



Executive Summary

Dubai crude price in Q3/2021 had slightly increased to an average of 71.68 USD/barrel, mainly from continuous recovery in crude oil demand following economic stimulus packages and lockdowns relaxation while the demand for natural gas for electricity generation had pushed LNG price to a record high. On the supply side, despite OPEC+ plan to boost production, prior slowdown in investment had resulted in many member countries being unable to increase production as per the quota received. Together with lower crude oil production in the Gulf of Mexico due to Hurricane Ida, global demand recovery had outweighed the supply increase and caused global crude oil inventories to fall below 5-year average. The market expected to see continuing supply deficit in Q4/2021, driving the oil price up further to 75-85 USD per barrel.

In this quarter, PTTEP had key activities under the EXECUTE – EXPAND strategy including the Sarawak SK417, which we previously announced natural gas discovery earlier this year, had started the second exploration well drilling in June 2021 and expected the results in Q4/2021; the acquisition of additional stake in Algeria Hassi Bir Rekaiz Project from CNOOC was officially approved and announced by the Algerian government in August this year, allowing our holding interest to increase to 49%. We had also divested investment in Potiguar Project, a small producing oil field in Brazil, as part of portfolio rationalization that aligned with our strategy with completion expected in Q4/2021. With regards to the transition of operations for G1/61 Project (Erawan field), the company are still not allowed to access the site to set up wellhead platforms and install pipeline, 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 buyer and government to find minimal impact solution. For G2/61 Project (Bongkot field), we have good progress in transition as planned.

Regarding non-E&P businesses, we had established subsidiaries to support investment in electricity and renewable energy businesses and had established subsidiaries under AI and Robotics Ventures Company Limited or ARV to support its 4 business units covering Subsea inspection, repair and maintenance, Integrated asset inspection and management service to various industries, Smart farming and smart forestry solution, and Health data network.

In Q3/2021, PTTEP reported net income of 292 MMUSD, 32% increase from the previous quarter. The continuously increasing crude oil price had pushed average selling price higher to 44.25 USD/barrel of oil equivalent (BOE), while average sales volume dropped from lower gas nomination in the Gulf of Thailand due to annual maintenance shutdown. Unit cost rose to 29.39 USD/BOE, mainly from exploration well write-off. Consequently, the profit from normal operation declined to 335 MMUSD while the loss from non-recurring items sharply dropped reflecting lower oil price hedging losses. PTTEP, therefore, reported cash flow from operations for nine-month period of 2,375 MMUSD with the EBITDA margin at 74%. As at Q3/2021, PTTEP reported total assets of 23,226 MMUSD, of which 2,000 MMUSD was cash on hand, while total liabilities were reported at 11,157 MMUSD, of which 3,888 MMUSD was interest-bearing debt. Total shareholders' equity stood at 12,069 MMUSD with debt-to-equity ratio at 0.32, reflecting strong and healthy financial structure.

Table of key financial results

(Unit: Million US Dollar)	Q2 2021	Q3 2021	Q3 2020	% Inc. (Dec.) QoQ	% Inc. (Dec.) YoY	9M 2021	9M 2020	% Inc. YTD
Total Revenue	1,767	1,784	1,305	1	37	5,331	4,082	31
Sales Revenue *	1,729	1,744	1,228	1	42	4,864	3,751	30
EBITDA **	1,328	1,297	890	(2)	46	3,665	2,682	37
Profit(loss) for the period	222	292	230	32	27	890	639	39
Basic earnings(loss) per share (Unit: US Dollar)	0.06	0.07	0.06	17	17	0.22	0.16	38
Profit(loss) from normal operation	349	335	195	(4)	72	967	613	58
Profit(loss) from non-recurring items	(127)	(43)	35	66	>(100)	(77)	26	>(100)

* Included deemed income for tax payment by Oman government for Q2/2021, Q3/2021 and for the nine-month period ended September 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 the nine-month period ended September 2021



Economic Overview in the third quarter of 2021

Crude Oil Price

Dubai crude price in Q3/2021 increased to an average of 71.68 USD per barrel, slightly higher than Q2/2021 at average price of 66.9 USD per barrel. The increase in prices was from the recovery of global demand that outweighed supply increase resulting in global crude oil inventories to fall below 5-year average.

On the demand side, economic stimulus packages by governments, lockdown easing and travel seasons in the U.S. and Europe, together with all-time high gas price that prompting consumers to switch from using gas into oil, had led to demand recovery in Q3/2021. However, COVID-19 Delta variant spread in Asia where vaccination rate was moderate, urged many countries including China to enforce lockdown measures resulted in lower regional crude demand.

On the other hand, the supply increased slightly in this quarter. Despite agreement on 18th July to boost the collective OPEC+ production by 400,000 barrels per day each month from August to December 2021 to help alleviate tight supply, some members struggled to pump enough oil as per agreed quota due to investment slowdown and lack of exploration. In addition, hurricane Ida, which devastated Gulf of Mexico crude production in late August as well as damaged facilities, made the cumulative oil production loss surpassed 30 million barrels.

Liquefied Natural Gas (LNG)

The average Asian Spot LNG price in Q3/2021 was 18.7 USD per MMBTU, a significant increase from Q2/2021 average price at 10 USD per MMBTU. The price in late Q2/2021 was 13 USD per MMBTU and rallied to 34 USD per MMBTU at the end of September and is likely to increase further in Q4/2021. There are several factors contributing to the price increase, which are post COVID-19 demand recovery, stocking for upcoming winter, coal-to-gas switching in China and Europe in response to climate concerns, and lower power availability from other sources in Europe e.g. wind and nuclear phase out. Whereas, there are issues on supply side, namely, low gas storage in Europe after abnormal cold weather in spring, limited Russian export to Europe, and other supply disruptions such as US LNG due to impacts from Hurricane Ida, production problems at Bintulu LNG in Malaysia, ongoing planned plant maintenance on Cove Point in the U.S. and Wheatstone in Australia.

Thailand's Energy Demand

Thailand's energy demand during the first seven months of 2021 was at 2 million BOE, an increase of 1% relative to the same period of the previous year (Source: EPPO, The Ministry of Energy). The increase was largely due to the consumption of natural gas in electricity generation, gas separation plants and industrial sectors including the use of coal in industrial sector. Overall, the energy usage increased from all sources except oil which decreased from lower demand from COVID-19 impact.

Exchange Rates (Thai Baht against US Dollar)

In Q3/2021, THB against USD depreciated from 32.05 to 33.92 THB/USD. THB volatility was driven from the impact of COVID-19 to the Thai economic recovery in particular the tourism industry and the continued limited vaccine accessibility further delaying the general economic recovery. However, during the middle of Q3/2021, THB saw a slight appreciation due to a decrease in COVID-19 daily infection numbers in Thailand and the government announcement of various lockdown easing measures.

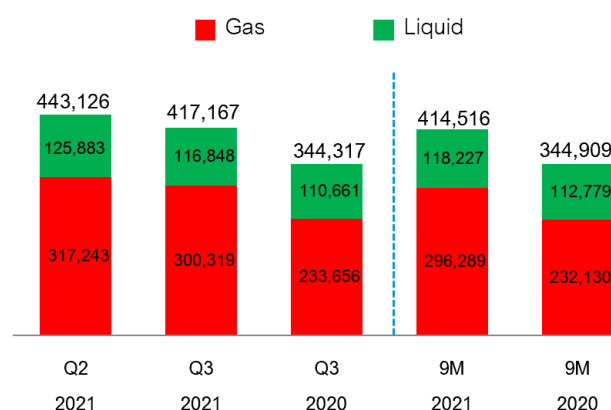


Financial Performance

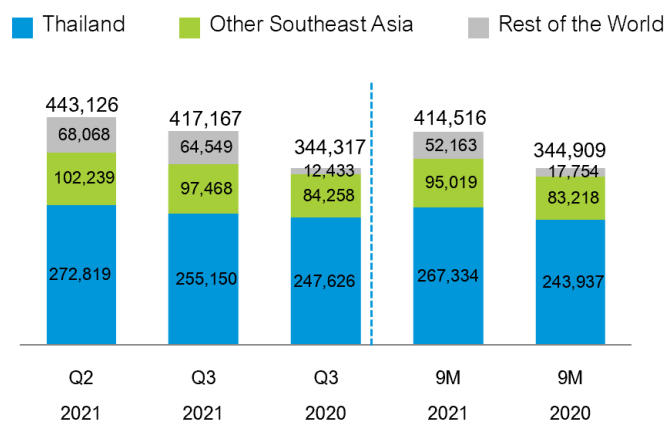
Average Sales Volume and Selling Price

Unit: Barrels of Oil Equivalent per Day

By Product Type



By Geographical Region



Average selling price and Dubai crude oil price (Unit : US Dollar)	Q2 2021	Q3 2021	2021 2020	% Inc. (Dec.) QoQ	% Inc. (Dec.) YoY	9M 2021	9M 2020	% Inc. (Dec.) YTD
Average selling price (/BOE)	42.19	44.25	38.77	5	14	42.34	39.69	7
Liquid price (/BOE)	63.98	69.16	41.82	8	65	63.40	41.14	54
Gas price (/MMBTU)	5.59	5.76	6.22	3	(7)	5.66	6.50	(13)
Average Dubai crude oil price (/BBL)	67.02	71.68	42.88	7	67	66.36	41.45	60

Remark: The average sale volume and selling price for Q2/2021, Q3/2021 and for the nine-month period ended September 2021 were excluded deemed income for tax payment by Oman government

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

In Q3/2021, the average sales volume of PTTEP and its subsidiaries (the “Group”) decreased to 417,167 BOED when compared with Q2/2021 of 443,126 BOED primarily from Bongkot Project, MTJDA Project, and Yadana Project due to lower gas nomination from buyer. The average selling price in Q3/2021 increased to 44.25 USD/BOE (Q2/2021: 42.19 USD/BOE).

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

When compared the average sales volume for Q3/2021 to Q3/2020 of 344,317 BOED, the average sales volume increased primarily from the acquisition of Oman Block 61 Project in March 2021, Malaysia Project first gas production of Malaysia Block H Project in February 2021, and Contract 4 Projects due to higher gas nomination from buyer. The average selling price in Q3/2021 increased to 44.25 USD/BOE (Q3/2020: 38.77 USD/BOE).

For the nine-month period ended September 2021 compared with 2020

The average sales volume for the nine-month period ended September 2021, increased to 414,516 BOED when compared with the same period of 2020 (for the nine-month period ended September 2020 of 344,909 BOED). The increase was primarily due to the acquisition of Oman Block 61 Project, 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 nine-month period ended September 2021 increased to 42.34 USD/BOE (for the nine-month period ended September 2020: 39.69 USD/BOE).

Overall Operating Results

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

In Q3/2021, the Group had a net profit of 292 MMUSD, an increase of 70 MMUSD or 32% from a net profit in Q2/2021 of 222 MMUSD was primarily from lower loss on financial instruments, offset with exploration expenses. The net profit for Q3/2021 of 292 MMUSD can be separated as following.

The profit from normal operation in Q3/2021 was 335 MMUSD, a decrease of 14 MMUSD compared with a profit in Q2/2021 of 349 MMUSD, despite that revenue from sales increased by 15 MMUSD from deemed income for tax payment by Oman government, there was a slight decrease in revenue from petroleum sales due to 6% decrease in average sales volume, offset with 5% increase in average selling price. On the other hand, expenses increased primarily from an increase in exploration expenses of 43 MMUSD from exploration well write-off, together with an increase in operating expenses of 27 MMUSD mainly from Malaysia Project due to higher sales volume and Bongkot Project due to more maintenance activities. However, depreciation, depletion and amortization decreased by 23 MMUSD, primarily from Oman Block 61 Project and Vietnam 16-1 Project due to petroleum reserve revision upward, along with Bongkot Project due to lower sales volume.

The loss from non-recurring items in Q3/2021 was 43 MMUSD, a decrease of 84 MMUSD compared with a loss in Q2/2021 of 127 MMUSD was from lower loss on financial instruments of 120 MMUSD, primarily from oil price hedging instruments due to less upward trend of forward oil price than the previous quarter, offset with higher loss on foreign exchange of 34 MMUSD from more depreciation of Thai Baht against USD than the previous quarter.

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

In Q3/2021, the Group had a net profit of 292 MMUSD, an increase of 62 MMUSD or 27% from a net profit in Q3/2020 of 230 MMUSD was primarily from an increase in revenue from sales, offset with loss on foreign exchange and loss on financial instruments (Q3/2020: recognized gain), together with an increase in exploration expenses. The net profit for Q3/2021 of 292 MMUSD can be separated as following.

The profit from normal operation in Q3/2021 was 335 MMUSD, an increase of 140 MMUSD when compared with a profit in Q3/2020 of 195 MMUSD was due to an increase in revenue from sales of 516 MMUSD, mainly from revenue from petroleum sales with 21% increase in average sales volume and 14% increase in average selling price. On the other hand, expenses increased primarily from an increase in income taxes of 186 MMUSD mainly from higher profit from projects in Thailand and Oman Block 61 Project which partially was a gradual recognition of non-cash expense from deferred tax assets. In addition, depreciation, depletion and amortization increased by 91 MMUSD primarily from the acquisition of Oman Block 61 Project and S1 Project due to additional completed assets. Exploration expenses increased by 42 MMUSD from exploration well write-off and operating expenses increased of 39 MMUSD primarily from the acquisition of Oman Block 61 Project and Malaysia Project higher maintenance activities.

The loss from non-recurring items in Q3/2021 was 43 MMUSD, a change of 78 MMUSD compared with a profit in Q3/2020 of 35 MMUSD was primarily from a change in loss on foreign exchange of 46 MMUSD since the Group recognized loss of 36 MMUSD in this quarter due to the depreciation of Thai Baht against USD (Q3/2020: recognized gain of 10 MMUSD). Additionally, there was a change in loss on financial instruments of 32 MMUSD since the Group recognized loss of 5 MMUSD in this quarter which mainly came from loss on oil price hedging instruments due to an upward trend of forward oil price, offset with gain on foreign exchange forward contracts since Thai Baht was depreciated against USD. However, Q3/2020 recognized gain of 27 MMUSD, primarily from foreign exchange forward contracts due to the depreciation of Thai Baht against USD.

For the nine-month period ended September 2021 compared with 2020

For the nine-month period ended September 2021, the Group had a net profit of 890 MMUSD, an increase of 251 MMUSD or 39% from a net profit for the nine-month period ended September 2020 of 639 MMUSD was primarily from an increase in revenue from sales and a recognition of gain from a bargain purchase of Oman Block 61 Project. However, there was loss on financial instruments (nine-month period ended September 2020: recognized gain), together with an increase in exploration expenses. The net profit for the nine-month period ended September 2021 of 890 MMUSD can be separated as following.

The profit from normal operation for the nine-month period ended September 2021 was 967 MMUSD, an increase of 354 MMUSD when compared with a profit for the nine-month period ended September 2020 of 613 MMUSD was from an increase in revenue from sales of 1,113 MMUSD, primarily from revenue from petroleum sales with 20% increase in average sales volume and 7% increase in average selling price. On the other hand, expenses increased primarily from an increase in income taxes of 409 MMUSD mainly from higher profit from projects in Thailand and Oman Block 61 Project regarding a gradual recognition of non-cash expense from deferred tax assets. Moreover, depreciation, depletion and amortization increased by 244 MMUSD primarily from the acquisition of Oman Block 61 Project and S1 Project due to additional completed assets, together with Bongkot Project and Contract 4 Project due to higher sales volume. Petroleum royalties also increased by 82 MMUSD, primarily from higher domestic sales.

The loss from non-recurring items for the nine-month period ended September 2021 was 77 MMUSD, a change of 103 MMUSD compared with a profit for the nine-month period ended September 2020 of 26 MMUSD, primarily from a change in loss on financial instruments of 399 MMUSD since the Group recognized loss of 228 MMUSD during the nine-month period ended September 2021, which mainly came from oil price hedging instruments due to an upward trend of forward oil price. However, gain of 171 MMUSD was recognized during the nine-month period ended September 2020, primarily from oil price hedging instruments due to a downward trend of 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 nine-month period ended September 2021 while for the nine-month period ended September 2020, there was a reversal of income tax benefits relating to changes in foreign exchange rate which were recognized in the prior period.

Operating Results by Segments

Net Profit (loss)	Q2 2021	Q3 2021	2021 2020	% Inc. (Dec.) QoQ	% Inc. (Dec.) YoY	9M 2021	9M 2020	% Inc. (Dec.) YTD
(Unit: Million US Dollar)								
Exploration and production	395	366	255	(7)	44	1,299	653	99
Southeast Asia	382	324	260	(15)	25	1,031	737	40
- Thailand	307	271	192	(12)	41	848	595	43
- Other Southeast Asia	75	53	68	(29)	(22)	183	142	29
Middle East	6	32	1	>100	>100	389	(13)	>100
Australia	(0.5)	(0.5)	(0.5)	0	0	(2)	(12)	83
America	(2)	(2)	(2)	0	0	(151)	(51)	>(100)
Africa	6	9	(3)	50	>100	22	(9)	>100
Others	3	3	(1)	0	>100	10	1	>100
Head office and others	(173)	(74)	(25)	57	>(100)	(409)	(14)	>(100)
Total	222	292	230	32	27	890	639	39

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

For Q3/2021, the Group reported a net profit of 292 MMUSD, an increase of 70 MMUSD or 32% when compared with a net profit of 222 MMUSD in Q2/2021, primarily from an increase of Head Office and Others segment of 99 MMUSD while there was a decrease in Exploration and Production segment in Southeast Asia (Thailand decreased by 36 MMUSD and Other Southeast Asia decreased by 22 MMUSD).

Head Office and Others segment

In Q3/2021, Head Office and Others segment reported a net loss of 74 MMUSD, a decrease of 99 MMUSD or 57% when compared with a net loss of 173 MMUSD in Q2/2021, primarily from lower loss on financial instruments mainly from oil price hedging instruments due to more upward trend of forward oil price than Q2/2021.

Exploration and Production segment

- Southeast Asia

- Thailand

In Q3/2021, Thailand reported a net profit of 271 MMUSD, a decrease of 36 MMUSD or 12% when compared with a net profit of 307 MMUSD in Q2/2021, primarily from a decrease in revenue from sales due to a decrease in average sales volume mainly from Bongkot Project while the average selling price increased.

- Other Southeast Asia

In Q3/2021, Other Southeast Asia reported a net profit of 53 MMUSD, a decrease of 22 MMUSD or 29% compared with a net profit of 75 MMUSD in Q2/2021, primarily from exploration wells write-off in this quarter while there was an increase in revenue from sales due to an increase in average selling price.

For the Third quarter of 2021 compare with the Third quarter of 2020

For Q3/2021, the Group reported a net profit of 292 MMUSD, an increase of 62 MMUSD or 27% when compared with a net profit of 230 MMUSD in Q3/2020, primarily from an increase of Exploration and Production segment in Southeast Asia (Thailand increased by 79 MMUSD) and Middle East increased by 31 MMUSD while there was a decrease in Head Office and Others segment of 49 MMUSD.

Exploration and Production segment

- Southeast Asia
 - Thailand

In Q3/2021, Thailand reported a net profit of 271 MMUSD, an increase of 79 MMUSD or 41% when compared with a net profit of 192 MMUSD in Q3/2020, primarily from an increase in revenue from sales due to increases in both average selling price and average sales volume mainly from Contract 4 Project, while income taxes increased in accordance with an increase in profit. In addition, depreciation, depletion and amortization increased primarily from additional completed assets.

- Middle East

In Q3/2021, Middle East reported a net profit of 32 MMUSD, an increase of 31 MMUSD or more than 100% when compared with a net profit of 1 MMUSD in Q3/2020, primarily from an increase in revenue from sales due to an increase in average sales volume mainly from the acquisition of Oman Block 61 Project, together with an increase in average selling price. However, there was an increase in income taxes, primarily from Oman Block 61 Project which partially was a gradual recognition of non-cash expense from deferred tax assets. In addition, depreciation, depletion and amortization increased from an increase in average sales volume.

Head Office and Others segment

In Q3/2021, Head Office and Others segment reported a net loss of 74 MMUSD, an increase of 49 MMUSD or more than 100% when compared with a net loss of 25 MMUSD in Q3/2020, primarily from a recognition of loss on financial instruments in Q3/2021, 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. However, there was a recognition of gain in Q3/2020, primarily from foreign exchange forward contracts due to the depreciation of Thai Baht against USD.

For the nine-month period ended September 2021 compared with 2020

For the nine-month period ended September 2021, the Group reported a net profit of 890 MMUSD, an increase of 251 MMUSD or 39% when compared with a net profit for the nine-month period ended September 2020 of 639 MMUSD, primarily from an increase of Exploration and Production segment in Middle East of 402 MMUSD and Southeast Asia (Thailand increased by 253 MMUSD), while there was a decrease in Head Office and Others segment of 395 MMUSD and America of 100 MMUSD.

Exploration and Production segment

- **Middle East**

For the nine-month period ended September 2021, Middle East reported a net profit of 389 MMUSD, an increase of 402 MMUSD or more than 100% when compared with a net loss of 13 MMUSD for the nine-month period ended September 2020, primarily from a recognition of gain from a bargain purchase of Oman Block 61 Project, together with an increase in revenue from sales due to an increase in average sales volume primarily from the acquisition of Oman Block 61. However, there was an increase in income taxes mainly from Oman Block 61 Project regarding a gradual recognition of non-cash expense from deferred tax assets. In addition, depreciation, depletion and amortization increased from an increase in average sales volume.

- **Southeast Asia**

- Thailand

For the nine-month period ended September 2021, Thailand reported a net profit of 848 MMUSD, an increase of 253 MMUSD or 43% when compared with a net profit of 595 MMUSD for the nine-month period ended September 2020, primarily from an increase in revenue from sales due to increases in both average selling price and average sales volume, mainly 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 additional completed assets.

- **America**

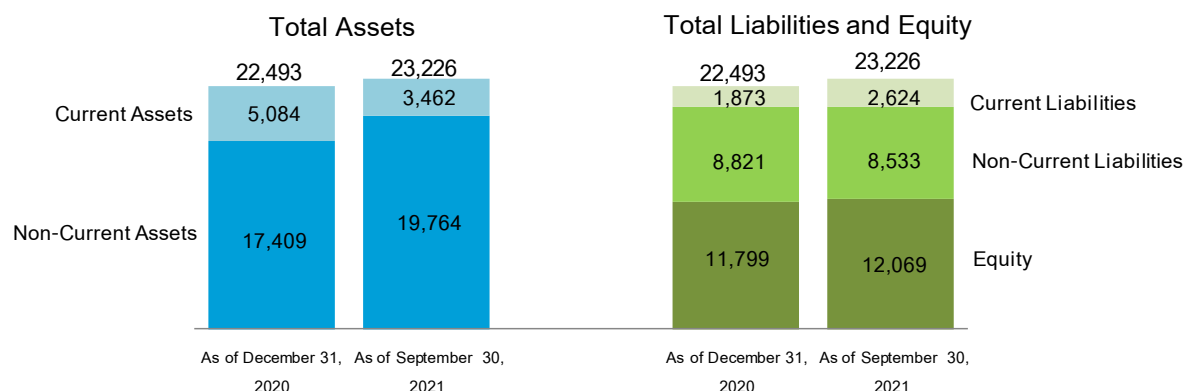
For the nine-month period ended September 2021, America reported a net loss of 151 MMUSD, an increase of 100 MMUSD or more than 100% when compared with a net loss of 51 MMUSD for the nine-month period ended September 2020, primarily from an increase in exploration expenses from partial write-off of exploration 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 nine-month period ended September 2021, Head Office and Others segment reported a net loss of 409 MMUSD, an increase of 395 MMUSD or more than 100% when compared with a net loss of 14 MMUSD for the nine-month period ended September 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 nine-month period ended September 2020 recognized gain due to a downward trend of oil price.

Financial Position

Unit: Million US Dollar



Assets

As at September 30, 2021, the Group had total assets amount of 23,226 MMUSD, an increase of 733 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, an increase of 2,355 MMUSD mainly due to an increase in property, plant and equipment from the acquisition of Oman Block 61 Project.

While

- (2) Current assets, which were primarily comprised of cash and cash equivalents, trade and other receivables and inventories, a decrease of 1,622 MMUSD mainly from a decrease in cash and cash equivalents of 1,704 MMUSD.

Liabilities

As at September 30, 2021, the Group had total liabilities of 11,157 MMUSD, an increase of 463 MMUSD from total liabilities as at December 31, 2020 of 10,694 MMUSD, primarily due to;

- (1) Current liabilities, which were primarily comprised of trade and other payables, current portion of long-term liabilities and income tax payable, an increase of 751 MMUSD mainly due to an increase in current portion of long-term liabilities of 488 MMUSD from Thai Baht debentures with a maturity in June 2022 and financial derivative liabilities increased by 150 MMUSD mainly due to oil price hedging instruments.
- (2) Non-current liabilities, which were primarily comprised of provision for decommission costs, debentures and deferred tax liabilities, a decrease of 288 MMUSD mainly due to a decrease in long-term debentures of 540 MMUSD from Thai Baht debentures with a maturity in June 2022, offset with provision for decommission costs increased by 79 MMUSD, deferred tax liabilities increased by 74 MMUSD and other non-current liabilities increased by 67 MMUSD mainly due to the acquisition of Oman Block 61 Project.

Equity

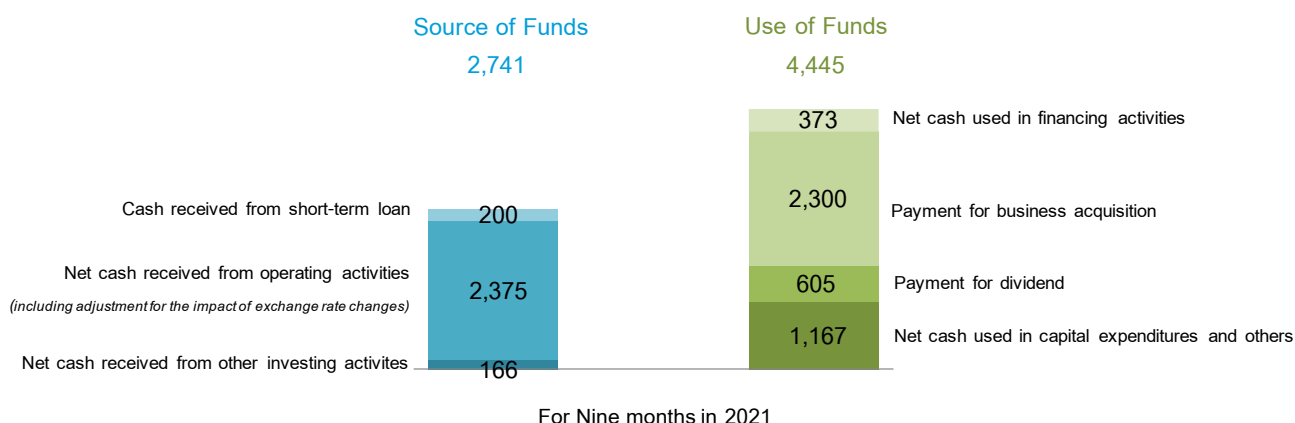
As at September 30, 2021, the Group had equity of 12,069 MMUSD, an increase of 270 MMUSD from equity as at December 31, 2020 of 11,799 MMUSD, primarily due to the net profit for the period, offset with the dividend payment in April and August 2021.

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 Q3/2021, the Group maintained cash on hand approximately of 2,000 MMUSD. In addition, the Group maintained its debt to equity ratio of 0.32, which was within the Group's financial policies and had a low level of finance costs at 3.43% 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 September 30, 2021, the Group had cash and cash equivalents* of 2,000 MMUSD, a decrease of 1,704 MMUSD compared with December 31, 2020 of 3,704 MMUSD.

Source of funds amount of 2,741 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 after the business acquisition which was in 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 4,445 MMUSD primarily came from the **Payment for business acquisition and additional capital expenditure**, from the acquisition of Oman Block 61 Project in Q1/2021 and additional investments in exploration and production assets mainly from S1 Project, Mozambique Area 1 Project and Arthit Project, as well as **Net cash used in financing activities**, primarily from payment of dividend for the second half of 2020 and the first half of 2021 and repayment of short-term loan from financial institution.

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

Key Financial Ratios

	Q2 2021	Q3 2021	Q3 2020	9M 2021	9M 2020
Profitability Ratio (%)					
EBITDA* margin	75.94	73.24	70.99	74.34	70.14
Return on equity	7.66	8.16	8.64	8.16	8.64
Net profit margin	14.82	14.69	17.01	14.69	17.01
Leverage Ratio (Times)					
Debt to equity	0.34	0.32	0.33	0.32	0.33
Debt to EBITDA *	0.98	0.86	0.78	0.86	0.78

* 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 the nine-month period ended September 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

As at Q3/2021, PTTEP has more than 40 projects in 15 countries, with key project highlights as follows:

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 Q3/2021, the average sales volume from projects in Thailand is 255,200 BOED, accounting for 61% of total sales volume. Average sales volume from other countries in this region is 97,500 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 March 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. For the **Bongkot Project**, the Company entered into Memorandum of Agreement relating to Bongkot end of concessions (MOA) with TOTAL E&P Thailand, a joint partner of Bongkot project, for the Company to be a sole risk operator for the infill drilling where the company shall recognize all revenues and costs from the petroleum produced. For **G1/61 Project (Erawan field)**, the company are still not allowed to access the site although the company has accepted all conditions 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. For **G2/61 Project (Bongkot field)** was on track for its transition plan.

- 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 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 (BCM) plan 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. The **Yetagun Project**, a natural gas and condensate producing project, has temporarily ceased its production, after resuming its production at the end of July, due to COVID-19 situation, but has resumed production in October. This has no significant impact to PTTEP. The **Yadana Project**, a natural gas producing field, has completed another production well drilling in August as plan, 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**, is currently waiting for PSC Supplementary approval from Myanmar Government and is under necessary preparation for development. On 17 September 2021, Mitsui Oil Exploration Company Limited (MOECO), a joint partner of Myanmar M3 project, notified to withdraw its 20% shareholding interest, in which the withdrawal will be effective from 31 October 2021 according to the Joint Operating Agreement. As a result, PTTEP will have the shareholding interest at 100% in this project, with completion subjected to Myanmar government approval. For **Domestic Gas to Power project**, the project has been facing some delay as a result of local political situation and COVID-19 outbreak. PTTEP is still 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. The main progress is the infill well preparation of SNP, expect to complete in December. The **Sarawak SK309 and SK311 Project** are oil and gas producing fields located in the shallow water of offshore Sarawak. The new Pemanis Topside was installed, with first gas expected in October. Infill well drilling will take place 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 such as increasing processing plant capacity, managing higher CO₂ as per GHG aspiration target. The field is expected to reach Final Investment Decision (FID) in 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** has started drilling the second exploration well in June, after the successful discovery of natural gas earlier this year, with results expected in Q4/2021. The **Sarawak SK405B Project** discovered crude oil and natural gas reservoirs in Sirung-1 well in March 2021. The Project is currently studying on upside petroleum potential in this area for future exploration and appraisal 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 to study 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 in that area 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 currently studying petroleum potential with 3D seismic reprocessing completed in September 2021 as planned and is planning for two exploration wells to be drilled in 2022-2023. The **PM415 Project** has completed drilling two exploration wells, JELAWAI-1/1ST1 and BEBARU-1, with no commercial reserves found, thus, the wells were written off in this quarter.

- Projects in Vietnam

The key *Producing Projects* in Vietnam include the **Vietnam 16-1 Project**, which is natural gas and crude oil field, located offshore in the southeast region of Vietnam. The project has campaign to drill 4 development wells in 2021; In Q3/2021, it had completed drilling 2 wells with the third well undergoing and the fourth well planned to be drilled in Q4/2021. 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 Q3/2021, both projects continue to produce as per OPEC+ agreement. Besides, **Oman Block 61 Project** with natural gas and condensate resources, the Project currently has a full production capacity of natural gas and condensate in according to the Sales and Purchase Agreement at 1,500 MMSCFD and 69,000 Barrels per day (BPD), respectively. 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** has started drilling an exploration well in September 2021. The **Abu Dhabi Offshore 3 Project** has been approved the appraisal plan by ADNOC. The project is on-going with geological and geophysical 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 has the direction to surrender all mineral leases. Therefore, the well abandonment campaign was completed, and 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. On 5 September 2021, the exploration well, Bacalar-1EXP, was spudded as a work commitment. It is expected to complete drilling operation in October 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 drilling operation of an exploration well and an appraisal well has been completed. Currently, well testing and petroleum evaluation is ongoing.

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, the court made judgement in March 2021 determining the damages caused only to lead plaintiff of the Class Action of approximately 0.02 million USD (excluding interest at approximately 0.01 million USD). Subsequently in October 2021, the court delivered additional judgement on unanswered common questions specifying the impacted areas from the Montara oil spill incident. Claims of other class members are presently statute barred and must be determined separately. PTTEP AAA is carefully considering the judgement and available avenues of appeal.

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).

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. In Q3/2021, the project had average production of 14,000 BPD following partial flow restriction on some wells, triennial Preventive Maintenance shutdown and the compliance to 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 Q4/2021. In the second phase, production capacity is planned to ramp up to around 50,000-60,000 BPD in 2026. In addition, the acquisition of additional participating interest of 24.5% from CNOOC was approved and announced by the government of Algeria in August 2021, resulting the increase in PTTEP's stake from 24.5% to 49%. SONATRACH, the national state-owned oil company of Algeria, remains the joint venture partner 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. The project finance close has been achieved, and the first debt drawdown has been made. On 26 April, due to the security incident since late March in the local area close to the project construction site, force Majeure has been declared for safety reason of all employees and stakeholders. In June, South African Development Committee - SADC) and the Rwanda Defense Force (RDF) has deployed military to support Mozambique to deal with the terrorists in Cabo Delgado, where the project is located. The troops are currently stationed in the area and are undergoing military action to restore security. Presently, the operator is in close discussion and provides required support to the government to accelerate the restoration of security, in order to allow safe project resumption.



Strategies under Sustainable Development Framework

PTTEP adheres to the Sustainable Development global practices and UN principles. Operating under the concept 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.

To be in line with the vision to become the "Energy Partner of Choice", PTTEP has established our 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) Amidst the COVID-19 pandemic, digitalization revolution and energy transition that causes challenges to various industries including the oil and gas industry, PTTEP continues to follow through our “EXECUTE and EXPAND” strategy.

- (1) **EXECUTE Strategy:** Strategy to enhance our competitive advantages through unit cost reduction and create additional value from existing assets with an emphasis on incremental production from key projects especially Thailand gas projects aiming to ensure national energy security as well as serve domestic demand. In Q3/2021, PTTEP constantly and closely collaborates with relevant parties and the government for G1/61 site access in order to prepare production readiness and agreement in field development plan revision in response to current circumstances and conditions with our highest effort. For G2/61 project, the transition execution has been advancing according to plan. In terms of oversea projects, PTTEP has pushed the development particularly Hassi Bir Rekeiz Project in Algeria, Integrated Domestic Gas to Power Project in Myanmar, and Mozambique Area 1 Project in Mozambique, ensuring progress and key milestone are on target.
- (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 focused investments in strategic areas being Thailand and Southeast Asia and looks for business expansion in gas value chain. In parallel with that, PTTEP has done the divestment as part of portfolio rationalization by selling our 50% holding interest in Potiguar project, an onshore oil producing field in Brazil. The relevant Sales and Purchase Agreement (SPA) is expected to reach the completion by the end of this year.
 - **Strategic Alliance Strategy:** PTTEP aims to capture an investment opportunity with strategic alliances in petroleum prolific areas specifically the Middle East i.e. Oman and UAE, where it has low-cost base as the advantage relative to other producing regions.
 - **Non-E&P 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 operation, A.I. and Robotics Ventures scale-up, renewable to power business, and future energy. In Q3/2021, PTTEP established the subsidiaries to support future investment in renewable power business. Furthermore, AI and Robotics Venture Company Limited (ARV), a subsidiary of PTTEP, recently established 4 subsidiaries to support its 4 business growth plans covering Subsea inspection, repair and maintenance, Integrated asset inspection and management service to various industries, Smart farming and smart forestry solution, and Health data network.
 - **LNG Strategy:** PTTEP is committed to drive LNG value chain with focused investments in upstream and liquefaction plants while developing in-house LNG capabilities. In Q3/2021, PTT Global LNG (PTTGL), a 50% joint venture company between PTT and PTTEP, obtained LNG shipper license from the Energy Regulatory Commission (ERC) as well as to explore other business opportunities related to LNG value chain internationally.

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 Q3/2021, the Company maintained a strong liquidity position with cash on hand of approximately 2,000 MMUSD. The debt-to-equity ratio is 0.32x which is in line with the Company's financial policy. The cost of capital was maintained at 3.43%, 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 Q3/2021, PTTEP received a Gold-level Thailand Most Innovative Knowledge Enterprise (MIKE) Award 2021 for the first time. This world-class award builds to identify the best practice organizations and ability to convert their knowledge into innovations.

Moreover, 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 CO₂ reserves, removing contaminants in condensate, enhancing oil recovery, reducing environmental impact, reducing decommissioning cost, and improving operation and maintenance efficiency. As of Q3/2021, there are 47 projects under research and development and the progress of highlight projects are as follow;

- The intelligence sampling pig for subsea pipeline decommissioning project is currently in progress of field trial test in Bongkot field.
- The modified method for contaminant measurement in condensate project is in progress to implement in Bongkot and Arthit field.
- The flare gas utilization by converting to Carbon Nanotube project is in progress to carry out the engineering design for the up-scaled production unit that is planned to construct at Sirikit field in 2023.
- 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 Q3/2021, PTTEP had Lost Time Injury Frequency (LTIF) of 0.15 and a Total Recordable Incident Rate (TRIR) of 0.74. The Company's recent performance on both safety indicators (LTIF and TRIR) are comparable to 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 Assets to take the results to improve GRC plans more effectively and prepare for a Company-wide GRC Maturity Level assessment program.
- Developing a system to compile assurance reports to be able to analyze an alignment and completeness to enable users to plan assurance activities effectively.
- Enhancing Risk Management System which covers suggesting risk, searching risk information, and linking risk reporting to other assurance reports.
- 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 sharing experiences
- 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 Q3/2021, PTTEP was honored to receive the Award for 2021 Role Model Organization on Human Rights in State Enterprise sector from the Department of Rights and Liberties Protection, Ministry of Justice for the third consecutive year. The recognition is a result of PTTEP's principle in respecting diversity and applying fundamental human right in all operations including having human rights management system and promoting good understanding on human rights for all staffs through training courses. PTTEP also has whistleblowing procedure and system for internal and external stakeholders to access.

Stakeholder Value Creation (SVC) PTTEP concerns for natural resource conservation, environmental restoration as well as community and social development. Our strategies and main progress in Q3/2021 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 of the end of Q3/2021, the Company reduced greenhouse gas emissions intensity by 16.6% 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 Q3/2021, PTTEP completed the 1st topside reuse at Arthit Asset on 20th August and 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 Q3/2021, 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 Q3/2021, PTTEP supported seafood product equipment to coastal communities for food processing and seafood product selling online platforms (Facebook and Shopee) were set up that overall product selling price have been increased by 78% from original price.

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 and Carbon Dioxide to Carbon Nanotube, the waste reduction by utilizing drill cutting as material for road pavement and 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 Q3/2021, PTTEP won a Best Community Development – Silver award from the Gulf of Sustainability Awards 2021 for its H.T.M.S Underwater Learning Site Project and PTTEP is the only Asian enterprise to honorably receive this award. In addition, PTTEP received 3 more awards in this quarter. A silver award for Innovation in Community Relations or Public Service Communications at the 2021 Asia-Pacific Stevie Awards was granted to the Forest Restoration at Sri Nakhon Khuean Khan Park Project in Samut Prakan Province. The top award in the Health Promotion category was received from the Asia Responsible Enterprise Awards (AREA) 2021 and PTTEP also received a Carbon Champion Certificate for addressing climate change issue and minimizing environmental impacts through Reforestation Project across 27 provinces. And the last award is a Communitas Awards 2021 with Excellence in Corporate Social Responsibility category was granted to the Petroleum Development Support Base in Songkhla (PSB) in recognition of Crab Hatchery Learning Center for Sustainability of Artisanal Fishery Group. PTTEP is the only company in Thailand to win the award this year. These recognitions emphasize PTTEP's determination to adhere to ethics in business operations and concerns over stakeholders as well as continuous responsibilities for community and environment.



Future Business Outlook

Oil Price Outlook

As vaccination rates surpass 60% of the total population in the U.S. and Europe, lockdown measures and travel restrictions have been lifted in most countries. Global oil demand recovery is expected to continue to gain momentum in the last quarter of this year, averaging 98 million barrels per day, with road transport sector as a main driver. Meanwhile, there is a potential demand upside from gas to oil switching in power generation by another 400,000 barrels per day due to recent high LNG prices. However, downside risk persisted by the rapid spread of Delta variant mostly in Asia.

On the supply side, OPEC+ production target will be increased 400,000 barrels per day each month since August until the end of 2021. However, it is expected to be underperformed than agreed quota due to low investment in previous years and heavy maintenance especially from Kazakhstan, Russia, and Nigeria. In the meantime, U.S. production is forecasted to slightly increase to 11.6 million barrels per day by year-end as oil companies still maintain their financial discipline, focusing on generating free cash for debt repayment and provide return to their investors.

Based on demand and supply outlook, crude oil balance is expected to be tight in Q4/2021. Oil prices has the potential to further increase to 75-85 USD per barrel reflecting the difficulty for supply to meet recovering demand. Moreover, Iran which originally has been forecasted to return the production at least 500,000 barrels per day in Q4/2021 after U.S. sanction lifted, will be deferred until at least 1H2022. The other key factors to be monitored are summarized as follows; COVID-19 situation, lockdown measure, vaccination progress, demand recovery, monetary policy, oil supply levels of main producing countries (OPEC, Russia, and the United States), weather disruption in Gulf of Mexico, U.S. policy to Iran and Venezuela as well as SPR drawdown policies from U.S. and China.

LNG Market

The global LNG market is expected to be tight until the end of 2021, with a total production capacity of existing and upcoming LNG projects growing by 32 MTPA (approximately 8%) from 2020 to 395 MTPA by the end of 2021, while the demand for LNG is anticipated to grow to 379 MTPA, 14 MTPA higher than July's estimate (Source: FGE as of September 2021). LNG price in Q4/2021 is expected to be at the average level of 30 USD per MMBTU because of growing demand from post COVID-19 recovery, coal-to-gas switching in response to climate concerns, and higher heating demand in winter. The average Asian spot LNG price in 2021 is forecasted to be in the range of 16-17 USD per MMBTU. (Source: FGE)

Thai Economy and Foreign Exchange Outlook

The Bank of Thailand expects the Thai economy to grow at 0.7% in 2021, revising down from the previous 1.8% forecast. Important drivers of Thailand's economic recovery are the efficacy of COVID-19 containment, vaccine accessibility, and the various government measures to stimulate spending. In Q4/2021, USD/THB is expected to remain volatile and move in line with Thailand's economic recovery. In addition, THB movement will be impacted by monetary policy decisions of the Bank of Thailand and the Federal Reserve. In Q3/2021, BOT voted to retain Thailand's policy rate at 0.5% while the Federal Reserve began signaling that tapering may begin in Q4/2021, a headwind for THB.

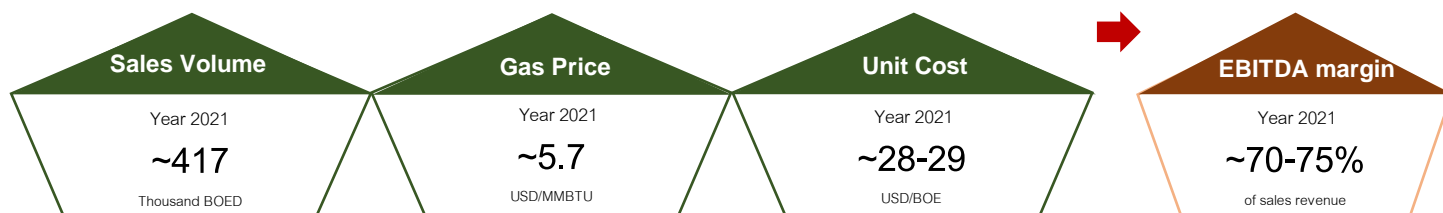
PTTEP has adopted the natural hedge method to manage FX risks by matching USD and USD-linked revenues from petroleum products with major USD expenses. Remaining FX risk exposures from non-USD revenues and expenses are managed by utilizing financial hedging instruments such as forwards and cross currency swaps. Moreover, interest rate volatility does not materially impact the Company's financial performance as 82% 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 year 2021

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 2021 of 67.2 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 full year of 2021 to be approximately 417,000 barrels of oil equivalent per day. The sales volume growth in 2021, compared to the previous year was mainly driven from the start-up of Malaysia Block H Project and 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 the full year of 2021 is 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. Moreover, the start-up of Block H project and the acquisition of 20% interest in Oman Block 61 Project also dragged down average gas price as gas price for these projects are lower than the average gas price of the company.
- Outstanding volume of oil price hedging for 2021, as at the end of Q3/2021 was approximately 6 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 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.