

Executive Summary

PTTEP has continued to operate through the strategies, “EXPAND” and “EXECUTE”, focusing growth in strategic investment areas, Southeast Asia, where the Company has full range of expertise, “Coming-Home Strategy” and expanding to other prolific areas in the Middle East including Oman and the United Arab Emirates (UAE) with strategic partners, “Strategic Alliance”. In Q2/2019, PTTEP’s achievements in operation and expansion include the acquisition of Partex Holding B.V. (Partex) in June 2019 who has major investment in the largest producing oil asset in Oman; the significant discovery of gas at the Lang Lebah-1RDR2, the first exploration well in Sarawak SK410B Project located in offshore Sarawak, Malaysia; the Final Investment Decision (FID) announcement of the Mozambique Area 1 Project on the initial two onshore liquefaction trains with the total capacity of 12.88 million tons per annum (MTPA) and first production expected in 2024. In addition, PTTEP has successfully completed the acquisition of Murphy’s interest in Malaysia after the conditions precedent to closing as prescribed in the Share Sale and Purchase Agreement has been fulfilled in July 2019. As a result, the contribution to PTTEP’s sales volume will start from Q3/2019 onward. These achievements from the aforementioned strategies will not only provide the immediate revenue stream, production and reserves, but also strengthen PTTEP’s position in Southeast Asia and the Middle East, paving a strong path for future expansion in these regions.

In transition of operations after the signing of Production Sharing Contracts (PSCs) for Block G1/61 (Erawan field) and Block G2/61 (Bongkot field), currently PTTEP coordinates with the existing concessionaire to access the area, study and prepare in advance to ensure smooth production during transition period. Apart from this, PTTEP remains focus on sustainable development in the aspects of economic, social and environment by adopting new technology for petroleum exploration and production enhancement and green practices, e.g. Automated Underwater Vehicle for maintenance of the subsea pipeline system operated by AI Robotics Ventures Company (ARV), a PTTEP’s subsidiary, the adsorbent and process development for CO₂ removal from natural gas, and technology to reduce greenhouse gas (GHG) emissions, with the goal to become a Low Carbon Footprint organization.

For Q2/2019, PTTEP reported net income of 433 MMUSD, an increase of 10% from 394 MMUSD in the previous quarter which was mainly driven by higher sales volume and average selling price. The unit cost for this quarter slightly increased to 31 USD per Barrel of Oil Equivalent (BOE), due to higher general and administration expenses from the recognition of additional compensation from the new Labor Protection Act and higher exploration expenses from exploration wells write-off. However, PTTEP’s financial structure remains strong reflected by positive operating cash flow of 1,310 MMUSD for 1H/2019 and healthy EBITDA margin over 70%. As at Q2/2019, the Company had total assets of 18,775 MMUSD and of which 3,469 MMUSD was cash and short-term investments; while total liabilities were reported at 6,878 MMUSD, which interest-bearing debt accounted for 2,046 MMUSD; and total shareholders’ equity ended at 11,897 MMUSD. In the Q2/2019, the Company issued the THB debentures of 480 MMUSD equivalent offering to domestic financial institutions, for refinancing the senior debts maturing this quarter. However, the Company’s debt-to-equity ratio remains roughly the same as the previous quarter at 0.17, reflecting strong financial position. Moreover, the Group fully redeemed the subordinated capital debentures for the total amount of 500 MMUSD in June and paid dividend for the second half of 2018 amount of 409 MMUSD which was paid in April.

Table of key financial results

	Q1 2019	Q2 2019	Q2 2018	% Inc. (Dec.) QoQ	% Inc. (Dec.) YoY	6M 2019	6M 2018	% Inc. (Dec.) YTD
(Unit: Million US Dollar)								
Total Revenue	1,428	1,573	1,347	10	17	3,001	2,562	17
Sales Revenue	1,328	1,469	1,293	11	14	2,797	2,454	14
EBITDA	1,025	1,087	965	6	13	2,112	1,844	15
Profit(loss) for the period	394	433	113	10	>100	827	536	54
Basic earnings(loss) per share (Unit: US Dollar)	0.10	0.10	0.03	0	>100	0.20	0.13	54
Profit(loss) from normal operation	374	389	336	4	16	763	640	19
Profit(loss) from non-recurring items	20	44	(223)	>100	>100	64	(104)	>100

Economic Overview in the second quarter of 2019

Crude Oil Prices

Dubai crude oil price in Q2/2019 were highly volatile but moving in the increasing trends comparing with the previous quarter, on average at 67.6 USD per barrel (Source: Platts). This was mainly driven by the tightening global crude supply as a result of the production cut at 1.2 million barrels per day by OPEC and other non-OPEC countries including Russia (or OPEC+) and lower crude exports from the worsening geopolitical tensions i.e. the US sanctions on Venezuela and Iran. Moreover, the pipeline disruptions in Russia, UK, Norway and Nigeria; the on-going terrorism in Middle East; and civil war in Libya might lead to a higher supply disruption risk. On the demand side, global economic figures, especially the US, China and Europe, continuously show a sign of slowdown since the previous quarter. In addition, the market closely monitors various situations that may potentially boost the global economy including the US-China trade dispute negotiations that is expected to be concluded in a near term and the implementation of more economic stimulus in China, monetary-easing policies from the Federal Reserve Board (Fed) and European Central Bank (ECB).

Liquefied Natural Gas (LNG)

For LNG Market in Q2/2019, the average Asian spot price significantly decreased from Q1/2019 to 4.95 USD per MMBTU (Source: Platts), mainly driven by the decrease in oil price. However, the LNG market remained oversupply due to incremental volumes from new projects sanctioned in the past 5 years. Thus, it is expected that this will increase the supply in the market by 42 MTPA from last year of 318 MTPA, primarily from LNG projects in US and Russia. Moreover, high LNG stocks in Northeast Asia might also have an impact on LNG price. However, the decrease in Asian Spot LNG price has no significant affect to natural gas demand from the Gulf of Thailand in this quarter.

Thailand's Energy Demand

Thailand's energy demand from first 4 months in 2019 was reported at 2.16 million BOED, a decrease of 1.6% compared to the same period last year (Source: EPPO, The Ministry of Energy) due to decrease in exports. This resulted in lower energy consumption especially in coal, hydro and imported electricity but the use of natural gas continues to increase.

Exchange Rates (Thai Baht against US Dollar)

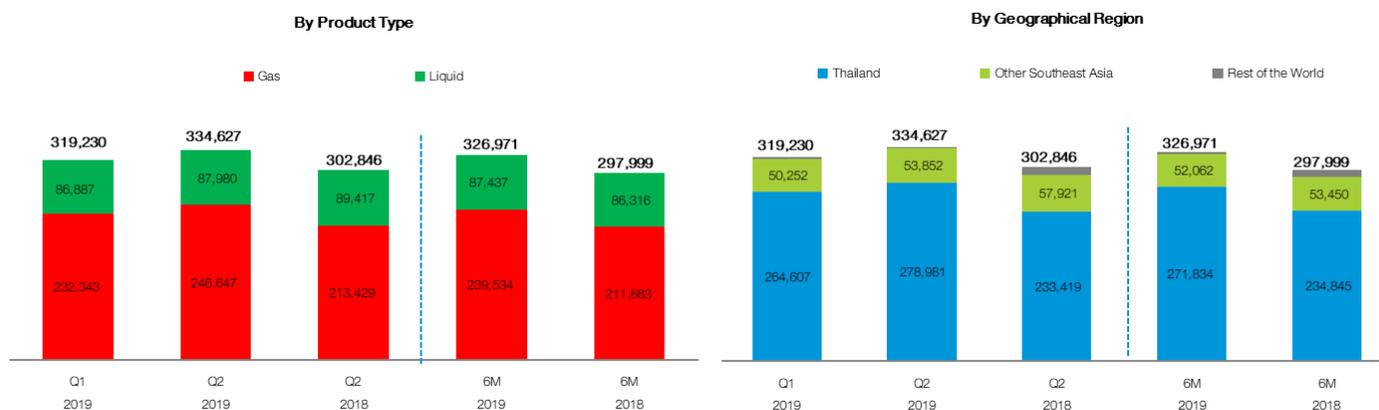
In Q2/2019, the depreciation of THB in the beginning period as the fund outflows from dividend repatriation of multinational companies. In the latter period, THB strengthened following persistent fund inflows into the country and this region, mainly due to the outlook of FED interest rate cut. Likewise, the Bank of Thailand (BOT) remained hawkish on monetary policy, coupled with the strong confidence on the Thailand political situation. At the end of the quarter, the USD/THB exchange rate closed at 30.74, which was stronger than Q1/2019 closing rate of 31.81.

In term of PTTEP's financial performance, PTTEP's functional currency is US Dollar (USD) whereas the tax filing currency is Thai Baht (THB), thus the movements in USD/THB exchange rate has impacts on PTTEP's financial performance. However, in April 2019, there were amendments on the related tax laws that allow tax filing in the company's functional currency, after the Revenue Department's approval, this would reduce foreign exchange fluctuation impact in financial statements. In Q2/2019, PTTEP received approval to change the currency for tax filing under Petroleum Income Tax Act and had recognized its effect in this quarter. However, for other companies in PTTEP's Group, tax filings continue to be in Thai Baht; as a result, the impact of foreign exchange volatility on financial statements remain but in a reduced magnitude.

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 2019	Q2 2019	Q2 2018	% Inc. (Dec.) QoQ	% Inc. (Dec.) YoY	6M 2019	6M 2018	% Inc. (Dec.) YTD
Average selling price (/BOE)	46.21	48.26	46.94	4	3	47.26	45.51	4
Liquid price (/BOE)	58.82	65.25	70.13	11	(7)	62.07	66.77	(7)
Gas price (/MMBTU)	6.92	7.03	6.20	2	13	6.98	6.14	14
Average Dubai crude oil price (/BBL)	63.41	67.55	72.07	7	(6)	65.48	68.01	(4)

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

In Q2/2019, average sales volume of PTTEP and its subsidiaries (the "Group") increased to 334,627 barrels of oil equivalent per day (BOED) when compared with Q1/2019 of 319,230 BOED. The increase was primarily from the Bongkot Project, due to decrease in shutdown day for maintenance activities. The average selling price in Q2/2019 increased to 48.26 USD/BOE (In Q1/2019: 46.21 USD/BOE).

For the Second quarter of 2019 compared with the Second quarter of 2018

When compared the average sales volume for Q2/2019 to Q2/2018 of 302,846 BOED, the average sales volume increased primarily from the acquisition of additional participating interests in the Bongkot Project. The average selling price increased to 48.26 USD/BOE (Q2/2018: 46.94 USD/BOE).

For the six-month period ended June 2019 compared with 2018

The average sales volume for the six-month period ended June 2019, increased to 326,971 BOED when compared with the same period of 2018 (for the six-month period ended June 2018 of 297,999 BOED). The increase was primarily from the acquisition of additional participating interests in the Bongkot Project. The average selling price increased to 47.26 USD/BOE (for the six-month period ended June 2018: 45.51 USD/BOE).

Overall Operating Results

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

In Q2/2019, the Group had a net profit of 433 MMUSD, an increase of 39 MMUSD or 10% from a net profit in Q1/2019 of 394 MMUSD. The net profit consists of profit from normal operation of 389 MMUSD and profit from non-recurring items of 44 MMUSD.

The profit from normal operation in Q2/2019 was 389 MMUSD, an increase of 15 MMUSD when compared with a profit in Q1/2019 of 374 MMUSD. The reason was primarily due to an increase in sales revenue of 141 MMUSD from increases in both average selling price and sales volume, while income taxes expenses and depreciation, depletion and amortization expenses increased 53 MMUSD from increase in sales revenue. The Group recognised an increase in administrative expense of 27 MMUSD, mainly due to professional fees, consulting fees and recognition of past service costs for retirement benefits, an additional compensation of not less than the 400 day's pay based on the latest hiring rate for the employee being laid off by the employer after serving 20 years or more in accordance with the new Labour Protection Act which was effective in May 5th, 2019, as well as, an increase in exploration expenses of 23 MMUSD due to 6 exploration wells written-off.

With the consideration of the profit from non-recurring items of Q2/2019, the Group reported a profit of 44 MMUSD, an increase of 24 MMUSD when compared with Q1/2019 which reported a profit of 20 MMUSD. The reason was primarily due to a decrease in loss on financial derivatives of 74 MMUSD primarily due to an oil price hedging, while the Group recognised an increase of income taxes expenses relating to changes in foreign exchange rate of 43 MMUSD, primarily due to the reversal of income taxes benefits balance relating to functional currency for the Company amounting to 60 MMUSD. The recognition of such reversal was in accordance with the announcement of Petroleum Income Tax Act (No.9) B.E. 2562 in April 2019. PTTEP has been granted approval by Revenue Department which allow company income tax computation to be in the US Dollar.

For the Second quarter of 2019 compared with the Second quarter of 2018

When compared a net profit for Q2/2019 with the same period last year which reported a net profit of 113 MMUSD, the Group had an increase in net profit by 320 MMUSD or more than 100%.

The profit from normal operation in Q2/2019 was 389 MMUSD, an increase of 53 MMUSD when compared with a profit of 336 MMUSD in Q2/2018. The reason was primarily due to an increase in sales revenue of 176 MMUSD from increases in both average sales volume and selling price, while income taxes expenses and petroleum royalties increase of 95 MMUSD due to an increase in sales revenue. Besides, the Group recognised an increase in administrative expenses of 34 MMUSD, mainly due to professional fees, consulting fees and recognition of the additional compensation for the employee being laid off by the employer after serving 20 years or more in accordance with the new Labour Protection Act which was effective in May 5th, 2019.

With the consideration of the profit from non-recurring items of Q2/2019, the Group reported a profit of 44 MMUSD, an increase of 267 MMUSD when compared with Q2/2018 which reported a loss of 223 MMUSD. The reason was primarily due to a decrease in income taxes expenses relating to changes in foreign exchange rate of 211 MMUSD due to the appreciation of Thai Baht against US Dollar at 1.07 Baht per USD in Q2/2019, while there was the depreciation of Thai Baht against US Dollar at 1.94 Baht per USD in Q2/2018. The decrease of income taxes expenses relating to changes in foreign exchange rate of 271 MMUSD was offset by the reversal of income taxes benefits balance relating to functional currency for the Company amounting to 60 MMUSD. Such reversal was in accordance with the announcement of Petroleum Income Tax Act (No.9) B.E. 2562 in April 2019. In addition, the Group recognized gain on foreign exchange rate of 26 MMUSD in Q2/2019, while recognized loss on foreign exchange rate of 30 MMUSD in the same period last year.

For the six-month period ended June 2019 compared with 2018

For the six-month period ended June 2019, the Group had a net profit of 827 MMUSD, an increase of 291 MMUSD or 54% when compared with the six-month period ended June 2018 of 536 MMUSD. The net profit for the six-month period ended June 2019 can be separated as the profit from normal operation of 763 MMUSD and gain from non-recurring items of 64 MMUSD.

The profit from normal operation for the six-month period ended June 2019 was 763 MMUSD, an increase of 123 MMUSD when compared with the profit for the same period last year of 640 MMUSD. The reason was primarily due to an increase in sales revenue of 343 MMUSD from increases in both average sales volume and selling price, while income taxes expenses and petroleum royalties increased 147 MMUSD due to an increase in sales revenue. Depreciation, depletion and amortization expenses increased 68 MMUSD due to the acquisition of additional participating interests in the Bongkot Project, as well as, an increase in administrative expenses of 41 MMUSD, mainly due to professional fees, consulting fees and recognition of the additional compensation for the employee being laid off by the employer after serving 20 years or more in accordance with the new Labour Protection Act which was effective in May 5th, 2019.

With the consideration of the profit from non-recurring items for the six-month period ended June 2019 of 64 MMUSD, an increase of 168 MMUSD when compared with loss of 104 MMUSD in the same period last year. The reason was primarily due to a decrease in income taxes expenses relating to changes in foreign exchange rate of 142 MMUSD due to the appreciation of Thai Baht against US Dollar during the six-month period ended June 2019 at 1.71 Baht per USD, while there was the depreciation of Thai Baht against US Dollar at 0.49 Baht per USD for the six-month period ended June 2018. The decrease of income taxes expenses relating to changes in foreign exchange rate of 202 MMUSD was offset by the reversal of income taxes benefits balance relating to functional currency for the Company amounting to 60 MMUSD, such reversal was in accordance with the announcement of Petroleum Income Tax Act (No.9) B.E. 2562 in April 2019. In addition, the Group recognized gain on foreign exchange rate of 59 MMUSD for the six-month period ended June 2019, while recognized loss on foreign exchange rate of 5 MMUSD in the same period last year. However, the Group recognized an increase in loss on financial derivatives of 39 MMUSD, mainly from foreign exchange forward contract.

Operating Results by Segments

Net Profit (loss)	Q1 2019	Q2 2019	Q2 2018	% Inc. (Dec.) QoQ	% Inc. (Dec.) YoY	6M 2019	6M 2018	% Inc. (Dec.) YTD
(Unit: Million US Dollar)								
Exploration and production	343	311	219	(9)	42	654	520	26
Thailand	309	285	209	(8)	36	594	504	18
Overseas	34	26	10	(24)	>100	60	16	>100
- Other Southeast Asia	36	24	22	(33)	9	60	27	>100
- Australia	(4)	(3)	(2)	25	(50)	(7)	(2)	>(100)
- America	(3)	(3)	(4)	-	25	(6)	(5)	(20)
- Africa	5	13	(6)	>100	>100	18	(4)	>100
- Others	-	(5)	-	(100)	(100)	(5)	-	(100)
Pipeline transportation	78	80	78	3	3	158	142	11
Head office and others	(27)	42	(184)	>100	>100	15	(126)	>100
Total	394	433	113	10	>100	827	536	54

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

For Q2/2019, the Group reported a net profit of 433 MMUSD, an increase of 39 MMUSD or 10% when compared with a net profit of 394 MMUSD in Q1/2019, primarily due to an increase of Head Office and Others segment of 69 MMUSD while there was a decrease of Exploration and Production segment in Thailand of 24 MMUSD and Other Southeast Asia segment of 12 MMUSD.

Head Office and Others segment

In Q2/2019, Head Office and Others segment reported a net profit of 42 MMUSD, an increase of 69 MMUSD or more than 100% when compared with a net loss of 27 MMUSD in Q1/2019, primarily from a decrease in loss on financial derivatives, mainly due to the oil price hedging.

Exploration and Production segment

- Thailand

For Q2/2019, Thailand segment reported a net profit of 285 MMUSD, a decrease of 24 MMUSD or 8% when compared with a net profit of 309 MMUSD in Q1/2019. The decreases were primarily from an increase in income taxes expenses due to the reversal of income taxes benefits balance relating to functional currency for the Company amounting to 60 MMUSD. Such reversal was in accordance with the announcement of Petroleum Income Tax Act (No.9) B.E. 2562 in April 2019. In addition, the petroleum royalties, depreciation, depletion and amortization expenses increased, while sales revenue increased from an increase in average sales volume and selling price.

- Other Southeast Asia

For Q2/2019, Other Southeast Asia segment reported a net profit of 24 MMUSD, a decrease of 12 MMUSD or 33% from a net profit of 36 MMUSD in Q1/2019, primarily due to an increase of exploration expenses from exploration wells written-off.

For Second quarter of 2019 compared with Second quarter of 2018

For Q2/2019, the Group reported a net profit of 433 MMUSD, an increase of 320 MMUSD or more than 100% when compared with a net profit of 113 MMUSD in Q2/2018, primarily due to an increase of Head Office and Others segment of 226 MMUSD, Exploration and Production segment in Thailand and Africa segment of 76 MMUSD and 19 MMUSD, respectively.

Head Office and Others segment

In Q2/2019, Head Office and Others segment reported a net profit of 42 MMUSD, an increase of 226 MMUSD or more than 100% when compared with a net loss of 184 MMUSD in Q2/2018, primarily from a decrease of income taxes expenses due to the appreciation of Thai Baht against US Dollar in Q2/2019 at 1.07 Baht per USD, while it was depreciated in Q2/2018 at 1.94 Baht per USD.

Exploration and Production segment

● Thailand

For Q2/2019, Thailand segment reported a net profit of 285 MMUSD, an increase of 76 MMUSD or 36% when compared with a net profit of 209 MMUSD in Q2/2018. The increase was primarily from an increase in sales revenue mainly from average sales volume, while income taxes expenses and petroleum royalties increased resulting from the increase in sales revenue. Also, depreciation, depletion and amortization expenses increased due to the acquisition of additional participating interests in the Bongkot Project.

● Africa

For Q2/2019, Africa segment reported a net profit of 13 MMUSD, an increase of 19 MMUSD or more than 100% when compared with a net loss of 6 MMUSD in Q2/2018, primarily due to a decrease in exploration expenses.

For the six-month period ended June 2019 compared with 2018

For the six-month period ended June 2019, the Group reported a net profit of 827 MMUSD, an increase of 291 MMUSD or 54% when compared with the six-month period ended June 2018 of 536 MMUSD, primarily from an increase of Head Office and Others segment of 141 MMUSD, Exploration and Production segment in Thailand and Other Southeast Asia segment of 90 MMUSD and 33 MMUSD, respectively.

Head Office and Others segment

For the six-month period ended June 2019, Head Office and Others segment reported a net profit of 15 MMUSD, an increase of 141 MMUSD or more than 100% when compared with the six-month period ended June 2018 which reported a net loss of 126 MMUSD, primarily from a decrease of income taxes expenses due to the appreciation of Thai Baht against US Dollar for the six-month period ended June 2019 at 1.71 Baht per USD, while for the six-month period ended June 2018, there was a depreciation of Thai Baht against US Dollar at 0.49 Baht per USD.

Exploration and Production segment

● Thailand

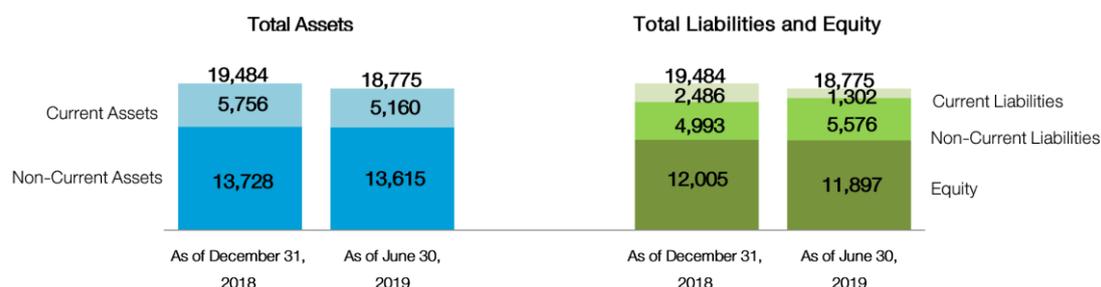
For the six-month period ended June 2019, Thailand segment reported net profit of 594 MMUSD, an increase of 90 MMUSD or 18% when compared with the six-month period ended June 2018 of 504 MMUSD. The primary reason came from an increase in sales revenue from an increase in average sales volume and average selling price, while depreciation, depletion and amortization expenses increased mainly due to the acquisition of additional participating interests in the Bongkot Project, as well as, income taxes expenses and petroleum royalties increased resulting from the increase in sales revenue.

● Other Southeast Asia

For the six-month period ended June 2019, the Other Southeast Asia segment reported net profit of 60 MMUSD, an increase of 33 MMUSD or more than 100% when compared with the six-month period ended June 2018 of 27 MMUSD. The increase was primarily from an increase in sales revenue mainly from average selling prices, while exploration expenses increased due to exploration wells written-off.

Financial Position

Unit: Million US Dollar



Assets

As at June 30, 2019, the Group had total assets in the amount of 18,775 MMUSD, a decrease of 709 MMUSD from the total assets as of December 31, 2018 of 19,484 MMUSD, primarily due to;

- (1) Current assets, which were primarily comprised of cash and cash equivalents, short-term investments and account receivable – parent company, decreased 596 MMUSD mainly due to a decrease of short-term investments and other accounts receivable of 476 MMUSD and 378 MMUSD, respectively, while restricted cash at financial institution increase of 205 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, decrease 113 MMUSD mainly due to a decrease of assets being recognized as part of property, plant and equipment including exploration and evaluation assets of 357 MMUSD, primarily from depreciation, depletion and amortization, despite there were additional investments in exploration and production assets, while deferred tax assets increased of 196 MMUSD.

Liabilities

As at June 30, 2019, the Group had total liabilities of 6,878 MMUSD, a decrease of 601 MMUSD from total liabilities as at December 31, 2018 of 7,479 MMUSD, primarily due to;

- (1) Current liabilities, which were primarily comprised of accrued expenses, income tax payable, short-term provision and trade accounts payable, decreased 1,184 MMUSD mainly from decrease of deferred considerations acquired through business acquisition, current portion of long-term financial liabilities from the debenture redemption, and income tax payable of 466 MMUSD, 407 MMUSD and 262 MMUSD, respectively.
- (2) Non-current liabilities, which were primarily comprised of provision for decommissioning costs, debentures and deferred tax liabilities, increased 583 MMUSD mainly from an increase of debentures 507 MMUSD, an increase of provision for decommissioning costs of 48 MMUSD due to the present value adjustment to the liabilities, resulting in the accretion expense recognition. In additional, provision for employee benefits increase of 26 MMUSD mainly due to the recognition of the additional compensation of not less than the 400 day's pay based on the latest hiring rate for the employee being laid off by the employer after serving 20 years or more in accordance with the new Labour Protection Act which was effective in May 5th, 2019.

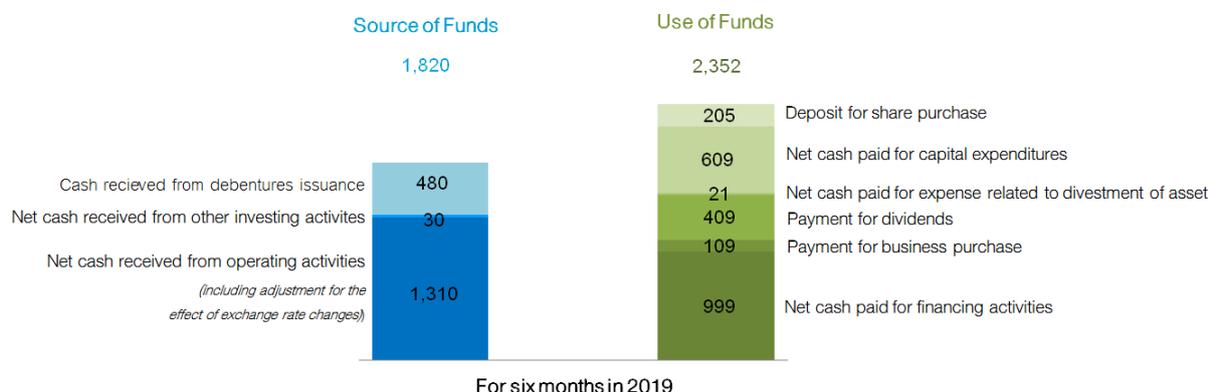
Capital Structure

As at June 30, 2019, the capital structure comprised of equity in the amount of 11,897 MMUSD and total liabilities of 6,878 MMUSD, including the interest-bearing debts of 2,046 MMUSD with a weighted average cost of debt of 5.04% and the average maturity of 8.62 years. All interest-bearing debts are fixed interest and denominated in US Dollar currency.

In Q2/2019, the Group fully redeemed at maturity its unsecured and unsubordinated debentures for the total amount of 13,200 MMTHB; of which, 5,000 MMTHB and 8,200 MMTHB were redeemed in May and June, respectively. In addition, PTTEP Treasury Center Company Limited, a wholly-owned subsidiary of PTTEP and the designated treasury center within the PTTEP Group, completed the issuance of Senior Guaranteed Debentures for the total amount of 15,000 MMTHB carrying a coupon of 2.26% p.a. with the tenor of 3 years, and fully guaranteed by PTTEP. Moreover, the Group fully redeemed the subordinated capital debentures for the total amount of 500 MMUSD in June and paid dividend for the second half of 2018 amount of 409 MMUSD which was paid in April.

Cash Flows

Unit: Million US Dollar



For six months in 2019

As at June 30, 2019, the Group had cash and cash equivalents, including short-term investment in the form of bank fixed deposit with a maturity of more than three months, but within twelve months of 3,469 MMUSD, a decrease of 532 MMUSD from cash and cash equivalents including short-term investment as at December 31, 2018 of 4,001 MMUSD.

Sources of funds in the amount of 1,820 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 taxes expenses and **cash received from financing activities** derived from issuances of Senior Guaranteed Debentures.

Uses of funds in the amount of 2,352 MMUSD primarily came from **Net cash paid for additional investment activities** for exploration and production assets, primarily for investment in the S1 Project and the Zawtika Project including the deposit for share purchase. For the **Net cash paid for financing activities**, which were mainly for the redemption of the subordinated capital debentures and the repayment of unsecured and unsubordinated debentures, as well as the payment of dividend for the second half of 2018 which was paid in April 2019.

Key Financial Ratios

	Q1 2019	Q2 2019	Q2 2018	6M 2019	6M 2018
Profitability Ratio (%)					
EBITDA to revenue from sales	75.62	72.31	73.20	73.88	73.69
Return on equity	9.13	11.97	4.81	11.97	4.81
Net profit margin	19.04	23.69	11.23	23.69	11.23
Leverage Ratio (Times)					
Debt to equity	0.16	0.17	0.19	0.17	0.19
Debt to EBITDA	0.60	0.52	0.65	0.52	0.65

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 shareholders' equity
Net profit margin	=	Net profit to total revenue (for the past 12 months)
Debt to equity	=	Interest Bearing Debt to shareholders' equity
Debt to EBITDA	=	Average Interest Bearing Debt to profit before deduction of interest, tax and depreciation for the past 12 months



Operational Highlights



Thailand and Southeast Asia



Middle East



America



Australia



Africa

As of Q2/2019, PTTEP's domestic and international operations altogether sum to 46¹ projects in 12 countries. The followings are key project highlights.

Projects in Thailand

PTTEP currently has 18¹ projects in Thailand, with the majority in the *production phase*, locating in the Gulf of Thailand and onshore. The average sales volume from the projects in Thailand for this quarter is approximately 279,000 BOED, accounting for 83% of PTTEP's total sales volume. The key activities of producing projects are as follows. The **Bongkot Project** maintained the production plateau as planned. For operation transition after the signing of Production Sharing Contracts (PSCs) for Block G1/61 (Erawan field) and Block G2/61 (Bongkot field), currently PTTEP coordinates with the current concessionaire to access the area, study and prepare in advance to ensure smooth production during transition period. The **S1 Project** has continuously drilled additional production wells with the plan to maintain production levels at around 30,000 BPD for the next 3 years. For this quarter, the project has the average sales volume of approximately 31,000 BPD.

Projects in Southeast Asia

PTTEP has 17 projects in this region which located in the Republic of the Union of Myanmar (Myanmar), Malaysia, the Socialist Republic of Vietnam (Vietnam) and the Republic of Indonesia (Indonesia). For Q2/2019, the average sales volume from the projects in this region is approximately 54,000 BOED, which accounted for 16% of PTTEP's total sales volume.

The highlights of key projects in the *production phase* in this region can be summarized as follows. The **Zawtika Project**, located in the Gulf of Moattama, Myanmar, completed production drilling in Phase 1C with 4 production platforms in order to maintain production plateau and is currently preparing for the additional production drilling in Phase 1D to ensure production continuity in the future, with the final investment decision (FID) expected within 2019. In Q2/2019, the project has the average natural gas sales volume of 332 MMSCFD (approximately 53,000 BOED). The **Vietnam 16-1 Project**, located offshore in the southeast of Vietnam, is currently drilling an additional production well to maintain production plateau. In Q2/2019, the project has the average sales volume for crude oil and natural gas of approximately 19,000 BPD and 8 MMSCFD (approximately 2,000 BOED) respectively.

The *exploration phase* projects in this region are mainly located in Myanmar, with major highlights as follows. The **Myanmar M3 Project**, is awaiting approval for the Field Development Plan that was proposed in Q4 2018 from the Government of Myanmar, and is currently preparing for the initial pre-feed study. The **Myanmar MD-7 Project**, is in preparation for drilling plan for an exploration well in Q4 2019. The **Myanmar M11 Project**, has completed the drilling of an exploration well in June and is currently evaluating the drilling results. The **Myanmar MOGE 3 Project**, completed the drilling of 4 exploration wells in June; 2 wells were written off in the quarter while for the other 2 wells, results are currently under evaluation. For Malaysia, the **Sarawak SK410B Project**, completed the drilling of an appraisal well and encountered 252 meters of net gas pay, indicating multi-TCF gas discovery. The project is currently preparing for further drilling to confirm upside potential. The **Sarawak SK417 Project**, the **Sarawak SK438 Project**, the **PM407 Project** and the **PM 415 Project** are currently evaluating the petroleum potential for the drilling of exploration wells in 2020. For offshore Vietnam, the **Vietnam B & 48/95 Project** and the **Vietnam 52/97 Project** are currently in the negotiation process on commercial terms in order to push forward the Final Investment Decision (FID) with the first production target at the end of 2022 and ramping up capacity to 490 MMSCFD.

¹ Including G1/61 and G2/61 projects with production starting in 2022 and 2023

Projects in the Middle East

PTTEP has 2 projects under exploration phase in this region, located in the north-west of Abu Dhabi, United Arab Emirates. **The Abu Dhabi Offshore 1 Project** and **Abu Dhabi Offshore 2 Project**, signed the concession agreements in January 2019, are currently evaluating the petroleum potential.

Projects in the Americas

PTTEP has 5 projects in this region located in Canada, the Federative Republic of Brazil (Brazil) and United Mexican States (Mexico). All projects are in the *exploration phase*.

The **Mariana Oil Sands Project**, located in Alberta, Canada, is currently under the evaluation for appropriate development plan.

PTTEP has 2 projects in Brazil including the **Barreirinhas AP1 Project** located in the Barreirinhas Basin, offshore of the northeast of Brazil, and the **Brazil BM-ES-23 Project** located offshore in the Espirito Santo basin, east of Brazil. Both projects are currently evaluating the petroleum potential.

PTTEP has 2 projects in Mexico including the **Mexico block 12 (2.4) Project** located in the Mexican Ridges, western Gulf of Mexico and the **Mexico block 29 (2.4) Project**, located in the Campeche, southern Gulf of Mexico. The projects received the exploration plan approval from the National Hydrocarbons Commission in Mexico and are currently evaluating the petroleum potential for further process according to the approved plan.

Projects in Australia

PTTEP has 1 project in this region, **PTTEP Australasia Project**, which is located in the Commonwealth of Australia (Australia), comprising of 8 permits.

The **Montara Field** is in the *production phase*. The divestment of the field to Jadestone Energy was completed on 28 September 2018. The operatorship transfer is awaiting for approval from the National Offshore Petroleum Safety and Environmental Management Authority (NOPSEMA) which is expected to be within Q3/2019.

The **Cash Maple Field** is in the *exploration phase*. The field is under the evaluation for appropriate development plan and is seeking partner to manage the project's risk. The **AC/P54 Field**, completed the drilling of the exploration well in Q1/2019 with the successful results. The well encountered gas and condensate with the net pay thickness around 34 meters, which the result will be further incorporated in development planning of Cash-Maple field.

Projects in Africa

PTTEP has 3 projects in this region, located in the People's Democratic Republic of Algeria (Algeria) and the Republic of Mozambique (Mozambique).

The **Algeria 433a and 416b Project**, which is in the *production phase*, is located onshore in the eastern part of Algeria. In Q2/2019, the project has average production volumes of approximately 18,000 BPD.

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 with partners and its approved development plan by government. The development activities have commenced since March 2019 with the expected first oil production for the initial phase around 10,000-13,000 barrels per day (BPD) in 2021 and the second phase production capacity ramping 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. On 18 June 2019, the co-venture partners of the Mozambique Area 1 Project have officially announced a final investment decision (FID) to develop the Golfinho-Atum natural gas accumulations located in offshore Area 1 with the onshore LNG facility of the initial two liquefaction trains, a total nameplate capacity of 12.88 MTPA. The project has successfully secured the long-term LNG sales of 11.1 MTPA with key LNG buyers in both Asia and Europe and has made a significant progress on the negotiation of project finance terms with the financial institutions. The signing of the loan agreements is expected by the end of 2019, with the plan for first Cargo by 2024.



Company Strategy

Portfolio Management

PTTEP has made significant progress to implement EXPAND and EXECUTE strategy to enhance the company's competitive advantage and maintain sustainable growth. The key highlights for this quarter are as follow:

- (1) **EXPAND: Strategy to focus growth in strategic investment areas and diversify into energy related businesses for long-term sustainability**
- **Coming-Home Strategy:** PTTEP continues to focus on investing in Thailand and South East Asia where the Company targets as strategic investment areas. The transaction of acquiring Murphy Oil Corporation's assets in Malaysia was completed in July. Moreover, PTTEP also looks to expand business opportunities such as Gas Value Chain business in Myanmar in term of Gas-to-Power.
 - **Strategic Alliance Strategy:** In June 2019, PTTEP has successfully acquired a 100% stake in Partex, a well-established oil and gas company with long presence in the Middle East for over 80 years. Currently, the company has investment in PDO (Block 6), the largest and long-lasting producing oil asset in Oman. The acquisition fits with PTTEP's strategy to expand investment in potential areas especially in the Middle East and also strengthen relationship with the local governments and paving a strong path for PTTEP to expand its investments in this region.
 - **Sustainable Development Strategy:** PTTEP continues to invest in businesses focusing on technology and innovation as well as R&D capability and studies to support core E&P business and future investment opportunity related to the energy industry.
- (2) **EXECUTE: Strategy to increase sales volume of legacy assets and maintain competitive advantage**
- Accelerating activities in exploration projects located in Myanmar and Malaysia. In this quarter, the Company made a multi-TCF discovery in our Sarawak SK410B project, offshore Sarawak, Malaysia, which will increase reserves in the future
 - Creating more value from existing assets by optimizing operations and maintenance program, conducting infill drilling campaigns and using advanced technologies such as Hydraulic Fracturing to increase S1 project's production
 - Maintaining cost competitiveness through digital and organizational transformation
 - Successfully increase petroleum reserves by achieving Final Investment Decision (FID) for the Mozambique Area 1 project
 - Continues to effectively execute Bongkot and Erawan transition
 - Executing the transition plans of our newly acquired assets to ensure smooth operations during handover

Capital Management

PTTEP focuses on ensuring effective financial management by maintaining a robust capital structure. In the Q2/2019, the Company redeemed unsecured and unsubordinated debentures of 13,200 million baht (equivalent to USD 418 million) and issued Senior Guaranteed Debentures to domestic Institutional and High Net Worth Investors for the total amount of 15,000 million baht (equivalent to USD 480 million) which will be used for refinancing senior debt and working capital. As a result, the Company's weighted average cost of debt in has reduced from 5.32% in Q1/2019 to 5.04% in Q2/2019 with average loan life of 8.62 years and the debt-to-equity ratio at 0.17 which is in line with the Company financial policies. As of the end of Q2/2019, the Company maintained a strong liquidity position with cash on hand of approximately USD 3.5 billion, which is not include the payment of the acquisition of Murphy in Malaysia of around USD 2 billion, which was completed on 10 July 2019. However, the Company still has adequate liquidity to fund capital expenditure to maintain production level, push forward development projects, and carry out exploration activities as well as to support new investment opportunities according to Company's strategy.

Sustainable Development

PTTEP's Sustainable Development is aligned with global indices and UN principles. This resulted in the Company being selected as a member of Dow Jones Sustainability Index (DJSI) in the Oil and Gas Upstream & Integrated Industry sector for the fifth consecutive year, and also received the Silver Class distinction in the Sustainability Yearbook 2019 by RobecoSam for the excellence in sustainability performance. Key activities in the second quarter of 2019 covering business, society, and environment, are as follows:

Business: PTTEP encourages all staff on creation of new technology and innovation in order to support our core business. During the second quarter of 2019, the key projects in progress are as follows:

- **Technology for petroleum exploration and production enhancement** i.e. the electromagnetic for subsurface fluid movement monitoring to enhance petroleum exploration and production efficiency, the adsorbent and process development for CO₂ removal from natural gas, the advanced filter development for contaminant removal in condensate.
- **Technology for green practices** i.e. the CO₂ conversion to high valued product to reduce GHG emission, the in-line pipe surface sampling tool to support subsea pipeline decommissioning.

Moreover, PTTEP has commenced the construction project of the PTTEP Technology and Innovation Center (PTIC) in the Eastern Economic Corridor of Innovation (EECi) area. The project's term of reference has been completed and PTTEP has invited contractors to participate in the bidding process for the design and construction phase.

Social In 2019, PTTEP's social development strategy focuses on Stakeholder Value Creation by carrying out CSR projects for Basic Needs. PTTEP also has plan to transform the projects to the implementation of CSV (Creating Shared Value) and Social Enterprise project. In this quarter, PTTEP has opened an additional Crab Hatchery Learning Center at Sating Pra District in Songkhla, set up the Bio-gas Learning Center and held workshop to expand the network at Ban Tab Hai in Udonthani. PTTEP also supports the Social Enterprise Fund under the School-Based Integrated Rural Development Project with an aim to promote savings and facilitate community's access to loan for their business.

Safety, Security, Health and Environment PTTEP has an environmental management system which encompasses a project's entire life cycle, and is a subset of PTTEP's Safety, Security, Health and Environment Management System (SSHE MS). In the second quarter of 2019 PTTEP had a Lost Time Injury Frequency (LTIF) score of 0.07 and a Total Recordable Incident Rate (TRIR) score of 0.64. The Company's performance on both safety indicators is in line with the average of the members in the International Association of Oil and Gas Producers (IOGP). Moreover, PTTEP aims to become a Low Carbon Footprint organization, and has revised a target to reduce its greenhouse gas (GHG) emissions by a minimum 25% by the year 2030 versus its 2012 base year. The projects of reusing and recovery of excess gases and flare gases, energy efficiency improvement and reducing methane leakages have been continuously implemented to achieve the target.

Future Business Outlook

Energy Outlook

The Dubai crude prices for 2019 is expected to remain volatile in the range between 60 to 70 USD per barrel, reflecting the expectation of higher US crude supply from the increased pipeline capacity in 2H/2019 that will compensate the lower crude production by various countries including Venezuela, Iran and Saudi Arabia. However, the extension of production cut until March 2020 by the OPEC+ countries is expected to stabilize the crude supply in the market throughout 2019. Also, the response by Iran on the US sanctions might tighten the global crude supply.

On the crude demand perspective, even though the US-China trade war situation has improved, there are still concerns on the economics indices and the Brexit that may slow-down world economy growth. Moreover, the Dubai crude prices might be affected by the IMO2020 regulations that will limit the sulphur content in bunker fuel used for marine transportation starting from 2020 in order to reduce emissions. As a result, this could reduce the demand for the sour-grade crude like Dubai crude from the end of 2019.

LNG Market

The oversupply situation of Global LNG market is expected to prolong towards 2019 with total capacity of existing and upcoming LNG projects growing by 13% to 360 MTPA, while demand side is anticipated to stabilize at 347 MTPA. As a result, the Asian Spot LNG is expected to be in the range of 5.7 – 6.6 USD/MMBTU on average. However, the global LNG price might be more volatile caused by a number of bearish factors including the increasing LNG supply from the projects sanctioned in 2013-2015 and the upcoming projects, majority in the US, with the FID anticipated in 2019-2020. On the other hand, the global LNG price may be impacted from the higher LNG demand in the Asian market especially in China and India; the supply disruption from existing LNG projects; the national energy policy by various countries; and the movement in oil price. Nonetheless, the over-supply situation in the global LNG market is expected to be tackled following the year 2022-2023.

Thai Economy and Foreign Exchange Outlook

The Bank of Thailand expects a slightly lower growth rate for 2019 at 3.8%, largely reflecting global headwinds, a reduction in service exports caused by fewer tourists. In addition, there is a lower-than-expected government spending while domestic consumption and private investment continues to improve.

THB against USD is expected to continue its appreciation or remain at the current level. This forecast is supported by the weakening of USD against its basket currencies reflecting poorer-than-expected US economic data, and thus, might pressure FED to lower interest rates within this year. The interest rate cut will cause the fund outflows from the US to emerging markets including Thailand. Nonetheless, it is essential for the market to closely monitor the BOT's direction on monetary policy. The majority of PTTEP's revenue from selling oil and natural gas is in USD and USD-linked term; as well as, the majority of PTTEP's expenses. Therefore, it is a natural hedge. For revenue and expenses in other currencies, PTTEP uses the financial hedging instruments, e.g. forward and swap, to reduce the USD/THB exchange rate fluctuations. For the implication of the exchange rate fluctuation on income tax, the impact will be reduced from the amendment of relevant tax laws in April 2019. Moreover, the interest rate volatility would not impact Company's financial performance as all of Company's interest-bearing debt is in fixed-rate.

Other important factors that affect the Company's operations

IMO 2020 Regulations. the International Maritime Organization (IMO) agreed to limit Sulphur content in all marine fuels to 0.5% (from current 3.5%) effective on January 1, 2020 onwards. As the result, demand of High Sulphur Fuel Oil (HSFO) is expected to decrease significantly and will likely lead to lower HSFO's price. According to PTTEP gas sale agreement especially in the Gulf of Thailand, HSFO is a factor accounted in the gas pricing formula which led to a risk of lower selling price. However, PTTEP has realized in the impact of this issue while expecting minimal impacts thanks to lagging of fuel price linked to gas sale formula varied from 6-12 months. From 2022 onwards, PTTEP expects material decrease of the impacts according to gas selling price of Bongkot and Erawan under the new production sharing contracts linked to Dubai crude price.

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, which will allow tax filing to be in company’s functional currency that can be a currency other than Thai Baht. This will subsequently reduce the impact of foreign exchange volatility on financial statements and will become effective from the first day of accounting period in 2019 once approved by the Revenue Department. In Q2/2019, PTTEP received approval to change the currency for tax filing under Petroleum Income Tax and had recognized its effect in this quarter. However, for other companies in PTTEP’s Group, tax filings continue to be in Thai Baht; as a result, the impact of foreign exchange volatility on financial statements remain but in a reduced magnitude.

PTTEP’s performance outlook for 2019*

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



* Included the acquisition of Murphy’s assets in Malaysia which was completed in July 2019, excluded the acquisition of Partex

** Based on average Dubai price assumption of 63 USD/BBL for 2019

Sales volume:

PTTEP estimates sales volume for Q3/2019 and full-year 2019 of approximately 356 KBOED and 345 KBOED, respectively. The target sales volume was increased from the announcement in the previous quarter supported by the acquisition of Murphy’s assets in Malaysia which was completed on July 10, 2019.

Sales price:

- PTTEP’s liquid prices will fluctuate relative with global crude prices.
- PTTEP’s gas prices are linked via a price formula with 6-12 months lag-time to referenced global oil prices indices. Average gas price for Q3/2019 and full-year 2019 are estimated at approximately 6.8 USD/MMBTU and 6.9 USD/MMBTU respectively, reflecting the upturn in oil price environment.
- Outstanding volume of oil price hedging as of Q2/2019 is approximately 10 million barrels; the Company, however, consistently monitors crude oil price movements and has the flexibility to adjust the hedging plan as appropriate.

Unit Cost:

In Q3/2019 and for the full-year 2019, PTTEP endeavors to uphold its competitive unit cost at around 32-33 USE/BOE and 32 USD/BOE respectively, in line with planned investment and activities.