation, depletion and amortization mainly from Bongkot Project while income taxes increased in accordance with higher profit.

- Other Southeast Asia

For the six-month period ended June 2022, Other Southeast Asia reported a net profit of 318 MMUSD, an increase of 189 MMUSD or more than 100% when compared with a net profit of 129 MMUSD for the six-month period ended June 2021 was primarily from an increase in revenue from sales due to higher average selling price while income taxes increased in accordance with higher profit.

- **America**

For the six-month period ended June 2022, America reported a net loss of 11 MMUSD, a decrease of 137 MMUSD or 93% when compared with a net loss of 148 MMUSD for the six-month period ended June 2021 was primarily from a decrease in exploration expenses from partial write-off of exploration and evaluation assets of the exploration project in Brazil for the six-month period 2021.

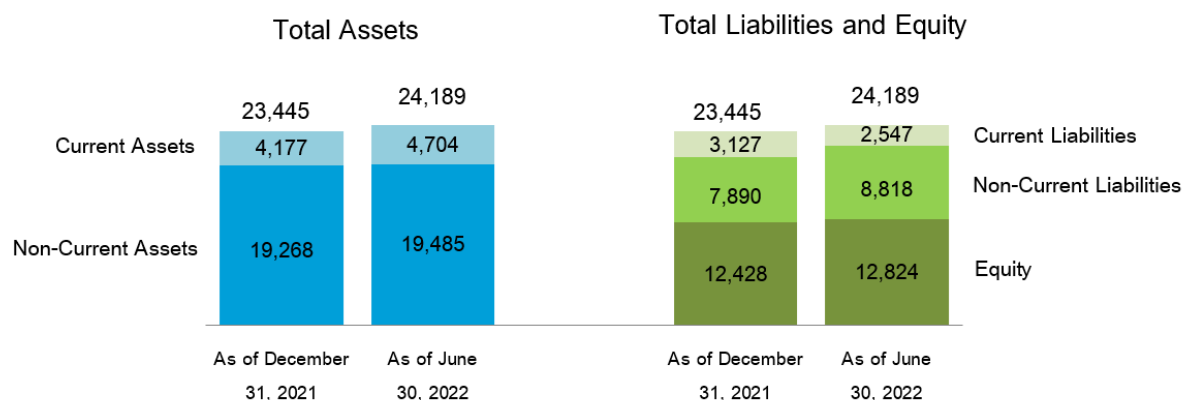
- **Middle East**

For the six-month period ended June 2022, Middle East reported a net profit of 110 MMUSD, a decrease of 247 MMUSD or 69% when compared with a net profit of 357 MMUSD for the six-month period ended June 2021. Despite an increase in revenue from sales due to higher average selling price and higher Oman Block 61 Project average sales volume, there was a decrease in net profit from a recognition of gain from a bargain purchase of Oman Block 61 Project for the six-month period in 2021.



### Financial Position

Unit: Million US Dollar



### Assets

As at June 30, 2022, the Group had total assets of 24,189 MMUSD, an increase of 744 MMUSD from total assets as at December 31, 2021 of 23,445 MMUSD was primarily due to;

- (1) Current assets, which were primarily comprised of cash and cash equivalents, trade and other receivables and inventories, increased by 527 MMUSD mainly from higher cash and cash equivalents of 247 MMUSD, as well as higher other current assets of 173 MMUSD which was primarily from prepayment upon Asset Transfer Agreement of Bongkot Project.
- (2) Non-current assets, which were primarily comprised of exploration and production assets in joint venture projects being recognized as part of the property, plant and equipment, exploration and evaluation assets, goodwill and deferred tax assets, increased by 217 MMUSD mainly due to higher property, plant and equipment, together with higher right-of-use assets of 319 MMUSD and 307 MMUSD, respectively which were mainly from G1/61 Project and G2/61 Project. However, deferred tax assets decreased by 304 MMUSD from Bongkot Project and Oman Block 61 Project.

### Liabilities

As at June 30, 2022, the Group had total liabilities of 11,365 MMUSD, an increase of 348 MMUSD from total liabilities as at December 31, 2021 of 11,017 MMUSD was primarily due to;

- (1) Non-current liabilities, which were primarily comprised of provision for decommissioning costs, debentures, and deferred tax liabilities, increased by 928 MMUSD mainly due to higher provision for decommissioning costs, together with higher debentures from the issuance of senior guaranteed debentures of 12,000 MMTHB (equivalent to 359 MMUSD) in April 2022. In addition, lease liabilities increased mainly from G1/61 Project and G2/61 Project.

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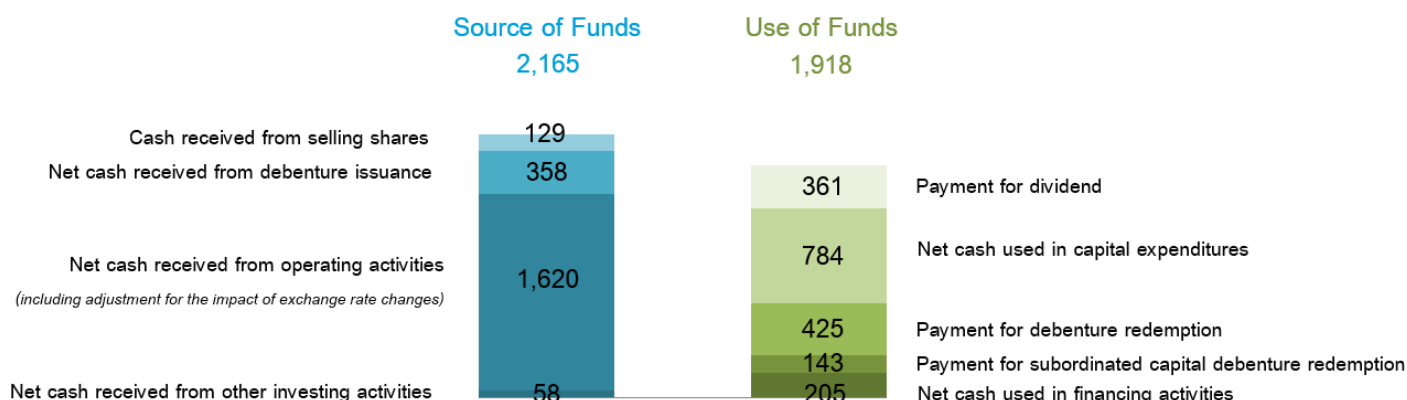
- (2) Current liabilities, which were primarily comprised of trade and other payables, income tax payable, and short-term provisions, decreased by 580 MMUSD mainly due to lower current portion of long-term liabilities from the redemption of senior guaranteed debentures of 15,000 MMTHB (equivalent to 449 MMUSD) in June 2022. In addition, income tax payable decreased by 309 MMUSD from 2021 tax payment in May 2022 while financial derivative liabilities increased by 100 MMUSD mainly from oil price hedging instruments.

### Equity

As at June 30, 2022, the Group had equity of 12,824 MMUSD, an increase of 396 MMUSD from equity as at December 31, 2021 of 12,428 MMUSD was primarily due to the net profit for the period, offset with the dividend payment in April 2022 and the redemption of subordinated capital debentures of 5,000 MMTHB (equivalent to 157 MMUSD) in June 2022.

Cash Flows

Unit: Million US Dollar



For six months in 2022

As at June 30, 2022, the Group had cash and cash equivalents of 2,806 MMUSD, an increase of 247 MMUSD when compared with December 31, 2021 of 2,559 MMUSD.

Source of funds amount of 2,165 MMUSD primarily came from Net cash received from operating activities as a result of the positive net cash flow from revenue from sales, offset with cash payments for expenses and income taxes, Net cash received from financing activities from the issuance of senior guaranteed debentures of 12,000 MMTHB (equivalent to 358 MMUSD) and Net cash received from investing activities from selling shares of PTT Global LNG Company Limited.

Uses of funds amount of 1,918 MMUSD primarily came from Net cash used for additional capital expenditures in exploration and production assets mainly from G1/61 Project, G2/61 Project, S1 Project, Bongkot Project and Zawtika Project, as well as Net cash used in financing activities primarily from the redemption of senior guaranteed debentures of 15,000 MMTHB (equivalent to 425 MMUSD) and subordinated capital debentures of 5,000 MMTHB (equivalent to 143 MMUSD), together with the dividend payment for the second half of 2021.

## Key Financial Ratios

	Q1 2022	Q2 2022	Q2 2021	6M 2022	6M 2021
<b>Profitability Ratio (%)</b>					
EBITDA* margin	77.69	75.19	75.94	76.34	74.95
Return on equity	9.39	12.32	7.66	12.32	7.66
Net profit margin	15.13	18.40	14.82	18.40	14.82
<b>Leverage Ratio (Times)</b>					
Debt to equity	0.33	0.33	0.34	0.33	0.34
Debt to EBITDA*	0.72	0.69	0.98	0.69	0.98

\* EBITDA excluded gain from a bargain purchase of Oman Block 61 Project and partial write-off of exploration and evaluation assets of the exploration project in Brazil which were recognized during 2021

## Remark:

EBITDA margin	=	Profit before deduction of interest, tax and depreciation to revenue from sales (included deemed income for tax payment by Oman government) including revenue from pipeline transportation
Return on equity	=	Net profit for the past 12 months to average equity
Net profit margin	=	Net profit to total revenue (for the past 12 months)
Debt to equity	=	Interest Bearing Debt to equity
Debt to EBITDA	=	Average Interest-Bearing Debt to profit before deduction of interest, tax and depreciation for the past 12 months



## Operational Highlights

As of Q2/2022, PTTEP Group has over 40 projects with domestic and international operations in 15 countries. The following are key project highlights.

### *Projects in Southeast Asia*

PTTEP Group's primary operational base is in Southeast Asia, with projects located in Thailand, the Republic of the Union of Myanmar (Myanmar), the Federation of Malaya (Malaysia), the Socialist Republic of Vietnam (Vietnam), and the Republic of Indonesia (Indonesia). In Q2/2022, the average sales volume from projects in Thailand is 290,100 BOED, accounting for 62% of total sales volume. Average sales volume from other countries in this region is 98,200 BOED, which accounted for 21% of total sales volume.

#### - Projects in Thailand

The majority of PTTEP Group's projects in Thailand, located in the Gulf of Thailand and onshore, are in the *production phase*. Key activities of the main producing projects are as follows. The **S1 Project**, where natural gas, liquefied petroleum gas (LPG) and crude oil are produced currently is under execution of long-term plan which has been already approved. The project is continuously drilling additional production wells with exploration drilling plan to maintain its production level. The environmental impact assessments were also undertaken into both existing and new production areas. The **Bongkot Project** and **Arhit Project**, which produce natural gas, condensate, and the **Contract 4 Project**, which produce natural gas, condensate and crude oil, were able to deliver production volumes as nominated from the buyer. On April 23, 2022, Bongkot Block 15 has ended the concession and has been transferred to PTTEP Energy Development Company Limited (PTTEP ED), who operates under G2/61 project. For Bongkot Block 16 and Block 17, has maintained production until end of concession on March 7, 2023. For **G1/61 Project (Erawan field)**, PTTEP ED has become an operator under Production Sharing Contract (PSC) on April 24, 2022 with successful, smooth and safe transition. The project has continued to develop according to the project development plan, which was developed in collaboration with the Department of Mineral Fuels and is able to maintain production volumes as nominated from the buyer. In addition, two new developments well head platforms are currently being installed and it is expected to complete the installation of another six well head platforms within 2022. Development wells drilling will be commenced in July 2022 onwards. For **G2/61 Project (Bongkot field)**, the operatorship transfer was completed on April 24, 2022, as planned, and PTTEP ED is now the operator under Production Sharing Contract.

#### - Projects in Myanmar

The key *producing projects* in Myanmar include the **Zawtika Project**, a natural gas producing project which located in the Gulf of Moattama in Myanmar, was able to deliver sales and production as per obligation. However, the COVID-19 and turbulence situation in Myanmar including financial sanctions imposed by western countries have caused some delays in certain activities. PTTEP has monitored the situation closely, identified potential risk, and prepared asset readiness following the Business Continuity Management plan (BCM) to ensure uninterrupted supply of petroleum, including closely coordination with PTT, the Department of Mineral Fuels, Ministry of Energy and Ministry of Foreign Affairs, on a regular basis for immediate mitigation plan to ensure continuity of gas production. In addition, the Project has been executing Phase 1D Field Development Plan in order to maintain the production level under the contract. Currently, the progress of wellhead platform construction is slightly delayed. The project team has expedited construction by increasing manpower and machinery so that the wellhead platforms can be installed as scheduled. **The Yetagun Project** is a natural gas and condensate producing project. On April 29, 2022, PTTEP International Limited (PTTEPI) and PTTEP Offshore Investment Company Limited (PTTEPO), subsidiaries of PTTEP, have notified their decisions to withdraw from Yetagun Project and gas transportation company, Taninthayi Pipeline Company LLC (TPC), to all partners of Yetagun Project effective on May 31, 2022. **The Yadana Project**, a natural gas producing field, PTTEPI became a new operator of the Project on July 20, 2022.

For *exploration project*, the **Myanmar M3 Project**, which includes the **Domestic Gas to Power project**, is awaiting development due to the political issue in Myanmar. PTTEP Group is closely monitoring the situations to assess risks, as well as to prepare for an appropriate action plan.

#### - Projects in Malaysia

The *producing projects* in Malaysia include the **Block K Project**, an oil producing field consisting of Kikeh, Siakap North-Petai (SNP) and Gumusut-Kakap (GK) fields which are located in the deep-water offshore Sabah. In Q2/2022, the inspection and maintenance were completed as planned and the Project continued drilling well in GK as part of field development phase 3. The **Sarawak SK309 and SK311 Project** are oil and gas producing fields located in the shallow water of offshore Sarawak. Two new infill wells have completed drilling, with expected production in July 2022. The **Block H Project**, located in the deep-water of offshore Sabah, is capable of producing up to 270 MMSCFD. Continue prospect evaluation and perform two Exploration wells planning for 2022 drilling campaign.

*Exploration projects* in Malaysia are highlighted as follows. The **Sarawak SK410B Project**, which includes a massive gas discovery in Lang Lebah Field, is currently undergoing field development study to reflect the larger gas discovery volume such as increasing processing plant capacity, managing higher CO<sub>2</sub> as per GHG aspiration target. Front End Engineering Design (FEED) is scheduled to begin in middle 2022 and the Final Investment Decision is expected to be in 2023. The Project still has several petroleum prospects, which are being studied and plans to drill one exploration well in July 2022. The **Sarawak SK417 Project** discovered natural gas reservoirs in Nangka-1 well and performed subsurface study on petroleum potential in the nearby area. The project is now planning and preparing to drill one appraisal well to prove up all resource potential. The **Sarawak SK405B Project** discovered crude oil and natural gas reservoirs in Sirung-1 well and performed subsurface study on petroleum potential in the nearby area. The project is now planning and preparing for the drilling of two exploration wells in 2022. The **Sarawak SK438 Project** conducted studies on additional appraisal program and development plan for this field, as well as on new petroleum potential candidates. Currently, the project is planning and preparing for the drilling of one exploration wells in 2022. The **Sarawak SK314A project** is currently planning and preparing for the drilling of two exploration wells in 2022. The **PM407 Project** is currently ongoing for the candidate prospect evaluation prior to proceed on prospect selection and future exploration well planning. The **PM415 Project** has been evaluating the remaining of petroleum potential which will result in the upcoming exploration strategy in the near future. The **Sabah SB412 Project** is currently preparing for exploration activities, beginning with 3D Seismic reprocessing, and geological and geophysical studies to comprehensively evaluate the petroleum potential in the near future.

#### - Projects in Vietnam

The key *Producing Projects* in Vietnam include the **Vietnam 9-2 Project**, which is natural gas and crude oil field, located offshore in the southeast region of Vietnam. In 2022, The Project has plan to drill 1 development wells in Q4/2022. **Vietnam 16-1 Project**, which is natural gas and crude oil field, located offshore in the southeast region of Vietnam. In 2022, the Project has plan to drill 2 development wells in Q3 - Q4/2022. For *Exploration Projects*, the **Vietnam B & 48/95 Project** and the **Vietnam 52/97 Project**, located offshore, are currently in the negotiation process on commercial terms in order to push forward the Final Investment Decision (FID). The projects have production capacity approximately 490 MMSCFD.

#### *Projects in the Middle East*

PTTEP Group's project highlights in this region are located in Sultanate of Oman (Oman) and United Arab Emirates (UAE).

The projects in Oman under *production phase* include the **PDO (Block 6) Project**, which is the largest potential onshore oil producing asset in Oman, and the **Mukhaizna (Block 53) Project**, which is a large producing onshore oil field located in the southern part of Oman. In Q2/2022, both projects continue to produce as per OPEC+ agreement. For **Oman Block 61 Project**, with its natural gas and condensate resources, the Project currently has a full production capacity of natural gas and condensate at 1,500 MMSCFD and

65,000 Barrels per day (BPD), respectively. For *Exploration Projects*, Oman Onshore block 12 Project continues the geological and geophysical studies throughout the year 2022 and plan to drill two exploration wells in 2023.

All of the projects in UAE are under *exploration phase*, located offshore in the northwest of Abu Dhabi. The Abu Dhabi Offshore 1 Project is currently being evaluated for petroleum potential for future exploration. The Abu Dhabi Offshore 2 Project completed one exploration well drilling in early of June. Currently, the drill stem test (DST) is in progress. The Abu Dhabi Offshore 3 Project is currently evaluating petroleum potential in preparation for the drilling of an appraisal well and exploration well in 2023-2024. The Sharjah Onshore Area C Project is currently in progress of seismic activity.

### *Projects in the Americas*

PTTEP Group's exploration projects in this region are located in Canada, the Federative Republic of Brazil (Brazil) and United Mexican States (Mexico).

The Mariana Oil Sands Project is located in Alberta, Canada. The Project is underway for reclamation activities according to government's conditions.

Projects in Brazil include the Barreirinhas AP1 Project located in the Barreirinhas Basin, offshore of the northeastern region of Brazil, is waiting for exploration wells drilling permit from the government. The Brazil BM-ES-23 Project located offshore in the Espirito Santo basin, east of Brazil, is currently evaluating the petroleum potential for further development.

Projects in Mexico include the Mexico block 12 (2.4) Project which is located in the Mexican Ridges, Western Gulf of Mexico. The Project is currently evaluating the remaining petroleum potential for further way forward. The Mexico block 29 (2.4) Project is located in the Campeche basin. The Project is now undergoing a pre-development study.

### *Projects in Australia*

PTTEP has one project in this region which is the PTTEP Australasia Project. This project is located in the Commonwealth of Australia (Australia) and has 6 permits.

The Cash Maple Field and Orchid Field, which are in exploration phase, are currently in progress to define proper direction of the project in order to increase the opportunity for development.

With regards to a claim made against PTTEP AAA in the Federal Court of Australia seeking damages on behalf of a group of Indonesian seaweed farmers (Class Action) for compensation relating to the Montara oil spill incident in 2009, PTTEP AAA has been performing all court requirements and be prepared for the appeal call.

### *Projects in Africa*

PTTEP's projects in this region are in the People's Democratic Republic of Algeria (Algeria) and the Republic of Mozambique (Mozambique) and the Republic of Angola (Angola).

The Algeria 433a and 416b Project, which is in the *production phase*, is located onshore in the eastern part of Algeria with crude oil producing. The project's average production for crude oil in Q2/2022 is at approximately 16,800 BPD. Eight additional infilled wells are in progress for drilling, and the production will begin in Q4/2022.

The Algeria Hassi Bir Rekaiz Project, which is in the *production phase*, is located onshore in the eastern part of Algeria. The first phase of the Project has started first oil production on 1 June 2022, at production rate around 10,000-13,000 BPD. The Project will complete Phase 1 in Q2/2023 by completing the remaining drilling and construction work. In the second phase, production capacity is planned to ramp up to around 50,000-60,000 BPD in 2026-2027.

The Mozambique Area 1 Project, which is a large LNG project located in offshore Mozambique, is currently in the development phase. In 2021, the project has commenced foundation work for onshore LNG facilities, temporary Beach Landing, subsea pipeline dredging and construction of security infrastructures. The project finance close and the first debt drawdown had been achieved.

However, due to the security situation in city of Palma since March 2021, which is close to the project construction site, in April 2021, Force Majeure was then declared, to suspend all construction works at the site, for safety reason of all employees and stakeholders. In June 2021, South African Development Committee (SADC) and the Rwanda Defense Force (RDF) has deployed military to support Mozambique to deal with the situation. The troops are currently stationed in the area and main districts in the vicinity of the Project, but insurgences still active outside the controlled perimeters. Presently, the operator is in close monitoring of the situation with the government and is studying the resumption plan in detail.

The **Block 17/06 Project**, which is in the *development phase*, is located offshore western of Angola and consists of two main development areas: on the east and the west sides of the Project. The FID for the eastern area is expected in the middle of 2022 and the first oil production is expected by the end of 2024, with the expected production capacity of 30,000 BPD (100% interest). The development plan for the western area is still being studied, with expected FID in 2024.

### *Other investments*

PTTEP Group had sold its shareholding interest in PTT Global LNG Company Limited (PTTGL) to Siam Management Holding Company Limited (Siam Management Holding), a subsidiary of PTT Group. The Sale and Purchase Agreement was signed on May 17, 2022, with the effective date on June 1, 2022. This divestment provides the flexibility for PTTGL's operations.



## Strategies under Sustainable Development Framework

PTTEP adheres to the sustainable development global practices and UN principles. Operating under the concept of “From We to World” in order to become the “sustainable organization” that takes conscious consideration of all stakeholders’ interests, maintains energy security, delivers value and fosters sustainability for the wider society and to be in line with the vision to become the “Energy Partner of Choice”. Therefore, PTTEP has established a strategic framework with three strategies, together with resource preparedness enablers for becoming a winning oil and gas company during energy transition. The three strategies are E&P growth strategy, decarbonization strategy, and beyond E&P business strategy. Key highlights from the second quarter of 2022 are as follows:

### *E&P growth strategy*

- Create additional value from existing assets with an emphasis on increasing production from key projects especially Thailand gas projects aiming to ensure national energy security as well as serve domestic demand. On April 24, 2022, PTTEP became the official operator of the G1/61 project (Erawan, Platong, Satun and Funan fields). The transition was smooth and safe without any interruption on supplying domestic gas demand. In addition, PTTEP has successfully commenced the production of the Algeria Hassi Bir Rekaiz project, in partnership with SONATRACH SPA, with the oil production target at 13,000 barrels per day. The production from this project supports the long-term growth of PTTEP.
- Expand investments in Thailand and Southeast Asia and where PTTEP targets as strategic investment areas and looks to expand business opportunities in Gas Value Chain. Along with capturing investment opportunity with strategic alliance in the Middle East i.e., Oman and UAE, where it has low-cost base as the advantage relative to other producing regions.
- Continuously maintain competitive unit costs to strengthen PTTEP's core business amid the increasingly volatile environment of the industry.
- Drive integrated LNG projects focusing on the upstream and liquefaction plants.

### *Decarbonization strategy*

- As of Q2/2022, the percentage of PTTEP GHG intensity reduction when compared with 2012 base year is reported at 25.2%. The figure demonstrates our early achievement (8 year ahead of plan) of our original GHG reduction target at 25% of GHG intensity reduction by 2030 (2012 base year). Since January 2022, the Company had reduced 0.28 million tonnes of CO<sub>2</sub> equivalent.
- In addition, PTTEP thrives to achieve Net Zero Greenhouse Gas Emissions by 2050 for E&P business covering scope 1 and scope 2 under PTTEP's operational control through the E&P portfolio management. Greenhouse gas criteria is included as part of investment decision for new projects, as well as managing Greenhouse gas through energy efficiency improvement, Carbon Capture Storage (CCS) engineering studies, and blue carbon initiative implementation to support greenhouse gas offsetting. In Q2/2022, PTTEP had received a confirmation letter from the Department of Marine and Coastal Resources (DMCR) to officially confirm their allocation of 40,000 rais of mangrove areas to PTTEP. Along with mangrove forestation, PTTEP also has plans to provide support to researchers in the studies of other blue carbon initiatives including seagrass, seaweed, and coral planting as well as seashell culturing.

### *Beyond E&P business strategy*

- Scale up AI and Robotics Ventures Company Limited (ARV) and accelerate products and services to market as well as explore investment opportunities with new alliances. On July 22, 2022, ARV together with Krungthai Bank signed a MOU to pilot National Corporate Identification Platform (NCID), which is an in-house solution on Digital ID and E-document. NCID transforms the conventional know-your-customer (KYC) process by digitizing process, which is fast, efficient, transparent, and secure. Furthermore, ARV's subsidiaries have made progress as follows;



- 1) The Rovula business unit has demonstrated utilizing Xplorer, which is Autonomous Underwater Vehicle for subsea inspection in Hydro-floating Solar Hybrid project at Sirindhorn Dam developed by the Electricity Generating Authority of Thailand (EGAT) in April 2022.
  - 2) The Skyller business unit had a MOU signing with the Nam Thuan Energy Investment Joint Stock Company, which is a subsidiary of the Super Energy Corporation on June 2, 2022. The MOU aims to jointly develop the eyes from the sky project for supporting a renewable energy business in Vietnam using a smart drone solution. In addition, the Skyller business unit also signed a MOU with the Thyssenkrupp Uhde company on June 15, 2022, to jointly nurture technological development and mature markets in Thailand, Germany, and SEA.
  - 3) The Varuna business unit completed and delivered the green area management web application for the OUR Khung BangKachao project to the Chaipattana Foundation in May 2022. The application eases the process of monitoring forestation using remote sensing, reducing labor needed for field surveying. In addition, products from the Varuna business have assisted smart farming fertilizing for more than 100,000 Rais
  - 4) The Cariva business unit jointly found the B-MED X company with the BJC Healthcare company on April 21, 2022, to develop and commercialize a healthcare platform to improve hospitalization experience in Thailand. In addition, the unit launched two mobile health applications, which are Arvic, Beaut, and Nextcercise on Google Play Store and Apple App Store.
- Explore Power business opportunities for Gas/LNG and renewables
  - Explore business opportunities in Carbon Capture Utilization (CCU). On April 6, 2022, PTTEP have signed a MOU partnership with five leading companies, which are Air Liquide, YTL PowerSeraya Pte. Limited, Oiltanking Asia Pacific Pte. Ltd., Kenoil Marine Services Pte Ltd, and A.P. Moller - Maersk A/S on a “Green Methanol Value Chain Collaboration” which will explore the feasibility of establishing a green e-methanol pilot plant, with a minimum capacity of 50,000 tons per annum (TPA), and will be the first of its kind in Southeast Asia. This MoU marks a pivotal step towards transforming captured biogenic CO<sub>2</sub> and green hydrogen produced from renewable electricity into green e-methanol and making this low carbon fuel commercially accessible for the maritime industry.
  - Drive the success of carbon capture and storage (CCS) or CCS hub model in Thailand. On June 1, 2022, PTTEP attended an MOU signing ceremony for the CCS Hub Model. The MOU was signed by PTT, PTTEP, PTTGC, Thai Oil, IRPC, and GPSC, to conduct a feasibility study to reduce greenhouse gas emitted from our operations as well as other industries in the adjacent operational areas. These ongoing projects are expected to support the country’s road to net zero greenhouse gas reduction effectively. In addition, PTTEP signed a MOU with Inpex Corporation and JGC Holdings Corporation on exploring the potential development of a CCS project in Thailand on April 26, 2022.
  - Commercialize in-house technology that have been researched and developed to support E&P operations

In Q2/2022, PTTEP received APAC NOC of the Year 2022 in the Asia Pacific Energy Capital Assembly (APAC) from the Energy Council, Singapore. The award represents a regional benchmark of excellence for companies, working in the energy industry at the forefront of its operating performance and value creation. In addition, PTTEP received two awards, which are Best Emerging CEO (Oil & Gas) and Best Investor Relations (Oil & Gas), from The Global Economics, a leading UK financial magazine. These awards represent international recognition for PTTEP’s strong commitment and continuous development.

### *Resource preparedness enablers*

#### **Business support and company activity**

PTTEP is committed to conducting its business with transparency and effectiveness by adhering to the good corporate governance principles, maintaining robust risk management and internal control system as well as strictly conforming to applicable laws and regulations. The main progress of works is highlighted as follows:

- Continuously Improve GRC implementation and develop related activities through appropriate communication channels to embed GRC culture and enhance the understanding in Malaysia Asset to prepare for Company-wide GRC Maturity Level assessment program.
- Enhance Risk Management System by implementing Chatbot to cover suggesting risk, searching risk information with an aim of no improperly managed high-impact risks (no surprise problem).
- Develop GRC One Digital System which covers various reporting related to GRC i.e. Whistleblower Reporting, Risk Management, Business Continuity Management, Internal Control Assessment, and Compliance Reporting to assist management and relevant parties to obtain immediate GRC information for efficient decision making.
- Continue building GRC culture throughout several communication campaigns to enhance employee's understanding and awareness in order to ensure GRC implementation as part of their work. Furthermore, promoting GRC to outside organization to become a GRC role model.

In Q2/2022, PTTEP received the NACC Integrity Awards for the fourth time from the National Anti-Corruption Commission (NACC). The awards are bestowed upon organizations that operate their business with transparency and uphold universal ethical practices. The ceremony was held at the NACC Office, Nonthaburi.

PTTEP has established its Human Rights Policy and Management System in line with the international best practices to ensure concrete implementation and prevention of Human Rights violation through its business operations. The Company also conducted annual Human Rights Risk Assessment continuously. In 2022, the risk assessment covers 100% of its operating assets, including G1/61 and G2/61 projects that have been officially transferred to PTTEP since April this year, non-operated joint ventures, and Tier 1 suppliers. Human Rights e-Learning in online platform was also provided to increase understanding for all employees.

Furthermore, PTTEP has an environmental management system which is a subset of PTTEP's Safety, Security, Health and Environment Management System (SSHE MS). In Q2/2022, PTTEP Lost Time Injury Frequency (LTIF) was 0.1, while the Total Recordable Incident Rate (TRIR) was 0.89. The LTIF and TRIR were in the average safety performance of the International Association of Oil & Gas Producers (IOGP).

For natural resource conservation, environmental restoration as well as community and social development that PTTEP also put emphasis on, our strategies and main progress in Q2/2022 are as follows:

- Circular Model for E&P Strategy: PTTEP's work processes are designed to improve waste management effectiveness and ultimately to ensure optimum resource efficiency. Unused materials are encouraged to be reused and recycled, when appropriate, safe, and only when they are still in efficient conditions. Additionally, opportunities for high volume waste upcycling are being studied. In Q2/2022, PTTEP's prototype study result to turn sand waste from petroleum production from Zawtika project to nano silica and zeolite was found satisfactory with good moisture adsorption rate. Zeolite is used in various applications i.e. adsorption, catalyst, and energy storage. In addition, the feasibility to reuse wellhead platform jacket is being studied in the extension to the success of wellhead platform topside reuse at one of the Arthit wellhead platforms in 2021.
- Ocean for Life Strategy: PTTEP, whose operations are mostly offshore, aims to be a leader in conserving, restoring, and monitoring natural resources and marine ecosystems (Guardian of the Ocean) to support economic growth and quality of life for nearshore communities. In Q2/2022, the development of PTTEP ocean data platform was kicked off with the objective to publicly disclose PTTEP ocean health monitoring scientific data as well as other ocean activity related information on the website. The platform is expected to go live by October 2022. In addition, to support the increasing of the income of communities in 17 provinces around the Gulf of Thailand, as of Q2/2022, PTTEP under the collaboration with the Department of Marine and Coastal Resources (DMCR) have established 2 aquatic animal hatchery learning centers in Baan Phanoen, Phetchaburi province and Baan Krood, Prachuap Khiri Khan province. The total of 8 centers are planned to be established by the end of 2022.

In the second quarter, PTTEP received the gold award from the International CSR Excellence Award 2022 in London, United Kingdom from the H.T.M.S. underwater learning site project. Moreover, PTTEP won the Golden Peacock Global Award for Corporate Social Responsibility 2021, which is a global CSR award instituted by the Institute of Director (IOD), India. This award is given to organizations that demonstrate a commitment to conduct their businesses with good corporate governance principle contributing to social, environmental, and economic development, along with improving the quality of life of society and the community.

### Finance

PTTEP places great importance on effective financial management by focusing on building financial discipline and maintaining a robust capital structure. As at Q2/2022, the company maintained a strong liquidity position with cash on hand of approximately 2,806 MMUSD. The debt-to-equity ratio is 0.33 which is in line with the Company's financial policy.

On 5 April 2022, PTTEP Treasury Center Company Limited (PTTEP TC), a wholly-owned subsidiary of PTTEP Group has successfully completed the issuance of senior guaranteed debentures with bondholder's representative amount of 12,000 MMTHB (equivalent to 359 MMUSD). The debentures have three tranches consisting of 5, 7 and 10 years, carrying the coupon rates of 2.09% 2.69% and 3.05% per annum, respectively, and are fully guaranteed by PTTEP.

In June 2022, PTTEP exercised the right to early redeem its subordinated perpetual capital debentures for the full amount of 5,000 MMTHB (equivalent to 157 MMUSD). PTTEP TC also redeemed its senior guaranteed debentures with bondholders' representative amount of 15,000 MMTHB (equivalent to 449 MMUSD) at maturity. Additionally, in April 2022, PTTEP paid the remaining annual dividend for year 2021 at the rate of 3.00 THB per share, totaling of 361 MMUSD. After the redemptions and dividend payout, PTTEP still has sufficient liquidity for operation and investment, as well as maintain its solid financial position to withstand such oil price and global economic fluctuation.

### Research development and technology

PTTEP encourages Research and Development (R&D), technological applications, and innovation to increase the efficiency and competitiveness of the petroleum exploration and production business. The main objectives of R&D include unlocking high CO<sub>2</sub> reserves, removing contaminants in condensate, enhancing oil recovery, reducing environmental impact, reducing decommissioning cost, and improving operation and maintenance efficiency. As of Q2/2022, there are 55 projects under research and development and the progress of highlight projects are as follows:

- The technology for contaminant removal in condensate is successful in field trial tested which consists of the chemical demulsifier injection for particulate contaminants separation, and adsorbent technology. Currently, it is in the process of expanding technology implementation and improving its efficiency.
- The technology for supporting pipeline decommissioning activities such as the decontamination chemicals for pipelines cleaning and intelligent sampling PIG have been completed field trial in Bongkot field in Q1/2022, and the performance is satisfactory. The development team is carrying out the technology performance improvement as well as expanding its use to support future petroleum pipeline decommissioning activities.
- The wellhead operator robot project is in progress of developing a prototype robot which has capability to detect equipment abnormalities and to autonomously manipulate the process equipment in the production platform. The prototype testing in offshore production platform had been performed during Q1 to Q2 of 2022. The test result is satisfactory, and the development is going to be continued to the next phase as well as expanding the development scope to cover other production fields.
- The flare gas conversion to Carbon Nanotube for greenhouse gas emission reduction project is in progress to carry out the front-end engineering design (FEED) for the pilot production unit that is planned to construct at S1 Project in 2023.
- The Carbon Dioxide (CO<sub>2</sub>) conversion to Propylene Carbonate for greenhouse gas emission reduction project is in progress to carry out the prototype process development.



## Future Business Outlook

### *Oil Price Outlook*

Following Russia-Ukraine war, EU has agreed to cut up-to 90% of crude import from Russia by December 2022. Meanwhile, Russia is planning to pivot their export to Asian buyers mainly China and India at an increase of 1.0-1.5 million barrels per day (MMBPD) compared to April 2022. Russia crude production could be dropped from 10.8 to below 9 MMBPD by the end of this year.

OPEC+ output remains flattish around 38-39 MMBPD due to lack of investment earlier and spare capacity around 2-3 MMBPD mainly from Saudi Arabia and UAE. Current production cut deal which is due to reach pre-pandemic level in August 2022 could add group production toward 40 MMBPD, assuming there is no new deal in place. Moreover, U.S. production is expected to increase from 11.4 MMBPD in first half of 2022 to 13.2 MMBPD by December 2022 reached pre-COVID-19 level. This is mainly due to high price encouraging more investment as seen from increasing number of oil rig count in U.S.

Demand forecast could rise toward 101 MMBPD in the second half of 2022 from average 99 MMBPD in first half of the year. This is mainly from summer driving season in U.S. and Europe, while crude inventory is expected to build up slightly over the second half of the year. These cause Dubai price to average at high level around 90-110 USD/barrel and 90-105 USD/barrel yearly average, based on PTTEP's internal analysis and market consensus. Concerns on world GDP growth start to influence crude price, many financial institutes already revised down projection to only 3% in 2022 as a result of central banks' effort to tame surging inflation from high energy and food prices globally by increasing interest rates. Moreover, additional downside risks are coming from potential Iran sanction lifted, China zero COVID policy, EU compliance to cut Russia crude import and additional strategic reserves release.

### *LNG Market*

Russia – Ukraine conflict is still the main factor that affects the Asian Spot LNG price in this year as 40% of Europe's natural gas is supplied by Russia. When considering LNG growth, LNG demand in Asia is still increasing, propelled by countries such as China, India and Bangladesh, together with demand from Europe to fulfill low gas inventory levels. The situation will cause the Asian Spot LNG price to remain high in Q3/2022. However, it is expected that total production capacity of existing and upcoming LNG projects in 2022 will grow by 25 MTPA to 420 MTPA from 2021 (approximately 6%), while demand for LNG is anticipated to be around 392 MTPA (Source: FGE as of June 2022). The average 2022 Asian Spot LNG price is expected to be around 27-33 USD/MMBTU (Source: FGE, Wood Mackenzie as of June 2022).

### *Thai Economy and Foreign Exchange Outlook*

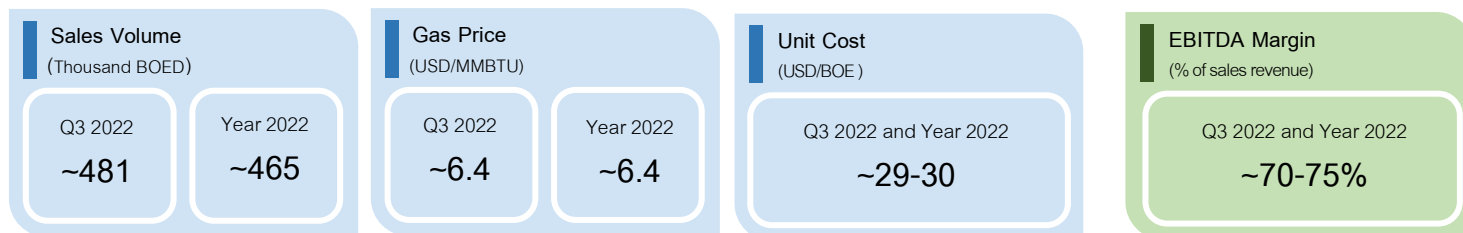
The Bank of Thailand expects the economy to recover and expand at 3.3% in 2022, an upward revision from its previous forecast of 3.2% made in Q1/2022. Although inflation is passed through to the Thai economy through energy and commodity prices, BOT expects Thailand's economic recovery to continue. Inflation is expected to be above target range of 1-3% in 2022 and to decline to be within range in 2023. Employment rate is also below pre-pandemic levels, but it is on a recovery path.

For 2022, the Thai Baht is expected to continue to be volatile and may depreciate further in the short-term due to uncertainty generated from high levels of inflation which reached 7.1% in Thailand as of May. However, the THB is expected to begin appreciating within 2022 from the recovery of Thailand's tourism industry and the potential shift to tighter monetary policy by BOT through multiple rate hikes in the remainder of 2022.

PTTEP has adopted the natural hedge method to manage FX risks of revenues from petroleum products and major expenses which are in the same currency. Remaining FX risk exposures from non-USD revenues and expenses are managed by utilizing financial hedging instruments such as forwards and cross currency swaps. Moreover, interest rate volatility does not materially impact the Company's financial performance as 83% of total interest-bearing debt is fixed rate.

### PTTEP's performance outlook for the third quarter and the year 2022

PTTEP's performance depends on three major factors including Sales volumes, Gas price and Unit cost with guidance as follows.



Note: 1. The sales volume includes the sales volume from ADNOC Gas Processing (AGP)

2. The assumption is based on average Dubai price in 2022 of 99 USD/Barrel

3. Including increased sales volume from G1/61 sole investment

4. EBITDA margin: A percentage of Earnings before interest, taxes, depreciation, and amortization to the Sales Revenues and Revenue from pipeline transportation

#### Sales volume:

PTTEP expects the average sales volume for the third quarter and full year of 2022 to be approximately 481,000 and 465,000 barrels of oil equivalent per day, respectively. The sales volume growth in 2022, compared to the previous year was mainly driven by the operatorship takeover and start of petroleum production of G1/61 Project (Erawan), the first oil production of Algeria Hassi Bir Rekaiz Project in Q2/2022. Moreover, this year marks the first full year realization of sales volume from Malaysia Block H and Oman Block 61 Project.

#### Sales price:

- PTTEP's liquid prices will fluctuate according to global crude prices.
- PTTEP's gas price formulas are partially linked to oil prices with reference to average historical prices ranging from the past 6 to 24 months. The average gas price for the third quarter and full year of 2022 is estimated at approximately 6.4 USD/MMBTU, higher than the previous year, reflecting the lag time adjustment of gas price in accordance with a continuous increase in global crude price.
- Outstanding volume of oil price hedging as at the end of the second quarter, to be settled throughout the second half of 2022, was approximately 7.7 million barrels. The Company has consistently monitored crude oil price movements and has the flexibility to adjust its hedging plan as appropriate.

#### Unit Cost:

For the third quarter and full year of 2022, PTTEP expects to be able to maintain unit cost at around 29-30 USD/BOE, higher than the reported unit cost of 2021 mainly from an increase in royalty expense per unit following a rise in average selling price. The operating expense per unit also increased from petroleum development and production of G1/61 Project, which PTTEP has taken over the operatorship under Petroleum Sharing Contract, starting from Q2/2022.