Executive Summary

The coronavirus disease 2019 (COVID-19) pandemic has not only affected the health, safety and economics around the world, it has also caused major changes in many sectors, especially business sector. Businesses need to adapt to the "New Normal": new ways of work and behavior of counterparties, employees and all stakeholders; and need to fully utilize digital technology for work efficiency. In addition, the crude oil prices that had fallen sharply and directly impacted the oil and gas industry, have continued to volatile. Even though, the demand for crude oil has improved after the easing of lockdown restrictions in many countries, the concerns over possible "second wave" of COVID-19 has risen. In the supply-side perspective, oil production cut by OPEC+ may not be sufficient to compensate the collapse of oil demand.

PTTEP has realized the importance of these major changes in the business sector and has sharpened our plan under the strategy "Execute & Expand" in order to be resilient in the industry's increasingly volatile environment, enhance the company's competitive advantage and promote sustainability: by ***1)*** Strengthen our core business, Exploration and Production, by optimizing development and production plans for cost competitiveness with the aspirational goal to continuously reduce unit cost to be at the top quartile in the industry (at the level of 25 USD/BOE) and 5% average production growth (CAGR) by 2030 ***2)*** Grow E&P portfolio, for continuous growth in our core business with the aspiration target to maintain the reserves to production ratio of 7 years in 2030 ***3)*** Drive the LNG value chain, through joint-venture investments in upstream and liquefaction ***4)*** Diversify to new businesses, with the aspirational goal in 2030 as a 20% contribution to Net Income, including power business that extended from existing gas business and expansion of A.I. & Robotics Venture (ARV) in 4 core areas: subsea, agricultural, medical and drone inspection. ***5)*** Transform to the New Normal, through the transformation projects that consist of various initiatives to accelerate digital transformation aimed at long-term work efficiency towards the concept of "One Team, One Goal"

For Q2/2020, PTTEP reported net income of 134 MMUSD, a decrease of 51% compared to the previous quarter. This is mainly driven by lower sales volume and selling prices as a result of lower energy demand and lower global crude oil prices respectively. Nonetheless, PTTEP was able to maintain unit cost and cash cost at 30 USD/barrel of oil equivalent (BOE) and 14 USD/BOE, respectively. For the first half of 2020, PTTEP reported cash flow generated from operations of 1,205 MMUSD and has maintained EBITDA margin of 70%. During Q2/2020, the Company also recognized impairment loss on assets of 47 MMUSD mainly from the Mariana Oil Sand Project due to the forecast of low oil price in long term indicating project development uncommercial. As at end of Q2/2020, PTTEP's financial structure remains strong reflecting the cash and short-term investments of 3,090 MMUSD with debt to equity ratio at 0.33.

Table of key financial results

(Unit: Million US Dollar)	Q1 2020	Q2 2020	Q2 2019	% Inc. (Dec.) QoQ	% Inc. (Dec.) YoY	6M 2020	6M 2019	% Inc. (Dec.) YTD
Total Revenue	1,771	1,095	1,573	(38)	(30)	2,779	3,001	(7)
Sales Revenue	1,482	1,041	1,469	(30)	(29)	2,523	2,797	(10)
EBITDA	1,082	711	1,087	(34)	(35)	1,793	2,112	(15)
Profit(loss) for the period	275	134	433	(51)	(69)	409	827	(51)
Basic earnings(loss) per share (Unit: US Dollar)	0.07	0.03	0.10	(57)	(70)	0.10	0.20	(50)
Profit(loss) from normal operation	290	128	389	(56)	(67)	418	763	(45)
Profit(loss) from non-recurring items	(15)	6	44	>100	(86)	(9)	64	>(100)

Economic Overview in the second quarter of 2020

Crude Oil Price

Dubai crude price in Q2/2020 averaged at $30.7 per barrel, lower than Q1/2020 average of $50.4 per barrel. After the unsuccessful negotiation during OPEC+ meeting in March, Saudi Arabia and Russia decided to boost up their production to the maximum capacity in April. Therefore, the price had fallen below $20 per barrel. OPEC+ had held several meetings since then with the aim to cut productions, the latest OPEC+ meeting was held in July to confirm the position to cut output by approximately 10 million barrels per day in May to July. The production cut will be eased since August to December to about 8 million barrels per day then further be relaxed to about 6 million barrels per day between January 2021 to April 2022. Moreover, the G20 countries, led by U.S., Canada and Brazil, had agreed to contribute additional production cut up to 5 million barrels per day mainly from their voluntary production cuts and production shut-in due to sub-economic level.

While the global crude production remains high in April, the oil demand has reached its bottom in April. Country lockdowns to prevent the spread of COVID-19 infection had caused oil demand drop around 25 million barrels per day. Together with market concerns over insufficient production cut to compensate such demand collapse, have caused the crude price to average at $20 per barrel in April. However, the COVID-19 outbreak has lessened as many countries, including China, South Korea and Japan, had eased their lockdown measures. Crude oil price has then increased to approximately $30 and $40 per barrel in May and June respectively.

Liquefied Natural Gas (LNG)

For LNG Market in Q2/2020, the average Asian Spot LNG price decreased drastically to 2.14 USD per MMBTU, mainly driven by the outbreak of COVID-19, resulting in the collapse of global energy demand. Moreover, oil price war between Saudi Arabia and Russia at the beginning of March also led to oil price collapse. On the supply side, the LNG market remained oversupply due to incremental volumes from new projects, mainly from LNG projects in Australia, Russia and U.S., with total capacity of 383 million ton per annum (MTPA), while LNG's demand remained at 360 MTPA, revised down from previous estimate of 373 MTPA.

Thailand's Energy Demand

Thailand's energy demand from January to May 2020 was reported at 2 million BOED, a significant decrease of 8% relative to the same period of the previous year (Source: EPPO, The Ministry of Energy). The decrease can be attributed primarily to the slowdown economy caused by COVID-19 pandemic and country lockdown that have impacted almost every segment, especially the tourism industry and jet fuel usage.

Exchange Rates (Thai Baht against US Dollar)

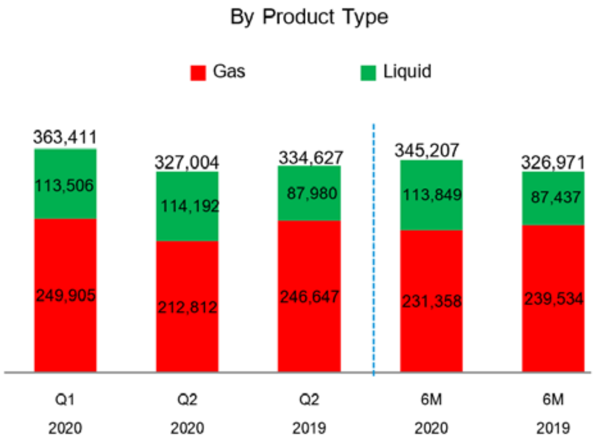
In Q2/2020, THB appreciated, from Q1/2020, by 5% against USD to close at 30.89 THB/USD and became the strongest performing currency in the region due to capital inflows from effective COVID-19 domestic containment measures. However, these measures also contributed to the contraction of the Thai economy through negative impacts on tourism and export sectors, although leaving general economic stability intact. As part of the range of easing measures, Bank of Thailand has cut the policy rate to 0.50% to support the liquidity mechanism in Thailand's financial markets and insulate effects from negative headline inflation caused by contracted energy prices and lower public spending.

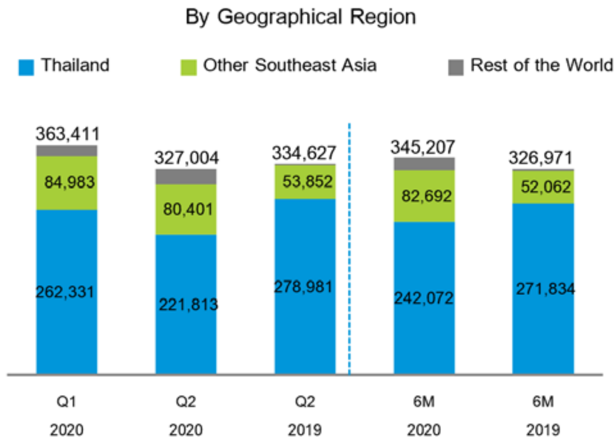
In terms of the impacts on income taxes from THB fluctuations, due to the difference in tax filing currency (THB) and financial reporting functional currency (USD) according to accounting standards, the amendments on relevant tax laws has been made by Revenue Department to support tax filing in the company's functional currency in April 2019 with subsequent related legislations announced in June 2020, has allowed PTTEP Group to be able to file income tax returns in US dollar currency, which is the Company's financial reporting functional currency (USD), for the accounting periods starting from 2020 onwards. There will be no effect from the change in the volatility of Thai Baht in terms of income tax to the company's future financial performance.

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 2020	Q2 2020	Q2 2019	% Inc. (Dec.) QoQ	% Inc. (Dec.) YoY	6M 2020	6M 2019	% Inc. (Dec.) YTD
Average selling price (/BOE)	44.81	34.97	48.26	(22)	(28)	40.15	47.26	(15)
Liquid price (/BOE)	52.75	28.92	65.25	(45)	(56)	40.80	62.07	(34)
Gas price (/MMBTU)	6.87	6.37	7.03	(7)	(9)	6.64	6.98	(5)
Average Dubai crude oil price (/BBL)	50.41	30.72	67.55	(39)	(55)	40.72	65.48	(38)

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

In Q2/2020, average sales volume of PTTEP and its subsidiaries (the “Group”) decreased to 327,004 barrels of oil equivalent per day (BOED) when compared with Q1/2020 of 363,411 BOED. The decrease was primarily from the Bongkot and Contract 4 Project due to lower gas nomination from buyers while there was an increase in crude oil sales volume from Partex Group. The average selling price in Q2/2020 decreased to 34.97 USD/BOE (In Q1/2020: 44.81 USD/BOE).

For the Second quarter of 2020 compared with the Second quarter of 2019

When compared the average sales volume for Q2/2020 to Q2/2019 of 334,627 BOED, the average sales volume decreased primarily from the Bongkot and Contract 4 Project due to lower gas nomination from buyers while there was an increase in sales volume of Malaysia project and Partex group from the business acquisition. The average selling price in Q2/2020 decreased to 34.97 USD/BOE (In Q2/2019: 48.26 USD/BOE).

For the six-month period ended June 2020 compared with 2019

The average sales volume for the six-month period ended June 2020, increased to 345,207 BOED when compared with the same period of 2019 (for the six-month period ended June 2019 of 326,971 BOED). The increase was primarily due to Malaysia project and Partex group from the business acquisition, offset with Contract 4 project which had lower gas nomination from buyers. The average selling price decreased to 40.15 USD/BOE (for the six-month period ended June 2019: 47.26 USD/BOE).

Overall Operating Results

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

For Q2/2020, the Group had a net profit of 134 MMUSD, a decrease of 141 MMUSD or 51% from a net profit in Q1/2020 of 275 MMUSD. The decrease was due to a decrease in total revenue of 676 MMUSD which was primarily from lower sales revenue of 441 MMUSD, as well as, a loss on financial instruments of 78 MMUSD in Q2/2020 (Q1/2020: recognized gain of 222 MMUSD). However, the total expenses decreased 535 MMUSD mainly due to a decrease in income tax expense of 520 MMUSD from a reversal of income taxes liabilities balance relating to changes in foreign exchange rate which were recognized in Q1/2020, due to the change of corporate income tax calculation currency in Q2/2020, as well as, the decrease of tax expenses from the decrease of sales revenue. The net profit for Q2/2020 of 134 MMUSD can be separated as following.

The profit from normal operation in Q2/2020 was 128 MMUSD, a decrease of 162 MMUSD when compared with a profit in Q1/2020 of 290 MMUSD. The reason was primarily from a decrease in sales revenue of 441 MMUSD due to decreases in both an average selling price and sale volume. However, there was a decrease in total expenses mainly from a decrease in tax expense of 173 MMUSD from lower sales revenue, and a decrease in depreciation, depletion and amortization expenses of 48 MMUSD in accordance with a decrease in average sale volume.

The profit from non-recurring items in Q2/2020 was 6 MMUSD, an increase of 21 MMUSD when compared with Q1/2020 which reported a loss of 15 MMUSD. The reason was primarily due to a decrease in income tax expense relating to foreign exchange rate of 347 MMUSD from the reversal of income taxes liabilities balance relating to changes in foreign exchange rate which were recognized in Q1/2020, the decrease was offset with the reversal of tax benefit which were recognized in the prior period due to the change of corporate income tax calculation currency in Q2/2020. However, the Group recognized loss on financial instruments of 78 MMUSD in Q2/2020, while, recognizing gain of 222 MMUSD from such transaction in Q1/2020, mainly from oil price hedging instruments and forward contracts, as well as, the recognition of impairment loss on assets amounting to 47 MMUSD mainly from Mariana Oil Sands project.

For the Second quarter of 2020 compared with the Second quarter of 2019

When compared with the same period last year which reported a net profit of 433 MMUSD, the Group had a decrease in net profit of 299 MMUSD or 69%. The decrease was due to the decrease of total revenue of 478 MMUSD which was primarily due to a decrease in sales revenue of 428 MMUSD. However, the total expense decreased 179 MMUSD, mainly from a decrease in income tax expense of 254 MMUSD in accordance with a decrease in average sale revenue. In Q2/2020, the Group recognized a reversal of income taxes liabilities balance relating to changes in foreign exchange rate which were recognized in Q1/2020 due to the change of corporate income tax calculation currency while recognized an increase in loss on financial instruments of 70 MMUSD. The net profit for Q2/2020 of 134 MMUSD can be separated as following.

The profit from normal operation in Q2/2020 was 128 MMUSD, a decrease of 261 MMUSD when compared with a profit in Q2/2019 of 389 MMUSD. The reason was primarily from a decrease in sales revenue of 428 MMUSD due to decreases in an average selling price and sales volume. However, there was a decrease in total expenses mainly from a decrease in tax expense of 158 MMUSD from lower sales revenue, as well as, a decrease in petroleum royalties of 59 MMUSD in accordance with a decrease in domestic sales revenue.

The profit from non-recurring items of Q2/2020 was 6 MMUSD, a decrease of 38 MMUSD when compared with a profit in Q2/2019 of 44 MMUSD. The reason was primarily due to an increase in a recognition of loss on financial instruments of 70 MMUSD in Q2/2020, mainly from oil price hedging instruments and forward contracts, as well as, the recognition of impairment loss on assets amounting to 47 MMUSD mainly from Mariana Oil Sands project. While there was a decrease in income tax expense relating to foreign exchange rate of 96 MMUSD due to the higher impact from the reversal of income taxes liabilities relating to changes in foreign exchange rate which were recognized in Q1/2020 due to change of corporate income tax calculation currency in Q2/2020, than a decrease in income tax expense due to the appreciation of Thai Baht against USD at 1.07 Thai Baht per USD in Q2/2019.

For the six-month period ended June 2020 compared with 2019

For the six-month period ended June 2020, the Group had a net profit of 409 MMUSD, a decrease of 418 MMUSD or 51% when compared with the six-month period ended June 2019 of 827 MMUSD. The decrease was due to the decrease of total revenue of 222 MMUSD which was primarily due to a decrease in sales revenue of 274 MMUSD as well as an increase of total expense of 196 MMUSD, mainly from an increase in operating expense and depreciation, depletion and amortization expenses of 91 MMUSD and 88 MMUSD respectively, such increases were in accordance with an increase in average sales volume from Malaysia Project and Partex group which was acquired in the second half of 2019. Besides, there was an increase in income tax expense of 90 MMUSD mainly from a decrease of income tax expense for the six-month period ended June 2019 due to the appreciation of Thai Baht against USD at 1.71 Thai Baht per USD, while the Group recognized a slight increase in an income tax expense from depreciation of Thai Baht against USD at 0.74 Thai Baht per USD during the six-month period this year, due to the change of corporate income tax calculation currency, offset with a decrease of income tax expense from the decrease in sales revenue. However, the Group recognized gain on financial instruments of 144 MMUSD (For the six-month period ended June 2019: recognized loss 90 MMUSD). The net profit for the six-month period ended June 2020 of 409 MMUSD can be separated as following.

The profit from normal operation for the six-month period ended June 2020 was 418 MMUSD, a decrease of 345 MMUSD when compared with a profit for the six-month period ended June 2019 of 763 MMUSD. The reason was primarily from a decrease in sales revenue of 274 MMUSD due to decreases in an average selling price even though there were increases in average sales volume as well as increases in both operating expenses and depreciation, depletion and amortization expenses of 91 MMUSD and 88 MMUSD, respectively, such increases were in accordance with an increase in average sales volume from Malaysia Project and Partex group which was acquired in the second half of 2019. However, the Group recognized a decrease in income tax expense of 108 MMUSD mainly from the decrease in sales revenue.

The loss from non-recurring items for the six-month period ended June 2020 was 9 MMUSD, a decrease of 73 MMUSD when compared with a profit for the six-month period ended June 2019 of 64 MMUSD. The reason was primarily due to an increase in income tax expense relating to foreign exchange rate of 198 MMUSD, which was mainly from a decrease in income tax expense of 155 MMUSD due to the appreciation of Thai Baht against USD at 1.71 Thai Baht per USD for the six-month period ended June 2019, while there was an increase in an income tax expense of 12 MMUSD due to the depreciation of Thai Baht against USD at 0.74 Thai Baht per USD for the six-month period ended this year. However, the impact of income tax relating to foreign exchange rate was lower this year, due to the change in corporate income tax calculation currency. Besides, the Group recognized loss on foreign exchange rate of 3 MMUSD due to the depreciation of Thai Baht against USD for the six-month period ended June 2020, while, recognized gain from such transaction of 59 MMUSD due to the appreciation of Thai Baht against USD in the same period last year and recognized of impairment loss on assets amounting to 47 MMUSD mainly from Mariana Oil Sands project. However, the Group recognized gains on financial instruments of 144 MMUSD for the six-month period ended June 2020, while recognized loss on financial instruments of 90 MMUSD in the same period last year, mainly due to oil price hedging instruments and foreign exchange forward contracts.

Operating Results by Segments

Net Profit (loss) (Unit: Million US Dollar)	Q1 2020	Q2 2020	Q2 2019	% Inc. (Dec.) QoQ	% Inc. (Dec.) YoY	6M 2020	6M 2019	% Inc. (Dec.) YTD
Exploration and production	192	78	311	(59)	(75)	270	654	(59)
Southeast Asia	204	144	309	(29)	(53)	348	654	(47)
- Thailand	245	158	285	(36)	(45)	403	594	(32)
- Other Southeast Asia	(41)	(14)	24	66	>(100)	(55)	60	>(100)
Australia	(1)	(10)	(3)	>(100)	>(100)	(11)	(7)	(57)
America	(3)	(46)	(3)	>(100)	>(100)	(49)	(6)	>(100)
Africa	(5)	(1)	13	80	>(100)	(6)	18	>(100)
Others	(3)	(9)	(5)	>(100)	(80)	(12)	(5)	>(100)
Gas separation plant	1	(0.1)	-	>(100)	(100)	1	-	100
Pipeline transportation	65	64	80	(2)	(20)	129	158	(18)
Head office and others	17	(8)	42	>(100)	>(100)	9	15	(40)
Total	**275**	**134**	**433**	**(51)**	**(69)**	**409**	**827**	**(51)**

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

For Q2/2020, the Group reported a net profit of 134 MMUSD, a decrease of 141 MMUSD or 51% when compared with a net profit of 275 MMUSD in Q1/2020, primarily due to a decrease of Exploration and Production segment in Southeast Asia (Thailand decreased 87 MMUSD, while other Southeast Asia increased 27 MMUSD), and decrease in America of 43 MMUSD.

Exploration and Production segment

- Southeast Asia

  - Thailand

For Q2/2020, Thailand reported a net profit of 158 MMUSD, a decrease of 87 MMUSD or 36% when compared with a net profit of 245 MMUSD in Q1/2020. The decreases were primarily from a decrease in sales revenue from decreases in both average selling price and sales volume, while there was a decrease in income tax expense in accordance with a decrease in sales revenue and the impact from the appreciation of Thai Baht against USD at 1.78 Baht per USD in Q2/2020, while there was the depreciation of Thai Baht against USD at 2.52 Baht per USD in Q1/2020. In addition, depreciation, depletion and amortization expenses decreased, as well as, the petroleum royalties decreased in accordance with the decreases in average sales volume and sales revenue, respectively.

  - Other Southeast Asia

For Q2/2020, Other Southeast Asia reported a net loss of 14 MMUSD, a decrease of 27 MMUSD loss or 66% from a net loss of 41 MMUSD in Q1/2020, primarily due to a decrease in income tax expense relating to changes in foreign exchange rate from a depreciation of Thai Baht against USD at 2.52 Baht per USD in Q1/2020, while there was a lower impact from such expenses due to the change of corporate income tax calculation currency in Q2/2020. However, the sales revenue decreased in accordance with the decrease in average selling price and sales volume.

- America

For Q2/2020, America reported a net loss of 46 MMUSD, an increase of 43 MMUSD loss or more than 100% when compared with a net loss of 3 MMUSD in Q1/2020, mainly due to the recognition of impairment loss on assets from Mariana Oil Sands project.

For Second quarter of 2020 compared with Second quarter of 2019

For Q2/2020, the Group reported a net profit of 134 MMUSD, a decrease of 299 MMUSD or 69% when compared with a net profit of 433 MMUSD in Q2/2019, primarily due to a decrease of Exploration and Production segment in Southeast Asia (Thailand decreased 127 MMUSD and Other Southeast Asia decreased 38 MMUSD), and decrease in America of 43 MMUSD including the decrease in Head Office and Others segment of 50 MMUSD.

Exploration and Production segment

- Southeast Asia
  - Thailand

For Q2/2020, Thailand reported a net profit of 158 MMUSD, a decrease of 127 MMUSD or 45% when compared with a net profit of 285 MMUSD in Q2/2019. The decreases were primarily from a decrease in sales revenue from decreases in both average selling price and sales volume, while there was a decrease in income tax expense in accordance with a decrease in sales revenue. In addition, depreciation, depletion and amortization expenses decreased, as well as, the petroleum royalties decreased in accordance with the decreases in average sales volume and sales revenue, respectively.

  - Other Southeast Asia

For Q2/2020, Other Southeast Asia reported a net loss of 14 MMUSD, a decrease of 38 MMUSD or more than 100% from a net profit of 24 MMUSD in Q2/2019, primarily due to an increase in depreciation, depletion and amortization expenses in accordance with an increase in sales volume from Malaysia Project which was acquired in the second half of 2019, as well as, a decrease in sales revenue due to a decrease in average selling price.

- America

For Q2/2020, America reported a net loss of 46 MMUSD, an increase of 43 MMUSD loss or more than 100% when compared with a net loss of 3 MMUSD in Q2/2019, mainly due to the recognition of impairment loss on assets from Mariana Oil Sands project.

Head Office and Others segment

For Q2/2020, Head Office and Others segment reported a net loss of 8 MMUSD, a decrease of 50 MMUSD or more than 100% when compared with a net profit of 42 MMUSD in Q2/2019, mainly due to an increase in the recognition of loss from financial instruments from oil price hedging instruments and forward contracts.

For the six-month period ended June 2020 compared with 2019

For the six-month period ended June 2020, the Group reported a net profit of 409 MMUSD, a decrease of 418 MMUSD or 51% when compared with a net profit of 827 MMUSD for the six-month period ended June 2019, primarily due to a decrease of Exploration and Production segment in Southeast Asia (Thailand decreased 191 MMUSD and other Southeast Asia decreased 115 MMUSD), and decreae in America of 43 MMUSD.

Exploration and Production segment

- Southeast Asia
  - Thailand

For the six-month period ended June 2020, Thailand reported a net profit of 403 MMUSD, a decrease of 191 MMUSD or 32% when compared with a net profit of 594 MMUSD for the six-month period ended June 2019. The decreases were primarily from a decrease in sales revenue from decreases in both average selling price and sales volume, while there was a decrease in income tax expense in accordance with a decrease in sales revenue. In addition, depreciation, depletion and amortization expenses decreased, as well as, the petroleum royalties decreased in accordance with the decreases in average sales volume and sales revenue respectively.

- Other Southeast Asia

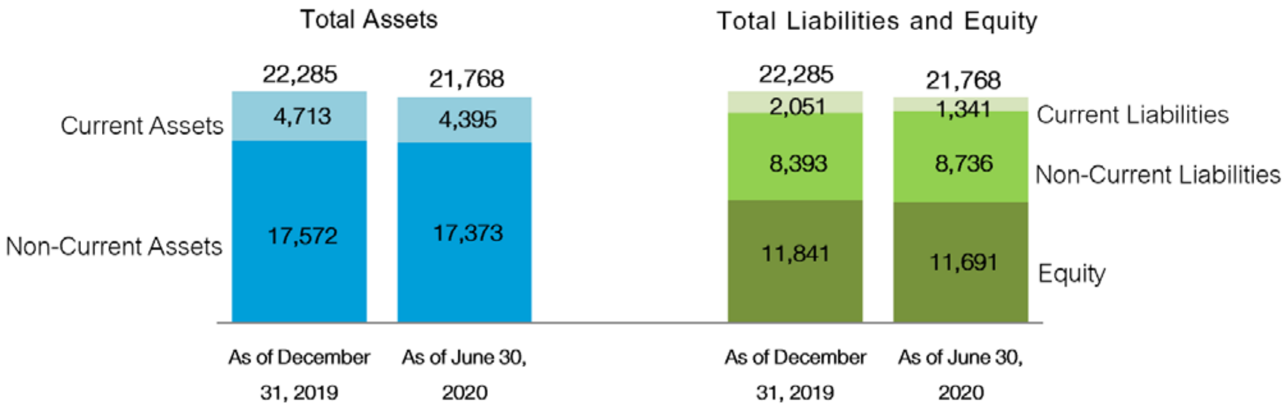
For the six-month period ended June 2020, Other Southeast Asia reported a net loss of 55 MMUSD, an decrease of 115 MMUSD or more than 100% when compared with a net profit of 60 MMUSD in Q2/2019, primarily due to an increase in depreciation, depletion and amortization expenses in accordance with an increase in sales volume from Malaysia Project which was acquired in the second half of 2019. In addition, there was an increase in income tax expense relating to changes in foreign exchange rate due to the revesal of tax benefits which were recognized in the prior period from the change of corporate income tax calculation currency. While, the sales revenue increased in accordance with the increase of average sales volume.

- America

For the six-month period ended June 2020, America reported a net loss of 49 MMUSD, a decrease of 43 MMUSD or more than 100% when compared with a net loss of 6 MMUSD for the six-month period ended June 2019, mainly due to the recognition of impairment loss on assets from Mariana Oil Sands project.

Financial Position

Unit: Million US Dollar



Assets

As at June 30, 2020, the Group had total assets amount of 21,768 MMUSD, a decrease of 517 MMUSD from total assets as at December 31, 2019 of 22,285 MMUSD, primarily due to;

1) Current assets, which were primarily comprised of cash and cash equivalents, short-term investment, account receivable and other receivable, and inventories, decreased 318 MMUSD mainly from a decrease in account receivable and other receivable of 365 MMUSD.
2) Non-current assets, which were primarily comprised of exploration and production assets in joint venture projects being recognized as part of the property, plant and equipment, exploration and evaluation assets and goodwill, decreased 199 MMUSD mainly due to a depreciation, depletion and amortization expenses, although there was an increase in an investment for exploration and evaluation assets.

Liabilities

As at June 30, 2020, the Group had total liabilities of 10,077 MMUSD, a decrease of 367 MMUSD from total liabilities as at December 31, 2019 of 10,444 MMUSD, primarily due to;

1) Current liabilities, which were primarily comprised of trade account payables and other payables, income tax payable, and other current liabilities, decreased 710 MMUSD mainly due to a decrease in income tax payable of 597 MMUSD from the payment of income tax for the year 2019, and decreases in trade account payables and other payables of 181 MMUSD.
2) Non-current liabilities, which were primarily comprised of provision for decommissioning costs, debentures and deferred tax liabilities, increased 343 MMUSD mainly from an increase of lease liabilities of 241 MMUSD and an increase in debentures amount of 100 MMUSD primarily due to debentures issuance.

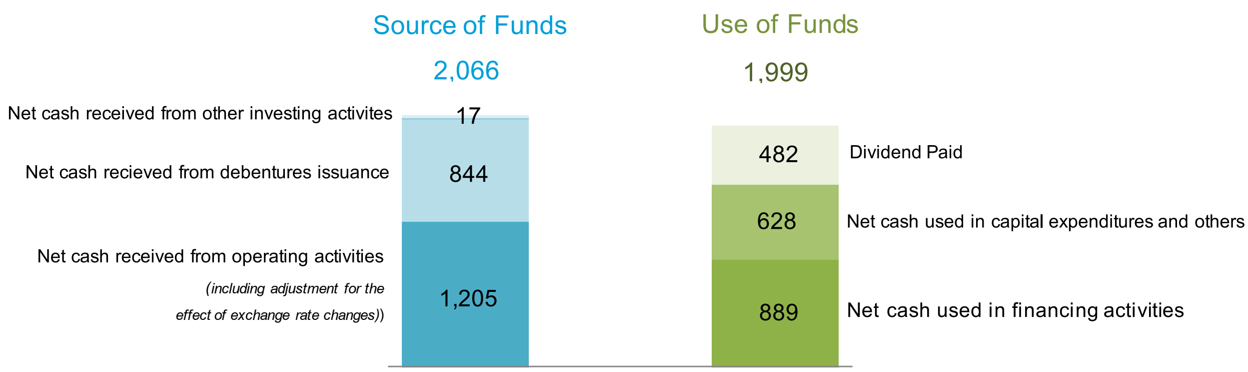
Capital Structure

As of June 30, 2020, the capital structure consisted of 11,691 MMUSD in shareholders' equity and 10,077 MMUSD in total liabilities. The Group total liabilities comprised of 3,883 MMUSD worth of interest-bearing debts with a weighted average cost of debt of 3.74% and having average maturity of 14.59 years, in which all interest-bearing debts were denominated in USD and the fixed interest rates to the floating interest rates ratio is 82:18.

In Q2/2020, PTTEP TC, subsidiary of the Company, and the Group's treasury center, completed the offer and issuance of unsecured and unsubordinated debentures to offshore investors for the total amount of 500 MMUSD carrying a coupon of 2.587% per annum with the tenor of 7 years. In addition, the Group paid the remaining interim dividend for the year 2019 amount of 482 MMUSD in April.

Cash Flows

Unit: Million US Dollar



For six months in 2020

As at June 30, 2020, the Group had cash and cash equivalents, including short-term investments in the form of bank fixed deposit with a maturity of more than three months, but within twelve months of 3,090 MMUSD, an increase of 67 MMUSD from cash and cash equivalents, including short-term investments as at December 31, 2019 of 3,023 MMUSD.

Sources of funds amount of 2,066 MMUSD primarily came from **Net cash received from operating activities** as a result of the positive net cash flows from sales revenues, offset with cash payments for expenditures and income tax expense and **Net cash received from financing activities** derived from the issuance of the USD denominated unsecured and unsubordinated debentures.

Uses of funds in the amount of 1,999 MMUSD primarily came from **Net cash used in the additional investments** in exploration and production assets, primarily for investment in S1 and Mozambique Area 1 Project. The **Net cash used in financing activities** were mainly from the repurchase of the USD denominated unsecured and unsubordinated debentures and , as well as the payment of remaining interim dividend for year 2019 in April 2020.

Key Financial Ratios

	Q1 2020	Q2 2020	Q2 2019	6M 2020	6M 2019
Profitability Ratio (%)					
EBITDA to revenue from sales	71.85	66.72	72.31	69.73	73.88
Return on equity	12.32	9.76	11.97	9.76	11.97
Net profit margin	21.40	18.28	23.69	18.28	23.69
Leverage Ratio (Times)					
Debt to equity	0.29	0.33	0.17	0.33	0.17
Debt to EBITDA	0.60	0.73	0.52	0.73	0.52

Remark:

EBITDA to revenue from sales	=	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 of Q2/2020, PTTEP has over 40 projects with domestic and international operations 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 Malaysia (Malaysia), the Socialist Republic of Vietnam (Vietnam), and the Republic of Indonesia (Indonesia). In this quarter, the average sales volume from projects in Thailand is 221,813 BOED, accounting for 68% of total sales volume. Average sales volume from other countries in this region is 80,402 BOED, which accounted for 25% 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** maintained production volumes as planned. The **Bongkot Project, Contract 4 Project** and **Arthit Project** delivered production volumes as nominated from the buyer. For the Bongkot Project and Contract 4 Project, the lower nomination was due to the lower energy demand from the COVID-19 outbreak. **G1/61 Project** (Erawan field) and **G2/61 Project** (Bongkot field) have commenced the preparation phase which includes planning for exploration drilling, construction of production platform and gas pipelines, and other studies to ensure gas production in accordance with the minimum volume stated in the Production Sharing Contract (PSC) of 1,500 MMSCFD in total, starting from 2022-2023 onwards. PTTEP has closely coordinated with the existing concessionaire and the Department of Mineral Fuels to ensure a smooth operational transition.

- Projects in Myanmar

The key ***producing project*** in Myanmar is the **Zawtika Project** located in the Gulf of Moattama, maintained production volumes as planned. Projects in ***exploration phase*** are highlighted and detailed as follows. The **Myanmar M3 Project**, the project is in the process of waiting for an approval of the Field Development Plan from the Government, which was filed in Q1/2020. The **Myanmar MD-7 Project**, which has completed the drilling of an exploration well in March 2020, evaluated the results to have no commercial reserves and thus were written off in this quarter.

- Projects in Malaysia

The ***producing projects*** in Malaysia include the **Block K Project**, consisting of Kikeh, Siakap North-Petai (SNP) and Gumusut-Kakap (GK) fields which are located in the deep water of offshore Sabah. The **Sarawak SK309 and SK311 Project** are oil and gas producing fields located in the shallow water of offshore Sarawak. In this quarter, the production of both projects had been lower than planned, due to lower energy demand from the COVID-19 outbreak. In addition, Government of Malaysia has extended a Movement Control Order ("MCO") from 18 March to 31 August 2020, in response to the COVID-19 outbreak, consequently delayed in some of the maintenance work. Slightly impact on production was observed.

Development Projects in Malaysia are as follows. **Block H Project,** located in the deep-water of offshore Sabah with capacity of 270 MMSCFD, with the first gas is expected in Q3/2020, slightly delayed from the original plan, due to extension of the Movement Control Order (MCO), which was required to complete the subsea structure installation works. Currently, the installation work has been proceeded. ***Exploration Projects*** in Malaysia are highlighted as follows. The **Sarawak SK410B Project** is currently preparing for the drilling of an appraisal well to further evaluate potential upside in the end of Q3/2020 along with studying on the field development plan. The **Sarawak SK417 Project,** the **Sarawak SK438 Project,** the **Sarawak SK405B**, and the **PM 415 Project** are currently being evaluated for petroleum potential and prepare for exploration drilling in 2020-2021. Other Malaysia projects are in the process of prioritizing exploration drilling plan.

- Projects in Vietnam

The key *Producing Project* is the Vietnam 16-1 Project, located offshore in the southeastern region. The project has completed drilling an appraisal well in Q2/2020 to maintain production plateau as planned. 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 are expected to have its first gas by end of 2023 with production capacity gradually ramping up to 490 MMSCFD.

Projects in the Middle East

In this quarter, the average sales volume from projects in the Middle East is approximately 18,800 BOED, accounting for 6% of total sales volume. PTTEP's project highlights in this region are located in Sultanate of Oman (Oman) and United Arab Emirates (UAE).

Projects under ***production phase*** in this region include the PDO (Block 6) Project which is the largest potential onshore oil producing asset in Oman. The Mukhaizna (Block 53) Project is a large producing onshore oil field located in southern Oman. In this quarter, both projects reduced production volume since May, resulting from the agreement of OPEC+ to stabilize prices from oil prices collapsed. For *Exploration Projects*, Oman Onshore block 12 Project with Total, in February 2020, signed an Exploration and Production Sharing Agreement (EPSA) with Oman's Ministry of Oil and Gas (MOG) for exploration and production rights, located onshore central part of the Sultanate of Oman. The project will carry out geological and geophysical studies and prepare for the exploration drilling plan in 2021.

Middle East projects under ***exploration phase*** are located offshore in the northwest of Abu Dhabi, UAE. The Abu Dhabi Offshore 1 Project is currently being evaluated for petroleum potential for future exploration. The Abu Dhabi Offshore 2 Project, is currently being evaluated for petroleum potential to prepare for drilling of one exploration well in 2021.

Projects in the Americas

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

Projects in Brazil include the Barreirinhas AP1 Project located in the Barreirinhas Basin, offshore of the northeastern region of Brazil, and the Brazil BM-ES-23 Project located offshore in the Espirito Santo basin, east of Brazil. Both projects are currently being evaluated for petroleum potential.

Projects in Mexico include the Mexico block 12 (2.4) Project located in the Mexican Ridges, western Gulf of Mexico, is currently being evaluated for petroleum potential to prepare for drilling of an exploration well in 2021. The Mexico block 29 (2.4) Project, located in the Campeche, southern Gulf of Mexico, has completed the drilling of 2 exploration wells in May 2020 with successful deep-water oil discoveries of good quality reservoirs. The project is currently preparing to evaluate for petroleum potential as well as future development plans for further regulatory approval.

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 8 permits.

The **Cash Maple Field** is currently under evaluation for the appropriate development plan. The **AC/P54** in **Orchid Field** is in the ***exploration phase***, completed drilling of an exploration well in 2019 with successful results. The well encountered gas and condensate. The project plans to include its development along with the Cash Maple Field.

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**, both of which are in the ***production phase***, are located onshore in the eastern part of Algeria. In this quarter, the project had lowered its production volume from plan since May, resulting from the agreement of OPEC+ to stabilize prices from oil prices collapsed.

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 development on Phase 1 following the conclusion from an approved development plan by the government. Development activities of the project have commenced since Q1/2019 with expected first oil production for the initial phase of around 10,000-13,000 barrels per day (BPD) in 2021. In the second phase, production capacity is planned to ramp up to around 50,000-60,000 BPD in 2025.

The **Mozambique Area 1 Project**, which is in the ***development phase***, is a large LNG project located in offshore Mozambique. In Q2/2020, the project is in the process of finalizing the selection of the LNG Ship-owner and negotiating the terms of the Time Charter Party Agreement, which is expected to conclude and ready to sign the contract with the ship's owner as planned to further proceed with approval from the Mozambican government. Currently, the Project has signed loan agreements for Project Finance for the amount of US$14.9 billion, to advance the first two-train LNG development, with the plan for its first commercial cargo by 2024.

Strategies under Sustainable Development Framework

PTTEP aligns its Sustainable Development policy with 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 activities in this quarter are as follows:

High Performance Organization (HPO) Amidst the current low oil price situation due to the COVID-19 pandemic and the oil price war between Saudi Arabia and Russia, PTTEP is still ready to proceed with 2020 work plans, focusing on EXECUTE and EXPAND strategies. Nevertheless, the company has sharpened our execution plans in order to adapt to the changing situation, enhance the company's competitive advantage and promote sustainable growth. The afore-mentioned plans can be highlighted as follows:

1) **Strengthen PTTEP's core business** by optimizing development and production plan using competitive costs to ensure resiliency in the industry's increasingly volatile environment and to continuously reduce unit cost to be at the top quartile in the industry (at the level of 25 USD/BOE) and average production growth (CAGR) of 5% by 2030. The Company plans to reduce investment spending throughout 2020 and beyond while deferring non-essential activities to optimize all asset's values and synergize development plans according to post-COVID-19 demand forecasts. In addition, the Company will also be implementing new technologies to improve work efficiency and further cost reduction
2) **Grow the E&P portfolio** to maintain the reserves to production ratio of 7 years by seeking new opportunities during this crisis with world-class strategic partners
3) **Drive the LNG value chain** by reshaping the Company's LNG strategy and targeting JV investments in the upstream and liquefaction plants while developing LNG capabilities
4) **Diversify to new businesses** such as the Power business and scale-up the A.I. & Robotics Venture (ARV) on 4 core sectors: Subsea, Agricultural, Medical and Drone Inspection. The Company's target is that, within 2030, 20% of total net income will be from these new businesses
5) **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

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 Q2/2020, the Company maintained a strong liquidity position with cash on hand of approximately USD 3 billion. The debt-to-equity ratio is 0.33x which is in line with the Company's financial policy. In addition, the Company has implemented liability management activities, continuing from 2019, with respect to its USD denominated bonds which reduce the cost of capital from 4.41% to 3.74%, with no debt service obligation in 2020 and 2021. PTTEP is, therefore, confident that its solid financial position and liquidity will drive the Company to achieve the afore-mentioned aspiration targets.

Moreover, PTTEP has supported Research and Development (R&D) and encourages technological application and innovation to increase efficiency of exploration and production activities. The key projects that are in progress, are technology development for CO_2 removal in natural gas, technology development for condensate decontaminant and technology development for enhanced oil recovery. PTTEP has an environmental management system which is a subset of PTTEP's Safety, Security, Health and Environment Management System (SSHE MS) with a focus on loss prevention. In the second quarter of 2020, PTTEP had Lost Time Injury (LTI) score of 0.06 and a Total Recordable Incident Rate (TRIR) score of 0.31. The Company's performance on both safety indicators (LTIF and TRIR) is in line with the average of the members of the International Association of Oil and Gas Producers (IOGP).

<u>Governance, Risk Management and Compliance (GRC)</u> PTTEP is committed to conduct 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 of GRC Roadmap in the second quarter are as follows:

- Established GRC Program in the newly acquired projects in Malaysia with continuous monitoring and reporting of GRC progress. GRC has further communicated to other overseas projects according to GRC Maturity Level Assessment Program in 2021
- Studied and analyzed company-wide assurance functions in order to improve and to have more flexibility, conciseness and effectiveness of the assurance processes

In Q2/2020, PTTEP receives two awards at the 15th ASIAN ESG Award 2019 from Corporate Governance Asia Magazine. The awards are as follow; Asia's Icon on Corporate Governance Award for the 8th consecutive year and Asian Corporate Director Recognition Award for Mr. Phongsthorn Thavisin, President and Chief Executive Officer, in recognition of his contributions in enhancing good corporate governance. Besides, PTTEP also has received the NACC Integrity Awards (Year 2019) from The National Anti-Corruption Commission (NACC for the second consecutive year.

<u>Stakeholder Value Creation (SVC)</u> PTTEP concern for natural resource conservation, environmental restoration as well as community and social development. The Company has also supported front line organizations to fight with COVID-19. The strategies of SVC are as follows:

- **Greenhouse Gas Reduction Strategy**: 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 Q2 2020, the Company reduced greenhouse gas emissions intensity by 11% through continuously project implementation including flare gases recovering and utilization, energy efficiency and reducing methane leakage from production processes

- **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 and equipment which are retained at appropriate, safe, and efficient conditions by 2030. 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 which is in the process of preparing for the pilot stage in the PTTEP Technology and Innovation Centre (PTIC) in July 2020. In addition, in Q2/2020, our hazardous waste to landfill is reported as 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 to support economic growth and quality of life of nearshore communities. In Q2, the Company is ongoing to study of biodiversity and community income baseline for long-term targets setting compared to the 2020 base year

Furthermore, PTTEP has supported Research and Development (R&D) and apply the technology for green practices such as Technology development for subsea pipeline decommissioning which follows international standards and will not affect the environment, Technology development for Greenhouse Gas (GHG) reduction by converting Carbon dioxide to high valued products and Carbon nanotube production from flare gas. These projects are currently under development and field trials.

In Q2/2020, PTTEP won the 3G Best Social Empowerment Award in the initiative of CSR project for the second consecutive year at the Global Good Governance (3G) Awards 2020 in London, United Kingdom for the project 'Crab Hatchery Learning Centre'. This project is designed to work towards the goal of comprehensive conservation of marine resources and continue to sustainably create value for the communities.

Future Business Outlook

Oil Price Outlook

Oil market outlook in 2H/2020 is expected to continue its gradual recovery from the bottom of COVID-19 crisis in April and May 2020 as the outbreak situations are now much improved in many regions such as Europe and Asia. Economic activities have started to resume, and some have already returned to pre-COVID-19 level such as land transportation and manufacturing activities. Global oil demand has been seen to continue its recovery. However, the recovery is expected to be gradual as the outbreak situations still not improved in many countries especially big oil consumers such as the U.S. and India. Also, some countries such as Japan and Australia are risked having COVID-19 second wave outbreak. Therefore, it may take some time until 2021 for oil demand to reach pre COVID-19 level.

Meanwhile, oil supply is expected to remain in balance with demand, as OPEC+ has been successful in maintaining production cuts agreement. However, there are some delinquent countries such as Iraq and Kazakhstan who did not comply to the agreement, which could lead to argument in the cut deal in the future. Massive CAPEX cut from oil producers around the world, especially the U.S. which had its oil rigs and production activities declined significantly in Q2/2020, will also help slow down oil supply growth. However, these drilling activities, especially U.S. shale, can partially return if oil prices rise high enough. Therefore, this might set oil price to be able to recover, but not in a high magnitude, to be averaged around $40-45 per barrel in 2H/2020.

LNG Market

The oversupply situation of Global LNG market is expected to prolong throughout 2020, with total production capacity of existing and upcoming LNG projects growing by 27 MTPA (approximately 7%) from 2019. While LNG demand in the power generation and industrial sectors decreased significantly from the spreading of COVID-19, which caused the slowdown in the global economy, especially in China which is the world's second largest LNG importer. As a result, LNG price is expected to remain under pressure at low level. The average Asian Spot LNG price is expected to be in the range between 2.8 – 3.3 USD/MMBTU (Source: FGE). However, there will be some bullish factors e.g. supply disruption from existing LNG projects coupled with the lack of FIDs over 2016-2017 which will result in significantly decreased LNG supply growth during 2022 – 2024. Nonetheless, the market is expected to rebalance in 2024.

As the LNG price has continued to decline in 2020 leading to additional LNG imports to Thailand, coupled with the lower energy demand, these result in lower gas nomination. In which, the Company has already incorporated this impact in our sales volume forecast in 2020, about 9% lower from the previous guidance announced at the beginning of the year. The impact on gas sales volume is lessened by the terms in the gas sales agreements that specify the minimum committed volume. In addition, in the long term, the Company is seeking investment opportunities in LNG value chain through JV investments in the upstream and liquefaction plants, in order to minimize risks from oil price volatility.

Thai Economy and Foreign Exchange Outlook

The Bank of Thailand (BOT) expects the economy to gradually recover in the second half of 2020, attributable to the effective containment of the COVID-19 outbreak. BOT also expects the currently negative headline inflation to return to target range in 2021. Accommodative monetary policies as well as the easing of lockdown restrictions will support the Thai economy's recovery post-COVID-19 and decrease risks to financial stability. However, a second wave of COVID-19 is still a possibility and Thailand needs to monitor the situation closely.

THB volatility against US dollar is expected to continue and the currency should move in the appreciating trend, compared to 1H/2020, for the rest of the year in the range of 31-32 THB/USD due to the uncertainty in COVID-19 containment ability of the country post-lockdown. The second-wave pandemic, if happens, will impact economic recovery of Thailand, especially tourism and export sectors. Moreover, the monetary policies of U.S. and Thailand also affect the direction of capital flows.

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

<u>Enactment of the Revenue Code Amendment Act (No. 50) B.E. 2562 and the Petroleum Income Tax Act Amendment (No. 9) B.E. 2562</u> in April 2019. In June 2020, the related regulations were enacted so that PTTEP group expects to be able to file its income tax returns in US dollar currency, which is the Company's functional currency, from the year 2020 onward. As a result, the impact of foreign exchange volatility on future financial performances of the Company will be eliminated.

PTTEP's performance outlook for 2020

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

	Sales Volume		Gas Price		Unit Cost		EBITDA Margin
	Q3 2020	Year 2020	Q3 2020	Year 2020	Q3 2020	Year 2020	Year 2020
	~340	~355	~6.1	~6.0	~30		65-70%
Unit	Thousand BOED		USD/MMBTU		USD/BOE		of sales revenue

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

2. The assumption is based on average Dubai price in 2020 of 38 USD/BBL

<u>Sales volume:</u>

PTTEP expects the average sales volume for the Q3/2020 and for the full-year of 2020 to be approximately 340,000 and 355,000 barrels of oil equivalent per day respectively, decreasing by approximately 9 percent from the previously target sales volume of the year 2020 due to the situation of the Covid-19 pandemic which resulted in lower energy demand together with an increase in LNG import from the significantly drop in LNG spot price. However, the gas sales volume is in accordance with the minimum committed volume as prescribed in the long-term gas sales agreements.

<u>Sales price:</u>

- 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 Q3/2020 and the full-year of 2020 are estimated at approximately 6.1 and 6.0 USD/MMBTU respectively, reflecting the adjustment of selling price in accordance to global crude prices.
- Outstanding volume of oil price hedging at the end of the second quarter of 2020 is approximately 6 million barrels; the Company, however, consistently monitors crude oil price movements and has the flexibility to adjust its hedging plan as appropriate.

<u>Unit Cost:</u>

For Q3/2020 and the full-year of 2020, PTTEP expects to be able to maintain unit cost at around 30 USD/BOE, in line with planned investments according to current situation.