



Executive Summary

During the second quarter of 2021, average crude oil price had increased to 66.9 USD/barrel, mainly from recovery in crude oil demand following lockdowns relaxation in many countries as more COVID-19 vaccines had been administered and the number of new infections declined. This led to faster global economic recovery than expected. On the supply side, OPEC+ has been cautious towards its policy by deciding to gradually increase its production volume. The market, therefore, expected to see continuing supply deficit in Q3/2021 and the crude oil price rose to 70-80 USD per barrel. Nevertheless, oil prices remain under pressure from concerns over COVID-19 new variants outbreak and the delay in vaccine roll out that may force countries to re-implement lockdown measures.

PTTEP continues to operate under the EXPAND – EXECUTE strategy with update on key activities in Q2/2021 including the Sarawak SK410B Project in Malaysia, which we previously announced the finding of large natural gas reservoir, is currently under field development study to reflect a larger gas discovery volume with the Final Investment Decision (FID) expected in late 2022/early 2023; the Sarawak SK438 Project which we discovered a new natural gas field in its first exploration well and is currently evaluating petroleum potential from the drilling result of the second exploration well for further development planning, evidencing additional success in exploration drilling in Malaysia after Q1/2021 discoveries in Sarawak SK417 and Sarawak SK405B projects; Oman Block 61 Project that we had recently acquired participating interest in March 2021, has increased its production level of natural gas and condensate to 1,500 MMSCFD and 69,000 BPD, respectively since 27 June 2021.

Regarding the transition of operations for G1/61 Project (Erawan field), there is no clarity on the site access for wellhead platforms and pipeline installation, although the company has accepted all conditions to access the site required by the current concessionaire. This will affect the gas production under the new PSC. The impact is currently being evaluated with remediation plan to compensate potential volume shortfall from other projects. We continuously and closely coordinate with the government to find minimal impact solution, putting the top priority on Thailand’s energy security. For G2/61 Project (Bongkot field), we have good progress in transition as planned.

In Q2/2021, PTTEP reported net income of 222 MMUSD, decreased from the previous quarter. The profit from normal operation has increased to 349 MMUSD mainly driven by higher sales volume and average selling price, together with lower unit cost which decreased from 27.96 USD/barrel of oil equivalent (BOE) to 27.24 USD/BOE. Whereas, there is loss from non-recurring items 127 MMUSD mainly from oil price hedging. PTTEP, therefore, reported cash flow from operations of 1,434 MMUSD with the EBITDA margin at 76%. As at Q2/2021, PTTEP reported total assets of 23,230 MMUSD, of which 1,850 MMUSD was cash and short-term investments, while total liabilities were reported at 11,209 MMUSD, of which 4,131 MMUSD was interest-bearing debt. Total shareholders’ equity stood at 12,021 MMUSD with debt-to-equity ratio at 0.34, reflecting strong and healthy financial structure.

Table of key financial results

| | Q1 2021 | Q2 2021 | Q2 2020 | % Inc. (Dec.) QoQ | % Inc. (Dec.) YoY | 6M 2021 | 6M 2020 | % Inc. YTD |
|--|------------|------------|------------|-------------------------|-------------------------|------------|------------|------------------|
| <i>(Unit: Million US Dollar)</i> | | | | | | | | |
| Total Revenue | 1,779 | 1,767 | 1,095 | (1) | 61 | 3,546 | 2,779 | 28 |
| Sales Revenue * | 1,391 | 1,729 | 1,041 | 24 | 66 | 3,120 | 2,523 | 24 |
| EBITDA ** | 1,041 | 1,328 | 711 | 28 | 87 | 2,369 | 1,793 | 32 |
| Profit(loss) for the period | 376 | 222 | 134 | (41) | 66 | 598 | 409 | 46 |
| Basic earnings(loss) per share (Unit: US Dollar) | 0.09 | 0.06 | 0.03 | (37) | 100 | 0.15 | 0.10 | 50 |
| Profit(loss) from normal operation | 282 | 349 | 128 | 24 | >100 | 631 | 418 | 51 |
| Profit(loss) from non-recurring items | 94 | (127) | 6 | >(100) | >(100) | (33) | (9) | >(100) |

* Included deemed income for tax payment by Oman government amounting to 28 MMUSD for Q2/2021 and for the six-month period ended June 2021 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 for Q1/2021 and for the six-month period ended June 2021



Economic Overview in the second quarter of 2021

Crude Oil Price

Dubai crude price in Q2/2021 increased to an average of 66.9 USD per barrel, higher than 60.2 USD per barrel in Q1/2021. Price increase was mainly due to demand recovery from lockdown easing and higher COVID-19 vaccination rate as well as low daily COVID-19 cases in U.S. and Europe. These helped accelerate faster than expected economic recovery and therefore demand resumption despite situation of rising COVID-19 cases in India and Europe during April and Southeast Asia in June.

On the supply side, OPEC+'s cautious policy towards demand recovery has influenced OPEC+ volume cut, including voluntary cut from Saudi Arabia, to be more gradually from 7.9 million barrels per day in April to 7.3, 6.6, and 5.8 million barrels per day from May to July 2021, respectively. Despite the price increase, U.S. shale oil producers have kept modest activity and utilized cash flows mainly for debts repayment and return to investors. As a result, Supply becomes more tighten in Q2/2021.

Liquefied Natural Gas (LNG)

For LNG Market in Q2/2021, the average Asian Spot LNG price remained close to the previous quarter at approximately 10.03 USD per MMBTU where price continuously increased from 7 USD per MMBTU at the end of Q1/2021 to 13 USD per MMBTU at the end of June. Main reasons that supporting high price came from strong LNG demand from global economic recovery as many countries had higher COVID-19 vaccination rate, which resulted in easing travel restrictions for vaccinated travelers together with unusual hot climate in Northeast Asia led to a surge in LNG demand in China, Japan and South Korea for electric power. The LNG price is also supported by higher carbon price in Europe.

On the supply side, facing shortage from production issues and extended maintenances at multiple U.S. production facilities including Sabine Pass, Freeport and Cameron, along with Australia's Gorgon and Ichthys had kept prices at high level. Besides, it is expected that China's strong economic recovery this year and supportive government regulation on investment in LNG infrastructure will significantly increase LNG demand and that China could overtake Japan as the world's largest LNG buyer.

Thailand's Energy Demand

Thailand's energy demand from January to April 2021 was reported at 2 million BOED, an increase of 1% relative to the same period of the previous year (Source: EPPO, The Ministry of Energy), largely due to the use of natural gas to produce electricity during summer in power and industrial sectors including using coal in industrial sector. Overall, the energy usage was increased from all sources except oil which was decreased from lower jet fuel demand from COVID-19 impact.

Exchange Rates (Thai Baht against US Dollar)

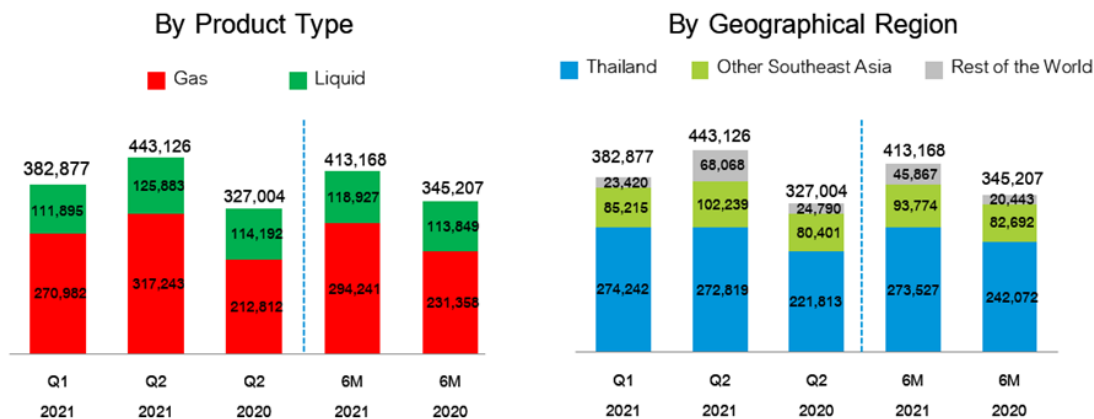
In Q2/2021, THB against USD depreciated from 31.34 to 32.05 THB/USD. Important drivers of the depreciation were Thailand's expected delayed economic recovery due to the continued uncontained Covid-19 situation and limited vaccine distribution in Thailand, as well as additional pressure from seasonal profit repatriation of foreign investors. On the USD front, the dollar appreciated sharply in late Q2/2021 due to signaling from the Federal Reserve of the sooner-than-expected tapering timeline.



Financial Performance

Average Sales Volume and Selling Price

Unit: Barrels of Oil Equivalent per Day



| Average selling price and Dubai crude oil price (Unit : US Dollar) | Q1 2021 | Q2 2021 | Q2 2020 | % Inc. (Dec.) QoQ | % Inc. (Dec.) YoY | 6M 2021 | 6M 2020 | % Inc. (Dec.) YTD |
|--|---------|---------|---------|-------------------|-------------------|---------|---------|-------------------|
| Average selling price (/BOE) | 40.38 | 42.19 | 34.97 | 4 | 21 | 41.35 | 40.15 | 3 |
| Liquid price (/BOE) | 56.59 | 63.98 | 28.92 | 13 | >100 | 60.52 | 40.80 | 48 |
| Gas price (/MMBTU) | 5.61 | 5.59 | 6.37 | (0) | (12) | 5.60 | 6.64 | (16) |
| Average Dubai crude oil price (/BBL) | 60.21 | 67.02 | 30.72 | 11 | >100 | 63.62 | 40.72 | 56 |

Remark: The average sales volume and selling price for Q2/2021 and for the six-month period ended June 2021 were excluded deemed income for tax payment by Oman government.

For the Second quarter of 2021 compared with the First quarter of 2021

In Q2/2021, the average sales volume of PTTEP and its subsidiaries (the "Group") increased to 443,126 BOED when compared with Q1/2021 of 382,877 BOED primarily from the acquisition of Oman Block 61 Project in March 2021, and Malaysia Project first gas production of Malaysia Block H Project in February 2021. The average selling price in Q2/2021 increased to 42.19 USD/BOE (Q1/2021: 40.38 USD/BOE).

For the Second quarter of 2021 compared with the Second quarter of 2020

When compared the average sales volume for Q2/2021 to Q2/2020 of 327,004 BOED, the average sales volume increased primarily from the acquisition of Oman Block 61 Project in March 2021, Bongkot Project and Contract 4 Project due to higher gas nomination from buyer and Malaysia Project first gas production of Malaysia Block H Project in February 2021. The average selling price in Q2/2021 increased to 42.19 USD/BOE (Q2/2020: 34.97 USD/BOE).

For the six-month period ended June 2021 compared with 2020

The average sales volume for the six-month period ended June 2021, increased to 413,168 BOED when compared with the same period of 2020 (for the six-month period ended June 2020 of 345,207 BOED). The increase was primarily due to the acquisition of Oman Block 61 Project in March 2021, Bongkot Project and Contract 4 Project due to higher gas nomination from buyer together with Malaysia Project from Malaysia Block H Project first gas production in February 2021. The average selling price for the six-month period ended June 2021 increased to 41.35 USD/BOE (for the six-month period ended June 2020: 40.15 USD/BOE).

Overall Operating Results

For the Second quarter of 2021 compared with the First quarter of 2021

In Q2/2021, the Group had net profit of 222 MMUSD, a decrease of 154 MMUSD or 41% from a net profit in Q1/2021 of 376 MMUSD, despite an increase in revenue from sales and a decrease in exploration expenses, there was no recognition of gain from a bargain purchase of Oman Block 61 Project in this quarter along with an increase in loss on financial instruments. The net profit for Q2/2021 of 222 MMUSD can be separated as following.

The profit from normal operation in Q2/2021 was 349 MMUSD, an increase of 67 MMUSD compared with a profit in Q1/2021 of 282 MMUSD was due to an increase in revenue from sales of 338 MMUSD from 16% increase in average sales volume and higher average selling price, offset with an increase in expenses which was primarily from an increase in income taxes of 138 MMUSD mainly from Oman Block 61 Project regarding a gradual recognition of non-cash income tax expense, as well as higher profit from projects in Thailand, together with an increase in depreciation, depletion and amortization of 82 MMUSD due to higher sales volume primarily from Oman Block 61 Project acquisition and Malaysia Project along with additional completed assets from S1 Project. Moreover, there was an increase in operating expenses of 19 MMUSD due to higher sales volume primarily from the acquisition of Oman Block 61 Project and higher crude sales volume from Malaysia Project. In addition, petroleum royalties increased by 19 MMUSD in accordance with higher domestic sales.

The loss from non-recurring items in Q2/2021 was 127 MMUSD, a change of 221 MMUSD compared with a profit in Q1/2021 of 94 MMUSD due to no recognition of gain from a bargain purchase of Oman Block 61 Project amounting to 350 MMUSD in this quarter, together with an increase in loss on financial instruments of 27 MMUSD, primarily from oil price hedging instruments due to more upward trend of forward oil price than Q1/2021. However, there was no exploration expense from partial write-off of exploration and evaluation assets of the exploration project in Brazil amounting to 145 MMUSD in this quarter.

For the Second quarter of 2021 compared with the Second quarter of 2020

In Q2/2021, the Group had net profit of 222 MMUSD, an increase of 88 MMUSD or 66% from a net profit in Q2/2020 of 134 MMUSD primarily from an increase in revenue from sales, offset with impact from the change of income tax calculation currency from Thai baht to USD. The net profit for Q2/2021 of 222 MMUSD can be separated as following.

The profit from normal operation in Q2/2021 was 349 MMUSD, an increase of 221 MMUSD when compared with a profit in Q2/2020 of 128 MMUSD, was due to an increase in revenue from sales of 688 MMUSD, 36% increase in average sales volume and 21% increase in average selling price. However, there was an increase in expenses primarily from an increase in income taxes of 267 MMUSD mainly from higher profit from projects in Thailand and Oman Block 61 Project regarding a gradual recognition of non-cash income tax expense, together with an increase in depreciation, depletion and amortization of 141 MMUSD due to higher sales volume primarily from Oman Block 61 Project acquisition, Bongkot Project, Malaysia Project and Contract 4 Project. In addition, petroleum royalties increased by 59 MMUSD in accordance with higher domestic sales.

The loss from non-recurring items in Q2/2021 was 127 MMUSD, a change of 133 MMUSD compared with a profit in Q2/2020 of 6 MMUSD. The reason was primarily from the change of income tax calculation currency from Thai baht to USD during 2020 which resulted in no such income tax in Q2/2021 while there was a recognition of tax saving of 122 MMUSD in Q2/2020 from the reversal of income taxes relating to changes in foreign exchange rate which were recognized in the prior period for corporate income tax. In addition, there was an increase in loss on financial instruments of 47 MMUSD, primarily from higher loss on oil price hedging instruments due to more upward trend of forward oil price than Q2/2020, offset with gain on foreign exchange forward contracts due to the depreciation of Thai baht against USD in this quarter (Q2/2020: recognized loss due to the appreciation of Thai Baht against USD). However, there was no recognition of impairment loss on assets this quarter (Q2/2020: recognized loss of 47 MMUSD mainly from Mariana Oil Sands Project).

For the six-month period ended June 2021 compared with 2020

For the six-month period ended June 2021, the Group had net profit of 598 MMUSD, an increase of 189 MMUSD or 46% from a net profit for the six-month period ended June 2020 of 409 MMUSD primarily from an increase in revenue from sales and a recognition of gain from a bargain purchase of Oman Block 61 Project, offset with an increase in expenses which was primarily from a recognition of loss on financial instruments (for the six-month period ended June 2020: recognized gain) and exploration expenses. The net profit for the six-month period ended June 2021 of 598 MMUSD can be separated as following.

The profit from normal operation for the six-month period ended June 2021 was 631 MMUSD, an increase of 213 MMUSD when compared with a profit for the six-month period ended June 2020 of 418 MMUSD, was due to an increase in revenue from sales of 597 MMUSD, 20% increase in average sales volume and higher average selling price. However, income taxes increased by 223 MMUSD as a result of higher profit from projects in Thailand and Oman Block 61 Project regarding a gradual recognition of non-cash income tax expense. In addition, depreciation, depletion and amortization increased by 152 MMUSD due to higher sales volume primarily from Oman Block 61 Project acquisition, Bongkot Project and Contract 4 Project.

The loss from non-recurring items for the six-month period ended June 2021 was 33 MMUSD, an increase of 24 MMUSD when compared with a loss for the six-month period ended June 2020 of 9 MMUSD due to a recognition of loss on financial instruments of 223 MMUSD primarily from oil price hedging instruments due to an upward trend of forward oil price while gain of 144 MMUSD was recognized for the six-month period ended June 2020, primarily from oil price hedging instruments due to a downward trend of forward oil price. In addition, there was a recognition of exploration expenses from partial write-off of exploration and evaluation assets of the exploration project in Brazil amounting to 145 MMUSD, offset with gain from a bargain purchase of Oman Block 61 Project amounting to 350 MMUSD and a decrease in income taxes relating to foreign exchange rate of 94 MMUSD due to the change of income tax calculation currency from Thai baht to USD during 2020 which resulted in no such income tax for the six-month period ended June 2021 while for the six-month period ended June 2020, there was a reversal of income tax benefits relating to changes in foreign exchange rate which were recognized in the prior period. In addition, for the six-month period ended June 2021 there was no recognition of impairment loss on assets (for the six-month period ended June 2020: recognized loss of 47 MMUSD mainly from Mariana Oil Sands Project).

Operating Results by Segments

| Net Profit (loss) | Q1 2021 | Q2 2021 | Q2 2020 | % Inc. (Dec.) QoQ | % Inc. (Dec.) YoY | 6M 2021 | 6M 2020 | % Inc. (Dec.) YTD |
|----------------------------|------------|------------|------------|-------------------------|-------------------------|------------|------------|-------------------------|
| (Unit: Million US Dollar) | | | | | | | | |
| Exploration and production | 539 | 395 | 142 | (27) | >100 | 934 | 399 | >100 |
| Southeast Asia | 324 | 382 | 208 | 18 | 84 | 706 | 477 | 48 |
| - Thailand | 270 | 307 | 158 | 14 | 94 | 577 | 403 | 43 |
| - Other Southeast Asia | 54 | 75 | 50 | 39 | 50 | 129 | 74 | 74 |
| Middle East | 351 | 6 | (10) | (98) | >100 | 357 | (14) | >100 |
| Australia | (1) | (0.5) | (10) | 50 | 95 | (1) | (11) | 91 |
| America | (146) | (2) | (46) | 99 | 96 | (148) | (49) | >(100) |
| Africa | 7 | 6 | (1) | (14) | >100 | 13 | (6) | >100 |
| Others | 4 | 3 | 1 | (25) | >100 | 7 | 2 | >100 |
| Head office and others | (163) | (173) | (8) | (6) | >(100) | (336) | 10 | >(100) |
| Total | 376 | 222 | 134 | (33) | 65 | 598 | 409 | 46 |

For the Second quarter of 2021 compared with the First quarter of 2021

For Q2/2021, the Group reported a net profit of 222 MMUSD, a decrease of 154 MMUSD or 41% when compared with a net profit of 376 MMUSD in Q1/2021, primarily from a decrease of Exploration and Production segment in Middle East of 345 MMUSD, while there was an increase in America of 144 MMUSD and Southeast Asia (Thailand increased by 37 MMUSD and Other Southeast Asia increased by 21 MMUSD).

Exploration and Production segment

- Middle East

In Q2/2021, Middle East reported a net profit of 6 MMUSD, a decrease of 345 MMUSD or 98% when compared with a net profit of 351 MMUSD in Q1/2021, primarily from no recognition of gain from a bargain purchase of Oman Block 61 Project.

- America

In Q2/2021, America reported a net loss of 2 MMUSD, a decrease of 144 MMUSD or 99% when compared with a net loss of 146 MMUSD in Q1/2021, primarily from a decrease of exploration expenses from no partial write-off of exploration and evaluation assets of the exploration project in Brazil.

- Southeast Asia

- Thailand

In Q2/2021, Thailand reported a net profit of 307 MMUSD, an increase of 37 MMUSD or 14% when compared with a net profit of 270 MMUSD in Q1/2021, primarily from an increase in revenue from sales due to increase in average selling price while income taxes increased in accordance with higher net profit. In addition, depreciation, depletion and amortization increased primarily from increases of completed assets and petroleum royalties increased in accordance with an increase in revenue from sales.

- Other Southeast Asia

In Q2/2021, Other Southeast Asia reported a net profit of 75 MMUSD, an increase of 21 MMUSD or 39% when compared with a net profit of 54 MMUSD in Q1/2021, primarily from an increase in revenue from sales due to an increase in average sales volume primarily from Malaysia Project, while operating expenses increased in accordance with an increase in average sales volume, as well as, income taxes increased in accordance with increases in profit.

For the Second quarter of 2021 compared with the Second quarter of 2020

For Q2/2021, the Group reported a net profit of 222 MMUSD, an increase of 88 MMUSD or 66% when compared with a net profit of 134 MMUSD in Q2/2020, primarily from an increase of Exploration and Production segment in Southeast Asia (Thailand increased by 149 MMUSD and Other Southeast Asia increased by 25 MMUSD) and America of 44 MMUSD, while there was a decrease in Head Office and Others segment of 165 MMUSD.

Exploration and Production segment

- Southeast Asia

- Thailand

In Q2/2021, Thailand reported a net profit of 307 MMUSD, an increase of 149 MMUSD or 94% when compared with a net profit of 158 MMUSD in Q2/2020, primarily from an increase in revenue from sales due to increases in both average selling price and average sales volume primarily from Bongkot Project and Contract 4 Project, while income taxes increased in accordance with an increase in profit. In addition, depreciation, depletion and amortization increased primarily from an increase of average sales volume and petroleum royalties increased in accordance with an increase in revenue from sales.

- Other Southeast Asia

In Q2/2021, Other Southeast Asia reported a net profit of 75 MMUSD, an increase of 25 MMUSD or 50% when compared with a net profit of 50 MMUSD in Q2/2020, primarily from an increase in revenue from sales due to an increase in average sales volume primarily from Malaysia Project and an increase in average selling price. In addition, exploration expenses decreased primarily from there was the exploration well written-off of Myanmar MD-7 Project in Q2/2020, while income taxes increased in accordance with an increase in profit. In addition, depreciation, depletion and amortization increased primarily from an increase of average sales volume.

- America

In Q2/2021, America reported a net loss of 2 MMUSD, a decrease of 44 MMUSD or 96% when compared with a net loss of 46 MMUSD in Q2/2020, primarily from no recognition of impairment loss on assets of Mariana Oil Sands Project.

Head Office and Others segment

In Q2/2021, Head office and Others segment reported a net loss of 173 MMUSD, an increase of 165 MMUSD or more than 100% when compared with a net loss of 8 MMUSD in Q2/2020, primarily from an increase in income taxes relating to changes in foreign exchange rate due to the change of income taxes calculation currency from Thai baht to USD during 2020 which resulted in no such income tax in Q2/2021 while in Q2/2020, there was a recognition of tax saving from the reversal of income taxes relating to changes in foreign exchange rate which were recognized in the prior period. In addition, the Group recognized loss on financial instruments mainly from oil price hedging instruments due to an upward trend of forward oil price, offset with gain on foreign exchange forward contracts due to the depreciation of Thai baht against USD.

For the six-month period ended June 2021 compared with 2020

For the six-month period ended June 2021, the Group reported a net profit of 598 MMUSD, an increase of 189 MMUSD or 46% when compared with a net profit for the six-month period ended June 2020 of 409 MMUSD, primarily from an increase in Exploration and Production segment in Middle East of 371 MMUSD and Southeast Asia (Thailand increased by 174 MMUSD and Other Southeast Asia increased by 55 MMUSD), while there was a decrease in Head Office and Others segment of 346 MMUSD and America of 99 MMUSD.

Exploration and Production segment

- **Middle East**

For the six-month period ended June 2021, Middle East reported a net profit of 357 MMUSD, an increase of 371 MMUSD or more than 100% when compared with a net loss of 14 MMUSD for the six-month period ended June 2020, primarily from a recognition of gain from a bargain purchase of Oman Block 61 Project.

- **Southeast Asia**

- Thailand

For the six-month period ended June 2021, Thailand reported a net profit of 577 MMUSD, an increase of 174 MMUSD or 43% when compared with a net profit of 403 MMUSD for the six-month period ended June 2020, primarily from an increase in revenue from sales due to an increase in average sales volume primarily from Bongkot Project and Contract 4 Project including an increase in average selling price, while income taxes increased in accordance with an increase in profit. In addition, depreciation, depletion and amortization increased primarily from an increase of average sales volume and petroleum royalties increased in accordance with an increase in revenue from sales.

- Other Southeast Asia

For the six-month period ended June 2021, Other Southeast Asia reported a net profit of 129 MMUSD, an increase of 55 MMUSD or 74% when compared with a net profit of 74 MMUSD for the six-month period ended June 2020, primarily from a decrease in exploration expenses mainly from the exploration wells written-off of Zawtika Project and Myanmar MD-7 Project for the six-month period ended June 2020.

- **America**

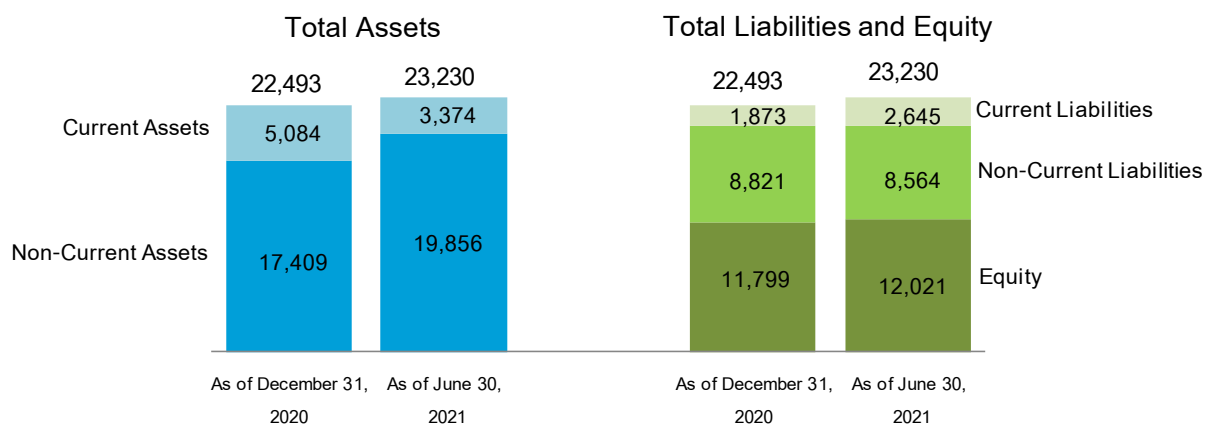
For the six-month period ended June 2021, America reported a net loss of 148 MMUSD, an increase of 99 MMUSD or more than 100% when compared with a net loss of 49 MMUSD for the six-month period ended June 2020, primarily from an increase in exploration expenses from partial write-off of exploration and evaluation assets of the exploration project in Brazil, offset with no recognition of impairment loss on assets of Mariana Oil Sands project.

Head Office and Others segment

For the six-month period ended June 2021, Head Office and Others segment reported a net loss of 336 MMUSD, a decrease of 346 MMUSD or more than 100% when compared with a net profit of 10 MMUSD for the six-month period ended June 2020, primarily from a recognition of loss on financial instruments mainly from oil price hedging instruments due to an upward trend of forward oil price, while the six-month period ended June 2020 recognized gain due to a downward trend of forward oil price.

Financial Position

Unit: Million US Dollar



Assets

As at June 30, 2021, the Group had total assets amount of 23,230 MMUSD, an increase of 737 MMUSD from total assets as at December 31, 2020 of 22,493 MMUSD, primarily due to;

- (1) 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 2,447 MMUSD mainly due to an increase of property, plant and equipment from acquisition of Oman Block 61 Project in Q1/2021.

While

- (2) Current assets, which were primarily comprised of cash and cash equivalents, trade and other receivables and inventories, decreased of 1,710 MMUSD mainly from a decrease in cash and cash equivalents of 1,854 MMUSD.

Liabilities

As at June 30, 2021, the Group had total liabilities of 11,209 MMUSD, an increase of 515 MMUSD from total liabilities as at December 31, 2020 of 10,694 MMUSD, primarily due to;

- (1) Current liabilities, which were primarily comprise of trade and other payables, current portion of long-term liabilities and income tax payable, increase of 772 MMUSD mainly due to an increase of current portion of long-term liabilities of 503 MMUSD from Thai Baht debentures with a maturity in June 2022. Short-term loans increased of 200 MMUSD and financial derivative liabilities increased by 167 MMUSD due to oil price hedging instruments, offset with 109 MMUSD decrease of income tax payable from 2020 tax payment in May 2021.
- (2) Non-current liabilities, which were primarily comprised of provision for decommission costs, debentures and deferred tax liabilities, decreased 257 MMUSD mainly due to a decrease of long-term debentures of 521 MMUSD from Thai Baht debentures with a maturity in June 2022, offset with increased in deferred tax liabilities amount of 82 MMUSD. Other non-current liabilities increased 68 MMUSD and provision for decommission costs increased 56 MMUSD mainly due to acquisition of Oman Block 61 Project in Q1/2021.

Equity

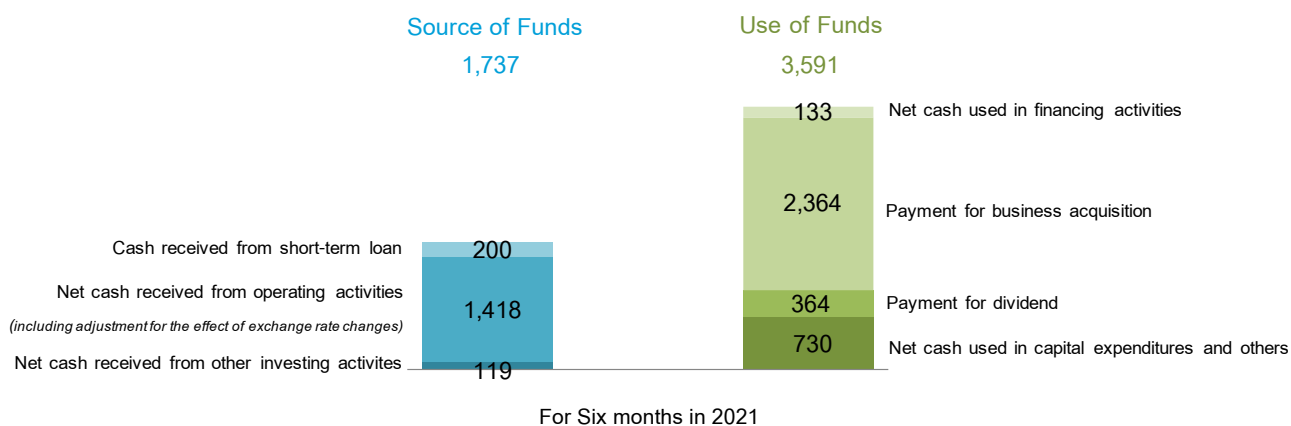
As at June 30, 2021, the Group had equity of 12,021 MMUSD, an increase of 222 MMUSD from equity as at December 31, 2020 of 11,799 MMUSD, primarily due to the net profit for the period, offset with the dividend payment in April 2021.

Capital Structure

PTTEP ensure efficiency of its financial management by focusing on building financial discipline and maintaining a strong financial structure. At the end of Q2/2021, the Company maintained cash on hand approximately of 1,850 MMUSD. In addition, the Company maintains its debt-to-equity ratio of 0.34, which is within the Company's financial policies and had a low level of finance costs at 3.31% with no debt service obligation in 2021. The Company is confident that its solid financial position and high liquidity will enable the company to withstand such oil price fluctuations and global economic slowdown.

Cash Flows

Unit: Million US Dollar



As at June 30, 2021, the Group had cash and cash equivalents* of 1,850 MMUSD, a decrease of 1,854 MMUSD compared with December 31, 2020 of 3,704 MMUSD.

Source of funds amount of 1,737 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 payment for expenses and income taxes as well as net cash received from Oman Block 61 Project due to full quarter recognition which was according to the operation plan, **Net cash received from financing activities** derived from short-term loan from financial institution and **Net cash received from investing activities** mainly from maturity of short-term investments.

Uses of funds amount of 3,591 MMUSD primarily from the **Payment for business acquisition and additional capital expenditure**, from acquisition of Oman Block 61 Project in Q1/2021 and additional investments in exploration and production assets mainly for Mozambique Area 1 Project and S1 Project, as well as **Net cash used in financing activities**, primarily from payment of dividend for the second half of 2020, interest payment as well as repayment of lease liabilities during the six-month period 2021.

* Exclude short-term investment in the form of bank fixed deposit with a maturity of more than three months but less than twelve months of 100 MMUSD as at December 31, 2020.

Key Financial Ratios

| | Q1 | Q2 | Q2 | 6M | 6M |
|--------------------------------|-------|-------|-------|-------|-------|
| | 2021 | 2021 | 2020 | 2021 | 2020 |
| Profitability Ratio (%) | | | | | |
| EBITDA* margin | 73.73 | 75.94 | 66.72 | 74.95 | 69.73 |
| Return on equity | 6.92 | 7.66 | 9.76 | 7.66 | 9.76 |
| Net profit margin | 15.04 | 14.82 | 18.28 | 14.82 | 18.28 |
| Leverage Ratio (Times) | | | | | |
| Debt to equity | 0.32 | 0.34 | 0.33 | 0.34 | 0.33 |
| Debt to EBITDA * | 1.04 | 0.98 | 0.73 | 0.98 | 0.73 |

* 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 for Q1/2021 and for the six-month period ended June 2021

Remark:

- EBITDA margin = Profit before deduction of interest, tax and depreciation to revenue from sales 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

At of Q2/2021, PTTEP has over 40 projects in 15 countries. The following are key project highlights.

Projects in Southeast Asia

PTTEP'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 Q2/2021, the average sales volume from projects in Thailand is 272,800 BOED, accounting for 62% of total sales volume. Average sales volume from other countries in this region is 102,200 BOED, which accounted for 23% of total sales volume.

- Projects in Thailand

The majority of PTTEP'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, is currently executing its development plan to maximize crude production as per 2021 target. After receiving production period extension approval to until Mar 2031, 10 years strategy road map has been prepared and completed for the long-term operation. The **Bongkot Project**, **Arthit Project** and **Contract 4 Project**, which produce natural gas, condensate and crude oil, was able to deliver production volumes as nominated from the buyer. The **G2/61 Project** (Bongkot field) was on track for its transition plan. The **G1/61 Project** (Erawan field), has been preparing all transitional works with highest efforts including construction of facilities, staff recruitment, Gas Sales Agreement negotiation, and related procurement activities, with the aims for successful transition and gas production as per commitment although the site access is still pending.

- 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, were able to deliver sales and production as per obligation. However, the recent turbulence situation in Myanmar has caused some delays in certain activities. PTTEP has implemented the Business Continuity Management (BCM) plan to ensure uninterrupted supply of petroleum and closely monitored the situation, including coordination with PTT, the Department of Mineral Fuels, Ministry of Energy and Ministry of Foreign Affairs, on a regular basis for immediate mitigation plan. The **Yetagun Project**, a natural gas and condensate producing project, has temporarily ceased its production after its production rate dropping below the technical turndown rate of its facilities. This has no significant impact to PTTEP and the production is expected to resume in Q3/2021. The **Yadana Project**, a natural gas producing field, has completed the production well drilling in May, which is one month earlier than planned, in order to maintain production volumes, as well as the sales volumes according to the Sales and Purchase Agreement. For **Exploration Project**, the **Myanmar M3 Project's** Field Development Plan was approved in April 2021. It is currently in the process of PSC Supplementary conclusion and preparation for the next field development phase. For **Domestic Gas to Power project**, after the Coup d'état and political situation in Myanmar in the past few months, the project has been facing delay. PTTEP has been 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 of offshore Sabah. The main progress is the infill well preparation of SNP, to be drilled in July 2021. The **Sarawak SK309 and SK311 Project** are oil and gas producing fields located in the shallow water of offshore Sarawak. The new Pemanis Topside will be installed in early July 2021, with first gas expected in August. Infill well drilling will take place from July 2021 to increase production from the existing facilities. **Block H Project**, located in the deep-water of offshore Sabah, has started the natural gas production since February 2021 and able to reach full production capacity of 270 MMSCFD.

Exploration Projects in Malaysia are highlighted as follows. The **Sarawak SK410B Project** with giant gas discovery in Lang Lebah Field is currently under field development study reflecting larger gas discovery volume and CO₂ management as per GHG aspiration target. The field is expected to reach Final Investment Decision (FID) in late 2022 to early 2023. The Sarawak SK410B Project still has several petroleum prospects, which are being studied. The project plan is to drill at least one more exploration well in 2022. The **Sarawak SK417 Project** completed Dokong-1 exploration well in January 2021. The Project discovered a reservoir of natural gas and continues drilling an addition exploration well, Nangka-1 started in June 2021. The **Sarawak SK405B Project** discovered crude oil and natural gas reservoirs in Sirung-1 well in March 2021. Project is currently studying on upside petroleum potential in this area for future exploration campaign. The **Sarawak SK438 Project** completed Kulintang-1 exploration well in April 2021. The Project discovered a satisfactory reservoir of natural gas and will continue studying on additional appraisal program and development plan for this field. In addition, exploration well drilled at Mak Yong-1 was completed in June 2021 and petroleum potential is being evaluated. The **Sarawak SK314A project** is performing 3D seismic reprocessing expected to complete in 2021. Its results will be used to plan for two exploration wells in 2022. The **PM407 Project** is in the progress of study for petroleum potential evaluation. Moreover, the 3D seismic reprocessing is expected to complete within Q3/2021 as planned. The evaluation result of such seismic data will be used for two exploration wells, drilled in 2022-2023 campaign accordingly. The **PM415 Project** is currently conducting the remaining petroleum potential after drilling exploration wells, JELAWAI-1&1ST1 and BEBARU-1.

- Projects in Vietnam

The key *Producing Project* is the **Vietnam 16-1 Project**, which is natural gas and crude oil field, located offshore in the southeastern region. The project has planned to start the campaign to drill 4 development wells in 2021. It is currently under procurement process for equipment and services and expected to start drilling the first well in Q3/2021. 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'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 Q2/2021, both projects continue to curb production per OPEC+ agreement to support global oil price. Besides, **Oman Block 61 Project** with natural gas and condensate resources, has ramped up its production level of natural gas and condensate to 1,500 MMSCFD and 69,000 Barrels per day (BPD), respectively, since 27 June 2021. For *Exploration Projects*, **Oman Onshore block 12 Project** is in the process of 3D seismic reprocessing, to support prospect ranking evaluation of exploration wells, which will be drilled 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** is currently in the stage of preparation for exploration well, to be drilled in early of August 2021. The **Abu Dhabi Offshore 3 Project** has been approved the Appraisal plan of Pre-existing discovery by ADNOC. The project is on-going with G&G study.

Projects in the Americas

PTTEP'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 currently under evaluation for an appropriate plan.

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** is located in the Mexican Ridges, Western Gulf of Mexico. The geophysical survey (CSEM-MT) was completed in April 2021. The project is currently in the stage of further petroleum potential evaluation, as well as preparation for one exploration well drilling in Q3/2021. The **Mexico block 29 (2.4) Project** is located in the Campeche basin. After the appraisal and exploration plan for further project development were approved by the Mexican regulators (CNH), the project has been drilling the exploration well (Chak-1EXP), expected to complete in July 2021 and will continue with the appraisal well (Polok-2DEL), which is expected to complete in October 2021.

Projects in Australia

PTTEP's projects in this region include only the **PTTEP Australasia Project**, which is located in the Commonwealth of Australia (Australia) and consists of 7 permits.

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

Projects in Africa

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

The **Algeria 433a and 416b Project**, which is in the *production phase*, are located onshore in the eastern part of Algeria with crude oil producing. In Q2/2021, the project had average production of 16,500 BPD due to partial flow restriction on some wells and to comply with OPEC+ production cut agreement.

The **Algeria Hassi Bir Rekaiz Project**, which is in the *development phase*, is located onshore in the eastern part of Algeria. The project has started the development on Phase 1 following the conclusion from an approved development plan by the government in Q1/2019. The project is currently under construction and drilling production wells with expected first oil production for the initial phase of around 10,000-13,000 BPD in the second half of 2021. In the second phase, production capacity is planned to ramp up to around 50,000-60,000 BPD in 2026. In addition, PTTEP has entered into the Asset Sale and Purchase Agreement (ASPA) to acquire additional participating interest of 24.5% from CNOOC, the current partner of the project, at the transaction value of CNOOC's accumulated development cost up to the date that the transfer was approved and announced by the government of Algeria, expected to be by the end of 2021. After the deal completion, PTTEP's stake in the project will increase from 24.5% to 49%. The only joint venture partner will be SONATRACH, the national state-owned oil company of Algeria, with the participating interest of 51%.

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. At the end of March, project finance close has been achieved, and the first debt drawdown has been made. However, due to the Palma security incident in late March, which is located 25 Kilometres from the project construction site, the operator has withdrawn all project personnel from Afungi site and handed over the project site to be under control of the Government of Mozambique to maintain security. Subsequently, on April 26th, Force Majeure has been declared for safety reason of all employees and stakeholders. The operator has set up a dedicated taskforce to study the impacts in short and long term to determine further plans and directions. Presently, the operator is in close discussion and provides required support to the government to accelerate the restoration of security, in order to allow the safe project resumption. However, the project has moved forward with some operations running outside Mozambique.



Strategies under Sustainable Development Framework

PTTEP adheres to the Sustainable Development guidelines that is in line with international practices and UN principles. Operating under the concept FROM “WE” to “WORLD” 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.

To be in line with the vision to become the "Energy Partner of Choice", PTTEP has established sustainable development framework which comprises of three main components namely: High Performance Organization (HPO); Governance, Risk Management and Compliance (GRC); and Stakeholder Value Creation (SVC). Key highlights are as follows:

High Performance Organization (HPO) PTTEP continues to focus on EXECUTE and EXPAND strategies. Amidst the current COVID-19 pandemic and the challenges that many industries including oil and gas are facing, the company has revisited and sharpened our execution plan in order to adapt to the changing situation with the strong endeavor to maintain the company’s competitive advantage, explore business opportunities in focus areas as well as promote sustainable growth. The afore-mentioned plans can be highlighted under each strategy as follows:

(1) EXECUTE: Strategy to increase sales volume of legacy assets and maintain competitive advantage

- **Create additional value from existing assets** with an emphasis on increasing production from key projects including accelerating the development of major overseas projects particularly the Mozambique Area 1 Project in Mozambique, the Hassi Bir Rekaiz Project in Algeria and the Integrated Domestic Gas to Power Project in Myanmar which is an integrated energy project from upstream to power generation creating additional value to the company.

Furthermore, in Q2/2021 PTTEP successfully made new gas discovery in offshore Sarawak, Malaysia from exploration well, Kulintang-1, in Sarawak SK438 Project. The Sarawak SK438 Project is adjacent to Sarawak SK405B, Sarawak SK309 & SK311, and Sarawak SK314A projects, all of which are operated by PTTEP, with existing facilities nearby. The location, therefore, provides an advantage for future development including the potential for cluster development.

- **Continuously maintain competitive unit cost** by using digital technology and increasing work effectiveness to strengthen PTTEP’s core business amid the increasingly volatile environment of the industry.
- **Constantly collaborate with Thai government and the authorities to access G1/61 project** to prepare and ensure continuity of natural gas production to serve energy demand of the country. PTTEP has been preparing Field Development Plan Revision if the company could not access G1/61 area in parallel with effectively executing the transitions for G2/61 project and newly acquired asset.
- **Transform to the New Normal** by implementing transformation projects and redesigning human resources within the company. The new transformation projects consist of various initiatives to accelerate digital transformation aimed at improving long term efficiency, changing the organization’s mindset towards “One Team One Goal”, improving internal capabilities and work processes, introducing new ways of working in a post COVID-19 world, for instance.

(2) EXPAND: Strategy to focus growth in strategic investment areas and diversify into energy related businesses for long-term sustainability

- **Coming-Home Strategy:** PTTEP remains our investment focus in strategic areas being Thailand and Southeast Asia. Moreover, PTTEP is also expanding business opportunities in the Gas Value Chain business.
- **Strategic Alliance Strategy:** PTTEP aims to capture an investment opportunity in other petroleum prolific areas with strategic alliances by mainly focusing on the Middle East.
- **New Business Investment Strategy for Sustainability:** PTTEP targets to invest in businesses focusing on technology and innovation as well as R&D capability enhancement to support core E&P business, future investment opportunity related to the energy industry, e.g. solar and wind and the A.I. and Robotics Ventures (ARV) scale-up. In Q2/2021, AI and Robotics Venture Company Limited (ARV), a subsidiary of PTTEP, in partnership with Aerodyne Group from Malaysia and Digital Creation Co., LTD has announced the launch of a joint venture company “AeroSky (Thailand) Company Limited” (Aerosky), which will provide state-of-the-art drone-based enterprise solutions across the Thai market, including clients in the telecoms, electricity, oil & gas, and other infrastructure-led industries. Aerosky services would allow infrastructure inspection and monitoring to be of better quality, quicker, safer and lower cost.
- **LNG Strategy:** PTTEP is committed to drive LNG value chain with a focus on investments in the upstream and liquefaction plants while developing in-house LNG capabilities. The company had submitted an LNG Shipper License application to the Energy Regulatory Commission (ERC) via PTT Global LNG (PTTGL), a 50% joint venture company between PTT Public Company Limited and PTTEP Business Center Company limited (Subsidiary of PTTEP), in response to domestic gas market liberalization and to expand from gas exploration and production both domestic and international. PTTGL has been preparing the supplementary documents to submit to the Energy Regulatory Commission (ERC) for license approval.

PTTEP places great importance on effective financial management by focusing on building financial discipline and maintaining a robust capital structure. As at the end of Q2/2021, the Company maintained a strong liquidity position with cash on hand of approximately 1,850 MMUSD. The debt-to-equity ratio is 0.34 x which is in line with the Company's financial policy. The cost of capital was maintained at 3.31%, with no debt service obligation in 2021. PTTEP is, therefore, confident that its solid financial position and liquidity will enable the Company to withstand such oil price fluctuation.

In Q2/2021, PTTEP received an award from the American Productivity and Quality Center (APQC) in the category of Excellence in Knowledge Management Program 2021. PTTEP is the first and only Thai company which has received this award for two consecutive years. Another award in this quarter is the Best Practice Award from the New Way of Working project, which was a part of the 7th International Best Practice Competition (IBPC), implemented by the Center for Organizational Excellence Research (COER). This indicates PTTEP's New Way of Working that not only proven efficiency but is also a good role model with international recognition.

Moreover, PTTEP encourages Research and Development (R&D), technological applications and innovation to increase efficiency and competitiveness of the petroleum exploration and production business. The main objectives of R&D include unlocking high CO₂ reserve, removing contaminants in condensate, enhancing oil recovery, reducing environmental impact, reducing decommissioning cost and improving operation and maintenance efficiency. As of Q2/2021, there are 45 projects under research and development in which 10 projects are under field trial phase. In the area of infrastructure to support technology research and development, the company is constructing the PTTEP Technology and Innovation Center (PTIC) in the Eastern Economic Corridor of Innovation area (EECi) which will be completed by 2021. PTTEP has an environmental management system which is a subset of PTTEP's Safety, Security, Health and Environment Management System (SSHE MS). In Q2/2021, PTTEP had Lost Time Injury Frequency (LTIF) of 0.18 and a Total Recordable Incident Rate (TRIR) of 0.78. The Company's recent performance on both safety indicators (LTIF and TRIR) are among the First Quartile of the International Association of Oil and Gas Producers (IOGP) average.

Governance, Risk Management and Compliance (GRC) 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 to assure stable and sustainable growth of the company. The main progress are as follows:

- Conducting an Internal Maturity Assessment for Malaysia to prepare for a Company-wide GRC Maturity Level assessment program
- Enhancing Risk Management System which covers suggesting risk and searching risk information features
- Conducting analysis on alignment and completeness of assurance activities for further effective planning and preparing for system development to integrate assurance governance and report for more flexibility and efficiency
- Continue building GRC culture to increase awareness, understanding and implementation through communication campaign such as promotional materials in the format of VDO Clips, games, and Q&A by top management
- Cooperating with the Sustainable Development and Knowledge Management team to conduct Stakeholders Engagement Survey and take the results to develop improvement plan for becoming a GRC role model among Thai Listed Companies

Furthermore, 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. In 2021, the risk assessment covers 100% of its operating assets, non-operated joint ventures, and Tier 1 suppliers.

In Q2/2021, PTTEP received 2 ESG Awards from the 16th Asian ESG Award 2021 in the category of Asia's Icon on ESG for the 9th consecutive year and Asian Corporate Director Award granted to CEO for the 2nd consecutive year. Moreover, PTTEP has recognized to be an ESG influencer, which plays an important role for exceptional driver of ESG.

Besides, PTTEP has received a certificate of Thai Private Sector Collective Action Against Corruption (CAC) in the announcement at the end of Q4/2020. PTTEP is committed to improving its operations and anti-corruption measures to be strengthened continuously. The receiving of CAC certificate demonstrates the acceptance of PTTEP's clear intention to conduct business transparently as well as leading us to gain trust and confidence from stakeholders.

Stakeholder Value Creation (SVC) PTTEP put great important to the conservation of natural resources, environmental restoration as well as community and social development. Our strategies and main progress in Q2/2021 of SVC are as follows:

- **Greenhouse Gas Reduction Strategy:** To mitigate global warming and climate change, PTTEP aims to become a Low Carbon Footprint organization and aims to reduce its greenhouse gas emissions intensity by at least 25% by 2030, compared to the 2012 base year. As at Q2/2021, the Company has reduced greenhouse gas emissions intensity by 16% through continuously project implementation including flare gases recovering and utilization, energy & process efficiency improvement and reducing methane leakage from production processes. Moreover, PTTEP completed Carbon Capture Storage (CCS) feasibility study in Gulf of Thailand and continue concept selection.
- **Circular Model for E&P Strategy:** PTTEP's work processes were redesigned, and resources were reused and recycled. The target is to reuse at least 50% of main structures which are retained at appropriate, safe, and efficient conditions by 2030. In Q2/2021, our onshore operations continue the achievement of 100% Mobile Production Facility Reuse. For the resource efficiency maximization, the Company also conducted the study on the use of rocks and soils generated from our drilling activities

(drill cuttings) as alternative material for road construction and maintenance. Additionally, in Q2/2021, our hazardous waste to landfill is reported at zero in line with our long-term target for zero waste to landfill by 2030.

- **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 of nearshore communities, with the target to achieve Net Positive Impact of Ocean Biodiversity and Ecosystem Services (Ocean BES) value in domestic offshore operations by 2025 and all offshore operations by 2030, compared to the 2019 base year. The Company also set the target to increase 50% of community income for focused communities and achieve 16,000 conservation networks by 2030, compared to the baseline data before PTTEP project implementation. In Q2/2021, with Kasetsart University, PTTEP conducted the third-time sampling around our operation area in the Gulf of Thailand for the Baseline Study of Microplastics project and the second-time of onsite aerial mapping survey at Koh Mannai and Pala Beach, Rayong Province for Marine Spatial Planning by advanced technology and drone in coral reef areas.

Furthermore, PTTEP also supports the SVC strategy by carrying out research and development (R&D) projects such as the Greenhouse Gas (GHG) reduction by converting Carbon Dioxide to Polycarbonate, converting flare gas to Carbon Nanotube, the waste reduction by converting the produced sand to high value products, the green buoy for underwater condition monitoring and the microplastics sensor development project. These projects are currently under research and development.

In Q2/2021, PTTEP received the Golden Peacock Award for the two consecutive years from India's Institute of Director (IOD). The recognition has been awarded to organization with outstanding social and environment care and emphasizes PTTEP's ethical operations and contributions to quality-of-life enhancement for community and society.



Future Business Outlook

Oil Price Outlook

After population across the world continue to receive more COVID-19 vaccines, it is expected that vaccination rate in the United States of America (U.S.) and Europe will reach herd immunity target at 75% within Q3/2021 and rest of the world by mid-2022. Global oil demand is thereby expected to continue its recovery path from lifting lock-down restriction and rising activities during summer season. By the end of this year, oil demand is anticipated to recover to 100 million barrels per day which is slightly below pre-COVID-19 level in 2019 at average 100.8 million barrels per day.

On the supply side, according to OPEC+ meeting during 1-4 July 2021, there was an agreement to boost oil production by 400,000 barrels per day each month from August to December 2021 and extend their supply management agreement through the end of 2022. Meanwhile, U.S. production is forecasted to maintain constant around 11 million barrels per day this year as oil companies maintain their financial discipline, focusing on generating free cash for debt repayment and provide return to their investors.

Based on oil demand and supply outlook, supply deficit is expected in Q3/2021 and potentially push oil price up further to 70-80 USD per barrel level with the main reason being that OPEC+ will continue to control of their supply level. However, Iran is forecasted to ramp up their production to at least 500,000 barrels per day in Q4/2021 if U.S. sanction lifted after potentially successful negotiation about Iran nuclear deal. This could pressure the oil market to be slightly supply surplus and push oil price downward to 60-70 USD per barrel. The other key factors to be monitored are summarized as per following; COVID-19 situation, lockdown measure, vaccination progress, demand recovery, monetary policy, oil supply levels of main producing countries (OPEC, Russia and the U.S.), as well as U.S. sanction policy on Iran and Venezuela.

LNG Market

The oversupply situation of global LNG market is expected to prolong throughout 2021, with a total production capacity of existing and upcoming LNG projects growing by 33 MTPA (approximately 9%) from 2020 to 396 MTPA by the end of 2021, while demand for LNG is anticipated to grow to 379 MTPA (Source: FGE as of July 2021). LNG price is expected to be lower at the range of 7-8 USD per MMBTU during the second half of 2021 as the U.S. and Australia production facilities could be returned to normal level. The LNG spot price tends to increase during the end of this year when winter is approaching. The 2021 Asian Spot LNG price forecasts range between 8.1 – 10.3 USD per MMBTU (Source: Morgan Stanley, FGE).

Thai Economy and Foreign Exchange Outlook

The Bank of Thailand expects the Thai economy to grow at 1.8% in 2021, revising down from the previous 3% forecast. The revision was driven by the third wave of infections and the emergence of Covid-19 variants in Thailand which further delayed Thailand's tourism and general economic recovery. The USD/THB is expected to remain volatile for the remainder of 2021 with movements in line with Thailand's economic recovery path. Such recovery is, in turn, dependent on Thailand's vaccine efficacy, procurement, and distribution, and also reliant on the continued accommodative fiscal and monetary policies such as government relief programs and Bank of Thailand's decision to hold the policy rate at 0.5%.

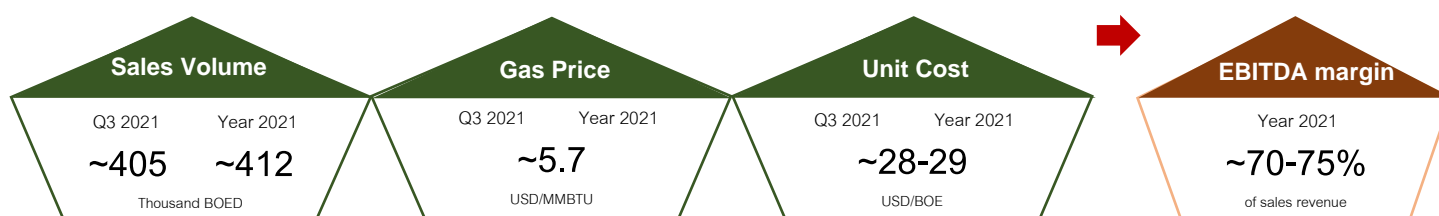
PTTEP has adopted the natural hedge method to manage FX risks by matching USD and USD-linked revenues from petroleum products with major USD expenses. Remaining FX risk exposures from non-USD revenues and expenses are managed by utilizing financial hedging instruments such as forwards and cross currency swaps. Moreover, interest rate volatility does not materially impact the Company's financial performance as 78% of total interest-bearing debt is fixed rate.

Other important factors that affect the Company's operations

Enactment of the Revenue Code Amendment Act (No. 50) B.E. 2562 and the Petroleum Income Tax Amendment (No. 9) B.E. 2562 in April 2019 and relevant regulations in June 2020, which allow tax filing to be done in US Dollar, which is the company's functional currency for the fiscal year starting from 2020. PTTEP group had already recognized the financial impacts of such changes in Q2/2020 and Q3/2020, and there will be no impact from THB/USD fluctuation to the company's financial performance starting from Q4/2020 onward.

PTTEP's performance outlook for the third quarter and for the year 2021

PTTEP's performance depends on three major factors including Sales volumes, Gas price and Unit cost with the guidance summary 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 2021 of 67.6 USD/Barrel

3. Including Oman Block 61 performance which PTTEP has acquired 20% interest, with Completion Date on March 23, 2021.

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 Q3/2021 and for the full year of 2021 to be approximately 405,000 and 412,000 barrels of oil equivalent per day, respectively. The higher sales volume in 2021, compared to the previous year was mainly from additional sales volume from the start-up of Block H Project, including the acquisition of 20% interest in Oman Block 61 Project, which the transaction was completed on March 23, 2021.

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 Q3/2021 and the full year of 2021 are estimated at approximately 5.7 USD/MMBTU, lower than the previous year, reflecting the lag time adjustment of gas price in accordance with a slump in global crude price last year.
- Outstanding volume of oil price hedging for 2021, as at the end of Q2/2021 was approximately 12 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 Q3/2021 and the full year of 2021, PTTEP expects to be able to maintain unit cost at around 28-29 USD/BOE, lower from the previous year from effective cost management, coupled with the commercial production start-up of Block H project and the acquisition of 20% interest in Oman Block 61 Project, of which the unit costs for these two projects are quite low.