



**Management's Discussion and
Analysis of Financial Condition and Result of Operations
For Quarter 4/2020 and Year 2020**

Star Petroleum Refining Public Company Limited



1) Company's Operating Result

(US\$ Million)	Q4/20	Q3/20	+/(-)	Q4/19	+/(-)	2020	2019	+/(-)
Total Revenue	1,064	1,024	40	912	152	4,152	5,392	(1,240)
EBITDA	60	35	26	(102)	162	(140)	(39)	(101)
EBIT	37	12	25	(123)	160	(230)	(121)	(108)
Gain on foreign exchange and derivatives	6	4	3	5	1	14	39	(25)
Net income (Loss)	29	8	20	(98)	127	(187)	(94)	(93)
Net income (Loss) (US\$ per share)	0.01	0.00	0.00	(0.02)	0.03	(0.04)	(0.02)	(0.02)
Accounting gross refining margin (US\$/barrel) ⁽¹⁾	6.45	3.94	2.51	1.85	4.60	(1.04)	4.12	(5.17)
Market gross refining margin (US\$/barrel) ⁽²⁾	3.88	1.53	2.35	2.49	1.39	2.79	3.39	(0.60)

Crude intake (thousand barrels/day)	135.2	142.2	(7.0)	77.9	57.3	143.1	134.3	8.8
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(Baht Million)	Q4/20	Q3/20	+/(-)	Q4/19	+/(-)	2020	2019	+/(-)
Total Revenue	32,708	32,248	460	27,804	4,905	130,163	168,840	(38,676)
EBITDA	1,818	1,089	735	(3,104)	4,929	(4,551)	(1,082)	(4,168)
EBIT	1,119	384	735	(3,727)	4,846	(7,383)	(3,647)	(3,735)
Gain (Loss) on foreign exchange and derivatives	193	110	82	159	34	464	1,225	(762)
Net income (Loss)	862	268	595	(2,975)	3,837	(6,005)	(2,809)	(3,196)
Net income (Loss) (Baht per share)	0.20	0.06	0.14	(0.69)	0.88	(1.38)	(0.65)	(0.74)

⁽¹⁾ margin includes inventory gain/loss based on weighted average inventory cost.

⁽²⁾ margin is calculated based on current replacement cost.

Exchange rate (Baht/US\$)	Q4/20	Q3/20	+/(-)	Q4/19	+/(-)	2020	2019	+/(-)
Average FX	30.79	31.49	(0.71)	30.46	0.33	31.46	31.22	0.25
Closing FX	30.21	31.83	(1.62)	30.33	(0.12)	30.21	30.33	(0.12)

In Q4/20 SPRC still continues to be impacted by the growing number of COVID-19 cases around the world which directly caused to the reduction in global oil demand. However, recently the oil price has recovered as a result of the expectation of demand resuming after the COVID-19 vaccines announcement and the decline in crude oil inventory. In addition, the OPEC and allies agreed to maintain oil production cuts throughout Q4/20 as a consequence of a decline in global oil demand which resulted in the average of Dubai price in Q4/20 increased from average price in Q3/20, and closed at US\$51/bbl at end of Dec 20 which was the highest level since Mar 20. This increase in oil and petroleum product price resulted to the increase in total revenue from US\$1,024 million in Q3/20 to US\$1,064 million in Q4/20, or equivalent to 4%. EBITDA, EBIT and net earnings in Q4/20 increased from prior quarter primarily due to the higher gross refining margin. NIAT for Q4/20 was US\$29 million while it was US\$8 million in Q3/20. An increase of oil price in Q4/20 comparing to Q3/20 resulted to stock gain in the accounting gross refining margin for Q4/20 which close to stock gain in Q3/20. Q4/20 market gross refining margin, which excluded stock gain (loss), was also higher than prior quarter from opportunity crude benefit and improved fuel oil price but still pressured from a narrow crack spread and the decline of global demand which caused SPRC to adjust the production down to optimally satisfy market demand. Crude intake in Q4/20 was low at 135 thousand barrels per day, equivalent to 77% of the refining capacity, which was lower than Q3/20 at 142 thousand barrels per day. Apart from the improved gross refining margin in Q4/20, SPRC had FX gain from US\$ depreciation against Baht and maintained our cost focus in operating the refinery.

Compared Q4/20 with Q4/19, while COVID-19 continually impacted to SPRC's performance in Q4/20 in both total revenue and refining margin due to low demand and weak refining margin, EBITDA, EBIT and net earnings in Q4/20 were higher than Q4/19 as a consequence of Q4/19 turnaround event which reflected to low refinery throughput. Together with excessive supply of refinery products and incurred expenses relating to the turnaround in Q4/19, these resulted to negative financial performance in same quarter of last year. In addition, Q4/20 SPRC had stock gain due to the increase in oil price while there was a slight stock loss in Q4/19 from oil price declining. As a result of the turnaround, crude intake for Q4/19 dropped to 78 thousand barrels per day compared to 135 thousand barrels per day in Q4/20. Continuing appreciation of Baht against US\$ during the quarter resulted to exchange gain in Q4/20 similarly to Q4/19.

Compared 2020 with 2019, SPRC's financial performance in 2020 was significantly impacted by a sharp fall-off in oil price since the first quarter of the year which caused loss in EBITDA and net earnings. Accounting gross refining margin in 2020 was negative which impacted from the oil price fall and resulted in a significant stock loss for the year 2020 while a slight stock gain in 2019. Despite the increase in the total crude intake in 2020 of 143 thousand barrels per day from 134 thousand barrels per day in 2019 or equivalent to 7% increase, but the total revenue decreased 23% as a result of lower average selling price. Both accounting gross refining margin and market gross refining margin in 2020 decreased from prior year. Accounting gross margin was negative at US\$(1.04)/bbl in 2020 but positive at US\$4.12/bbl in 2019. Excluding stock gain (loss), the market gross refining margin also decreased from US\$3.39/bbl in 2019 to \$2.79/bbl in 2020 in response to the decrease in oil consumption demand due to the COVID-19 pandemic. Through all these situations, the SPRC family has continued to remain incident, injury and infection free (IIIF), made significant cash flow improvement through inventory management, reduction in operating expenses, capital expenditure and process optimization while maintaining the focus on plant reliability.

2) Market Condition

Pricing	Q4/20	Q3/20	+/(-)	Q4/19	+/(-)	2020	2019	+/(-)
Dubai crude oil	44.64	42.88	1.76	62.08	-17.44	41.65	63.52	-21.86
Light Naphtha (MOPJ)	45.38	44.08	1.30	59.98	-14.60	41.61	58.15	-16.54
Gasoline (premium)	48.75	47.33	1.42	75.01	-26.26	45.93	72.51	-26.59
Jet Fuel	47.06	42.11	4.95	76.00	-28.93	44.65	77.24	-32.58
Diesel	48.33	47.01	1.32	76.38	-28.05	48.27	77.23	-28.95
Fuel Oil	44.07	40.35	3.72	43.41	0.66	38.83	58.61	-19.78

Spread over Dubai	Q4/20	Q3/20	+/(-)	Q4/19	+/(-)	2020	2019	+/(-)
Light Naphtha (MOPJ)	0.74	1.20	-0.46	-2.09	2.83	-0.06	-5.37	5.31
Gasoline (premium)	4.11	4.45	-0.34	12.93	-8.83	4.24	8.99	-4.75
Jet Fuel	2.42	-0.77	3.19	13.92	-11.50	2.93	13.72	-10.79
Diesel	3.69	4.13	-0.44	14.30	-10.61	6.58	13.71	-7.13
Fuel Oil	-0.57	-2.53	1.96	-18.67	18.10	-2.85	-4.91	2.06

Average Dubai price for Q4/20 was \$44.64/bbl, which was increased from \$42.88/bbl in Q3/20. The oil price recovery was mainly supported by the recovery in refined products demand especially in India and China as well as bullish sentiment on COVID-19 vaccine development. That said, the oil market was also pressured by some concerns on virus resurgence in major developed markets such as the US and Europe. At the same time, OPEC+ announcement in early December to increase output by a modest 500,000 barrels per day from January instead of 2 million barrels per day in their initial plan provided some supports to the crude market as well.

Gasoline spread over Dubai in Q4/20 dropped slightly to \$4.11/bbl. Gasoline crack was pressured by lower mobility indicators in some markets in Asia-Pacific. For example, Malaysia's mobility indicator took a hit due to an extension of its movement control to more states. Vietnam also saw a brief spike in daily cases in the middle of November while both South Korea's and Japan's daily infection have been rising. Chinese gasoline exports were high while strong domestic demand in India helped to cap the availability for exports. On the other hand, regional inventories held steady, above seasonal high, and had slightly converged toward five-year high in December.

Naphtha spread over Dubai in Q4/20 reduced to \$0.74/bbl. The crack was weighed down due to heavy cracker maintenance in recent months. Together with unplanned shutdowns at a South Korea's 1.2 mmtpa cracker (due to a fire) and a Japan's 540 ktpa cracker (due to technical issues), total offline cracking capacity peaked in November at nearly 8.1 mmtpa. Asia's naphtha deficit was at around 900 kb/d in November, the narrowest in 2020. Additional pressure stems from another wave of weakness in the gasoline complex in the West. However, the worst for Asia's naphtha complex has likely passed in November as there was a return of some 2.5 mmtpa of cracking capacity in December. Asian naphtha demand has surged by 190 kb/d m-o-m to 5.3 mmb/d this month. Despite the positive fundamental shift in December, naphtha crack in Q4/20 is lower q-o-q.

Jet and diesel crack spreads over Dubai were \$2.42/bbl and \$3.69/bbl respectively. The jet crack rose for the third straight month, largely supported by recovering domestic aviation demand and winter heating oil consumptions, particularly in Japan and South Korea. Weekly kerosene inventories in Japan had shown a gradually drawdown as heating oil consumption rises. Diesel cracks strengthened for the third straight month in December as demand remained healthy with PMI readings for most major manufacturing countries showing an improvement. Chinese diesel exports remained at elevated levels in Q4 while India's strong industrial production continued to limit the exports, supporting the diesel cracks. Global middle distillate inventory levels in 5 key areas are converging toward five-year high while Singapore inventories remain relatively steady. Despite some positive factors, average diesel crack in Q4 is still lower than that of Q3.

Fuel oil spread over Dubai in Q4/20 was -\$0.57/bbl, which was higher than Q3/20. High sulfur fuel oil crack was supported by prompted steep run cuts across all regions, with utilization rates in export-oriented countries such as South Korea hitting multiyear lows. This has impacted products at the bottom of the barrel disproportionately, tightening HSFO yields to a greater extent. Singapore onshore fuel oil inventories dropped by 9% Q-o-Q to 22.0 million barrels.

Due to lower crude premiums and lower negative effect from actual market, SPRC's average market refining margin in Q4/20 was \$3.88/bbl, which is better, as compared to \$1.53/bbl in Q3/20 and \$2.49/bbl in Q4/19. In Q4/20, SPRC captured margin by maximizing light crude to maximize gasoline production, maintaining zero jet production, optimizing crude throughput to meet domestic demand as well as continuing process and product optimization.

3) Financial Results

	US\$ Million			US\$ Million		US\$ Million		
	Q4/20	Q3/20	+ / (-)	Q4/19	+ / (-)	2020	2019	+ / (-)
Total Revenue	1,064	1,024	40	912	152	4,152	5,392	(1,240)
Cost of sales	(1,031)	(1,009)	(21)	(1,009)	(21)	(4,370)	(5,498)	1,129
Gross profit (Loss)	34	15	19	(97)	131	(218)	(107)	(111)
Other income	1	0	1	0	1	2	1	1
Gain on exchange rate	3	1	3	5	(2)	10	39	(29)
Fair value gain on derivatives	3	3	0	0	3	5	0	5
Administrative expenses	(4)	(6)	3	(31)	27	(29)	(55)	26
Finance costs	(1)	(2)	0	(1)	(1)	(6)	(1)	(4)
Income tax	(7)	(2)	(5)	25	(32)	48	29	19
Net income (Loss)	29	8	20	(98)	127	(187)	(94)	(93)

	Baht Million			Baht Million		Baht Million		
	Q4/20	Q3/20	+/(–)	Q4/19	+/(–)	2020	2019	+/(–)
Total Revenue	32,708	32,248	460	27,804	4,905	130,163	168,840	(38,676)
Cost of sales	(31,700)	(31,787)	88	(30,756)	(944)	(137,169)	(172,051)	34,882
Gross profit (Loss)	1,009	461	548	(2,952)	3,961	(7,006)	(3,211)	(3,794)
Other income	38	13	25	6	31	71	36	35
Gain on exchange rate	99	20	79	159	(60)	320	1,225	(906)
Fair value gain on derivatives	94	91	4	0	94	144	0	144
Administrative expenses	(120)	(200)	80	(939)	818	(911)	(1,690)	779
Finance costs	(45)	(49)	4	(18)	(27)	(177)	(46)	(131)
Income tax	(211)	(67)	(144)	771	(982)	1,555	885	670
Net income (Loss)	862	268	595	(2,975)	3,837	(6,005)	(2,809)	(3,196)

Production Volumes

Petroleum products				Thousands barrels	
	Q4/20	Q3/20	Q4/19	2020	2019
Polymer Grade Propylene	435	446	162	1,666	1,269
Liquefied Petroleum Gas	613	612	338	2,411	2,346
Light Naphtha	836	858	330	3,395	2,247
Gasoline	4,215	4,007	1,709	15,533	12,823
Jet Fuel	22	1	713	1,675	4,381
Diesel	5,664	6,107	2,867	24,214	19,443
Fuel Oil	418	503	599	2,619	4,522
Asphalt	137	235	71	614	745
Mix C4	503	508	168	2,025	1,396
Other ⁽¹⁾	997	1,010	154	4,175	4,213
Total production	13,839	14,286	7,110	58,326	53,386

⁽¹⁾ Includes sulfur and reformat and products sold pursuant to our cracker feed exchange with PTT Global Chemical (PTTGC).

Total Sale Revenue

Petroleum products ⁽¹⁾				US\$ Million	
	Q4/20	Q3/20	Q4/19	2020	2019
Polymer Grade Propylene	32	27	11	103	87
Liquefied Petroleum Gas	25	21	14	90	103
Light Naphtha	40	34	23	137	129
Gasoline	360	349	275	1,319	1,616
Jet Fuel	0	4	60	95	346
Diesel	499	491	470	2,001	2,394
Fuel Oil	23	16	19	97	255
Asphalt	6	10	4	25	43
Mix C4	29	27	12	94	93
Crude	0	0	19	0	30
Others ⁽²⁾	52	46	4	181	296
Total Revenue	1,064	1,024	912	4,152	5,392

⁽¹⁾ Includes Government LPG and oil subsidies.

⁽²⁾ Includes sulfur, reformat and products sold pursuant to our cracker feed exchange with PTT Global Chemical (PTTGC).

Sale revenue in Q4/20 increased 4% from Q3/20 resulted from the increase in average oil price during Q4/20 comparing to Q3/20 and sale volume was 14.9 million barrels, slightly higher than previous quarter at 14.7 million barrels. Sale volume in both quarters continued to be impacted from weakened demand from COVID-19 pandemic and SPRC adjusted the production down to the optimal level.

Comparing Q4/20 to Q4/19, Sales volume of petroleum products was at 14.9 million barrels in Q4/20, higher than Q4/19 which was at 9.4 million barrels from planned turnaround event in Nov-Dec 19. However, average petroleum product price was lower in Q4/20 comparing to Q4/19.

SPRC had sale revenue of US\$4,152 million in 2020, decreased from US\$5,392 million in 2019 or equivalent to 23%. A decrease in global oil price and weak product crack spread comparing to crude oil in 2020 led to lower sale revenue. On the contrary, sales volume of petroleum products was at 61.1 million barrels in 2020, higher than 2019 which was at 58.0 million barrels as a result of planned turnaround in Nov-Dec 19.

Cost of Sales

Comparing cost of sales, Q4/20 cost of sale slightly increased from Q3/20 which in line with the increase in sale volume and oil price.

Comparing Q4/20 to Q4/19, cost of sale in Q4/20 also increased from Q4/19 as a result of higher sale volume while there was planned turnaround in Q4/19 but partly offset with the declining in oil price.

Comparing cost of sale, 2020 cost of sale decreased from 2019 impacted from global decrease in oil price.

Gain on Foreign Exchange

Comparing Q4/20 with Q3/20, SPRC booked net foreign exchange gain (excluding derivatives) of US\$3 million in Q4/20 comparing to a slight exchange gain of US\$1 million in Q3/20 due to Baht appreciation from the end of previous quarter. Baht appreciation resulted in an increase in the value of Baht denominated receivables when converted to US\$ equivalent. Similarly, there was foreign exchange gain of US\$5 million in Q4/19 due to Baht to US\$ continued appreciation during Q4/19.

Comparing 2020 to 2019, foreign exchange gain in 2020 was lower than prior year due to lower appreciation of Baht against US\$ in 2020 comparing to 2019 appreciation. Baht moved stronger which resulted to US\$ foreign exchange gain on net Baht denominated receivables to US\$ amount.

Administrative Expenses

Comparing Q4/20 with Q3/20 and Q4/19, administrative expense in Q4/20 decreased to US\$4 million from US\$6 million in Q3/20 and US\$31 million in Q4/19. In the late 2019, SPRC had loss of invoice payment of US\$22.4 million due to the cyber-attack. Subsequently in Q4/20 SPRC received the recovery from the loss of invoice payment approximately US\$5.5 Million in 2020 but partly offset by legal consulting fee relating to the recovery of such loss. Excluding the loss and recovery on invoice payment, SPRC administrative expenses in Q4/20 was approximated last quarter and same quarter of last year.

Comparing 2020 with 2019, administrative expenses in 2020 was lower mainly due to the loss of invoice payment from cyber-attack in Q4/19 while in 2020 there was a recovery of such loss in the amount of US\$5.5 million which to offset by additional relating legal fee of US\$3.0 million. Except such loss and recovery, administrative expense still decreased in 2020 from company efforts in cost controlling program during COVID-19.

Income tax

Operating profit in Q4/20 resulted in income tax in this period which will offset with the deferred income tax on operating loss carry forward.

4) Analysis of Financial Position

	US\$ Million				Baht Million		
	31 Dec 2020	31 Dec 2019	+ / (-)	% + / (-)	31 Dec 2020	31 Dec 2019	+ / (-)
Assets							
Cash & cash equivalent	54	1	53	8,035%	1,635	20	1,615
Other current assets	586	841	(255)	-30%	17,688	25,504	(7,816)
Non-current assets	901	949	(47)	-5%	27,218	28,770	(1,552)
Total assets	1,541	1,790	(249)	-14%	46,541	54,294	(7,753)
Liabilities							
Current liabilities	356	703	(348)	-49%	10,740	21,334	(10,594)
Non-current liabilities	310	16	294	1,845%	9,374	484	8,890
Total liabilities	666	719	(53)	-7%	20,114	21,818	(1,704)
Equity							
Share capital & retained earnings	875	1,071	(196)	-18%	33,874	40,150	(6,276)
Other component of shareholders' equity					(7,447)	(7,674)	227
Total equity	875	1,071	(196)	-18%	26,427	32,476	(6,049)
Total liabilities & equity	1,541	1,790	(249)	-14%	46,541	54,294	(7,753)

Assets

Total assets as of 31 Dec 2020 decreased by US\$249 million (Baht 7,753 million) from 31 Dec 2019.

Total current assets decreased US\$202 million (Baht 6,201 million) mainly due to:

- A decrease in inventory of US\$289 million (Baht 8,805 million) from crude inventory reduction to optimum operating inventory level and a reduction in strategic reserve requirement from 6% to 4%. Inventory price also decreased which was in line with global oil price decline;
- A decrease in VAT receivables of US\$11 million (Baht 321 million) due to higher sales volume in December 20 comparing to December 19 resulted in VAT on sale higher than VAT on crude purchase which net to no VAT receivables at end December 20; but partly offset by
- An increase in cash and cash equivalent of US\$53 million (Baht 1,615 million) due to net cash generated by new long-term borrowings; and
- An increase in trade and other receivables of US\$45 million (Baht 1,323 million) due to higher sales volume comparing to December 19 after refinery shutdown despite lower product price.

Non-current assets decreased US\$47 million (Baht 1,552 million) from a decrease in property, plant and equipment of US\$80 million (Baht 2,530 million) due to 2020 depreciation expenses and a decrease in prepaid income tax of US\$20 million (Baht 617 million) due to the income tax refunded from the government but offset by an increase in deferred tax asset of US\$51 million (Baht 1,528 million) from operating loss carryforward in 2020.

Liabilities

Total liabilities as of 31 Dec 20 decreased US\$53 million (Baht 1,704 million) from 31 Dec 2019. The decrease is mainly from:

- A decrease in trade and other account payables of US\$188 million (Baht 5,746 million) from lower price of crude oil purchase in December 20 comparing to December 19 and also from lower crude volume purchase;
- a decrease in S-T borrowing of US\$225 million (Baht 6,819 million) from repayment; but partially offset by
- an increase in current portion of L-T borrowings of US\$46 million (Baht 1,380 million) from new long-term loan agreement entered during 2020;
- a slight increase in VAT payable of US\$11 million (Baht 323 million) from VAT on sale higher than VAT on crude purchase which net to VAT payable; and
- a slight increase in excise tax payable of US\$10 million (Baht 288 million) from higher sales volume in December 20 comparing to December 19.

Total non-current liabilities increased US\$294 million (Baht 8,890 million) mainly from new L-T borrowings which the proceed was used to repay S-T loan.

Shareholders' Equity

Shareholders' equity as of 31 December 2020 decreased US\$196 million (Baht 6,049 million) from 31 December 2019 resulted from the net loss in 2020 of US\$187 million and 2019 annual dividend payment of US\$8 million.

5) Statement of Cash Flow

	US\$ Million		Baht Million	
	2020	2019	2020	2019
Net cash used in operating activities	(42)	(123)	(1,448)	(3,726)
Net cash used in investing activities	(11)	(83)	(350)	(2,599)
Net cash generated from financing activities	106	205	3,346	6,207
Net increase (decrease) in cash and cash equivalents	53	(2)	1,549	(118)
Cash and cash equivalents at the beginning of the period	1	2	20	74
Adjustments from foreign exchange translation	0	0	66	64
Cash and cash equivalents at the end of the period	54	1	1,635	20

SPRC cash and cash equivalents increased from US\$1 million (Baht 20 million) at 31 Dec 2019 to US\$54 million (Baht 1,635 million) at 31 Dec 2020

Details of cash flow activities in 2020 are as follow.

- Net cash used in operating activities of US\$42 million (Baht 1,448 million) which was primarily due to:
 - 2020 net loss of US\$187 million (Baht 6,005 million) and add back non-cash items of US\$55 million (Baht 1,720 million); and
 - Cash used in operating liabilities of US\$167 million (Baht 5,245 million) mainly from a decrease in trade and other payables US\$186 million (Baht 5,857 million) due to the decrease in both volume and price of crude oil purchase in December 20 but partly offset by an increase in other current liabilities of US\$19 million (Baht 612 million) mainly from higher VAT and excise tax payables from higher sales volume in December 20 comparing to December 19;
 - Cash generated from operating assets of US\$257 million (Baht 8,082 million) mainly from an decrease in inventory US\$290 million (Baht 9,122 million) from lower in both inventory volume and price and an decrease in other assets of US\$12 million (Baht 384 million) but offset by an increase in trade receivables of US\$45 million (Baht 1,425 million) due to higher sale volumes.

- b) Net cash used in investing activities of US\$11 million (Baht 350 million) mainly for new fuel oil tank.
- c) Net cash generated from financing activities of US\$106 million (Baht 3,346 million) from L-T borrowings which part of the proceed was used to repay S-T borrowings.

6) Financial Ratios

		Q4/20	Q3/20	Q4/19	2020	2019
Current Ratio	(Time)	1.8	1.5	1.2	1.8	1.2
Net Profit Margin	(%)	2.7	0.8	(10.7)	(4.5)	(1.7)
Debt to Equity ratio	(Time)	0.8	0.7	0.7	0.8	0.7
Net Interest-Bearing Debt to Equity ratio	(Time)	0.3	0.4	0.2	0.3	0.2

Note:

Current Ratio	= Current Assets / Current Liabilities	(Time)
Net Profit Margin	= Quarter (Net Profit (Loss) / Total Revenue)	(%)
Debt to Equity Ratio	= Total Liabilities / Total Shareholders' Equity	(Time)
Net Interest Bearing Debt to Equity ratio	= Interest Bearing Debt - Cash / Total Shareholders' Equity	(Time)