



THAI AGRO ENERGY PUBLIC COMPANY LIMITED

MANAGEMENT DISCUSSION AND ANALYSIS

FOR THE OPERATING RESULTS OF

YEAR 2018

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(For the Financial Statements of the Year 2018)

OVERALL OPERATING RESULTS

The Company's revenue and earnings efficiency of the year 2018 recorded a good level and continuous growth with the highest revenue and net profit since the Company was founded which were considered very satisfying.

Year	Total Revenue (Million Baht)	Net Profit (Loss) (Million Baht)	Proportion of Profit (Loss) to total revenue (%)
2005	485.61	47.68	9.82
2006	934.78	292.67	31.31
2007	644.32	147.47	22.89
2008	964.90	290.39	30.10
2009	678.07	207.88	30.66
2010	760.44	(94.52)	(12.43)
2011	1,098.81	(42.90)	(3.90)
2012	1,350.87	164.07	12.15
2013	1,659.75	117.68	7.09
2014	2,500.43	219.31	8.77
2015	2,602.57	244.27	9.39
2016	2,418.35	178.10	7.36
2017	2,472.76	48.86	1.97
2018	2,697.85	294.28	10.91

REVENUE:

The Company's total revenue in year 2018 was Baht 2,697.85 million, increased from the same period last year by Baht 225.09 million or 9.10 percent, due to the following reasons.

- (1) The revenue from ethanol sales was Baht 2,696.07 million or 99.93 percent of total revenue, increased by Baht 225.55 million or 9.13 percent from last year due to the increase of ethanol sales volume by 18.09 percent but the selling price decreased from last year by 7.58 percent.
- (2) The other revenue was Baht 1.78 million or 0.07 percent of total revenue, slightly decreased by Baht 0.46 million or 20.54 percent from last year. This was due to a decrease of income from the sales of Fusel Oil.

Revenue	Year 2018		Year 2017		Increase (Decrease)	
	Baht Million	%	Baht Million	%	Baht Million	%
Revenue from Ethanol Business	2,696.07	99.93	2,470.52	99.91	225.55	9.13
Other Revenue	1.78	0.07	2.24	0.09	(4.46)	(20.54)
Total Revenue	2,697.85	100.00	2,472.76	100.00	225.09	9.10

EXPENSES:

The Company's expenses in year 2018 was Baht 2,403.57 million, decreased by Baht 20.33 million or 0.84 percent from the previous year, due to the following reasons;

- (1) Cost of ethanol sales in year 2018 increased by Baht 38.24 million or 1.72 percent from the previous year. This was due to increases in ethanol sales volume of 18.09 percent as mentioned above.
- (2) Selling and administrative expenses in year 2018 decreased by Baht 23.43 million or 23.77 percent from the previous year. This was due to the flood event in 2017 that caused the temporary operation shut down and the production costs during production disruption were transferred to selling and administrative expenses.
- (3) Loss from flood event in previous year decreased by Baht 71.07 million or 96.93 percent. This was due to the Company paid compensation for damage to people who were affected by the treated vinasse leakage in year 2017 in the amount of Baht 73.32 million and paid in year 2018 for Baht 2.25 million.
- (4) Financial expenses increased by Baht 7.94 million or 24.17 percent from the previous year. This was due to an increase of loan from financial institution.
- (5) Corporate income tax increased by Baht 27.99 million from last year due to the increase of profit.

Expenses	Year 2018		Year 2017		Increase (Decrease)	
	Baht Million	% Sale	Baht Million	% Sale	Baht Million	% Sale
Cost of sale	2,257.91	83.75	2,219.67	89.85	38.24	1.72
Selling and administrative expense	75.13	2.79	98.56	3.99	(23.43)	(23.77)
Damage from flood	2.25	0.08	73.32	2.97	(71.07)	(96.93)
Financial cost	40.79	1.51	32.85	1.33	7.94	24.17
Income tax expense	27.49	1.02	(0.50)	(0.02)	27.99	N/A
Total Expenses	2,403.57	89.15	2,423.90	98.12	(20.33)	(0.84)

GROSS PROFIT:

The Company's gross profit in year 2018 was Baht 438.16 million or 16.25 percent of the sales revenue, as compared with the gross profit of Baht 250.85 million or 10.15 percent of the sales revenue in the previous year. This was due to the increase of ethanol sales volume by 18.09 percent from last year and the decrease in the molasses price by approximately 18.00 percent from the previous year.

Gross Profit	Year 2018		Year 2017	
	Baht Million	%	Baht Million	%
Revenue from sales	2,696.07	100.00	2,470.52	100.00
Less cost of sales	2,257.91	83.75	2,219.67	89.85
Gross Profit	438.16	16.25	250.85	10.15

NET PROFIT:

The Company's net profit in year 2018 was Baht 294.28 million which increased from the previous year by Baht 245.42 million or 502.29 Percent, which accounts for net profit of Baht 0.29 per share. When compared with last year, the net profit increased by Baht 0.24 per share or 480 percent of the total revenues due to the payment of compensation for damage to people who were affected by the treated vinasse leakage in year 2017 as described above.

NET PROFIT & NET PROFIT MARGIN (Million Baht)	Unit	Year 2018	Year 2017	Increase (Decrease)	%
NET PROFIT	Million Baht	294.28	48.86	245.42	502.29
NET PROFIT PER SHARE (BAHT)	Baht per Share	0.29	0.05	0.24	480.00
Remark: Registered per value of Baht 1 per share					

EARNINGS EFFICIENCY

(1) EBITDA (Earnings before financial expenses, corporate income tax, depreciation and amortization) of the Company in year 2018 was Baht 521.97 million, which increased from the previous year by Baht 294.18 million or 129.15 percent and EBITDA margin was at 19.35 percent, which increased from the previous year by 10.14 percent due to the payment of compensation for damage to people who were affected by the treated vinasse leakage in year 2017 as mentioned above.

(2) Net profit margin of the Company in year 2018 was at 10.91 percent, which increased from the previous year by 8.93 percent due to the payment of compensation for damage to people who were affected by the treated vinasse leakage in year 2017 as mentioned above.

(3) Return on equity of the Company in year 2018 was at 17.31 percent, which increased from the previous year by 14.40 percent.

(4) Return on total assets of the Company in year 2018 was at 8.91 percent, which increased from the previous year by 7.30 percent. The return on fixed assets in year 2018 was at 17.60 percent, which increased from the previous year by 9.31 percent.

STATEMENT OF FINANCIAL POSITION:

FINANCIAL POSITION	Unit	As at December 31, 2018	As at December 31, 2017	Increase (Decrease)	%
Total Assets	Million Baht	3,772.27	2,830.29	941.98	33.28
Total Liabilities	Million Baht	2,000.07	1,202.38	797.69	66.34
Total Shareholder's Equity	Million Baht	1,772.20	1,627.91	144.29	8.86
Book Value	Baht per Share	1.77	1.63	0.14	8.59
Remark: Registered per value of Baht 1 per share					

ASSETS: The Company's total assets as at December 31, 2018 increased from the end of year 2017 by Baht 941.98 million or an increase of 33.28 percent. The total assets consisting of:

(1) Current assets increased from the end of 2017 by Baht 585.20 million or a increase of 137.84 percent, due to (A) cash and cash equivalent decreased from the year end 2017 by Baht 3.12 million or 8.84 percent; (B) trade accounts receivable and other receivables increased from the year end 2017 by Baht 63.08 million or an increase of 29.64 percent; (C) inventories increased from the end of 2017 by Baht 18.71 million or an decrease of 15.22 percent, most of which were molasses, (D) advances payment for purchase goods, most of which were molasses, increased by Baht 506.71 million or an increase of 1,318.87 percent, and (E) other current assets decreased by Baht 0.18 million or an decrease of 1.19 percent.

(2) Non-current assets increased from the year end 2017 by Baht 356.78 million or an increase of 14.83 percent, due to (A) land, plant, and equipment increased from the year end 2017 by 357.74 million or 14.92 percent, (B) Other non-current assets decreased by Baht 0.96 million or a decrease of 12.94 percent.

LIABILITIES: The Company's total liabilities as at December 31, 2018 increased from the year end 2017 by Baht 797.69 million or a increase of 66.34 percent, consisting of: (A) Trade accounts payable and other accounts payable decreased by Baht 14.27 million or a decrease of 8.93 percent, most of which were molasses cost. (B) Short term and long term loans which for raw material supply and the construction of the Wastewater Evaporation Plant, increased by Baht 785.85 million or an increase of 77.28, and (C) Other liabilities which most were remaining corporate income tax increased by Baht 26.11 million or 101.44 percent.

TOTAL SHAREHOLDERS' EQUITY: The total shareholders' equity of the Company as at December 31, 2018 increased from the year end 2017 by Baht 144.29 million or 8.86 percent, the share's book value increased from Baht 1.63 per share to Baht 1.77 per share, due to the increase of company net profit.

CASH FLOWS

Cash Flows	Unit: Million Baht	
	Year 2018	Year 2017
Cash Flows from (used in) Operating Activities	(143.29)	640.96
Cash Flows from (used in) Investing Activities	(492.38)	(221.79)
Cash Flows from (used in) Financing Activities	632.52	(420.91)
Net Increase (Decrease) in Cash	(3.12)	(1.74)
Cash at the Beginning of the Period	35.31	37.05
Cash at the End of the Period	32.19	35.31

(1) The Company's net cash used in operating activities in year 2018 was Baht 143.26 million, consisting of: (A) income before corporate income tax at Baht 321.76 million; (B) Non cash items such as the depreciation amounted to Baht 201.22 million; (C) an increase in operating assets of Baht 586.43 million due to an increase in trade and other receivables and inventories while advance payments for purchase of goods and current assets increased; (D) a decrease in operating liabilities at Baht 38.28 million due to decreased in account and other payable, provision for long-term employees benefits. (E) Interest income increased by Baht 0.13 million; (F) interest expense and corporate income tax increased by Baht 41.66 million.

(2) The Company's net cash used in investment activities in year 2018 was Baht 492.38 million, consists of (A) Land purchasing at Baht 16.39 million (B) The cost of construction of the Wastewater

Evaporation Plant at Baht 327.97 million, and (C) the cost of wastewater management system and other expenses at Baht 148.02 million.

(3) The Company's net cash used in financing activities in year 2018 was Baht 632.52 million which included (A) short-term loan increased by Baht 275.64 million, (B) long-term loan increased by Baht 510.21 million (C) financial leases repayment at Baht 3.34 million, and (D) dividend payment at Baht 149.99 million.

LIQUIDITY AND SUFFICIENCY OF CAPITAL

(1) The total debt to equity ratio of the Company as at end of year 2018 was as low as 1.13:1 with appropriate capital structure but the Company has been provided with good support from financial institution. Therefore, the Company should not have any problem.

(2) The current ratio and quick ratio of the Company as at end of year 2018 were 0.69 times and 0.21 times, respectively. In addition, the Company has cash generation and adequate credit line for working in the future.

(3) The cash cycle of the Company in year 2018 was only 19.27 days, which increased from the previous year by 10.80 days. The average debt collection period was at 29.75 days, which increased from the previous year by 2.73 days. The average inventory turnover was at 3.20 days, which increased from the previous year by 1.13 days, but the average debt repayment period was at 13.68 days, decreased from the previous year by 6.93 days.

DEBT OBLIGATION

The Company has obligation according to the terms and conditions of the loan agreement with a local commercial bank as follows.

(1) The Company must maintain its debt to equity ratio (D/E ratio) not to exceed 2 times and debt service coverage ratio (DSCR) of no less than 1.25 time in next years until the end of loan agreement. The company was able to maintain the D/E ratio and DSCR as required by the contractual obligation of the loan.

(2) The lending bank has determined that Lanna Resources Public Co., Ltd. (Lanna) must maintain its shareholding proportion in TAE of no less than 50 percent of the total number of shares during the whole duration of the loan agreement. Accordingly, Lanna has no plan to decrease its shareholding proportion in TAE to below 50 percent of the total number of shares.

(3) The lending bank has stipulated that the Company cannot pay dividend to its shareholders, including Lanna, if the Company cannot comply with the conditions as stipulated within the loan agreement, such as the maintaining of D/E ratio, DSCR, and maintaining of shareholding proportion of Lanna in the company, etc. Accordingly, the company has never breached the conditions of loan agreements and has been provided with good financial support from lending banks.

UPCOMING INVESTMENT PROJECT

The Company is now proceed with the construction of the EVAPORATOR SYSTEM FOR BIO METHANATED SPENT WASH 3,000 M3/DAY which was expected to complete in the first quarter of 2019. The investment in this project is an efficient long-term solution for treating wastewater, with all inherent positive environmental impact which complies with the Company's policy. Combined, the Evaporator condensate is a source of re-use water. Condensate recovery can reduce more than 90 percent of process water used in Ethanol production and excess electricity generated from the evaporation plant will be used in Ethanol production to save energy cost. Additionally, the Company will gain extra income from selling Potassium Humate fertilizer, a by-product from evaporation process around 50,000 metric tons per year.

IMPACT TO FUTURE OPERATIONS

The price of molasses, which is used as raw material of ethanol production, is projected to low in 2019 as per the trend of world sugar prices due to the oversupply of sugar. At the same time, the forecast amount of sugarcane that will supply to the mills for crushing is expected in high level close to 2018. Consequently, the operating results of the Company in 2019 will be recorded a good level as the operating results in 2018. The Company will keep focus on maintain product quality and efficiently manage on production cost to have an excellent growth in operating results in the following year.
