



THAI AGRO ENERGY PUBLIC COMPANY LIMITED

ANNUAL REPORT

2018



LONG LIVE THE KING

**His Majesty King Maha Vajiralongkorn
Bodindradebayavarangkun (King Rama X)**

On behalf of

**The Board of Directors, Management and Staff
Thai Agro Energy Public Company Limited**

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REPORT OF THE BOARD OF DIRECTORS



On behalf of the Board of Directors of Thai Agro Energy Public Company Limited, I would like to take this opportunity to report to the shareholders with regard to the financial position and operating results of the Company for the past year 2018, which were considered in very good level and very satisfying. The earning efficiency has improved significantly.

Overall Operating Results in 2018 : The total revenue was Baht 2,697.85 million with the net profit of Baht 294.28 million or net earnings per share of Baht 0.29. In comparison with year 2017, the revenue and net profit increased by Baht 225.09 million and Baht 245.42 million or an increase of 9.10 and 502.29 percent, respectively. In addition, the EBITDA margin increased from 9.21 percent in 2017 to 19.35 percent in 2018; the net profit margin increased from 1.97 percent in 2017 to 10.92 percent in 2018; and the return on equity increased from 2.91 percent in 2017 to 17.31 percent in 2018. Therefore, the profitability is considered much better in 2018.

Overall Financial Position in 2018 : Company's financial position was in good standing having the total asset as at the end of 2018 of Baht 3,772.27 million, an increase from the previous year of Baht 941.98 million or 33.28 percent and the total liabilities as at the end of 2018 of Baht 2,000.07 million increased from the previous year by Baht 797.69 million or 66.34 percent. The total shareholders' equity as at the end of 2018 of Baht 1,772.20 million increased from the previous year by Baht 144.29 million or 8.86 percent, resulting in an increase in the book value from Baht 1.63 per share in 2017 to Baht 1.77 per share in 2018, an increase of Baht 0.14 per share or 8.59 percent.

Overall Liquidity in 2018 : Company's current ratio was as low as 0.69 times but the Company will not have any problem on liquidity because there were inventories that can be easily exchange into cash. Combined, the Company's accounts receivables are the big energy companies with high financial security. The total debt to total asset ratio was 0.53 times and the total debt to equity ratio was 1.13 times. In addition, the Company has cash flow and credit facilities from financial institutions that are sufficient for business operations and future investments.

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.

Rewards and Recognition : The Company continues to give priority to the principles of good corporate governance and realizes the importance of corporate social responsibility to create sustainable development for the corporation in the long run, as well as being committed to promoting anti-corruption in every form. Accordingly, the Company has received the following rewards and recognitions in 2018:

(1) The Company was placed in a “Very Good” level or 4 stars () for the assessment of Corporate Governance (“CGR”) Year 2018 by the Thai Institute of Directors Association, having received a score of 84 percent, higher than the average score of the listed company in year 2018 with the score of 81 percent.

(2) The Company received 98 score or “Very Good” level on the Annual General Meeting Quality Assessment of the Listed Companies (“AGM Checklist”) Year 2018 conducted by the Thai Investors Association, higher than the average score of the listed company in year 2018 with 92.42 score.

(3) The Company has been officially certified as a member of “Thailand’s Private Sector Collective Action Coalition Against Corruption” since 2017 and will proceed with the certificate renewal in 2018.

Impact to Future Operations : The price of molasses, which is used as raw material for 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 is expected to be at a good level as in 2018. The Company will keep focus on maintain product quality and management efficiency on production cost to have a better growth in operating results in the following year.

The Board of Directors has endeavored to manage and resolve any difficulties with prudence and diligence by adhering to good corporate governance principles, having allowed the Company to get through any obstacles and maintain good operating results, which enables the Company to pay dividend to the shareholders at high level every year. Accordingly, the Board of Directors shall continue to consider business expansion for sustainable development of the Company in long term.



Mr. Suroj Subhasavasdikul,

Chairman of the Board

Thai Agro Energy Public Company Limited

Board of Directors



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- 01** | **Mr. Suroj Subhasavasdikul**
Chairman of the Board of Directors and Authorized Director
- 02** | **Mr. Kraisi Sirirungsi**
Vice Chairman, Chairman of the Nomination and Remuneration Committee and Authorized Director
- 03** | **Mr. Anun Louharanoo**
Director, Authorized Director, Chairman of the Corporate Governance Committee and Acting Chief Executive Officer
- 04** | **Mr. Srihasak Arirachakaran**
Director, Authorized Director and Member of the Nomination and Remuneration Committee



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Mr. Somchit Limwathanakura

Director and Authorized Director

06

Mr. Somchai Lovisuth

Director, Authorized Director and Member of the Nomination and Remuneration Committee

07

Mr. Padetpai Meekun-iam

Independent Director and Chairman of the Audit Committee

08

Mr. Virach Aphimeteetamrong

Independent Director and Member of the Audit Committee

09

Mr. Satit Chanchaowakun

Independent Director, Member of the Audit Committee, Chairman of the Risk Management Committee and Member of the Nomination and Remuneration Committee



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01 | **Mr. Somtawin Boonbanyen**
Chief Operation Officer

02 | **Mrs. Somrudee Suwannaroop**
Chief Financial Officer

03 | **Miss Kanyaphat Chinantdej**
Chief Commercial Officer

04 | **Mr. Anan Rayaruji**
Assistant Chief Operation Officer

05 | **Mr. Korn Tangviroon**
Assistant Chief Operation Officer

06 | **Miss Theeranan Khunakasem**
Accounting and Finance
Department Manager

07 | **Mr. Suphachai Kaewfuang**
Internal Audit Department Manager



Business Operation

Policy and Business Overview

Nature of Business

Risk Factors

The Company's assets use for doing business

Legal Disputes

General and essential information

Part 1

Business Operation

(1) Policy and Business Overview

Thai Agro Energy Public Company Limited engages in production and distribution of ethanol with 99.5 percent purity by volume. Produced for use as fuel, this ethanol has a molecular formula of C₂H₅OH with a boiling point at approximately 78 degree Celsius. This colourless and transparent product is flammable and is used as fuel due to its high octane rating. The product is denatured before being sold to oil companies under Section 7 of the Petroleum Trading Act B.E. 2543 as a substance to be blended with gasoline at the ratios of 10, 20, and 85 per cent, resulting in E10, E20, and E85 gasohol respectively. These gasoline substitutes help to reduce the country's import burden of fuel and MTBE (Methyl Tertiary Butyl Ether), an additive to boost octane in gasoline. Reduction of air pollution leading to a better environment is another benefit resulting from using gasohol.

The manufacturing technology being used at present came under license from a French company, Maguin Interis. The plant consists of two production lines with a combine capacity at 365,000 litres per day. Based on 330 production days per annum, the total annual production output of the plant is 120.75 million litres. Details of two production lines are given as follows.

Item	Line 1	Line 2
Raw material	Molasses	Molasses or cassava
Installed capacity	165,000 litres/day	200,000 litres/day
Commencement	31 st January 2005	2 nd April 2012

The Company received investment promotion certificates from the Board of Investment of Thailand; they are certificate no 1760(2)/2546 dated December 26, 2003 for Production line 1 and, certificate no. 2078(9)/2551 dated November 19, 2008 for Production line 2. Privileges granted by BOI include:

(1) Exemption from corporate income tax on profit generated by promoted activities and exemption from income tax on dividends distributed by the company are granted for a period of 8 years starting from the first day the company generates income. Privileges granted to Production line 1 expired on January 30, 2013, while that of Production line 2 shall expire on April 1, 2020.

(2) Permission to deduct annual loss, incurred from operation during the period of corporate income tax exemption, from annual profit incurred after the income tax exemption period for another 5 years from the date the privilege period expires.

(3) Exemption from import duty on raw materials and other essential materials imported for production of export products. This incentive lasts for one year from the date of first importation of such materials.

(4) Exemption from import duty on machinery as approved by the BOI.

Policy and Business Goal

Vision

“To be the leader in the development of alternative energy for a clean environment and quality society.”

Mission

We are dedicated to manufacturing and encouraging the use of ethanol as an alternative energy source through cooperation with government agencies, educational institutes, and other private enterprises. These motivations to undertake ethanol fuel development are pursued under good governance management for the benefit of the corporation, shareholders, business alliances and stakeholders.

Quality policy

Thai Agro Energy Plc. is determined to produce and distribute fuel ethanol that conforms to internationally-recognized quality standards. The Company aims to build confidence and satisfaction in the products and services among customers by adhering to three main principles:

- (1) Consistent development and improvement of the production process
- (2) Stringent inspection of the quality of raw materials, chemical substances, and water, as well as product quality, at every stage of the production process, as required by ISO 9001/2015
- (3) Creating awareness and being attentive to the needs of customers by acting swiftly, responsibly and sincerely

Corporate Social Responsibility: CSR

The Company is committed to management and business operations with responsibility to society and stakeholders, including shareholders, customers, suppliers, employees, community, and other social peers. The Company’s good governance policy has been carried out through campaigns and encouragements for the staff members to take part in communal activities which focus on sustainable improvement in quality of life among employees, and other members in community and surrounding society. Practical guidelines were designed for four CSR tasks:

(1) Environment

The Company is determined to operate its business in an environmentally responsible manner through the following performances :

- Monitoring and compliance with laws and regulations related to the environment
- Development and improvement of the production process and waste management system as a scheme to eliminate pollution affecting the environment and to upgrade its standard to ISO 14000/2015
- Raising awareness among employees at all levels of the responsibility to protect the environment both inside and outside the plant
- Manipulation of action plans, implementation, and ongoing monitoring and assessment
- Improvement of the factory’s working areas and its landscape as an ambition towards becoming a Green Plant

(2) Safety and occupational health

Employees' safety and occupational health is under the Company's basic responsibility and considered an important factor for the success and growth of the corporation. Thai Agro Energy Plc. has set a policy with the following practical rules :

- Abide to laws and regulations related to the Safety and Occupational Health measure
- Limit and control the risk of unsafe working
- Manipulate employee training on accident prevention and mitigation, on regular basis
- Set a Safety, Occupational Health, and Environment committee to work on planning, monitoring, and evaluation.

(3) Resources preservation

Considering that resources consumption is important to the business operation, the Company has launched strategies on resources management which include:

(a) Energy conservation

- Utilize bio-gas conveyed from waste water treatment system to replace furnace oil
- Reduce electricity consumption by using highly efficient and energy saving equipment
- Apply the Energy Audit scheme to achieve the highest efficiency in electricity consumption management
- Offer training courses to build understanding and awareness among the employees towards energy saving in all the factory's functions.

(b) Water resources and waste water treatment

- Check the raw water treatment and devices in the pipeline systems on schedule to prevent water loss from leaking and malfunctioning equipment
- Recycle water from the treatment system to use in ethanol production process
- Examine water quality on regular basis to prevent any defect that may affect the ethanol product
- No discharge of wastewater from the treatment system into the area outside the plant as regulated in the Zero Discharge measure
- Encourage the water saving plane in both consumption and working application usage

(c) Air pollution elimination

- Improve efficiency in the bio-gas production system on regular basis to prevent leakage
- Examine the fuel combustion system on schedule to control quality of the air emitting from the factory's chimneys in accordance with the standard set by Department of Industrial Works
- Check air quality every six month.

(4) Society

“Society” is the key element for the Company to sustain and grow steadily. Beginning from the small society of our corporation, where employees play the key role in strengthening the capacity and competitiveness, our social responsibility works into larger community, and society as a whole. Our CSR activities were created to reach various levels in the society:

(a) Organization level

- Improve skills of staff members at all levels and build corporate cognition to develop Competence Management
- Stimulate employees to express their opinions on the organization
- Encourage all to join community development projects

(b) Community level

- Preserve environment and resources
- Promote and improve quality of life
- Promote education and learning development among youths in community
- Support cultural learning and moral principles as a foundation for youths to develop their quality of life

(c) National level

- Support activities involving environmental preservation
- Promote development of learning, awareness, and responsibility among youths

Anti-corruption policy

With a strong determination to oppose all forms of corruption, the Board of Directors has set an anti-corruption policy for executive directors, management, and employees at all levels to be aware of corruption hazard. The policy also aims to create the value of correctness and to raise confidence among stakeholders, as well as to encourage the enterprise’s sustainable development in the long term.

The Company forbids directors, management, and employees at all levels to actuate or accept all forms of corruption in both direct and indirect manner. The anti-corruption policy applies to all of the Company’s business operations located in the country and abroad, and to all relating working units. Performance inspections and reviews are conducted on regular basis. Guidelines and requirements are regularly reviewed, as well, to be conformed with business transformation, and relevant regulatory and legal provisions. The anti-corruption policy contains the following details:

- (1) Directors, management, and employees at all levels must adhere to this anti-corruption policy and other business ethics. One must not get involved with corruption whether directly or indirectly.
- (2) Employees at all levels should not neglect or ignore any action that leads to corruption which involves the company. They should inform the matter to department heads or persons in charge and cooperate in the investigation. If in doubt, one must consult their boss or persons in charge of business code of conduct supervision through various defined channels.
- (3) The Company will ensure fairness and protect employees who report corruption related to the Company. Measures to protect the complainants or others who cooperate in reporting corruption are defined in the regulations and guidelines for stakeholders to submit clues or complaints.

- (4) Considered violating business ethics, one who commits corruption must be considered to get disciplinary punishment as defined in the company's regulations. Besides, punishment by law might be applied if the deed is illegal.
- (5) The Company is aware of the importance in dissemination of knowledge and understanding about the anti-corruption policy among other individuals whose works are associated with the Company.

In summary, the guidelines to effectively carry out the Company's anti-corruption policy include:

- (1) Anti-corruption procedures are designed to cover the whole process of human resources management, from recruitment to promotion, training, assessment and to rewarding. Heads or supervisors at all levels must communicate with employees for good understanding about business activities under their responsibility. Monitoring must be conducted efficiently and effectively.
- (2) Operations with a high risk of corruption must be undertaken by directors, management, and employees at all levels with special care, in the following particular manners:
 - (2.1) Do not offer to pay compensation or bribery, or demand/agree to accept all forms of graft from individuals or other agencies whether directly or indirectly as a means to return benefits to each other for fraud synergy or with expectation for benefits related to the company's operation.
 - (2.2) Receiving or giving donations or sponsoring activities must be transparent and lawful to ensure that the donations and support have not been used as a pretext for bribes.
 - (2.3) It is prohibited to accept or offer bribes in all business operations. The company operates and deals with government agencies in a strictly transparent, honest, and legitimate manner.

Investment in subsidiaries and associated companies

Having a policy to invest in its subsidiaries or associates of which operations are the same or similar to those of the Company, Thai Agro Energy Plc. views that the support given to these enterprises will enhance the Company's turnover or profit. Working as a synergy can empower the core business and expand the Company's capacity to become more comprehensive.

However, the investment in subsidiaries and associated companies are under the control and monitoring of the audit committee. To supervise these affiliates, Thai Agro Energy Plc. sends directors or selected executives with appropriate qualifications and experience to represent the company in the administration. Representatives of the parent company play a key role in policy-making and control the business operations of such subsidiaries and associated companies (if any).

To prevent conflict of interest which is a usual probability in competing businesses, the meeting of the Board of Directors of Lanna Resources Public Company Limited, the major shareholder of Thai Agro Energy Plc., approved for the entire operations relating to bio fuel business to be arisen under the group in the future will be conducted through Thai Agro Energy.

Changes and key developments

Background

Ethanol fuel produced by Thai Agro Energy is used to blend with gasoline to produce another form of energy known as gasohol. Gasohol production in Thailand was originated by a royal project initiated by His Majesty King Bhumibol in 1985 when HM launched the Study Project on Gasohol Production for an Alternative Energy by producing ethanol from sugar cane. Later on, with the awakening of the new alternative energy, enterprises in both public and private sectors participated in the development and test of ethanol with engines.

The use of gasohol had not been widespread until the world oil prices rose significantly in 2003. The government has turned to push the production and use of the alternative energy strategically. Ethanol manufacture has been promoted, as well, as it is the major mixture in gasohol production.

Foreseeing growth opportunities in ethanol business, the Company's existing shareholders decided to establish Thai Agro Energy Co., Ltd. on 25 October 2001, with an initial capital of 10 million baht, as a manufacturer and distributor of ethanol used as fuel. Permission to set up a production facility for ethanol fuel was granted by the National Ethanol Committee through the approval of the National Energy Policy No. 2/2545 held on 8 July 2002.

On 18 June 2003, Lanna Resources Plc (LANNA) purchased common shares and has become the major shareholder of the ethanol company. Presently, LANNA hold 75 per cent of the shares already sold making Thai Agro Energy a subsidiary of LANNA.

Recognized the first licensed ethanol producer in Thailand, Thai Agro Energy was certified a fuel trader under Section 10 of the Fuel Trade Act B.E. 2543 on 29 April 2005. The Company became public and changed its name to Thai Agro Energy Public Company Limited on 18 October 2007.

Significant milestones

2003
<ul style="list-style-type: none">▪ The Company increased its registered capital by 255 million baht: From 10 million at the initial, the new capital grew to 265 million baht by issuance of the new 25.5 million ordinary shares at par value of 10 baht per share offered to existing shareholders. The new fund helped make business expansion possible with sufficient working capital. In this effort LANNA invested in buying 19,875,000 shares making it major shareholder holding 75% of the already sold shares. The Company, since then, has become LANNA's subsidiary.▪ The Company received a business license for production and distribution of ethanol from Department of Industry on 22 September 2003.▪ December 26, 2013, the company received BOI promotional certification for the Production Line 1 from the Board of Investment (BOI).
2004
<ul style="list-style-type: none">▪ Completion of the construction of the ethanol production plant (Production Line 1: production of ethanol using molasses)

2005
<ul style="list-style-type: none"> ▪ January 31, 2005, the Company began production and distribution of ethanol from Line 1 for the first time. ▪ The Company became licensed fuel trader under Section 10 of the Fuel Trade Act B.E. 2000 for the distribution of ethanol for use as fuel. From Department of Energy Business.
2006
<ul style="list-style-type: none"> ▪ LANNA purchased 200,000 common shares from the company's existing shareholders making the company's share number increase from 19,875,000 shares to 20,075,000, shares accounting for 75.75 percent of the shares sold. ▪ In January 2006, the Company began using bio gas produced from the well no. 1 which is equipped with Anaerobic Baffled Reactor (ABR) technology. ▪ March 31, 2006, the company was authorized by Excise Department to produce and distribute ethanol with alcohol purity not less than 99.5 directly only to the fuel vendors. The production capacity then was 150,000 liters/day ▪ The Company increased its registered capital by 106 million baht : From 265 million, the capital grew to 371 million baht. The issuance of new 10.60 million ordinary shares at par value of 10 baht per share offered to the existing shareholders was completed, resulting in new fund to expand the business and use as working capital.
2007
<ul style="list-style-type: none"> ▪ The Company increased its registered capital by 79.50 million baht: From 371 million, the capital grew to 450.50 million baht. The issuance of new 7.95 million ordinary shares at par value of 10 baht per share offered to the existing shareholders was completed, resulting in new fund to expand the business and use as working capital. ▪ The Company increased its registered capital by 149.50 million baht: From 450.50 million, the capital grew to 600 million baht. The issuance of new 14.95 million ordinary shares at par value of 10 baht per share offered to the existing shareholders was completed, resulting in new fund to expand the business and use as working capital. ▪ October 18, 2007 the company transformed to a public company and changed its name to Thai Agro Energy Public Company Limited. Registration to change the par value from 10 to one baht per share was done. ▪ December 25, 2007, the company was authorized by the Excise Department to be able to export ethanol.
2008
<ul style="list-style-type: none"> ▪ November 19, 2018 the Company received BOI promotion certification for the Production Line 2 from the Board of Investment (BOI).
2009
<ul style="list-style-type: none"> ▪ June 30, 2009 the Company was accredited ISO 9001:2008 and ISO 14001:2004 from UKAS, England, and Thailand's NAC under the authorization of SGS (Thailand).

2010
<ul style="list-style-type: none"> ▪ The Company commenced the construction of Line 2 production facility, enabling the Company to produce ethanol from molasses and cassava and to increase the production capacity by 200,000 liters/day or 66.00 million liters/year (calculated from number of days taken in the production which is equivalent to 330 days/year).
2011
<ul style="list-style-type: none"> ▪ In January 2011, the Company commenced a test-run of the Line 2's cassava-based ethanol production machinery. ▪ In May 2011, the Company began using bio gas produced from well no 2, equipped with up flow Anaerobic Sludge Blanket (UASB) technology. ▪ The company increased its registered capital by 200 million baht: From 600 million, the capital grew to 800 million baht. The issuance of new 200 million ordinary shares at par value of 1 baht per share offered to the existing shareholders was completed, resulting in new fund to expand the business and use as working capital. ▪ July 22, 2011, the company was authorized by Excise Department to expand the production capacity of ethanol for use as fuel from 150,000 liters/day to 350,000 liters/day. ▪ 3rd quarter of 2011, the Company improved the Production Line 2 to facilitate the production of ethanol from molasses.
2012
<ul style="list-style-type: none"> ▪ In March 2012, the Company began using bio gas produced from well no. 3, equipped with Modified Covered Lagoon (MCL) technology. ▪ April 2, 2012, the Company was able to produce and distribute molasses-based ethanol from Production Line 2 for the first time.
2013
<ul style="list-style-type: none"> ▪ In September 2013, the Company increased its registered capital by 200 million baht: From the existing 800 million, the capital grew to 1,000 million baht, with the par value of 1 baht.
2014
<ul style="list-style-type: none"> ▪ In June 2014, The Capital was increased following the new registration at Department of Business Development, Ministry of Commerce. From the existing 800 million shares at the par value of 1 baht, accounting to 800 million baht; the new registered capital grew to 1,000 million shares at the par value 1 baht, accounting to 1,000 million baht. The new lot of ordinary shares resumed trading on the Stock Exchange of Thailand for the first time.
2015
<ul style="list-style-type: none"> ▪ The Company began using raw sugar to produce ethanol in Production Line 2. Following the launch of raw material diversification plan, using raw sugar and molasses as raw materials for ethanol production enables the company to save production cost greatly.

<ul style="list-style-type: none"> In June 2015, the Company invested in the installation of Bio-Scrubber to eliminate hydrogen sulfide (H₂S), the gas existing in bio-gas using as fuel for the production of steam and electricity. The new facility helps reduce the amount of SO_x residing in the Flue Gas, releasing from the boiler funnels. The practice can prevent air pollution that may harm the community around the factory.
2016
<ul style="list-style-type: none"> In November, 2016 the Company started Phase 2 of Hydrogen Sulfide Removal (H₂S) project in the Biogas (Bio-Scrubber) to increase the efficiency of air pollution prevention.
2017
<ul style="list-style-type: none"> March 10, 2017 The Company was certified as a member of Thailand's Private Sector Collective Action Coalition Against Corruption: CAC. The Certificate is valid for 3 years from the date of approval.
2018
<ul style="list-style-type: none"> March 14, 2018 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 Evaporator condensate is a source of re-use water. Condensate recovery can reduce process water used in Ethanol production and excess electricity generated from the evaporation plant will be used in Ethanol production and there will be a by-product from evaporation process which is Potassium Humate around 50,000 metric tons per year. June 30, 2018 The Company has been received Quality Management System certification ISO 9001:2015 and Environmental Management System certification ISO 14001:2015 from UKAS, United Kingdom and NAC, Thailand which is certified by SGS (Thailand) Co.,Ltd.

(2) Nature of Business

Revenue Structure

Type of income	2016		2017		2018	
	Million baht	Per cent	Million baht	Per cent	Million baht	Percent
Revenue from sales						
- Denatured ethanol ⁽¹⁾	2,415.07	99.86	2,470.52	99.91	2,696.07	99.93
Total revenue from sales	2,415.07	99.86	2,470.52	99.91	2,696.07	99.93
Other revenues ⁽²⁾	3.28	0.14	2.24	0.09	1.78	0.07
Total revenue	2,418.35	100.00	2,472.76	100.00	2,697.85	100.00

Remarks: (1) Revenue from the sale of denatured ethanol was generated by the sale of ethanol in the ratio of 99.5%, together with gasoline/gasohol in the ratio of 0.5%, according to the Excise Department's regulations for the distribution of ethanol used as fuel.

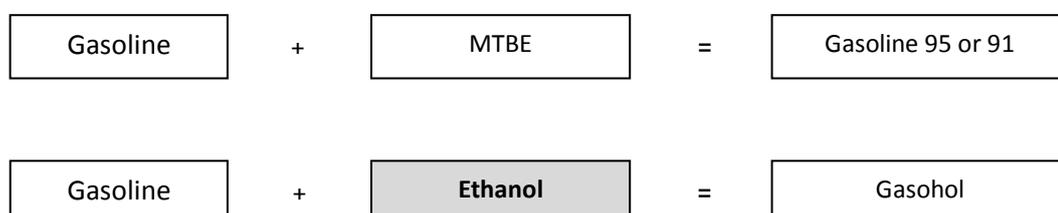
(2) Other revenues include revenues from the sales of fusel oil, asset, and interest income.

Product feature

(1) Ethanol

Ethanol is the Company's main product. Also known as ethyl alcohol, ethanol is a form of alcohol obtained from the processing of agricultural crops that contain starch and sugar. Molasses, cassava, and corn are the major raw materials in the production of ethanol. Biodegradation and fermentation process are applied to convert starch into sugar. The outcome will be distilled until it has a purity of 99.5% by volume.

Ethanol has C_2H_5OH as its molecular formula. Its boiling point is 78 degree Celsius. This flammable, colorless transparent liquid is known as a fuel with higher octane rating as it contains 35% oxygen and can replace MTBE (Methyl Tertiary Butyl Ether), an additive to boost octane in gasoline. As MTBE causes carbon monoxide and leaves residues that can contaminate the groundwater, ethanol can be a good substitution when blending with gasoline in an appropriate ratio to produce the clean gasohol fuel. Completely burned, gasohol helps to reduce air pollution. It can reduce the amount of hydrocarbons, carbon monoxide (CO), and carbon dioxide (CO₂), the main factor that contribute to the greenhouse effect. Black smoke, aromatic compounds and benzene compounds can be minimized as well for the benefit of the environment.

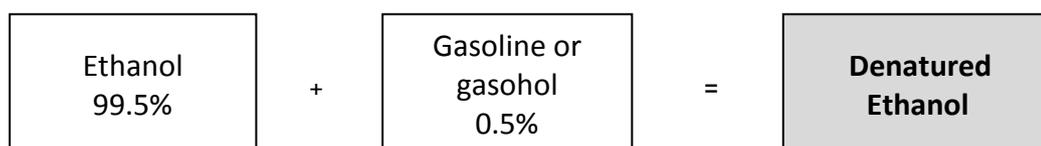


Ethanol production process at Thai Agro Energy is divided into two production lines:

	Production Line 1	Production Line 2
Raw materials	Molasses	Molasses or cassava
Installed capacity	165,000 liters/day	200,000 liters/day
Commencement	31 st January 2005	2 nd April 2012

Regulated by Excise Department, the Company can trade only denatured ethanol which is the ethanol to be used in the gasoline mixture in the process to produce gasohol, with conversion formulas determined by the department (as defined by the announcement of Department of Energy Business on Specification of Denatured Ethanol B.E. 2548).

The Company had used ethanol and gasoline 91 in the mixture to produce denatured ethanol until the bereavement of this gasoline type in the Thai market. To this end, the company now use gasohol 91 in the mixture. The company uses 0.5% gasoline or gasohol to mix with 99.5% ethanol in the production of denatured ethanol for sale to customers.



The denatured ethanol produced and distributed by Thai Agro Energy is a quality product according to the standards set by the Department of Energy Business. The Company's quality control department examines the quality of ethanol production on a daily basis.

Recognized the first licensed ethanol producer in Thailand, Thai Agro Energy was certified a fuel trader under Section 10 of the Fuel Trade Act B.E. 2543 on 29 April 2005. Section 10 covers the fuel traders whose commercial volumes of each oil type or a combination of all kinds of oil per year are less than to 100,000 metric tons (approximately 120 million liters).

Promoted by the Board of Investment, the company has enjoyed several incentives. According to Investment Promotion Act B.E. 2520, the incentives include:

Facts	Production Line 1	Production Line 2
Investment promotion certificate no	1760(2)/2546	2078(9)/2551
Promoted product	Pure alcohol	Pure alcohol
Production volumes exempted from tax	54,750,000 litres (working time 24 hrs./day : 365 days/year)	66,000,000 litres (working time 24 hrs./day : 330 days/year)
Commencement of revenue	31 st January 2005	2 nd April 2012
Expiry dates of benefits received.	30 th January 2013	1 st April 2020
Tax incentives		
1. Corporate income tax exemption for profits generated from the promoted operations. Able to exclude dividends, received from the operations that are exempted from corporate income tax, from the tax calculation throughout the duration of the corporate income tax exemption.	8 years from the date on which the revenue can be earned from the promoted operations (Expired 30 th January 2013)	8 years from the date on which the revenue can be earned from the promoted operations
2. Permission for the annual loss, incurred during the income tax exemption period, to be deducted from the net profit risen after the expiry of the tax exemption term.	5 years after the expiry date of the tax exemption period.	5 years after the expiry date of the tax exemption period.
3. Exemption from import duty on raw and other essential materials procured from abroad for production of export products:	1 year from the date of first import	1 year from the date of first import
4. Exemption from import duty on machinery following the BOI's approval	✓	✓

Besides, The Company has been certified Quality Management System ISO 9001:2015 and Environmental Management System ISO 14001: 2015 certifications from SGS (Thailand) Limited. This is a solid proof to indicate that the Company is seriously aware of the environment issue. Fully equipped with good environmental management system and facilities to control the production process, the company has implemented plans to reduce or prevent any clearly-seen environmental impact to meet the standards set.

(2) Raw materials and by-products

Apart from the key ethanol product, the Company benefits from Fusel Oil, a by-product derived from ethanol distillation. Fusel oil contains many forms of alcohol. After isolation of alcohol by distillation, the material is forwarded through a purification process to produce fusel alcohol, the type that is used as solvent in various industries, including perfume, resins, plastics, lacquers, and inks. Fusel oil derived from the company's production process accounts around 200 litres per day.

Marketing and competitiveness

(A) Competitive strategy

(1) Product quality

According to the policy, the Company focuses on manufacturing the premium-quality ethanol to meet the customer's requirement. Recognizing the importance of regular quality checking, the Company has applied a QC procedure throughout the production process, from the beginning of selection and quality check of raw materials, especially molasses which is the major raw mat. The Company embraces the French MAGUIN INTERIS technology to use in both production lines. Apart from the technology recognized among the ethanol producers worldwide, the facility is also equipped with modern and accurate distributed control system.

Monitoring and quality control of ethanol is carried out at all stages from the start until the final step prior to delivery to the customers. All procedures are stringent to ensure the ethanol is produced with quality standards. Presently, the Company is capable to produce ethanol with the purity up to 99.8% by volume, a higher quality standard than what is set by Department of Energy Business.

(2) Efficient cost management

The Company gives priority to cost management. Cost is considered the main factor to affect the ability to make profits and competitiveness. Several measures have been implemented, including the use of biogas as the main fuel to produce steam in the production of ethanol. Biogas is generated from the wastewater treatment process, resulting from the production of ethanol. The Company has used biogas to replace furnace oil. Since the termination of the costly furnace oil usage in 2013, And in year 2015, the Company built a biogas power generation system 3 megawatts of capacity to be used within the factory and production process enabling the Company to save on electricity costs. The production technology is wholly automatic with a computer-controlled system enabling the company to minimize the employee number in the production line. This is much help to reduce the labor cost. As the Production Line 2 was designed to use both molasses and processed cassava, the company has flexibility in managing manufacture costs to achieve the highest efficiency. Once the price of a certain raw mat tends to rise, the Company can shift to use the other choice in the production of ethanol.

(3) Reliable delivery service

On time delivery is another important factor for customers to make a decision to choose a product. Buyers usually accept denatured ethanol that is specified the quantity and the timing of delivery clearly. Inability to deliver products as specified leads to defamation of a company and mistrust among customers.

Delivery on time, then, is the main company's policy as a factor to create satisfaction and reliability among customers. The performance results in continuous calls for our services from customers.

(4) Maintaining good relationship with customers

The Company is the first ethanol producer granted a fuel trader certificate under Section 10 of Fuel Trade Act B.E. 2543, resulting in a large group of customers who are doing business with us for a long time. The company is dedicated to maintaining good relationship with customers successively to give them confidence and trust in the process of production and the efficient services of the company.

We work with customers to plan ethanol delivery in advance, in both terms of product volumes and delivery time to ensure them of accurate and punctual performance. We use all information obtained from customers in our production planning and procurement of raw materials for maximum performance. So that the delivery of ethanol can be completed with the quantity, quality, and time that meet the customer's needs.

(B) Nature of customers

The Company distributes denatured ethanol to mix with gasoline in various ratios to produce gasohol. The Company's major customers are fuel trading companies under Section 7 of the Fuel Trade Act B.E. 2543. Most of them are well-known Thai fuel traders. The Company makes ethanol agreements that are valid for 3-12 months, depending on each customer. The agreements specify the exact quantity and delivery date of denatured ethanol. Prices are determined on a quarterly basis.

(C) Pricing policy

The Committee on Energy Policy Administration (EPA) has agreed to base the reference price of ethanol on the lowest price between the price the producers report to the Excise Department and the price of the fuel traders under Section 7 report to Energy Policy and Planning Office (EPPO). The pricing formula has been effective since December 2015.

The Company uses the Cost plus Margin technique in its pricing policy. Apart from the ethanol reference price notified by the EPA, the Company takes other factors into consideration to denatured ethanol pricing. Key factors taken into consideration include prices for raw materials, supply and demand in the market and overall competitive conditions in both domestic and foreign markets.

(D) Sales and distribution channels

According to requirements set by the Excise Department and specified in licenses to produce and sell ethanol fuel, the Company must only use the ethanol it produces as an additive in fuel production or directly sell to oil traders. The Company is also required to transform ethanol into denatured ethanol before the product leaves the factory. Moreover, the transformation must conform to the formula set by the Excise Department (0.5% transforming substance—gasoline or gasohol—to 99.5% ethanol by volume). The transformation take place prior to sale to oil traders under Section 7 of the Fuel Trader Act B.E. 2543.

Oil traders take the denatured ethanol to mix with gasoline in ratios of 10%, 20% and 85% to produce gasohol E10, E20, or E85 respectively.

Most customers are responsible for transportation of the purchased denatured ethanol. Customers will arrange for trucks to transport the product from the plant. Some request the Company to provide transportation for them. In this case, the Company outsources to a hired transporter which is responsible for any damage occurring during transportation between the plant and the customers' storage. Trading volume of ethanol is measured by the meter at the Company's factory which is regularly calibrated as required by law.

(E) Industry and competitive

(1) Situation of Ethanol Industry

Ethanol consumption demand in year 2018 averaged at 4.20 million liters per day, which was lower than the target in accordance with the Alternative Energy Development Plan B.E. 2558-2579 that had projected the ethanol consumption in 2018 at 4.72 million liters per day. Nonetheless, ethanol demand in 2018 increased from year 2017 (4.00 million liters per day) by 5 percent. Mainly due to, the global oil prices remained low on average US \$ 65 per barrel including the cumulative volume of cars increased from year 2017 around 60,000 cars or 9.5 percent and the promotion policy from the government on fuel pricing structure.

While the consumption of gasohol in the Country has continued to increase significantly from 21.94 million liters per day in 2014 to 29.97 million liters per day in 2018 or compound annual growth rate (CAGR) of 8.11 percent per year as new cars are able to use higher ethanol content in the gasohol. In addition, retail prices of gasoline are still relatively at low level and the consumption and sale of E20 and E85 gasohol, which have higher ethanol content, have continued to increase due to support from the Government sector by increasing the difference in prices of E10 and E20 gasohol and compensation from oil fund, as well as, new type of cars can use higher ethanol content gasoline.

Table: Consumption of ethanol used as fuel 2014-2018

(unit : million litres)	2014	2015	2016	2017	2018
Consumption volume	1,181.88	1,273.08	1,334.91	1,435.40	1,532.65
Average daily consumption	3.24	3.49	3.66	4.00	4.20

Source: Department of Alternative Energy Development and Efficiency, Ministry of Energy

(2) Gasohol situation in Thailand

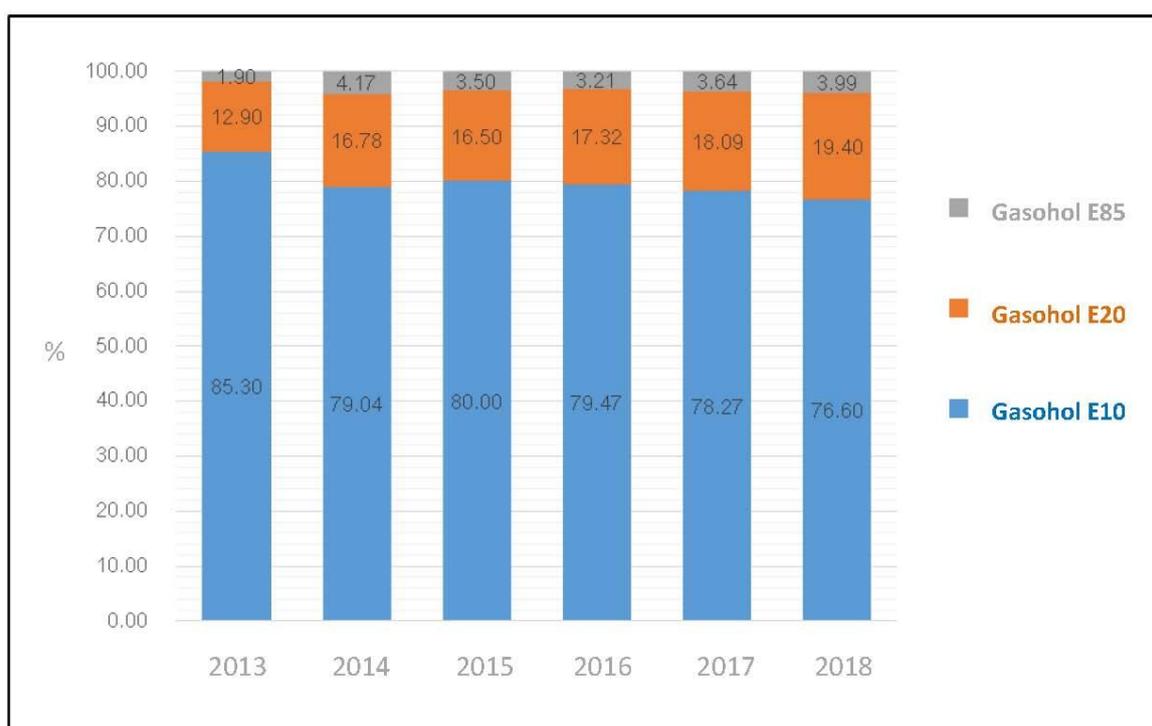
Ethanol used in fuel is blended with gasoline in ratios of 10%, 20% and 85%, resulting in E10, E20 and E85 gasohol respectively. This affects domestic demand for fuel ethanol, which is substantially determined by gasoline consumption. While the consumption of gasohol in the Country has continued to increase significantly from 21.94 million liters per day in 2014 to 29.97 million liters per day in 2018 or compound annual growth rate (CAGR) of 8.11 percent per year as new cars are able to use higher ethanol content in the gasohol. In addition, retail prices of gasoline are still relatively at low level.

Table: Gasohol sales 2014-2018					
(Unit: million litres)	2014	2015	2016	2017	2018
Annual sales volume	8,007.92	9,130.33	10,118.37	10,521.90	10,939.05
Daily sales volume	21.94	25.01	27.65	28.80	29.97

Source: Department of Energy Business, Ministry of Energy

Besides increasing sales volumes, consumption of gasohol by type is also revealing. From 2013, sales of gasohol with high-ethanol ratios—gasohol E20 and E85—increased steadily, due to government support for the sector which included a programme to expand the price difference between E10 and E20, a tax measure and compensation from the oil fund combine with the increase in the number of new vehicles compatible with gasohol featuring higher ratios of ethanol.

Graph : Proportion of gasohol consumption by type 2013-2018



Nevertheless, oil traders continued to increase the number of service stations equipped to cope with more E20 and E85. As of end-2018, there were 4,256 service stations for E20 and 1,333 service stations for E85.

(Unit: baht/litre)	Gasoline 95	Gasohol 95	Gasohol 91	Gasohol E20	Gasohol E85
Contribution to oil fund	8.0800	2.1200	2.1200	-	-
Subsidy rate	-	-	-	0.7800	6.3800
Marketing margin	3.3094	2.2452	2.3886	2.1427	3.4002
Retail price	34.1 600	26.7500	26.4800	23.7400	19.5400

Source: Fuel Price Structure as of February 8, 2018, Energy Policy and Planning Office Ministry of Energy.

(3) Molasses Situation

Molasses is a by-product of cane processing in sugar mills. One metric tonne of sugar cane can produce approximately 45-50 kilogrammes of molasses, accounting to 4.5-5.0% of the cane sent for milling. In Thailand, cane crushing season falls between November and May.

Sugar cane, and molasses volumes 2013/2014-2017/2018				
Year	Sugar cane plantation (million rai)	Average yield (tonnes/rai)	Sugar cane to mill (million tonnes)	Molasses produced (million tonnes)
2013/2014	10.08	11.24	103.67	4.29
2014/2015	10.53	11.08	105.96	4.61
2015/2016	11.01	9.15	94.05	4.23
2016/2017	10.99	9.43	92.95	3.89
2017/2018	11.54	12.06	135.00	5.49

Source: The Cane and Sugar Office

According to the government's policy on the management of agricultural land, to change the area of paddy fields that are not suitable for cultivation other crops such as sugarcane for industry, tapioca, oil palm and corn for animal feed. Sugarcane is a good economic crop to encourage farmers to replace rice. Because sugarcane can be used in all parts, used to produce sugar, a by-product used ethanol production as a renewable energy and sugarcane residue can be used as a fuel for power generation or pulp production, to add value to the industry continuously.

In 2017/2018 sugarcane plantations in the surveyed communal area increased by 500,000 rai, or 5 percent from 2016/2017, while the average yield increased by 2.63 tonnes/rai or 28 percent because of rainfall increased which have good effect on sugar cane.

Competition

As of 2018, there were 26 operating ethanol production plants in Thailand, with a total installed capacity of 5.79 million litres per day. The ethanol production facilities can be categorised by raw material types as follows:

Operating Ethanol Plants

	Ethanol Plant	Province	Capacity (litres/day)	Main raw material
1	Thai Agro Energy Plc, Phase 1	Suphanburi	150,000	Molasses
2	KSL Green Innovation Plc.*	Khun Kaen	150,000	Molasses
3	KSL Green Innovation Plc. (Bo Phloy)*	Kanchanaburi	200,000	Molasses
4	Thai Sugar Ethanol Co., Ltd.*	Kanchanaburi	100,000	Molasses
5	K.I. Ethanol Co., Ltd.*	Nakhon Ratchasima	200,000	Molasses
6	Mitrphol Biofuel Co., Ltd. (Kalasin)*	Kalasin	230,000	Molasses
7	Mitrphol Biofuel Co., Ltd. (Kalasin)* Kuchinarai	Kalasin	320,000	Molasses
8	Mitrphol Biofuel Co., Ltd. (Chaiyaphum)*	Chaiyaphum	500,000	Molasses
9	Ekarat Phatthana Co., Ltd.*	Nakhon Sawan	230,000	Molasses
10	Thai Rungrueng Energy Co., Ltd.*	Saraburi	300,000	Molasses
11	Mitrphol Biofuel Co., Ltd. (Dan Chang)*	Suphanburi	200,000	Molasses
12	Mae Sot Clean Energy Co., Ltd.*	Tak	230,000	Sugar cane syrup
13	Ratchaburi Ethanol Co., Ltd.*	Ratchaburi	150,000	Cassava chips/ molasses
14	E.S. Power Co., Ltd.*	Sakaew	150,000	Cassava chip/molasses
15	Thai Alcohol Plc*	Nakhon Pathom	200,000	Cassava chip/molasses
16	Thai Agro Energy Plc., Phase 2	Suphanburi	200,000	Cassava chip/molasses
17	Sapsin Co., Ltd.	Lopburi	200,000	Cassava chip
18	Tai Ping Ethanol Co., Ltd.	Sakaew	150,000	Fresh cassava
19	P.S.C. Starch Production Co., Ltd.	Cholburi	150,000	Fresh cassava/ cassava chip
20	Thai Ethanol Power Plc.	Khon Kaen	130,000	Fresh Cassava
21	E 85 Co., Ltd	Prachinburi	500,000	Fresh cassava/liquid cassava
22	Ubon Bio Ethanol Co., Ltd	Ubon Ratchathani	400,000	Fresh cassava/cassava chip
23	Sima Inter Product Co., Ltd.	Chachoengsao	150,000	Fresh cassava/cassava chip
24	T.P.K Ethanol Co.,Ltd.(Plase 1)	Nakhon Ratchasima	340,000	Cassava chip
25	Impress Ethanol Co.,Ltd.	Chachoengsao	200,000	Fresh cassava
26	Fah Kwan Thip Co.,Ltd.	Phajinburi	60,000	Fresh cassava/ cassava chip/ Molasses
	Total production capacity		5,790,000	

Source: Thai Ethanol Manufacturing Association

Remark: * Ethanol production plants operated by sugar mill entrepreneurs

For the year 2018, the market share is 7.56 percent increased from 2017 by 10.69 percent.

Year	Domestic consumption of ethanol (Million litres)	Company's sales volume of conversion ethanol (Million litres)	Company's market share (%)
2016	1,334.91	105.92	7.93
2017	1,435.18	98.092	6.83
2018	1,532.65	115.833	7.56

Source: Department of Alternative Energy Development and Efficiency

Public administration of ethanol industry

Production and distribution of ethanol used as fuel is a business sector that operates under the supervision of governmental authorities. This public administration oversees and sets policies concerning the sector's various facets:

(1) Production and distribution of ethanol

To set the same standard for licensing ethanol production plants, the Thai Cabinet on 12 December 2006 approved a liberalisation of regulations governing production of Sam Thab (ethanol) type distilled spirits used as fuel. Subsequently, on 24 September 2007, the Ministry of Finance issued Notification Concerning Administration of Sam Thab Distilled Spirits (ethanol) Used As Fuel B.E. 2550 defining procedures and directions for applying for authorisation to establish a plant manufacture and sell ethanol used as fuel, as well as other issues concerning production and distribution of ethanol, all of which is overseen by the Excise Department.

The Ministry of Energy on 21 January 2005 issued a notification defining ethanol used as fuel whether directly in an engine or blended with gasoline, in accordance with the Fuel Distribution Act B.E. 2543. Producers and distributors of ethanol used as fuel must be registered as fuel traders with the Department of Energy Business under Section 7 or Section 10 of the Act, as applicable.

- Fuel traders under Section 7 includes oil traders that operate commercial quantities of each or a combination of oil types of 100,000 metric tonnes per year or more.
- Fuel traders under Section 10 are those that operate commercial quantities of each or a combination of oil types of less than 100,000 metric tonnes per year, whose commercial quantities of each or combination of oil types is 30,000 metric tonnes (about 36 million litres) up, or traders with fuel storage capacity of 200,000 litres or more of each or a combination of oil types.

(2) Determining ethanol characteristics and quality

To encourage commercial application of ethanol and build confidence in it among consumers, the Department of Energy Business has determined characteristics and quality requirements for denatured ethanol fuel blended with basic gasoline to produce gasohol. Details appear in the Department's Notification on Determining Characteristics and Quality of Denatured Ethanol B.E. 2548 launched on 11 July 2005.

(3) Excise tax exemption

The government has a policy to support the production and use of ethanol as fuel. Therefore, the Excise Department issued a notice on: The Alcohol Tax Exemption for Ethanol Distillates Used as Raw Materials or Components for Fuel Production on September 29, 2017, by those who would seek tax exemptions will be necessary to set up an electronic database system and reporting according to Excise Department designated

Product supply

(1) Manufacturing

The Company's ethanol production facilities are located at 9, Moo 10, Dan Chang-Samchuk Road, Tambol Nong Makhamong, Dan Chang District, Suphanburi Province, on an area of over 1,400 rai. The plant comprises two production lines equipped with the French MAGUIN INTERIS technology which is well-recognised among ethanol producers worldwide.

MAGUIN technology features multi-tank continuous fermentation (Cascade Continuous) and a refining process with two distillation columns. The Company's production process holds Quality Management System ISO 9001: 2015 certification and Environmental Management System ISO 14001: 2015 certification from SGS (Thailand) Limited.

Details	Production Line 1	Production Line 2
Raw materials	Molasses	Molasses or cassava
Installed capacity	165,000 litres/day	200,000 litres/day
Commencement	31 January 2005	2 April 2012

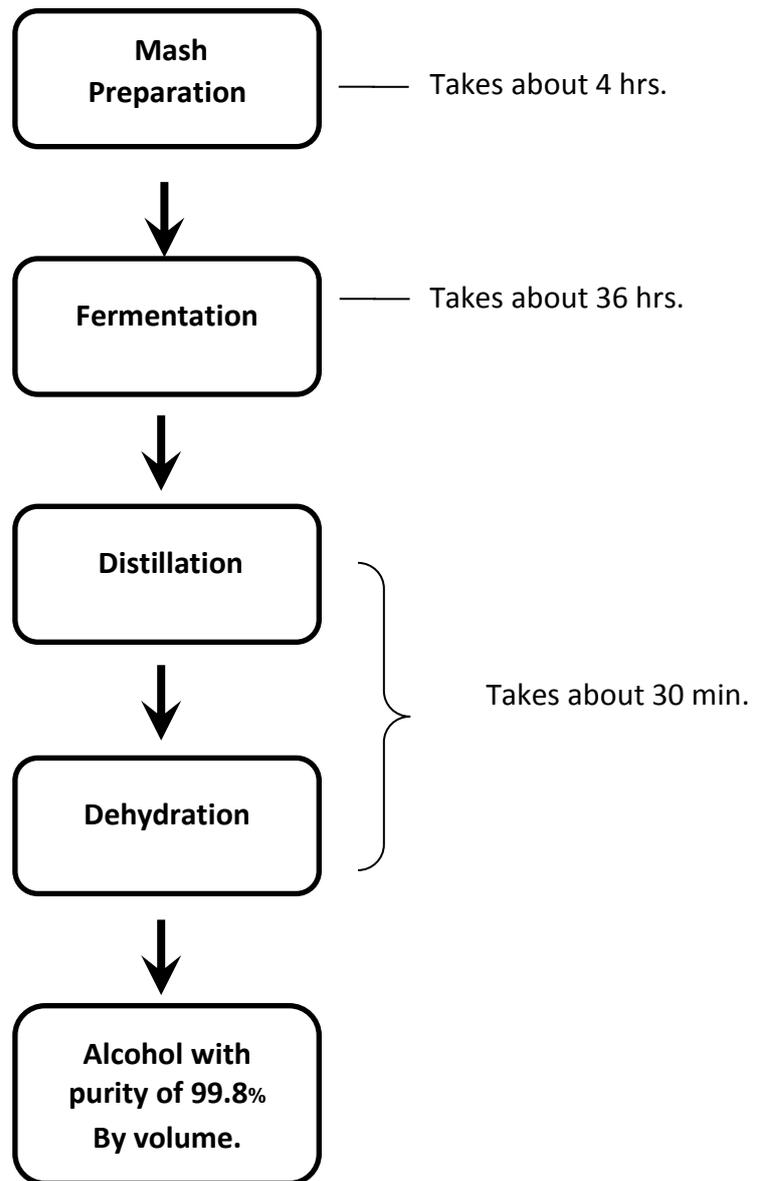
Production Line 2, which can use both molasses and cassava, is now enabled for commercial operation. Production Line 1, using molasses as its sole raw material, has been in operation since 31 January 2005.

Line 2, which started commercial output in April 2012, has in fact only used molasses as raw material. Upgrading is on the way to enable cassava chip processing. Selection of raw material for Line 2 is based on the Company's production plans and costs.

(2) Production capacity

Details	2017		2018	
	Production Line 1	Production Line 2	Production Line 1	Production Line 2
Installed capacity (unit: litres)	54,750,000	66,000,000	54,750,000	66,000,000
Actual production volume (unit: litres)	39,754,683	58,117,545	45,655,182	70,136,418
% of capacity installed	72.61	88.06	83.39	106.27
Total installed capacity (unit: litres)	120,750,000		120,750,000	
Total actual production volume (unit: litres)	97,872,228		115,791,600	
% of total capacity installed	81.05		95.89	

(3) Production and production process



Ethanol production at Thai Agro Energy comprises four main stages as follows :

(1) Mash Preparation Process

Molasses is delivered by pipeline from a storage tank for preparation prior to fermentation. The preparation process involves diluting the molasses with water to the required concentration. A special acid that reduces surface tension is added to separate out organic salts from the molasses.

(2) Fermentation

Diluted molasses is delivered to the next stage where yeast is added to begin a fermentation process. Essential nutrients, acid and air are added in a yeast culture chamber. The optimally fermented yeast and other diluted molasses is moved from pre-fermenters to fermenters. The Company's uses a cascade continuous fermentation process, passing through six fermenters fitted with radial flow pumps and cooling systems that stabilises the temperature in the fermenters. It takes 36 hours for the yeast to transform the sugar into alcohol. After fermentation, the fermented liquid is delivered to buffer tanks to await distillation. The processes produce alcohol with a purity level of 9%-10% by volume.

(3) Distillation

Fermented alcohol stored in the buffer tanks is transferred to Distillation Column 1 where the alcohol is separated from the fermentation broth. The distillation is conducted at a lower atmospheric pressure. The alcohol vapour wafts out of Column 1 and flows through a cooling system. Here, the purified alcohol vapour is condensed into liquid alcohol with approximately 50% purity by volume before being forwarded to Column 2 for further distillation at a higher atmospheric pressure. This produces 92% purified alcohol by volume. The alcohol vapour from Column 2 is conveyed to the dehydration process.

The distillation process renders fuel oil, a by-product utilized in perfumes, resins, plastics, lacquer and ink. Spent wash from the distillery spent wash is sent to the treatment system to generate biogas for application in other areas of the Company's operations.

(4) Dehydration

The dehydration process removes the remaining water after alcohol production, raising it to 99.8% purity by volume. Alcohol vapour drifts through a double-barrelled dehydration unit. Zolytes installed in the barrels absorb water from the vapour. The dehydrated alcohol is condensed and cooled before delivery to storage tanks to await distribution. The Company possesses four storage tanks with a total capacity of 4.5 million litres. Each tank is equipped with nitrogen blanketing to maintain the ethanol quality while it awaits delivery to customers.

Raw materials supply

(1) Molasses

Molasses is the main raw material used in the Company's production of ethanol, accounting for 80.00% of ethanol production costs. The Company sources molasses from producers and distributors around the country. Negotiation begins every year before the sugarcane milling season begins.

A by-product of sugar processing, the volume of molasses mainly depends on the amount of sugarcane sent for milling each season. To reduce the risk of insufficient molasses to meet the ethanol production plan, the Company contracts with molasses manufacturers and/or suppliers in advance. Each contract determines a certain quantity of molasses and delivery details.

The Company's main molasses supplier is Mitr Phol Sugar Co., Ltd. accounting for 30% of all intake in 2015. Located in close proximity with the Company's plant and with the freight cost included in the purchase price, purchasing molasses from Mitr Phol's sugar mill helps the Company save on both its raw materials cost and transportation. The Company's contract with Mitr Phol requires the molasses producer to deliver 200,000 tonnes of molasses per year for a period of 15 years, from 2005- 2019. Renewal or reconsideration of the purchase price takes place every five years in the main contract and every year in the supplementary agreement.

Besides Mitr Phol, the Company orders molasses from seven other producers and/or distributors. This is both to maintain good relations throughout the industry and reduce the risk of relying on only a few molasses traders. The latest long-term contract signed is with new supplier Nakhon Petch Sugar Co., Ltd. The contract is of five years duration, from 1 January 2014 to 31 December 2018.

Molasses vendors are mostly responsible for delivering the contracted consignments to the Company's factory. However, in some cases the Company arranges transportation of the molasses itself. In such cases the Company outsources the delivery. Such contracts clearly specify that all damage, whether by contamination, degradation or loss that occurs in transit as well as damages due to accidents, are the transportation contractor's responsibility and that they are required to pay the Company an indemnity.

(2) Chemicals

Apart from molasses, the main raw material, the Company uses other chemical substances in the production of ethanol. In 2016-2018, chemical ingredients accounted for 1.68 percent, 1.82 percent and 1.78 percent of the ethanol production cost.

Yeast, urea, diammonium phosphate, anti-foam and sulfuric acid are among the essential chemicals used in the production process. Most of the substances are supplied by domestic manufacturers and/or distributors. As quality is top priority, the Company focuses on purchasing only from manufacturers and/or distributors that deliver quality ingredients accurately and punctually as defined in the orders.

The Company has prepared an Approved Vendor List collating quality manufacturers and/or distributors. The list is updated every two years through performance reviews and assessments.

Orders are placed on a minimum stock basis. As stocks are reduced to minimum amounts that must be retained, ERP reports the situation to the concerned personnel to reorder. The system enables the Company to achieve efficient stock management and maintain appropriate inventories of raw materials.

(3) Cassava chips

Consideration of which raw material to use in Production Line 2 is based on cost and the current plan. Having a choice enables the Company to control its costs effectively and reduce the risk arising from solely depending on molasses as raw material. It gives the Company the freedom to choose whichever raw material is available at the lowest cost to use to produce ethanol.

The Company is also making preparations for using use cassava chips as another raw material for its ethanol production. It will procure cassava chips from producers in provinces in the vicinity of its plant, including Kanchanaburi, Uthai Thani, Nakhon Sawan and Kamphaeng Phet, in which cassava is a major crop. The Company surveyed various cassava yards to assess their capability of producing cassava chips of the required quality. Sampling will be conducted to determine the quality of the material every time before deciding whether to purchase.

Prior to acceptance, the Company checks the quality of the produce loaded onto each truck. Cassava of lower quality than that required by the Company is immediately rejected, ensuring that only quality cassava chips are used for ethanol production.

(4) Raw Sugar

Due to the production line 2 can use raw sugar for production process, this will gain the flexibility of raw material selection. Therefore, the Company can efficiently manage on production cost.

In the meeting of the cane and sugar board each year, the board will consider the policy to increase the sale volume of raw sugar within the country to the ethanol industry which will consider from the amount of raw sugar each production season.

(3) Risk factors

Thai Agro Energy Public Company Limited (TAE) is engaged in ethanol production. The Company's product is mixed with gasoline to produce gasohol E10, E20 and E85 which are alternative fuels for automobiles. The Company's risk management is as follows:

(1) Risk from Procurement of Main Raw Material: Molasses and cassava are the main raw materials used to produce ethanol of the Company, contributing more than 80 percent to the overall ethanol production cost. As molasses and cassava are agricultural products then various factors affected, for example, the size of land used for planting which varies by the price comparing to other crops, climate, crop disease, rainfall and water level, demand in other industries and export volume each year, etc. Accordingly, TAE has entered into long-term sale and purchase agreements with domestic molasses producers or sellers in order to conclude the volume and delivery schedule of molasses, while the procurement of cassava will be purchased from the cassava farm near TAE plant. This allows efficient management on inventory and effective ethanol production.

(2) Risk from Fluctuation of Main Raw Material: Fluctuation of raw materials prices directly impact to the cost of ethanol production since they are major costs in production process. The price of molasses varies by the supply and demand, following the same trend as the price of sugar which is seasonal and market force; as well as the price of cassava, in addition to the supply and demand in the market, it is also affected by government intervention. Therefore, if the raw materials prices jump up rapidly, the selling cost and the profit margin of TAE may be affected since the selling price may not change proportionally with the increased cost of raw material. Recognizing this issue, TAE determines its ethanol selling price from appropriate cost plus gross profit, with close and regular monitoring on the market and molasses price trend. Additionally, negotiations on the purchases of molasses are done in advance before the harvest season to ensure low and competitive price of molasses or having good gross profit margin.

(3) Risk from being Dependent on Major Customers: TAE sells ethanol-for-fuel to oil companies as defined by Section 7 of Fuel Trade Act B.E. 2543 for mixing in gasohol production. Being an oligopoly, the major buyers with high ethanol demand have more negotiating leverage in terms of price and selling terms, such as, longer credit term. However, without the purchase from the major buyers, or with lower volume of purchase, the revenue and profit of TAE may be affected. Accordingly, TAE focuses on keeping good relationship with customers, ensuring trust and satisfaction from customers. TAE also try to decrease its dependence on any single customer, having expanded its customer base to ensure ethanol sales target with optimal terms and prices.

(4) Risk from the Government Policy: Due to the policy promoting the use of renewable energy has an impact on ethanol business; the Alternative Energy Development Plan (AEDP 2015), which targets on ethanol needs and action plans and the bio-fuel management plan (Oil Plan 2015) to determine the appropriate type of oil to be sold. Therefore, if the government policy has changed or in case where the government policy is discrete or unclear, this will impact the business of TAE. TAE recognizes such risk and aims to manage the production and distribution of ethanol at the highest efficiency, with emphasis on cost management, product quality and good relationship with customers, including export market expansion or add value to the products, ensuring minimal impact from government policy.

(5) Risk from the Growing Trends of Electric Cars and Hybrid Cars: As the government has a policy to support the electric vehicles industry (“EVs”) in line with the Energy 4.0 policy to shift fossil reliance to renewable energy, in addition, the use of hybrid cars using both electricity and fuel is likely to increase, despite the disadvantage of price and battery life, charging time, including the number of service stations to be improved in the future, by which the utilization of electricity power in cars will have an impact on fuel and ethanol demand in the future. Accordingly, TAE is currently conducts a feasibility study of producing other products or derivatives products of ethanol to mitigate the impact of a decrease in ethanol demand.

(6) Risk from the Utilization of Biogas as Main Fuel on Steam and Power Generation to use in Ethanol Production: TAE uses biogas as main fuel for steam and power generation in ethanol production as one of the policies concerning cost reduction and improvement on ethanol production efficiency, instead of using fuel oil as before, which significantly reduces the fuel cost. Currently, TAE can produce enough biogas for steam and power generation, however, there is some risk from natural disaster, causing damage to the biogas ponds, rendering them dysfunctional and requiring substituted fuel (e.g. fuel oil, palm shell), increasing the cost of ethanol production. Recognizing such risk, TAE has strengthened the structure of the biogas ponds and conducts regular maintenance to ensure continuous and effective biogas generation. Moreover, insurance policies covering every type of risk from natural disaster are also in place.

(7) Risk from Environmental Impact: TAE places emphasis and recognizes the health impacts to the surrounding community, with great care to the environment and two potential pollution risks as follows:

(7.1) Risk from Environmental Impact of Air Pollution: TAE uses bio scrubber for removal hydrogen sulfide in biogas, which is used for steam and power generation for the biogas to be clean and has better quality. Additionally, there is a team monitoring and repairing the canvas covering biogas to ensure that it is in good condition, in case where it is damaged, it will be repaired immediately in order to minimize air pollution that would have an impact on the surrounding community.

(7.2) Risk from Environmental Impact of Water Resources and Wastewater Treatment: TAE has been complied with the requirements of the Department of Industrial Works, Ministry of Industry, in “Wastewater Management in Industrial Plants” by constructing of properly treated spent wash ponds from biogas production process with inspecting and repairing the levees follow the engineering standard and maintain the water level below 1 meter from the levee to reduce the risk of the overflows caused by heavy rains. In addition, the investment in spent wash evaporation project with evaporation system will take place in order to reduce the treated spent wash and mitigate the risk of water leakage in the event of flooding to prevent the potential impact on the surrounding community.

(8) Risk from Compliance with Loan Agreements

The lending bank has stipulated a condition concerning the maintenance of shareholding of Lanna Resources Public Co., Ltd. (“LANNA”) in TAE of no less than 50 percent of all shares during the whole duration of the loan agreement. Therefore, TAE has the risk of breaching the loan agreement condition, and the lending bank may demand a full repayment of loan if LANNA sells its shares in TAE and the shareholding proportion in TAE decreases to less than 50 percent of all shares, which will ultimately affect the liquidity and the operation of TAE. Accordingly, the management has informed the Board of Directors of LANNA regarding such condition. If LANNA plans to decrease its shareholding proportion in TAE in the future, a written notification is needed to be sent to TAE so that TAE may negotiate with the lending bank without breaching the loan agreement.

(4) The Company's assets used for doing business

The Company possesses various assets that it utilises in doing business as of 31 December 2018, the Company's total assets used in doing business were as follows:

Type/characteristic of asset	Ownership	Obligation As of 31 Dec. 18	Net Book Value As of 31 Dec. 18 (million baht)
Land comprising agricultural plots and desiccation ponds, located in Tambol Nong Makhamong, Dan Chang district, Suphanburi Province. Total area: 1,220-1-24.9 rai	Owner	Land mortgaged with commercial banks	65.14
		-	104.70
Land for biogas production: Well 3, located in Tambol Nong Makhamong, Dan Chang district, Suphanburi Province. Total area: 23-2-32 rai	Owner	-	5.21
Land for slops water wells, located in Tambol Nong Makhamong, Dan Chang district, Suphanburi Province. Total area: 128-3-63 rai	Owner	Land mortgaged with commercial banks	13.05
Land for fresh water storage, located in Tambol Nong Makhamong, Dan Chang district, Suphanburi Province. Total area: 42-3-72 rai	Owner	Land mortgaged with commercial banks	4.42
Land for truck parking yards, located in Tambol Nong Makhamong, Dan Chang district, Suphanburi Province. Total area: 245-2-19.5 rai	Owner	Land mortgaged with commercial banks	24.82
		-	3.19
Land for Production Process Line 2 and biogas production Well 4, located in Tambol Nong Makhamong, Dan Chang district, Suphanburi Province. Total area: 83-1-16 rai	Owner	Land mortgaged with commercial banks	8.22
Land for Production Line 1, located in Tambol Nong Makhamong, Dan Chang district, Suphanburi Province. Total area: 103-1-17 rai	Owner	Land mortgaged with commercial banks	10.63
Land improvement	Owner	-	56.79
Machinery and equipment	Owner	Machinery with loan finance by commercial banks	1,349.80
		-	360.08
Buildings and construction	Owner	buildings mortgaged with commercial banks	137.53
		-	242.44
Office equipment	Owner	-	3.43
Vehicles	Owner	-	4.91
Assets under construction and installation	Owner	-	361.70
Total			2,756.06

Molasses purchase contract

Contract party	: Mitr Phol Sugar Co., Ltd. (“Principal Contract”)
Contract date	: 28 May 2003
Nature of contract	: The Seller agrees to sell molasses to the buyer, amounting 120,000 tons per year, with a price agreement reached every 5 years.
Duration	: 2005-2019
Delivery	: The seller contracts to deliver molasses to the buyer at the buyer’s factory.
Penalty	: Should the seller be unable to deliver to the buyer the volume of molasses defined in the agreement, the seller must procure molasses from elsewhere to be delivered to the buyer in place of any shortfall in order to maintain the contracted volumes and prices as agreed through to completion of the contract. Should the seller be unable to procure and supply the substitute molasses in accordance with the contract, the seller is obliged to return to the buyer that portion of the contract value necessary for the buyer (the Company) to procure molasses to compensate for the shortfall in supply by the seller. Moreover, the seller must pay any excess in the price of molasses that the buyer has to pay other suppliers for higher priced molasses than stipulated in the agreement. The seller is also required to compensate the buyer for any related loss or damage incurred by the buyer.
Cause of cancellation of contract	: In case the buyer’s factory has to stop working, close or reduce operations by half or more of its normal level for whatever reason, so that the buyer is unable to take delivery of molasses from the seller as per the contract, by no fault of the seller, for more than 45 consecutive days, the molasses purchase agreement will be terminated immediately without notice. Upon the contract termination, all the money that the buyer has paid for the molasses purchases shall be vested in the seller immediately. Force majeure — war, revolution, insurrection, natural disasters, storms, floods, strikes or other unexpected incidents — are not included among such causes of cancellation.

Contract party	: Mitr Phol Sugar co., Ltd. (“Supplementary contract”)
Contract date	: 28 May 2003
Nature of contract	: The Seller agrees to sell molasses to the buyer, amounting to 80,000 tonnes per year. An agreement about the price and amount of molasses will be made every year.
Duration of contract	: 15 years, 2005-2019
Other obligations	: To follow the obligations prescribed in the principle contract

Contract party	: Nakhon Petch Sugar Co., Ltd.
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Contract date : 1 August 2013

Nature of contract : The Company will buy molasses from the seller as per the agreement

Duration of contract : 5 years, starting January 1, 2014 until December 31, 2018

Delivery : The seller must deliver molasses to the buyer at the buyer's factory.

Contract party	: Mitkasem Uthai Thani Co., Ltd.
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Contract date : 1 August 2013

Nature of contract : The Company will buy molasses from the seller as per the agreement

Duration : 5 years, starting January 1, 2014 until December 31, 2018

Delivery : The seller must deliver molasses to the buyer at the buyer's factory.

(5) Legal disputes

Conclusion of lawsuit : In September 2011, a company sued the Company for its alleged non-compliance with the cassava chip purchase agreement dated 21 January 2011 and memorandum dated 29 April 2011, claiming a compensation for damage of Baht 186.9 million. On 8 November 2011, the Company submitted the testimony and countersued that company, claiming a compensation for damage of Baht 82.4 million. Subsequently, on 9 October 2014, the Civil Court dismissed the lawsuit filed by that company and ordered it to make payments for purchases of cassava chip that the Company paid in advance of Baht 6.9 million which together with interest expense of 7.5 percent per annum, calculated from 8 November 2014 (the countersue date) until completion of payment. In addition, that company shall pay for charges and partial lawyer fee for the Company. However, on 3 December 2014, the Company lodged an appeal with the Court of Appeal. On 9 February 2016, the Appeal Court affirmed the judgment of the Civil Court.

Subsequently on 7 April 2016, the Company lodged an appeal with the Supreme Court and on 18 May 2018, the Company sued that company for bankruptcy case. Presently, the case is under consideration of the Courts. As at 31 December 2018, the Company has not received such payment. However, the Company recorded allowance for impairment for the full amount of the advance paid to that company.

(6) General and essential information

Company name:	Thai Agro Energy Public Company Limited
Company Registration Number:	0107550000157
Nature of business:	Production and distribution of ethanol used as fuel
Head office:	888/114 Mahathun Plaza Building, 11 th floor, Ploenchit Road, Khwaeng Lumpini, Pathumwan District, Bangkok 10330 Tel 02-627-3890-4 Fax 02-627-3889
Factory:	9 Moo 10, Dan Chang-Samchuk Road, Tambol Nong Makhamong, Dan Chang District, Suphanburi Province
Website:	www.thaiagroenergy.com
Securities registrar:	The Thailand Securities Depository Co., Ltd., 62 The Stock Exchange of Thailand Building, Ratchadaphisek Road, Khlongtoey, Bangkok 10110 Tel: 02-2292000
Auditor:	One of the names below: 1. Miss Kamonthip Lertwitworathep Auditor Registration Number 4377 and/or 2. Miss Satida Ratananurak Auditor Registration Number 4753 and/or 3. Miss Siriwan Nitdamrong Auditor Registration Number 5906 of EY Office Co., Ltd. Address: 193/136-137 Lake Ratchada Building, 33 rd floor, Ratchadaphisek Road, Khlongtoey, Bangkok 10110 Tel: 02-264-0777 Fax: 02-264-0789

Profile of Directors

- 1. Full name** : Mr. Suroj Subhasavasdikul
Position : Chairman of Board of Directors (effective from May 17, 2018)
 and Authorized Director
Nationality : Thai
Age : 76 years
Education :



- Ph.D. in Chemical Engineering Institute Du Genie Chimique, France
- Curriculum of Director Accreditation Program of Institute of Director (IOD)
 - Director Accreditation Program (DAP) 39/2005,

Duration of Director : Member of the Board of Directors, Thai Agro Energy Public Company Limited effective from October 18, 2007, totaling 12 years

Meeting Attendance : 12 of 12 times

Number of Company's Share on January 1, 2018 : None

Number of Company's Share on December 31, 2018 : None

Shares held by other persons : None

Direct and Indirect Interest in Company and Subsidiaries : None

Relationship with Directors and Management : None

The Punishment from the offense under The Securities Exchange Act B.E 2535 or the Derivatives Act B.E 2546 in the 5 Preceding Years : None

Working Experiences related to company's business in the 5 Preceding Years (on December 31, 2018)

- 2007 to May 16, 2018, Vice Chairman of Thai Agro Energy Pcl.
- May 17, 2018 to present, Chairman of Board of Directors of Thai Agro Energy Pcl

Number of Business as Directors / Executives

LISTED COMPANIES	NON-LISTED COMPANIES	POSITIONS IN COMPETITIVE BUSINESS / RELATED BUSINESS OF THE COMPANY
2	1	-None-

Details of director / executive positions in other businesses

NO.	TYPE OF COMPANY	TYPE OF DIRECTOR	POSITION	COMPANY
1	Listed companies	Authorized Director	Director	Lanna Resources PCL
2	Limited Company	Director	Director	United Bulk Shipping Pte.Ltd

2. Full name : Mr. Kraisi Sirirungsi
Position : Vice Chairman , Authorized Director and Chairman of Nomination and Remuneration Committee
Nationality : Thai
Age : 68 years



Education :

- Bachelor of Engineering (Mining Engineering)
- Diploma of National Defence, Thailand National Defence College (NDC), No. 4212
- Curriculum of Director Accreditation Program of Institute of Director (IOD)
- Director Accreditation Program (DAP) 39/2005

Duration of Director : Member of the Board of Directors, Thai Agro Energy Public Company Limited effective from October 18, 2007, totaling 12 years

Meeting Attendance : 12 of 12 times

Number of Company's Share on January 1, 2018: 41,200,000 shares

Number of Company's Share on December 31, 2018: 41,200,000 shares and Spouse 4,100,000 shares

Total amount 45,300,000 shares or 4.53 percent of the paid-up capital

Shares held by other persons: None

Direct and Indirect Interest in Company and Subsidiaries: None

Relationship with Directors and Management: None

The Punishment from the offense under The Securities Exchange Act B.E 2535 or the Derivatives Act B.E 2546 in the 5 Preceding Years : None

Working Experiences related to company's business in the 5 Preceding Years (on December 31, 2018)

- 2007 - Present, Vice Chairman of Thai Agro Energy Pcl.
- 2016 – Present, Chairman of the Nomination and Remuneration Committee, Thai Agro Energy Pcl.

Number of Business as Directors / Executives

LISTED COMPANIES	NON-LISTED COMPANIES	POSITIONS IN COMPETITIVE BUSINESS / RELATED BUSINESS OF THE COMPANY
2	5	-None-

Details of director / executive positions in other businesses

NO.	TYPE OF COMPANY	TYPE OF DIRECTOR	POSITION	COMPANY
1	Listed companies	Authorized Director	Director, Management Advisor	Lanna Resources PCL.
2	Limited Company	Independent director	Director	PT. Singlurus Pratama
3	Limited Company	Independent director	Chairman	PT. Lanna Mining Services
4	Limited Company	Director	Director	PT. Lanna Harita Indonesia
5	Limited Company	Director	Director	United Bulk Shipping Pte.Ltd
6	Limited Company	Director	Chairman	Lanna Power Generation Ltd.

3. Full name : Mr. Anun Louharanoo
Position : Director, Nomination and Remuneration Committee, Risk Management Committee, Chairman of the Corporate Governance Committee, Authorized Director and Acting Chief Executive Officer (effective from January 1, 2019)



Nationality : Thai
Age : 65 years

Education :

- Bachelor of Accounting, Thammasat University
- Bachelor of Law, Thammasat University
- Curriculum of Director Accreditation Program of Institute of Director (IOD)
 - Director Accreditation Program (DAP) 1/2003, Institute of Director
 - Director Certification Program (DCP) 29/2003
 - Audit Committee Program (ACP) 2/2004
 - DCP Refresh Course (RE.DCP) 2/2006
 - Improving the Quality of Financial Reporting (QFR) 2/2006
 - Monitoring the Internal Audit Function (MIA) 1/2007
 - Monitoring the System of Internal Control and Risk Management (MIR) 1/2007
 - Role of compensation Committee Program (RCC) 7/2008
 - Corporate Governance Workshop Board Performance Evaluation Year 2007
 - R-ACF Audit Committee Forum (R-ACF 1/2016)
- Certificates: The Stock Exchange of Thailand
 - CG Forum 4/2014: Performance Assessment of the Board of Directors and Remuneration of Directors Forum
 - CG Forum 1/2015: CG in Substance Corporate Culture and Corporate Governance
 - CG Forum 3/2015: Risk Oversight: High Priority Roles of the Board
 - CFO in the New Financial World by the Securities and Exchange Commission Year 2015
 - Responsibilities of Directors and the Management in Internal Control Year 2015
 - M&A and Directors' Duties Year 2015 Director Accreditation Program, Stock Exchange of Thailand

Duration of Director : Member of the Board of Directors, Thai Agro Energy Public Company Limited effective from October 18, 2007, totaling 12 years

Meeting Attendance : 12 of 12 times

Number of Company's Share on January 1, 2018 : 4,771,895

Number of Company's Share on December 31, 2018 : 4,771,895 shares and Spouse 2,622 shares Total amount 4,775,517 shares or 0.48 percent of the paid-up capital

Shares held by other persons : None

Direct and Indirect Interest in Company and Subsidiaries : None

Relationship with Directors and Management : None

The Punishment from the offense under The Securities Exchange Act B.E 2535 or the Derivatives Act B.E 2546 in the 5 Preceding Years : None

Working Experiences related to company's business in the 5 Preceding Years (on December 31, 2018)

- 2007 to present, Director of Thai Agro Energy Pcl.

Number of Business as Directors / Executives

LISTED COMPANIES	NON-LISTED COMPANIES	POSITIONS IN COMPETITIVE BUSINESS / RELATED BUSINESS OF THE COMPANY
4	4	-None-

Details of director / executive positions in other businesses

NO.	TYPE OF COMPANY	TYPE OF DIRECTOR	POSITION	COMPANY
1	Listed companies	Director	Authorized Director, Risk Management Committee Chairman, Financial Advisor Nomination and Remuneration Committee	Lanna Resources PCL
2	Listed companies	Independent director	Chairman of Audit Committee	TCM Corporation PCL
3	Listed companies	Independent director	Audit Committee, Nomination and Remuneration Committee	Diamond Roofing Tiles PCL
4	Limited Company	Director	Director	PT. Singlurus Pratama
5	Limited Company	Director	Director	PT. Lanna Mining Services
6	Limited Company	Director	Director	PT. Lanna Harita Indonesia
7	Limited Company	Director	Director	Lanna power generation

4. Full name : Mr. Srihasak Arirachakaran
Position : Director, Authorized Director and Nomination and Remuneration Committee
Nationality : Thai
Age : 59 years



Education :

- Ph.D., Petroleum Engineering, University of Tulsa, Oklahoma, U.S.A
- M.Sc., Petroleum Engineering, University of Tulsa, Oklahoma, U.S.A
- B.Sc., Petroleum Engineering (with honor) University of Tulsa, Oklahoma, U.S.A
- Curriculum of Director Accreditation Program of Institute of Director (IOD)
 - Director Accreditation Program (DAP) Class 107/2014
 - Director Certification Program (DCP) Class 198/2014
 - How to Develop a Risk Management Plan (HRP) Class 6/2014
 - Anti-Corruption Seminar Class 1/2015
 - The Power of Culture from Performance Culture to Winning Culture (2016)
 - Boards that make a Difference (BMD) (2017)
- Other training courses
 - Operating Transparency Business in Asia Collective Action Coalition, CAC (Year 2016)
 - Visit Hongsa Coal Power Plant Project Industrial Energy Institute / Laos (Year 2016)

Duration of Director : Member of the Board of Directors, Thai Agro Energy Public Company Limited effective from October 18, 2007, totaling 12 years

Meeting Attendance : 10 of 12 times

Number of Company's Share on January 1, 2018 : 45,940 shares or 0.0046 percent of the paid-up capital.

Number of Company's Share on December 31, 2018 : 45,940 shares or 0.0046 percent of the paid-up capital.

Shares held by other persons : None

Direct and Indirect Interest in Company and Subsidiaries : None

Relationship with Directors and Management : None

The Punishment from the offense under The Securities Exchange Act B.E 2535 or the Derivatives Act B.E 2546 in the 5 Preceding Years : None

Working Experiences related to company's business in the 5 Preceding Years (on December 31, 2018)

- 2007 to present, Director of Thai Agro Energy Pcl.
- 2016 to present, Nomination and Remuneration Committee, Thai Agro Energy Pcl.

Number of Business as Directors / Executives

LISTED COMPANIES	NON-LISTED COMPANIES	POSITIONS IN COMPETITIVE BUSINESS / RELATED BUSINESS OF THE COMPANY
2	5	-None-

Details of director / executive positions in other businesses

NO.	TYPE OF COMPANY	TYPE OF DIRECTOR	POSITION	COMPANY
1	Listed companies	Director	Director,CEO	Lanna Resources PCL
2	Limited Company	Director	Chairman	PT. Singlurus Pratama
3	Limited Company	Director	Chairman	PT. Lanna Mining Services
4	Limited Company	Director	Chairman	PT. Lanna Harita Indonesia
5	Limited Company	Director	Director and Acting Managing Director	Lanna Power Generation Co.,Ltd.
6	Limited Company	Director	Director	United Bulk Shipping Pte,Ltd.

5. Full name : Mr. Somchit Limwathanakura
Position : Director and Authorized Director
Nationality : Thai
Age : 80 years



Education :

- Bachelor of Engineering, Mechanism, Technique University, Germany
- Curriculum of Director Accreditation Program of Institute of Director (IOD)
 - Director Accreditation Program (DAP) 107/2014

Duration of Director : Member of the Board of Directors, Thai Agro Energy Public Company Limited effective from October 18, 2007, totaling 12 years

Meeting Attendance : 10 of 12 times

Number of Company's Share on January 1, 2018 : 28,322,657 shares

Number of Company's Share on December 31, 2018 : 28,322,657 shares or 2.83 percent of the paid-up capital

Shares held by other persons : None

Direct and Indirect Interest in Company and Subsidiaries : None

Relationship with Directors and Management : None

The Punishment from the offense under The Securities Exchange Act B.E 2535 or the Derivatives Act B.E 2546 in the 5 Preceding Years : None

Working Experiences related to company's business in the 5 Preceding Years (on December 31, 2018)

- 2007 to present, Director of Thai Agro Energy Pcl.

Number of Business as Directors / Executives

LISTED COMPANIES	NON-LISTED COMPANIES	POSITIONS IN COMPETITIVE BUSINESS / RELATED BUSINESS OF THE COMPANY
1	1	-None-

Details of director / executive positions in other businesses

NO.	TYPE OF COMPANY	TYPE OF DIRECTOR	POSITION	COMPANY
1	Limited Company	Director	International Affair Advisor	UT International Co., Ltd.

6. Full name : Mr. Somchai Lovisuth
Position : Director, Authorized Director, Nomination and Remuneration Committee, Risk Management Committee and Chief Executive Officer (until December 31, 2018)



Nationality : Thai

Age : 70 years

Education :

- Master in Production Management & Manufacturing Technology, University of Strathclyde, U.K.
- Bachelor of Engineering (Mechanics) Chulalongkorn University
- Curriculum of Director Accreditation Program of Institute of Director (IOD)
 - Director Accreditation Program (DAP) 80/2009
 - Director Certification Program (DCP) 198/2014

Duration of Director : Member of the Board of Directors, Thai Agro Energy Public Company Limited effective from October 18, 2007, totaling 12 years

Meeting Attendance : 12 of 12 times

Number of Company's Share on January 1, 2018 : 1,836,400 shares

Number of Company's Share on December 31, 2018 : 1,836,400 shares or 0.18 percent of the paid-up capital.

Shares held by other persons : None

Direct and Indirect Interest in Company and Subsidiaries : None

Relationship with Directors and Management : None

The Punishment from the offense under The Securities Exchange Act B.E 2535 or the Derivatives Act B.E 2546 in the 5 Preceding Years: None

Working Experiences related to company's business in the 5 Preceding Years (on December 31, 2018)

- 2007 to present, Director of Thai Agro Energy Pcl.
- 2016 to Present, Nomination and Remuneration Committee, Thai Agro Energy Pcl.
- 2016 to Present, Risk Management Committee, Thai Agro Energy Pcl.
- 2016 to 2018, Chairman of the Corporate Governance Committee
- 2007 to 2018, Chief Executive Officer of Thai Agro Energy Pcl.

Number of Business as Directors / Executives

LISTED COMPANIES	NON-LISTED COMPANIES	POSITIONS IN COMPETITIVE BUSINESS / RELATED BUSINESS OF THE COMPANY
1	-None-	-None-

Details of director / executive positions in other businesses

NO.	TYPE OF COMPANY	TYPE OF DIRECTOR	POSITION	COMPANY
-None-				

7. Full name : Mr. Padetpai Meekun-iam
Position : Independent Director and Chairman of Audit Committee
Nationality : Thai
Age : 74 years



Education :

- Master in Engineering, Mechanism, Georgia Institute of Technology U.S.A
- Master in Engineering, Mechanism (Second Class Honors), Chulalongkorn University
- Curriculum of Director Accreditation Program of Institute of Director (IOD)
 - Curriculum of Monitoring the Quality of Financial Reporting (MFR) 17/2013
 - Curriculum of Monitoring the System of Internal Control and Risk Management (MIR) 14/2013
 - Curriculum of Monitoring Fraud Risk Management (MFM) 10/2013
 - Curriculum of Monitoring the Internal Audit Function (MIA) 15/2013
 - Director Certification Program (DCP) 22/2002
 - Audit Committee Program (ACP) 42/2013

Duration of Director : Member of the Board of Directors, Thai Agro Energy Public Company Limited effective from October 18, 2007, totaling 12 years

Meeting Attendance : 10 of 12 times

Number of Company's Share on January 1, 2018 : None

Number of Company's Share on December 31, 2018 : None

Shares held by other persons : None

Direct and Indirect Interest in Company and Subsidiaries : None

Relationship with Directors and Management : None

The Punishment from the offense under The Securities Exchange Act B.E 2535 or the Derivatives Act B.E 2546 in the 5 Preceding Years: None

Working Experiences related to company's business in the 5 Preceding Years (on December 31, 2018)

- 2007 to present, Chairman of Audit Committee ,Thai Agro Energy Pcl.

Number of Business as Directors / Executives

LISTED COMPANIES	NON-LISTED COMPANIES	POSITIONS IN COMPETITIVE BUSINESS / RELATED BUSINESS OF THE COMPANY
2	-None-	-None-

Details of director / executive positions in other businesses

NO.	TYPE OF COMPANY	TYPE OF DIRECTOR	POSITION	COMPANY
1	Listed companies	Independent director	Chairman of Audit Committee	MBK Resort PCL

8. Full name : Mr. Virach Aphimeteetamrong
Position : Independent Director and Audit Committee
Nationality : Thai
Age : 74 years



Education :

- Ph.D. in Finance, University of Illinois, U.S.A.
- M.A.S. University of Illinois, U.S.A.
- M.B.A. University of Gothenburg, Sweden
- Bachelor of Accountancy (Second Class Honors), Chulalongkorn University
- Curriculum of Director Accreditation Program of Institute of Director (IOD)
 - Director Accreditation Program (DAP) 2/2003
 - M-DLB : Director Luncheon Briefing 1/2009
 - M-AGM : Annual General Meeting 1/2009
 - R-SS : Special Seminar 1/2010
 - Anti-Corruption for Executive Program (ACEP) 4/2012
 - R-CF : Chairman Forum “Chairman Role in Building Independence across the Board” 1/2014 and 1/2015
 - CGI : Corporate Governance for Capital Market Intermediaries 5/2015

Duration of Director : Member of the Board of Directors, Thai Agro Energy Public Company Limited effective from August 1, 2013, totaling 6 years

Meeting Attendance : 9 of 12 times

Number of Company’s Share on January 1, 2018 : None

Number of Company’s Share on December 31, 2018 : None

Shares held by other persons : None

Direct and Indirect Interest in Company and Subsidiaries : None

Relationship with Directors and Management: None

The Punishment from the offense under The Securities Exchange Act B.E 2535 or the Derivatives Act B.E 2546 in the 5 Preceding Years: None

Working Experiences related to company's business in the 5 Preceding Years (on December 31, 2018)

- 2013 to present, Audit Committee ,Thai Agro Energy Pcl.

Number of Business as Directors / Executives

LISTED COMPANIES	NON-LISTED COMPANIES	POSITIONS IN COMPETITIVE BUSINESS / RELATED BUSINESS OF THE COMPANY
6	5	-None-

Details of director / executive positions in other businesses

NO.	TYPE OF COMPANY	TYPE OF DIRECTOR	POSITION	COMPANY
1	Listed companies	Independent director	Chairman	Intouch Holdings PCL
2	Listed companies	Independent director	Director	Asia Plus Group Holdings PCL
3	Listed companies	Independent director	Director	Bangkok Chain Hospital PCL
4	Listed companies	Independent director	Director	Suphalai PCL
5	Listed companies	Independent director	Director	Metro System Corporation PCL
6	Limited Company	Director	Director	TRIS Corporation Co., Ltd.
7	Limited Company	Director	Chairman	Audit Office DR. Virach and Associates Co., Ltd.
8	University Council	Director	Director	Thai-Nichi Institute of Technology
9	University Council	Director	Director	Council of University of the Thai Chamber of Commerce
10	University Council	Director	Director	Council of Chulalongkorn University

9. Full name : Mr. Satit Chanchaowakun
Position : Independent Director, Audit Committee, Nomination and Remuneration Committee and Chairman of the Risk Management Committee
Nationality : Thai
Age : 70 years



Education :

- Master in Business Management, Thammasat University
- Master in Textile Technology, University of Leeds, U.K.
- Course of Private and Political Sectors (Class 14), National Defence College of Thailand.
- Certificate Top Executive Program (Class 5), Capital Market Academy(CMA)
- Curriculum of Director Accreditation Program of Institute of Director (IOD)
 - Director Accreditation Program (DAP) 39/2005
 - Director Certification Program (DCP) 83/2007
 - Corporate Governance for Capital Market Intermediaries (CGI) 7/2015

Duration of Director : Member of the Board of Directors, Thai Agro Energy Public Company Limited effective from August 1, 2013, totaling 6 years

Meeting Attendance : 10 of 12 times

Number of Company's Share on January 1, 2018 : None

Number of Company's Share on December 31, 2018 : None

Shares held by other persons : None

Direct and Indirect Interest in Company and Subsidiaries : None

Relationship with Directors and Management : None

The Punishment from the offense under The Securities Exchange Act B.E 2535 or the Derivatives

Act B.E 2546 in the 5 Preceding Years : None

Working Experiences related to company's business in the 5 Preceding Years (on December 31, 2018)

- 2013 to present, Audit Committee ,Thai Agro Energy Pcl.
- 2016 to Present, Nomination and Remuneration Committee, Thai Agro Energy Pcl.
- 2016 to Present, Chairman of the Risk Management Committee, Thai Agro Energy Pcl.

Number of Business as Directors / Executives

LISTED COMPANIES	NON-LISTED COMPANIES	POSITIONS IN COMPETITIVE BUSINESS / RELATED BUSINESS OF THE COMPANY
5	3	-None-

Details of director / executive positions in other businesses

NO.	TYPE OF COMPANY	TYPE OF DIRECTOR	POSITION	COMPANY
1	Listed companies	Independent director	Chairman	SNC Former PCL
2	Listed companies	Director	Director	Cworn Seal PCL
3	Listed companies	Director	Director	Lalin Property PCL
4	Listed companies	Director	Director	Asia Plus Group Holdings Securities PCL
5	Limited Company	Director	Director	SPC Home Idea Co., Ltd.
6	Limited Company	Director	Director	Witcorp Products Co., Ltd.
7	Limited Company	Director	Director	Asia Plus Securities Co., Ltd.

Executives and Company Secretary

1. Full name : Mrs. Somrudee Suwannaroop
Position : Chief Financial Officer and Company Secretary
Nationality : Thai
Age : 50 years



Education :

- Bachelor in Accounting, Dhurakij Bandit University
- Curriculum of Effective Minutes Recording, Thai Chamber of Commerce, 2009
- Curriculum of Mergers and Acquisitions Financial, Legal, and Tax Strategies and Planning 2014, OMEGA WORLD CLASS
- Curriculum of Director Accreditation Program of Institute of Director (IOD)
 - Company Secretary Program (CSP) 54/2013
 - Anti-Corruption: The Practical Guide (ACPG) 20/2015
- Strategic CFO in Capital markets Program 1/2015

Duration of Position : Company Secretary, Thai Agro Energy Public Company Limited effective from 2014, totaling 5 years

Number of Company's Share on January 1, 2018 : 100,000 shares

Number of Company's Share on December 31, 2018 : 100,000 shares, or 0.01 percent of the paid-up capital.

Shares held by other persons : None

Direct and Indirect Interest in Company and Subsidiaries : None

Relationship with Directors and Management : None

The Punishment from the offense under The Securities Exchange Act B.E 2535 or the Derivatives Act B.E 2546 in the 5 Preceding Years: None

Working Experiences related to company's business in the 5 Preceding Years (on December 31, 2018)

- Present, Chief Financial Officer, Thai Agro Energy Pcl.
- 2014 to 2018, Administrative Officer Director, Thai Agro Energy Pcl.
- 2014 to present, Company Secretary, Thai Agro Energy Pcl.
- 2016 to present, Secretary of the Nomination and Remuneration Committee, Thai Agro Energy Pcl.
- 2016 to present, Risk Management Committee, Thai Agro Energy Pcl.
- 2016 to present, Corporate Governance Committee, Thai Agro Energy Pcl.

Number of Business as Directors / Executives

LISTED COMPANIES	NON-LISTED COMPANIES	POSITIONS IN COMPETITIVE BUSINESS / RELATED BUSINESS OF THE COMPANY
1	1	-None-

Details of director / executive positions in other businesses

NO.	TYPE OF COMPANY	TYPE OF DIRECTOR	POSITION	COMPANY
1	Limited Company	Director	Director	NICHA WELL CO.,LTD.

2. Full name : Somtawin Boonbanyen
Position : Chief Operation Officer
Nationality : Thai
Age : 60 years



Education :

- Master of Science in Product Development, Kasetsart University
- Bachelor of Science, Silpakorn University

Duration of Position : Since June 2017 to present, Total 1 year and 6 months

Number of Company's Share on January 1, 2018 : None

Number of Company's Share on December 31, 2018 : None

Shares held by other persons : None

Direct and Indirect Interest in Company and Subsidiaries : None

Relationship with Directors and Management : None

The Punishment from the offense under The Securities Exchange Act B.E 2535 or the Derivatives Act B.E 2546 in the 5 Preceding Years: None

Working Experiences related to company's business in the 5 Preceding Years (on December 31, 2018)

- Present, Chief Operation Officer, Thai Agro Energy Pcl.
- 2017 to 2018, Assistant Chief Executive Officer, Thai Agro Energy Pcl.

Number of Business as Directors / Executives

LISTED COMPANIES	NON-LISTED COMPANIES	POSITIONS IN COMPETITIVE BUSINESS / RELATED BUSINESS OF THE COMPANY
1	-None-	-None-

3. Full name : Miss Kanyaphat Chinantdej
Position : Chief Commercial Officer
Nationality : Thai
Age : 52 years



Education :

- Master in Business Administration, University of Technology, Sydney, Australia
- Master in International Marketing, University of Technology, Sydney, Australia

Duration of Position : Since 2009 to present ,Total 10 years

Number of Company's Share on January 1, 2018 : None

Number of Company's Share on December 31, 2018 : None

Shares held by other persons : None

Direct and Indirect Interest in Company and Subsidiaries : None

Relationship with Directors and Management : None

The Punishment from the offense under The Securities Exchange Act B.E 2535 or the Derivatives Act B.E 2546 in the 5 Preceding Years: None

Working Experiences related to company's business in the 5 Preceding Years (on December 31, 2018)

- Present, Chief Commercial Officer, Thai Agro Energy Pcl.
- 2009 to 2018, Marketing and Sourcing Director, Thai Agro Energy Pcl.
- 2016 to present, Risk Management Committee, Thai Agro Energy Pcl.
- 2016 to present, Corporate Governance Committee, Thai Agro Energy Pcl.

Number of Business as Directors / Executives

LISTED COMPANIES	NON-LISTED COMPANIES	POSITIONS IN COMPETITIVE BUSINESS / RELATED BUSINESS OF THE COMPANY
1	-None-	-None-

4. Full name : Mr. Anan Rayarujj
Position : Assistance Chief Operation Officer
Nationality : Thai
Age : 45 years



Education :

- Master in Business Administration, Ramkhamhaeng University

Duration of Position : Since 2011 to present, Total 8 years

Number of Company's Share on January 1, 2018 : None

Number of Company's Share on December 31, 2018 : None

Shares held by other persons : None

Direct and Indirect Interest in Company and Subsidiaries: None

Relationship with Directors and Management: None

The Punishment from the offense under The Securities Exchange Act B.E 2535 or the Derivatives

Act B.E 2546 in the 5 Preceding Years: None

Working Experiences related to company's business in the 5 Preceding Years (on December 31, 2018)

- Present, Assistant Chief Operation Officer, Thai Agro Energy Pcl.
- 2011 to 2018, Assistant Plant Director, Thai Agro Energy Pcl.

Number of Business as Directors / Executives

LISTED COMPANIES	NON-LISTED COMPANIES	POSITIONS IN COMPETITIVE BUSINESS / RELATED BUSINESS OF THE COMPANY
1	-None-	-None-

5. Full name : Mr. Korn Tangviroon
Position : Assistant Chief Operation Officer
Nationality : Thai
Age : 59 years



Education :

- Master in Business Administration, Bangkok University

Duration of Position : Since November 15,2016, Total 2 years

Number of Company's Share on January 1, 2018 : None

Number of Company's Share on December 31, 2018 : None

Shares held by other persons : None

Direct and Indirect Interest in Company and Subsidiaries : None

Relationship with Directors and Management : None

The Punishment from the offense under The Securities Exchange Act B.E 2535 or the Derivatives Act B.E 2546 in the 5 Preceding Years: None

Working Experiences related to company's business in the 5 Preceding Years (on December 31, 2018)

- Present, Assistant Chief Operation Officer, Thai Agro Energy Pcl.
- 2016 to 2018, Assistant Plant Director, Thai Agro Energy Pcl.

Number of Business as Directors / Executives

LISTED COMPANIES	NON-LISTED COMPANIES	POSITIONS IN COMPETITIVE BUSINESS / RELATED BUSINESS OF THE COMPANY
1	-None-	-None-

6. Full name : Miss Theeranan Khunakasem
Position : Accounting and Finance Department Manager
Nationality : Thai
Age : 41 years



Education :

- Master in Business Administration (Accounting), Ramkhamhaeng University
- Bachelor in Business Administration (Accounting), Thanyaburi Rajamankala Technology University

Duration of Position : Since 2015 to present, Total 4 years

Number of Company's Share on January 1, 2018 : None

Number of Company's Share on December 31, 2018 : None

Shares held by other persons : None

Direct and Indirect Interest in Company and Subsidiaries : None

Relationship with Directors and Management : None

The Punishment from the offense under The Securities Exchange Act B.E 2535 or the Derivatives Act B.E 2546 in the 5 Preceding Years: None

Working Experiences related to company's business in the 5 Preceding Years (on December 31, 2018)

- 2015 to present, Accounting and Finance Manager, Thai Agro Energy Pcl.

Number of Business as Directors / Executives

LISTED COMPANIES	NON-LISTED COMPANIES	POSITIONS IN COMPETITIVE BUSINESS / RELATED BUSINESS OF THE COMPANY
1	-None-	-None-

7. Full name : Mr. Suphachai Kaewfuang
Position : Internal Audit Department Manager
Nationality : Thai
Age : 45 years



Education :

- Bachelor in B.B.A. (Accounting), Thanyaburi Rajamongkala Technology University

Duration of Position : Since 2007 to present, Total 12 years

Number of Company's Share on January 1, 2018: None

Number of Company's Share on December 31, 2018: None

Shares held by other persons: None

Direct and Indirect Interest in Company and Subsidiaries: None

Relationship with Directors and Management: None

The Punishment from the offense under The Securities Exchange Act B.E 2535 or the Derivatives Act B.E 2546 in the 5 Preceding Years: None

Working Experiences related to company's business in the 5 Preceding Years (on December 31, 2018)

- 2007 to present, Internal Audit Department Manager, Thai Agro Energy Pcl.

Number of Business as Directors / Executives

LISTED COMPANIES	NON-LISTED COMPANIES	POSITIONS IN COMPETITIVE BUSINESS / RELATED BUSINESS OF THE COMPANY
1	-None-	-None-

Details of The Holding position in Related Companies of the executives and controlling persons of Company (As of December 31, 2018)

No.	Name	TAE	Related Companies																								total
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1	Mr. Suroj Subhasavasdikul ⁽¹⁾	C	/				/																				3
2	Mr. Kraisi Sirirungsi	VC	/	/	/	/	/																		/		7
3	Mr. Anun Louharanoo ⁽²⁾	/	/,M	/	M	M				/,A									/,A					/			8
4	Mr. Somchit Limwathanagura	/						/																			2
5	Mr. Srihasak Arirachakaran	/	/,///	/,M	/,M	/,M	/																	/,M			5
6	Mr. Somchai Lovisuth ⁽³⁾	/,///																									1
7	Mr. Padetpai Meekun-iam	/,A																	/,A								2
8	Mr. Virach Aphimeteetamrong ⁽⁴⁾	/,A					/,A	C	/	/,A		/,A	/,A	/,A	C												8
9	Mr. Satit Chanjavanakul	/,A					/,A					/	/	C							/	/	/	/	/	/	8
10	Mrs. Somrudee Suwannaroop	M																									2
11	Miss Kanyaphat Chinantdej	M																									1
12	Mr. Somtawin Boonbanyen	M																									1
13	Mr. Anan Rayaruji	M																									1
14	Mr. Korn Tangviroon	M																									1
15	Miss Theeranan Khunakasem	M																									1
16	Mr. Supachai Keawfuang	M																									1

Remark (1) Mr. Suroj Subhasavasdikul, Vice Chairman, has been appointed as Chairman to replace Mr. Visith Noiphan who resigned from the position on May 17, 2018.

(2) Mr. Anun Louharanoo has been appointed as Acting Chief Executive Officer to replace Mr. Somchai Lovisuth who resigned from the position due to the end of contract on January 1, 2019

(3) Mr. Somchai Lovisuth has resigned from Chief Executive Officer due to the end of contract on December 31, 2018.

(4) Besides 8 directors in listed companies and limited company, Mr. Virach Aphimeteetamrong has also hold the position of director in university council of Chulalongkorn University, University of the Thai Chamber of Commerce and Thai-Nichi Institute of Technology.

Remarks C = Chairman VC = Vice Chairman A = Audit Committee
/ = Director // = Chief Executive Officer M = Management

RELATED COMPANIES:

1. LANNA RESOURCES PCL
2. PT. LANNA MINING SERVICES
3. PT. LANNA HARITA INDONESIA
4. PT. SINGLURUS PRATAMA
5. UNITED BULK SHIPPING PTE. LTD
6. ASIA PLUS GROUP HOLDINGS SECURITIES PCL
7. INTOUCH HOLDINGS PCL
8. TRIS CORPORATION CO., LTD.
9. UT INTERNATIONAL CO., LTD.
10. BANGKOK CHAIN HOSPITAL PCL
11. DIAMOND ROOFING TILES PCL
12. CWORN SEAL PCL
13. METRO SYSTEM CORPORATION PCL
14. LALIN PROPERTY PCL
15. SUPHALAI PCL
16. SNC FORMER PCL
17. AUDIT OFFICE DR. WIRAT AND ASSOCIATES CO., LTD.
18. TCM CORPORATION PCL
19. MBK RESORT PCL
20. SPC HOME IDEA CO., LTD.
21. NICHA WELL CO.,LTD.
22. WITCORP PRODUCTS CO., LTD.
23. LANNA POWER GENERATION CO., LTD.
24. ASIA PLUS SECURITIES CO., LTD.

Information of officer and head of internal audit and corporate governance

Name	Age (year)	Shareholding in the Company's (%)	Family Relationships with the executives.	Education / Training	Experiences during the past 5 years		
					Period	Position	
1. Suphachai Kaewfuang - Audit Department Manager - Secretary of Audit Committee - Secretary of Risk Management	45	None	None	<p>Education</p> 1993-1994 : University Institute of Technology Tanyaburi Bachelor's degree in B.B.A. (Accounting) 1991-1992 : Rajamangala Institute of Technology Phanakorn , Advanced Certificate (Accounting) <p>Training</p> <ul style="list-style-type: none"> - Professional Internal Audit Service (2018) - Fraud Risk Management (FRM) : Federation of Accounting Professions (2016) - Corporate Fraud Prevention: Federation of Accounting Professions (2016) - Certified Professional Internal Audit of Thailand (CPIAT) No.41 : The institution of Internal Auditors of Thailand - Anti-Corruption The Practical Guide (ACPG 18) : (IOD) (2015) - Enterprise Risk Management : OMEGAWORLDCLASS Research Institute (2014) - COBIT 5 For Management : Audit and Control Association Information Systems (2013) - Internal Audit Program: Prepared Course for Certified Internal Auditor: Pre - CIA)2013 - Audit Fraud Association of Internal Auditors of Thailand (2010) - Risk management based on COSO ERM: Association of Internal Auditors of Thailand (2009) <p>The Board Of Directors Of Listed Companies -None-</p> <p>Special Events (Current) -None -</p>	September 20, 2007-Present	Audit Department Manager	Thai Agro Energy PCL

Report of Audit Committee

Board of Directors defined that Audit Committee is independent from the Board. During 2018, Audit Committee held a total of 9 meetings to consider many significant issues independently. The committee also has meetings with accounting auditors, internal auditors and managers are invited to attend the meetings to give further information and clarification adequately. Summary of the meetings is as follows:

Name-Surname	Position	No. of attendance / No. of meeting in 2018
1. Mr. Padetpai Meekun-iam	Audit Committee Chairman	9/9
2. Mr. Virach Aphimeteetamrong*	Director	9/9
3. Mr. Satit Chanchaowakun	Director	9/9

The Audit Committee reported its performance to the Board of Directors as a result of operation of the Audit Committee are as follows.

(1) Reviewing the Company's quarterly and annually financial statements for year 2018. It was agreed that they were accurate and reliable. They were duly prepared in conformity with the generally accepted accounting standards with sufficient and appropriate disclosure of information.

(2) Consider the internal audit plan and scope for the year 2018, covering significant risks as well as anti-corruption practices. And the adequacy of the Company's internal control system. It has recommended the management to improve the system and the shortcomings to be more concise and more appropriate.

(3) To review and give importance to the administration of good corporate governance in accordance with the laws relating to the business operation of the Company. It emphasizes the accuracy and completeness of information disclosed to all stakeholders fairly and equally, can be referenced and verified in a transparent manner.

(4) Review of Acquisition and Disposition of Assets Including connected transactions or transactions that may cause conflict of interest occurred in the year 2018, the transaction is considered as a normal price and conditions of business.

(5) To review the risk management system and anti-corruption corrupt practices in the year 2018. It recommended the management to improve the system and defects to be more concise and more appropriate.

(6) To review progress on various lawsuits in the year 2018. It is recommended that the management closely monitor the progress of the case with the concise and appropriate.

(7) Review the administrative process of the administration regarding clues. In the year 2017, no complaint was made through the notification channel.

(8) To evaluate the self-performance of the Audit Committee, both individual and group, in the year 2018, to identify the strengths. Weaknesses and issues that need to be addressed. The Audit Committee has jointly considered the results of the evaluation and set up a way to improve the efficiency of the work in the next year.

(9) To consider the selection of the auditor and fix the remuneration of the auditor from the office of EY Company Limited to be the auditor of the company for the year 2019. To propose to the Board of Directors. To nominate Annual General Meeting of Shareholders for the year 2019 appointed Ms. Kamolthip Lertwitworathep, certified public accountant no. 4377, and/or Ms.

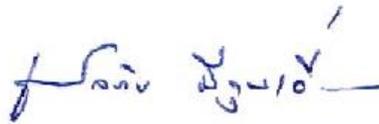
Satida Rattananuruk, certified public accountant no. 4753, and/or Ms. Siriwan Nitamrong, Certified Public Account Registration No. 5906 of EY Office Limited, to be the financial auditor for year 2019 with the yearly audit fee of Baht 1,050,000 and the audit financial statements to present the Board of Investment (BOI) at Baht 100,000 per promotion certificate.

(10) Considering the internal audit plan and scope for the year 2018 as well as the human resource and staff quality development of the internal audit unit to be adequate. To be consistent and able to handle the workload of duties and responsibilities efficiently, effectively.

In 2018 Audit Committee was independently performed various tasks as assigned. The Board of Directors and management emphasizes the administration that is based on the principles of corporate governance, business ethics. With a focus on risk factors that may affect the company, all functions must be carried out in compliance with legal requirements. Preparation of financial reports must be accurate and reliable, according to generally accepted accounting standards, with disclosure of information and operational transparency, and a suitable system of internal controls. The reviews found no significant defect at all.

On February 18, 2019

On behalf of the Audit Committee



(Mr. Phadetpai Meekun-iam)
Chairman of Audit Committee

Report of the Nomination and Remuneration Committee

The Nomination and Remuneration Committee (NRC) has been appointed by the Board of Directors, having authorities, duties and responsibilities including nomination of executives and determination of remunerations for directors, executives, and employees of the Company, as well as other duties as assigned by the Board of Directors on a case by case basis. The NRC held 4 meetings in year 2018, which can be summarized as follows.

(1) The NRC has established rule for salary adjustments of employees for year 2019 including the Chief Executive Officer and high-level executives and for the bonus payments for employees for year 2018 including for the Chief Executive Officer and high-level executives based on performance results in year 2018 which is correct and appropriate in accordance with the rules and conditions as approved by the Board of Directors with comparison of information with other companies in the same industrial sectors as surveyed by the independent organizations and for further proposal to the Board of Directors for its consideration and approval.

(2) The NRC has acknowledged the opening of opportunity for the shareholders to propose meeting agenda and nomination of new directors in accordance with good corporate governance principles by submitting written proposals by mail or facsimile (FAX) to the Company Secretary from October 1, 2018 to December 31, 2018. It appeared that no shareholders proposed any meeting agenda or new director nomination for the Annual General Meeting of Shareholders Year 2019.

(3) The NRC has considered the organization structure, manpower and wage budget of the Company for year 2019, which are deemed appropriate and corresponding to the Company's operation, including the allocation of resources of the Company to be efficiently and effectively used and for further proposal to the Board of Directors for its consideration and approval.

(4) The NRC has considered qualification and nomination of Chief Executive Officer in place of the former Chief Executive Officer who retired in 2018, to nominate and select person for the appointment to fill vacancy upon the retirement.

(5) The NRC has considered nomination of directors in place of directors retired by rotation at the Annual General Meeting of Shareholders Year 2019, having established method and procedures for the nomination as follows:

(5.1) The NRC acknowledged the name list of directors retired by rotation and name list of outsiders being proposed for appointment to director positions in place of the directors retired by rotation.

(5.2) The NRC considered and selected persons who are suitable for the director positions from the proposed name list. Qualifications being considered include skills, experience, and expertise from various occupation that are beneficial to the operation of the Company. The persons must also be eligible for the director position of a listed company in compliance with the Company's regulations and related laws. The performance during the past year (if any) of the Director of the Company is also considered.

(5.3) The NRC selected and proposed the name list of suitable persons for the director positions in place of the directors retired by rotation to the Board of Directors for further proposal to the Annual General Meeting of Shareholders Year 2019 for its consideration.

(6) The NRC considered the remunerations of the Board of Directors and sub-committees by considering the scope of duties, responsibilities and performance results of each committee. Comparisons with other companies in the same industrial sector were made, including the size and expansion of business and operating results of the previous year. Accordingly, the NRC has

proposed appropriate remunerations to the Board of Directors for further proposal to the Annual General Meeting of Shareholders Year 2019 for its consideration.

(7) The NRC has reviewed and made self-assessment of its performance during year 2018 as the whole committee and individual in accordance with good corporate governance. According to the results of the self-assessment, the NRC has operated effectively and in accordance with the assigned duties and responsibilities.

Dated: February 13, 2019

On behalf of the Nomination and Remuneration Committee



(Mr. Kraisri Sirirangsri)
Chairman of NRC

REPORT OF THE RISK MANAGEMENT COMMITTEE

The Board of Directors has established the Risk Management Committee or “RMC” comprising directors and executives from all departments, from the department manager or above, with at least one member from each department, who are authorized to consider risk factors that may possibly impact the operations of the Company by establishing prevention measures and focus on effective risk management in every aspect of operations according to the good corporate governance principles in order to minimize the risks and mitigate their impacts. Resources are used effectively for evaluation and manage risk in the overall to be in accordance with the current situation and ever-changing circumstances.

During year 2018, the Risk Management Committee held 4 meetings altogether in order to consider and assess risks, as well as monitor the risk management of all departments that might significantly impact the business operation of the Company in order to establish risk prevention measures and mitigate impacts or opportunities of risk in various aspects to be suitable with the current and future economic conditions and business environment of the Company. The report can be summarized as follows:

(1) The Risk Management Committee has considered the risk management process and plan in accordance with the policies and objectives approved by the Board of Directors in order to ensure that the risk management is effective and efficient in acceptable risk level and appropriately and concisely in line with the operations of the Company according to the good corporate governance.

(2) The Risk Management Committee has considered the risk factors, including monitoring and supervision of the risk management of the Company by convening the Risk Management Committee’s Meeting periodically to encourage efficiency of the risk management process, as well as providing suggestions which are beneficial to the risk management presently and for the future.

(3) The Risk Management Committee has regularly reviewed risks at all levels by assessing and analyzing risk factors to cover and in line with the strategic plan in terms of production, marketing, personnel development, as well as laws and other matters that might affect the business operation of the Company. The risks are categorized into a risk requiring urgent rectification (Red Risk) and the risk requiring close monitoring which might be a risk factor in the future (Yellow Risk).

(4) The Risk Management Committee and the Management has required a review and self assessment on the risks concerning corruption of all departments in order to apply the risk assessment results to amend the regulations and orders regarding day-to-day operations to appropriately and concisely cover such risks.

(5) The Risk Management Committee has prepared a performance summary report for presentation to the Board of Directors and the Audit Committee for acknowledgment periodically to take comments and/or suggestions to improve risk management to be more effective.

(6) The Risk Management Committee has established rules and prepared self-assessment as a whole and individual for year 2018 for the assessor to indicate strengths, weakness and matters that needed improvements. The Risk Management Committee together considered the results of the assessment and established guidelines for achieving more effective operation in the following year.

(7) The Risk Management Committee has disclosed the details of the significant risk management of the Company within the Annual Registration Statement Year 2018 (Form 56-1) and the Annual Report Year 2018 (Form 56-2).

The operation of the Risk Management Committee the past year 2018, the risks in various aspects were able to be controlled to the level which incurred no significant impact to the operations of the Company by responsibly and carefully performing assigned duties for the best benefit of the Company and all stakeholders.

February 18, 2019

On behalf of the Risk Management Committee



(Mr. Satit Chanchaowakun)

Chairman of the Risk Management Committee

REPORT OF THE CORPORATE GOVERNANCE COMMITTEE

The Corporate Governance Committee (“CGC”) of Thai Agro Energy Public Company Limited comprise of 4 members from the executives by position and 1 secretary, having authorities and responsibilities to supervise the Company’s operation regularly in accordance with the principles of good corporate governance as well as supervise the operation of Corporate Social, Community and Environment Responsibility according to related laws & regulations. During year 2018, the CG Committee held one meeting according to the authorities and responsibilities determined in the charter of the CG committee, which can be summarized as follows.

(1) The CGC has revised and improved on the Good Corporate Governance Handbook (CG Handbook) in accordance with the good corporate governance as stipulated by the Capital Market Supervisory Board and the Stock Exchange of Thailand including revision of best practices and business code of conduct, which have been disseminated on the Company’s website and intranet.

(2) The CGC has monitored and supervised that the employees adhere to the CG Handbook and the Business Code of Conduct so that it will developed into the Company’s culture, which have included as part of the orientation program of new employees and development training of Company’s employees. Related documents and leaflets have been given out to the employees for their acknowledgment and practice.

(3) The CGC has reviewed and improved on the performance self-assessment forms of the Board of Directors and sub-committees once a year by referring to the guidelines of the Thai Institute of Directors Association and the Stock Exchange of Thailand and revising the forms as appropriately for the Company. In 2018, self-assessment of performance of the Board of Directors and sub-committees were conducted as a whole and as individual, having objectives as follows.

(3.1) To acknowledge the problems and obstacles preventing achievements of established targets during the past year.

(3.2) To achieve more effective operation of the Company’s Board of Directors and subcommittees as their roles, duties and responsibilities are clearly specified.

(3.3) The results of the self-assessment on the performance of the Board of Directors and sub-committees as a whole and as individual during 2018.

Board of Directors and sub-committees	Average score of a whole committee (%)	Average score of individual (%)
(1) The Board of Directors	93.42	94.59
(2) The Nomination and Remuneration Committee	94.75	94.50
(3) The Audit Committee	98.65	99.27
(4) The Risk Management Committee	95.27	95.63
(5) The Corporate Governance Committee	96.90	96.60

The Board of Directors and each of the sub-committees offered opinions and recommendations on improvement for more effective operation of each committee for the best interest of the Company.

(4) The CGC has planned and carried out the re-certification of accreditation for the membership of Thailand's Private Sector Collective Action Coalition Against Corruption ("CAC") in year 2020.

(5) The CGC has acknowledged awards and recognitions received in Year 2018 as follows.

(5.1) The Company was placed in a "Very Good" level or 4 stars () for the assessment of Corporate Governance ("CGR") Year 2018 by the Thai Institute of Directors Association, having received a score of 84 percent, higher than the average score of the listed company in year 2018 with the score of 81 percent.

(5.2) The Company received 98 score or "Very Good" level on the Annual General Meeting Quality Assessment of the Listed Companies ("AGM Checklist") Year 2018 conducted by the Thai Investors Association, higher than the average score of the listed company in year 2018 with 92.42 score.

The CGC shall focus on the development of good corporate governance within the organization in order for the Company and its affiliated companies to manage their businesses effectively, building trust and be acceptable by all stakeholders.

February 12, 2019

On Behalf of the Corporate Governance Committee



(Mr. Anun Louharano)

Chairman of the Corporate Governance Committee



Management and Corporate Governance

Securities and Shareholder Information

Management Structure

Corporate Governance

Corporate Social Responsibility

Internal Control

Related Party Transaction

Part 2

Management and corporate governance

(7) Securities and Shareholder Information

Amount registered and paid-up capital

The Company has a registered capital of one billion baht, all is paid-up. The capital is divided into one billion ordinary shares, with par value of one baht per share.

Shareholders

List of 10 major shareholders of the Company. As of March 7, 2019, the list is as follows⁽¹⁾

Shareholder names	Number of shares	Per cent
(1) Lanna Resources Public Company Limited ⁽²⁾	510,000,000	51.00
(2) Siam City Cement Public Company Limited	47,234,796	4.72
(3) Sirirangsi Group		
(3.1) Mr.Kraisi Sirirangsi	41,200,000	4.12
(3.2) Mrs.Vassana Sirirangsi	4,100,000	0.41
(3.3) Total shares held by Sirirangsi Group	45,300,000	4.53
(4) Mr. Somchit Limwathanagura	28,322,657	2.83
(5) Chaturaphruek Group		
(5.1) Mrs.Hang Chaturaphruek	16,113,213	1.61
(5.2) Mr. Bunsin Chaturaphruek	5,900,080	0.59
(5.3) Mr. Manunsom Chaturaphruek	18,733	0.00
(5.4) Total shares held by Chaturaphruek Group	22,032,026	2.20
(6) Tantisunthon Group		
(6.1) Mr. Wisit Tantisunthon	16,346,400	1.63
(6.2) Mr.Tawee Tantisunthon	53,415	0.005
(6.3) Miss Vanida Tantisunthon	31,500	0.003
(6.4) Total shares held by Tantisunthon Group	16,431,315	1.64
(7) Susangkornkarn Group		
(7.1) Miss Kun Susangkornkarn	5,131,500	0.51
(7.2) Mr. Kan Susangkornkarn	2,880,600	0.29
(7.3) Total shares held by Susangkornkarn Group	8,012,100	0.80
(8) Miss Phanni Srisawat	8,100,000	0.81
(9) Louharanoo Group		
(9.1) Mr.Anun Louharanoo	4,771,895	0.48
(9.2) Miss Pornsuda Srikajornkul	2,622	0.0002622
(9.3) Mr. Arkhom Louharanoo	2,000,000	0.20
(9.4) Total shares held by Louharanoo Group	6,774,517	0.68
(10) Mr. Piphop Khunchak	6,500,000	0.65
(11) Other Shareholder	301,292,589	30.13
Total	1,000,000,000	100.00

Remark (1) Source: The roster of shareholders as of the closing date for suspension of share transfer as of March 7, 2019, made by The Thailand Securities Depository Co., Ltd. (TSD)

(2) List of 10 major shareholders of Lanna Resources Pcl. as of October 2, 2018

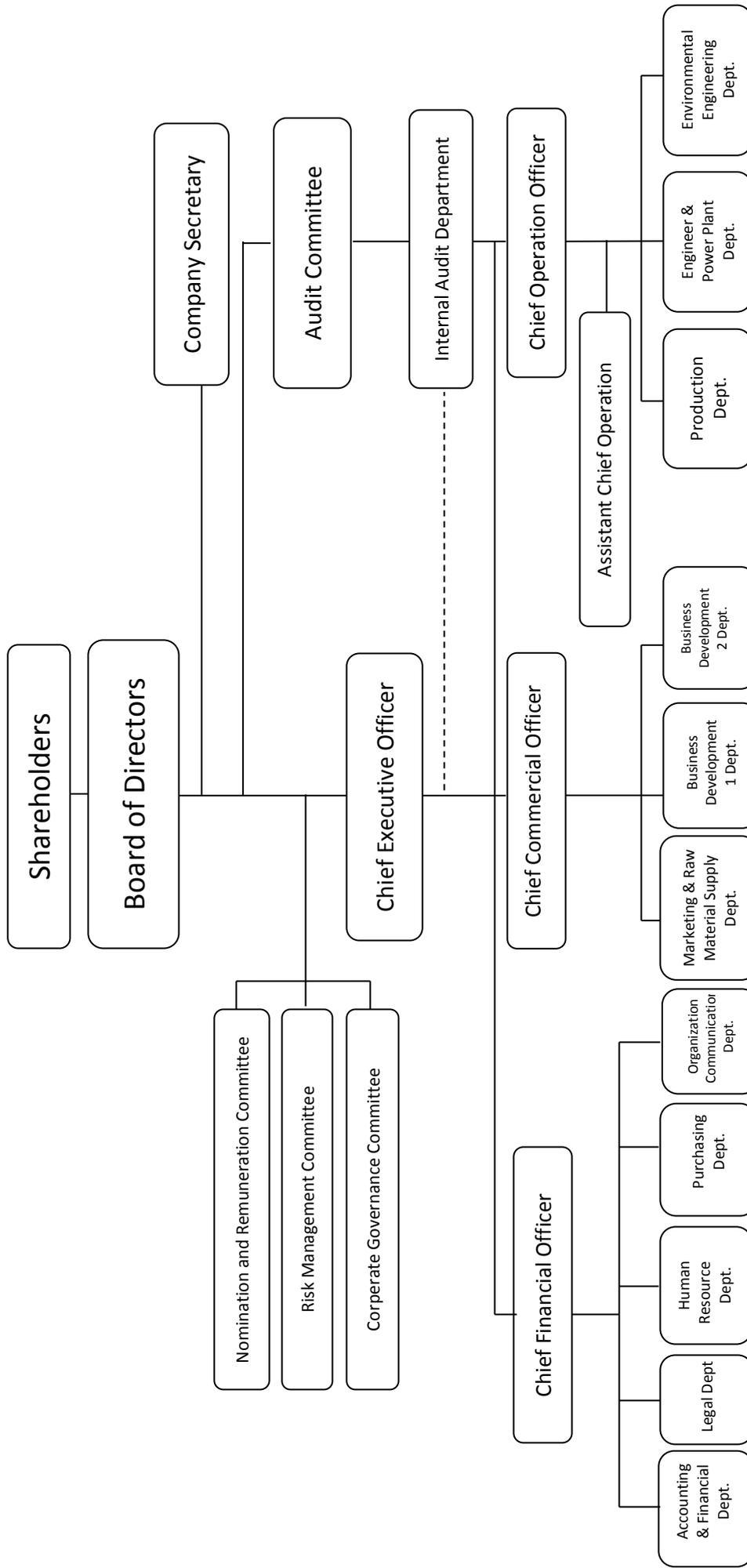
Shareholder names	Number of shares	Per cent
(1) Siam City Cement Public Company Limited ⁽¹⁾	236,733,980	45.09
(2) Mr.Thaweechat Jurankun	66,338,400	12.64
(3) Sirirangsi Group	42,697,781	8.13
(4) Tantisunthon Group	33,512,797	6.38
(5) Limsong Group	33,380,060	6.36
(6) Thai NVDR	14,563,459	2.77
(7) Loetphanitkun Group	5,957,000	1.14
(8) BNY MELLON NOMINEES LIMITED	3,519,700	0.67
(9) East fourteen limited-DFA Emerg Market Core EQ Port	2,397,350	0.46
(10)Mr.Wiloet Wongaphisamphoe	2,106,200	0.40
(11) Other Shareholder	83,792,952	15.96
Total	524,999,679	100.00

Remark ⁽¹⁾ The group of “Siam City Cement Public Co., Ltd.” and its executives is the largest shareholder, comprising of Siam City Cement Public Co., Ltd. and Mr. Vanchai Tosomboon holding a total of 236,733,980 shares or 45.09 percent of the paid-up capital and all shares with voting right, having three representing directors; namely, Mr. Paul Heinz Hugentobler, Mr. Siva Mahasandana, and Mr. Vanchai Tosomboon, whom are non-executives and nonauthorized Directors.

Dividend Policy

The Company's policy is to pay no less than 60 per cent of the net profit as stated in the Company's financial statements each year. An amount of each year's dividend is considered after deduction of accumulated losses brought forward (if any), and the legal allocation of reserve. However, the Company may pay dividends at a rate less than the above subject based on the results of operations, financial condition, liquidity, and the need for working capital in the business operations. Repayment of loans and accrued liabilities, expansion of investment, or the expansion of the company in the future are also consideration for a dividend rate.

(8) Management Structure



The management structure of the Company consists of the Board of Directors and four committees, namely Audit Committee, Risk Management Committee, Nomination and Remuneration Committee and Corporate Governance Committee. All of the Company's executive members, including directors and executive officers are qualified under Section 68 of the Companies Act B.E. 2535 and in line with relating regulations launched by the capital market. The management structure of the Company in details is as follows:

Board of Directors

The Board of Directors comprises a total of 9 members⁽¹⁾. In 2017 and 2018, the Company's Board of Directors held 14 and 12 meetings respectively. Mrs. Somrudee Suwannaroop is the Company Secretary. Details of attendance of each director are as follows :

Name of Director	Position	No. of attendance / No. of Meeting in 2017	No. of attendance / No. of meeting in 2018
1. Mr.Suroj Subhasavasdikul ⁽²⁾	Chairman and Authorised Signatory	12/14	12/12
2. Mr.Kraisi Sirirungsi	Vice Chairman and Authorised Signatory	14/14	12/12
3. Mr.Anun Louharanoo ⁽²⁾	Director and Authorised Signatory, and Acting Chief Executive Officer	14/14	12/12
4. Mr.Srihasak Arirachakaran	Director and Authorised Signatory	12/14	10/12
5. Mr.Somchit Limwathanakura	Director and Authorised Signatory	14/14	10/12
6. Mr.Somchai Lovisuth ⁽³⁾	Director and Authorised Signatory	14/14	12/12
7. Mr.Padetpai Meekun-im	Director and Chairman of Audit Committee	12/14	10/12
8. Mr.Virach Aphimeteetamrong	Director and member of Audit Committee	14/14	9/12
9. Mr.Satit Chanchaowakun	Director and member of Audit Committee	12/14	10/12

Remark: (1) The Board of Directors formerly comprises a total of 10 members. Then, Mr. Visith Noiphan has resigned from the Chairman of the Board of Director on May 17, 2018. The Company did not nominate new director in place of the vacancy position because the Company has considered that 9 directors are appropriate with the company management structure.

(2) Mr.Suroj Subhasavasdikul has been appointed as the Chairman of the Board of Directors to replace Mr. Visith Noiphan, former Chairman who has resigned from the position, effective May 17, 2018.

(3) Mr.Anun Louharanoo has been appointed as Acting Chief Executive Officer, replaced Mr. Somchai Lovisuth, effective January 1,2019.

(4) Mr. Somchai Lovisuth, Director, has resigned from the Chief Executive Officer, effective December 31,2018.

(5) Directors of the Board No. 1-4 are directors who are representatives of Lanna Resources Public Company Limited.

Directors authorized signatory of the Company

Mr. Kraisi Sirirungsi, Mr.Suroj Subhasavasdikul, Mr. Somchit Limwathanagura, Mr. Anun Louharanoo, Mr. Srihasak Arirachakaran, Mr. Somchai Lovisuth: Two of these six can co-sign beneath the seal of the Company.

Composition and Qualification of the Board of Directors

- Board of Directors shall consist of not less than five members, who were appointed by the general meeting of shareholders. Directors of not less than one-half of the whole number of the directors in the board must be resident in the Kingdom. Number of the independent directors must be not less than one-third of all directors.

- Composition of the Board of Directors must be formed with members of diverse skills in various fields — industry and business management, strategic planning, accounting, finance, and marketing and sales management, as well as law and corporate governance administration. In addition, directors must be eligible to perform directing a listed company as defined by the Company's articles, and by laws.

- Appointment of directors must follow the agenda set with transparency, accountability. The consideration must be performed based on sufficient information and credentials of the persons to be appointed, which are useful for the general meeting of shareholders to make decision.

- Directors must pass the recruitment criteria and procedures prescribed by the Board in a clear and transparent manner.

- Terms of director positioning must be in line with laws stipulated on listed companies. In each annual general meeting of shareholders, one-third of directors must be retired by rotation. For the directors to be retired in the first and second years following the company's being listed, if not agreed otherwise, the company arranges lot drawing to determine who must retire. The practice for subsequent years defines that the directors who are in office for the longest time shall retire. Directors who are retired by rotation may be re-elected to the position. The Company has not determined how many times a director can be re-elected to the office.

- In addition to the already retired by rotation, directors will be retired on:

- (1) Death

- (2) Resignation

- (3) Disqualified or prohibited under the law governing public companies

- (4) At the meeting, shareholders vote to be fired following the law governing a public limited company.

- (5) The court orders to be retired.

- Board of Directors must disclose the records of each director in the annual report every year for the shareholders to be informed accordingly. The report must state that which directors are executive or non-executive directors, or independent directors.

- Board of Directors appoints the Company Secretary to be responsible for arranging meetings of the Committees, taking care of activities of the Board, and following up operations for accurate and consistent practices. The Secretary has to report any significant change to the Board for acknowledgement.

- Duties and authorities of Chairman of the Board of Directors and of Chief Executive Officers are clearly segregated. This will define a certain scope of duties in policy making, corporate governance, and business management routine.

- To enable all directors to be fully devoted time and efforts to their duties, the Company's Board of Directors has set numbers of enterprises that each director can hold a position as follows:

- (1) Executive Director or Full-time Director, for up to four companies

- (2) Non-Executive Director or Professional Director, for up to six companies

- (a) In the case that a director needs to work for more than five listed companies, the company must inform shareholders and stakeholders and clarify the reasons, impact to the duties, and the director's performance in the company by documents in the Annual Information Form (Form 56-1) and annual reports (Form 56-2).

- (b) To nominate a person to be a director, the company must disclose sufficient information regarding the position in other companies of that nominee to shareholders to consider before the vote.

- (c) Senior management to become a director of a board in the company's subsidiaries and affiliates are required to get prior approval from the Board of Directors.

Leadership and independence of Directors

- Board of Directors has a role in defining the vision and policies and govern the management to perform accordingly. The Board is independent in its decision making with a purpose to offer maximum benefit for the Company's operation, all parties concerned, and stakeholders.

- Board of Directors, under the leadership of Chairman, can control the operation of the management efficiently and effectively, with the clear segregation of roles among Chairman, Chief Executive Officer or Managing Director.

- Board of Directors shall consist competent Independent Directors recruited from outside. The independent directors can access financial and other business information sufficiently to be able to express their opinions freely. They must safeguard the interests of those involved and attend meetings regularly. They must prepare a report certifying their independence when appointed which will be disclosed in the company's annual report (Form 56-2).

- The Chairman is independent from any relationship with the management and not a Chairman or member of any committee or subcommittee.

- Independent Directors must be qualified as independent as notified by the SEC and SET. They must have other qualifications as set by the Company for the position that has to take care of the interests of all shareholders equally, and of performances to avoid conflicts of interest among the Company and the executives or major shareholders, or other companies whose executives/major shareholders belong to the same group. In addition, an Independent Director must be able to give comments to the meetings independently.

Responsibilities of the Board of Directors

Board of Directors has the authority and responsibility to manage the Company, in line with relevant laws and the Company's regulations and objectives, including the legal resolutions of the general meeting of shareholders. It must work with integrity and be careful to protect the interests of the company. Its powers, duties, and responsibilities are summarised, as follows:

(1) Providing the Company with policies, directions, goals, business plans and budgets. Must oversee the management for efficiency and effectiveness so as to maximise the economic value and stability to the Company and the shareholders. Significant duties of the Board are as follows:

- (a) Determine the Company's organisation structural with a management and operational systems for the maximum efficiency and effectiveness.
- (b) Approve the annual work plan and budget within 30 days of the end of each year for the management to carry on the administration through the yearly plan and budget as approved by the Board.
- (c) Approve investment and expansion projects, or a project to downsize the entity that is seen most beneficial to both short- and long-term operations of the Company. This does not include items that are required approval from shareholders as defined by the Securities and Exchange Commission and The Stock Exchange of Thailand.

- (d) Approve the Company's financial plan, as well as financing loans and business credit to be sufficient and appropriate to the operations of the Company periodically.
 - (e) Provide the Company's balance sheet and income statement as at the end of the accounting period for the auditor, appointed by the shareholders, to audit and authentication before the general meeting of shareholders to approve on an annual basis.
 - (f) Consider and screening proposals before present to the general meeting of shareholders to seek their approval case by case, such as dividends, capital increase, capital reduction, the issuance, sale or transfer, purchase or transfer, acquisitions, mergers, and so on.
 - (g) Determine the Company's policy, direction, goal, vision, mission, value and other principles that are important and may affect the financial condition and the operational results presently or in the future.
- (2) Determine and clearly separate roles and responsibilities of the Board of Directors, Sub-committee, and the management. It must disseminate the segregation among such sub-committees, management and the employees on a regular basis.
- (3) Provide a control system, internal audit, and appropriate risk management systems that are substantial and effective enough. Follow up the operations regularly by querying in the meeting of the Board of Directors held periodically.
- (4) Hold the annual general meeting of shareholders within four months after the end of the accounting period of the Company and arrange an extraordinary general meeting of shareholders from time to time as necessary to the operation.
- (5) Be aware of the importance of the good corporate governance (Good Corporate Governance) principles by holding onto the values including justice and honesty (Fairness and Integrity), responsibility for work (Accountability), and fairness and equity in every function. It is a must to build trust among all stakeholders concerned (Stakeholders), with a commitment to creating value for the Company and its stakeholders for long-term prosperity with stable growth and sustainability in years to come.
- In addition, the Board has duties to oversee the Company to operate in compliance with laws relating to securities and securities exchange, as well as notifications and regulations of the Securities and Securities Exchange Commission, and/or the Securities Exchange of Thailand which rule performances such as transactions, acquisition, or disposition of key assets. To comply with laws relating to the Company's business in all respects is also essential.
- (6) Board of Directors may delegated one or several directors in sub-committees or any other person to take action on a certain affair on behalf of the Board. The delegate will perform under the supervision of the Board as well as the conditions and duration of the mandate as deemed appropriate and necessary. And it has the power to revoke or modify the authorisation of all matters as considered appropriate.
- The delegation as mentioned in the previous paragraph must not be in a manner to authorise a proxy, to consider and approve the transactions with equity or any other conflict of interest with the Company, or its affiliates unless the approval is given for certain matters that are based on policies and guidelines approved by the Board.
- (7) Board of Directors must provide a meeting at least once every three months and arrange performance evaluation of the Board of Directors annually.

(8) Encourage all employees to have a strong sense of ethics and morality by making a written code of business conduct. So that all employees can understand the ethical standards that the Company uses in the business and recognise the importance of internal control and risk management systems. This will reduce the risk of corruption and abuse of power, including will help prevent illegal acts relating to the company's business.

(9) Board of Directors opens an opportunity for all directors to propose an agenda within at least 10 days before the meeting, by sending the proposal to the Company Secretary: E-Mail address: somrudee@thaiagroenergy.com or Fax: 0-2627-3889. The Company Secretary will include the agenda in the next meeting.

(10) Board of Directors shall appoint the Company Secretary and determine its duties and responsibilities to act with responsibility, prudence, and integrity as stated below:

- (a) Arrange meeting of shareholders and the Board of Directors to comply with the laws and the company's articles.
 - (b) Arrange minutes of the General Meeting of Shareholders and of the Board of Directors, as well as to monitor operations to be performed in fully and correctly compliance with the resolutions of the General Meeting and of the Board of Directors.
 - (c) Make sure that the disclosure of the information and reports that are under the Secretary's care have been accomplished in accordance with the laws and regulatory requirements of the SEC and SET.
 - (d) Prepare and file documents, including registration, notice of the meeting of the Board of Directors, notice of the Annual Meeting of Shareholders, annual report, and other documents required by laws (if any).
 - (e) File reports on the interests of directors and management that were given the company.
 - (f) Give initial advice to the Board in terms of rules and regulations of the company and follow up the operations to be performed in fully and correctly compliance with those rules. And the Secretary also has to report significant changes to the directors.
 - (g) Oversee activities of the Board and perform other operational functions as required by laws or as assigned by the Board.
- (11) In addition, each director must hold and practice the following tasks:
- (1) Must not engage in the business of the same nature and in competition with the company's business or be a partner in a limited partnership or limited liability partnership, or be a director of a private company or other entities that operate the same nature and in competition with the business of the company, whether done for the benefit of themselves or others. Exception is applied if the director has informed the shareholders prior to the appointment.
 - (2) Must notify the company without delay If owning interest, whether direct or indirect, in any contract made by the company or its affiliates, or hold shares or other securities in the company or affiliates that are increasing or decreasing.

Executive Team : The Company has a total of six executive members.

Name-Surname	Position
1. Mr.Anun Louharanoo ⁽¹⁾	Acting Chief Executive Officer
2. Mr.Somtawin Boonbanyen	Chief Operation Officer
3. Miss Kanyaphat Chinantdej	Chief Commercial Officer
4. Mrs.Somrudee Suwannaroop	Chief Financial Officer
5. Mr.Anan Rayaruji	Assistant Chief Operation Officer
6. Mr. Korn Tangviroon	Assistant Chief Operation Officer

Remark (1) The resolution of the Meeting of the Board of Directors No. 12/2018 held on December 20,2018, appointed Mr.Anun Louharanoo as Acting Chief Executive Officer to replace Mr. Somchai Lovisuth who resigned from the position regarding to the contract, effective on January 1, 2019.

Responsibilities of Chief Executive Officer

General Authority

(1) Chief Executive Officer (CEO) supervises and directs the Company's management effectively and in accordance with the resolutions made by the meeting of shareholders / Board of Directors. Any performance must respond to the Company's objectives and regulations for the best interest of the Company with both short- and long-term benefit.

(2) CEO needs to prepare an operational plan, budget income, book of staffing employees, budget plans for hiring employees and annual investment to submit into the Board of Directors' consideration for approval annually.

(3) CEO must operate the business in line with policies defined by the Board of Directors and in accordance with the Company's budget, revenues, expenditures and investment budget as approved by the Board of Directors.

(4) CEO must report the Company's operations to the Board of Directors on a regular basis/once a month, and present a report summary to the Board on a quarterly basis/once every quarter.

(5) CEO must follow the laws related to the Company as well as perform in compliance with contractual obligations which are binding the Company to government agencies and other outsider individuals.

(6) CEO must handle the financial management in accordance with the Company's financial plan as approved by the Board of Directors and in line with the contractual obligations which are binding the company to all creditors.

(7) CEO must operate and/or carry on any other matters as assigned by the Board of Directors on case by case basis.

Financial Authority

(1) CEO is authorised to make approval on daily expenditure in accordance with the expenditure and staff employees hiring budgets as approved by the Board of Directors. Besides, CEO can handle the expenses under contractual obligations which are binding the company to government agencies and outsider individuals, or as required by law.

(2) CEO is authorized to purchase/hire outsiders to make a fixed asset and/or pay for objects that are not included in the normal operational expenses of the company. The expenditure must be within the budget approved by the Board of Directors with an amount not exceeding 200,000 baht per order or per transaction.

(3) CEO has authority to take on a loan to expend in the Company's operation. The loan amount must be within the limits and under the terms and conditions as approved by the Board. And in the case of using the assets of the Company to guarantee the loan, CEO must seek approval from the Board every time prior to loan procession. Exception is provided for the following items which are considered normal and CEO has authority to approve in all cases.

(a) Open Letter of Credits (L/C), Trust Receipt and Shipping Guarantee for procurement / outsourcing of work from overseas enterprises.

(b) Preparation of financial guarantees for commercial banks and/or financial institutions as collateral for the fulfillment of contractual obligations which are binding the company to government agencies and other outsider individuals.

(c) Contracts to hedge foreign currency such as the Forward Exchange Contracts, etc. only for cases that the company has agreements or obligations that must be paid or pay in foreign currencies.

(4) CEO has authority to approve for employees to borrow cash as a margin to carry out the following tasks beneath the company's operation:

(a) Expenses as bound by contractual obligations, or as required by law or approved by the Board to borrow cash to use according to actual payment, such as costs on real estate, electricity and other utilities, and taxation etc.

(b) Other expenses in addition to the above (a) can be approved at a time or a list of up to one million baht.

(5) CEO has authority to set provision and/or write off bad debt of the Company at not more than Baht 50,000 each time or per item during each financial year, and not exceeding Baht 1,000,000 overall in the financial year, and report the matter to the Board of Directors once every quarter.

(6) CEO has authority to sell and write off inventory and/or damaged or lost assets, and/or make compensation at not more than Baht 50,000 each time and not more than Baht 1,000,000 overall in the financial year, and report the matter to the Board of Directors once every quarter.

(7) CEO has authority to set aside reserve for depreciation of every type of asset, and/or outdated or deteriorated inventories in accordance with relevant accounting standards, and report the matter to the Board of Directors at the earliest opportunity.

Production Authority

(1) CEO must set goals and production plan each year to be in line with the market demand, and according to the contractual obligations of the company made to all customers, and propose the matter to seek approval from the Board of Directors on an annual basis.

(2) CEO has authority to approve for purchasing / procurement raw materials for use in the company's business within the budget and in accordance with the rules and conditions as approved by the Board.

(3) CEO must plan and implement production according to working plans and targets as approved by the Board of Directors, with the lowest cost. In the case of change to differ from plans and goals, the matter must be raised to seek approval from the Board prior to or at the first opportunity to do so.

(4) CEO must plan and/or propose policies, or directions of doing business that are beneficial for of the company to maximize its commercial, production, and sales potential in the future, and to enable the company to expand and/or achieve sustainable growth in the long term.

Sale Authority

(1) CEO must set targets, working plan, and strategies each year in accordance with market demand and to meet contractual obligations of the company made with all customers, and propose the matters into the Board of Directors' consideration for approval on an annual basis.

(2) CEO must plan and accomplish sales operation according to the scheme and goal approved by the Board to maintain or increase its Market Share as well as raising revenue or profit as much as possible. In case of change to differ from the plans and goals, CEO must propose the matter into the Board's consideration for approval prior to or at the first opportunity to do so.

(3) CEO must undertake distribution of products and services to meet the price and conditions prescribed by the Board or contractual obligations of the company made to all customers.

(4) CEO has authority to purchase/hire and/or order imported goods for sale as an effort to enable the company to maintain or increase its Market Share as well as to increase revenue or profit as much possible. The matter is subjected to the approval of the Board before proceeding.

(5) CEO has authority to sell products and services for both domestic and international market on contracts binding for a period of not more than one year.

Staff Authority

(1) CEO has authority to determine the number of staff to be appropriate to the company's operations, the salaries, wages, remuneration and reward for all employees at all levels. The task must be in line with capacity of staff employees and staff hiring budget as approved. Any determination on employees in the level of director or above must be approved by the Board of Directors.

(2) CEO has authority to hire, designate, transfer, revoke, and lay off employees at all levels, except for those in director level and above which must be approved by the Board of Directors prior to determination.

(3) CEO has authority to impose rules and regulations relating to working conditions and welfares of the employees. The operation must be in accordance with the terms and the budget as confirmed or approved by the Board of Directors.

Authority to deal with lawsuits and legal contracts

(1) CEO has authority to make a legal contract binding the Company only on the routine operation within the budget approved by the board, of which duration does not exceed one year.

(2) CEO has authority of litigation and the defense on the interests of the Company. CEO must report the matter to the Board at every meeting and when the lawsuit arose.

Authority in respect of project

(1) CEO must consider and carry out feasibility study of the preliminary project that will benefit the company's future business operations and/or provide a good return in the long term operation.

(2) CEO can consider hiring a consultant on various projects within the budget approved by the Board of Directors.

(3) CEO must present details of the project, after completion of the preliminary study and conclusion of possibility of the project to seek approval from the Board before proceeding.

(4) For projects that have been approved for implementation, CEO has authority in response to the project as follows

(a) Set plans and budgets for project to achieve the target or Internal Rate of Return within the framework as presented to the Board of Directors.

- (b) Contact authorities to negotiate and sign a Memorandum of Understanding on co-financing in a primary stage for a period not exceeding one year.
 - (c) Propose Shareholder Agreement and the establishment of Joint Venture Company to the Board for approval before proceeding.
- (5) Report the progress of projects approved for proceeding to the Board at every meeting.

Other responsibilities

(1) Matters that are required for confirmation or approval from the Board, CEO must consider every matter as to screen or agree to propose to the Board.

(2) Matters beyond the scope of duties and responsibilities of CEO, as defined above, must be propose to the Board to seek their approval before proceeding.

(3) CEO may delegate the duties to employees in any position or any staff member within the scope of their duties and responsibilities in accordance with the appropriateness on the case by case basis.

Delegation of authority and responsibility of the Board of Directors, Subcommittees, Directors, or management of one or many people must not be in the form of authorization or delegating for the appointees to make approval on matters that are the company's stakes, or potential conflict of interest, its subsidiaries or affiliates, unless the transactions are in the normal course of business that the scope of the mandate is clear.

Company Secretary : The Board of Directors passed a resolution at the board meeting 7/2556 held on 25 July 2013 to appoint Mrs. Somrudee Suwannaroop to the position of the Company Secretary Duties and responsibilities of the Company Secretary are as follows.

(1) Supervise and advise the Board and management on performances that must be compliance with legal requirements, and rules and regulations of the company. To monitor all operations to be implemented properly and consistently is under the Company Secretary's responsibility as well.

(2) Responsible for arrangement of meetings of the Board of Directors and shareholders, as well as take care of the the resolutions of the conference to be implemented by coordinating with other operating sections.

(3) Ensuring the disclosure and reporting information in respect of the responsibility to follow the rules and regulations of the Stock Exchange of Thailand and the Securities and Exchange Commission as well as relating legal provisions.

(4) Preparation and storage of the documents as follows.

- (a) Register of Committee
- (b) Notice and minutes of board meeting
- (c) Notice and minutes of meeting of shareholders
- (d) The company's annual report
- (e) Report of executive directors' stakes

(5) Other actions according to the notification of the Capital Market Commission

Remuneration of Directors and Executives

Remuneration in cash

(a) Remuneration of Directors : The Company pays compensation to directors in the form of monthly remuneration and bonus for the year. The compensation paid to directors in 2018 is as follows.

Name-Surname	Position	Unit: baht		
		Remuneration	Bonus	Total
1.Mr.Visith Noiphan ⁽¹⁾	Chairman	180,000	321,426	501,426
2.Mr.Suroj Subhasavasdikul	Chairman	360,000	214,286	694,286
	Vice Chairman	120,000		
3.Mr.Kraisi Sirirungsi	Vice Chairman	360,000	214,286	634,286
	Chairman of the Nomination and Remuneration Committee	60,000		
4.Mr.Anun Louharanoo	Director	360,000	214,286	574,286
5.Mr.Somchit Limwathanagura	Director	360,000	214,286	574,286
6.Mr.Srihasak Arirachakaran	Director	360,000	214,286	714,286
	Nomination and Remuneration Committee	40,000		
	Expert Director ⁽²⁾	100,000		
7.Mr.Somchai Lovisuth	Director	360,000	214,286	614,286
	Nomination and Remuneration Committee	40,000		
8.Mr.Padetpai Meekun-iam	Audit Committee Chairman	180,000	214,286	754,286
	Independent Director	360,000		
9.Mr.Virach Aphimeteetamrong	Independent Director	360,000	214,286	694,286
	Audit Committee	120,000		
10.Mr. Satit Chanchaowakun	Independent Director	360,000	214,286	784,286
	Audit Committee	120,000		
	Nomination and Remuneration Committee	30,000		
	Risk Management Committee	60,000		
Total		4,290,000	2,250,000	6,540,000

Remark : (1) Mr. Visith Noiphan has resigned from the Chairman of Board of Directors effective from May 17, 2018. The resolution of the meeting of the Board of Directors No.5/2018 held on May 17,2018 approved the appointment of Mr. Suroj Subhasavasdikul to be the Chairman replaced Mr. Visith Noiphan.
(2) Mr. Sihasak Arirachakaran was appointed as Expert Director by the Meeting of the Board of Directors No. 19/2554 dated December 22, 2011, with responsibility to provide counsel and represent the Board in monitoring implementations and issues approved by The Board of Directors for the management division to process to achieve maximum efficiency and effectiveness. The remuneration was set to 10,000 baht per month from the effective date of January 1, 2555 onwards. Until the resolution of the meeting of the Nomination and Remuneration Committee No. 3/2018 has canceled this position effective October 31, 2018.

(b) Executive Remuneration : The Company pays remuneration to executives in the form of salary and annual bonus from 2016 to 2018. This will vary according to the performance of the company. The details are as follows:

Year	Number of executives * (persons)	Amount of remuneration (million baht)
2016	8	17.97
2017	7	22.41
2018	6	24.20

Remark : Number of executives includes those who resigned during the year

Other compensation : None

Personnel

Number of personnel

As of December 31, 2018, the company employed a total of 233 employees (excluding six management members), dividing to 198 full-time staffs and 35 daily-waged workers as listed below.

Department	Full-time staff (person)	Daily-waged worker (person)	Total (person)
Management, Head Office	6	-	6
Financial Accountant	7	-	7
Human Resources	5	-	5
Purchasing	3	-	3
Legal Affairs	3	-	3
Audit	2	-	2
Business Development	1	-	1
Marketing and Supply	2	-	2
Management, Factory	19	17	36
Production	51	2	53
Engineering and Energy	58	-	58
Environmental Engineering	41	16	57
Total	198	35	233

Labour Disputation : None

Employee Compensation

(a) Compensation in Cash : In the years 2016,2017, and 2018, the company paid compensation to employees (excluding management) totally 58.19 million baht, 63.71 million baht, and 64.29 million baht respectively as compensation in the form of salaries, bonuses, overtime, contributions to the fund, and house rental.

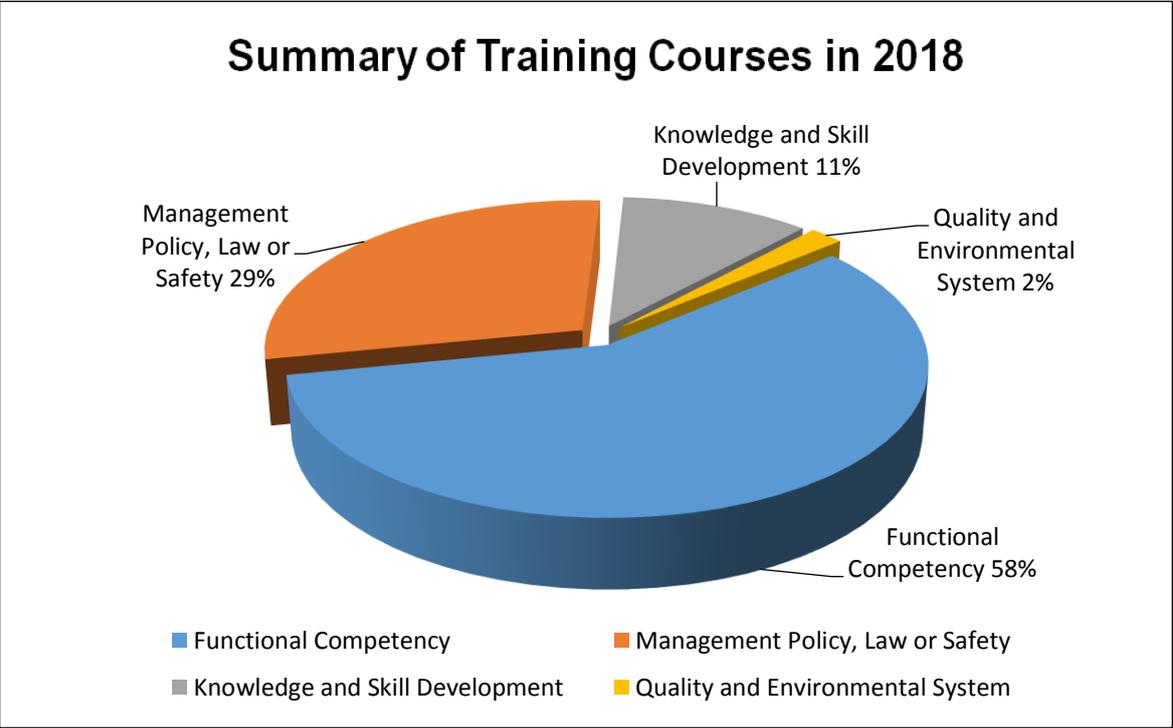
(b) Other compensations : None

Personnel Development Policy

The Company has a policy of constant development. The objective is to increase the knowledge, skills and expertise, including efficiency in the performance of employees at all levels. The company is encouraging employees to develop expertise from the practical learning (On the Job Training). New employees are supervised by supervisors in each department who perform as acting coach in any line of work. Training will be provided by the consultants of the company to transfer experience and additional knowledge to the employees on a regular basis. In addition, the company will consider arrange for employees and executives in various operations to attend workshops and seminars on subjects related to the operation of each department.

Presently, the company Promote personal development by used utilizing human resources development tools. Such as, Competency Development Systems to develop the full potential of performance.

The Company develops employees at all levels. The training is delivered to the public and private sector, as well as the training of the company. To focus on the employees' knowledge, abilities and skills to work in accordance with the performance of the position (Functional Competency) according to the operating procedures under the quality management system. And by exploring the need for training. The training plan for the year 2018 is as follows:



On 24 February 2018, Training course on “Building Safety Mind” was organized by Occupational Health and Safety section with Human Resource section.



During 20-22 March 2018, Suphanburi Institute of Skill Development 2 with Human Resource section organized a training course on how to control and maintenance forklift in the right and safe way.



During 18-21 September 2018, Human Resource section organized 12 classes of training course on ISO9001:2015&ISO14001:2015: Regulations & Application for staffs.



On 5 and 26 May, 2018, Training courses on Fraud Risk Management was held at Chantara Villa Hotel, Dan Chang District, Suphanburi organized by Professional Internal Auditservice Co.,Ltd. with Human Resource section.



During 29-30 October 2018, Occupational Health and Safety section with Human Resource section organized 4 classes of training courses on Personal Protective Equipments.

(9) Corporate Governance

Policy of Corporate Governance

The Company recognises the importance of good corporate governance as it is considered the significant component towards efficient, transparent, and verifiable management system. This will help build trust and confidence among shareholders, investors, stakeholders, and other related parties. Having good corporate governance is a tool to accomplish value-added business, create competitiveness, as well as promote sustainable growth of the company in the long term. In the Meeting of the Company's Board of Directors No. 9/2556 held on 20 September 2013, the Company established a policy of good governance as defined by the Stock Exchange of Thailand.

Thai Agro Energy Plc. is aware of the importance of good corporate governance (GOOD CORPORATE GOVERNANCE) based on the principles of justice and honesty (FAIRNESS AND INTEGRITY). The Company is always responsible for its portfolio (ACCOUNTABILITY) and recognises its duties (RESPONSIBILITY) which are carried out in a transparent manner (TRANSPARENCY). The Company encourages the fair, equitable, and reliability practice among all stakeholders concerned (STAKEHOLDERS), with a commitment to creating value for the business and for the long term mutual benefit, as well as a stable and sustainable growth of the Company in the future. The Board of Directors set a policy or basic principles of corporate governance to guide the business and the performance as follows.

- (1) Implementation for the Company's management structure to have a clear and reliable scope of duties and responsibilities among the Board of Directors, the committees, and the management for these executive members to the perform their duties effectively.
- (2) Continuity of performance to ensure the Company's reliable operation. This is to guarantee that every operational process is carried out proficiently, under a stringent internal control system. The balance of power must be preserved to enhance the transparent operation which can be inspected at any given time. Disclosure of the facts and information is assured through an effective system.

- (3) Continuity of the performance to ensure that the Company's financial report reflects the true result of operations and financial status, with assessment and measures to prevent and manage the risks to a reasonable level.
- (4) Conflicts of interest must be managed carefully and reasonably in a way that the company's benefits must be preserved.
- (5) Morality and good conscience are property to be encouraged among the Company's executives and employees to accomplish the quality of good conduct, integrity, and discipline. This quality helps to instill into staff members a sense of duty and responsibility, both for themselves and teamwork. With these, they are well prepared for transition to a better future.
- (6) Commitment to business excellence through customer's satisfaction. Hearing customer's requirements and opinions, doing self-assessment for improvement, and relentless creativity are among executions to satisfy valued customers.
- (7) Awareness of and honour the right of ownership of the shareholders must be cherished. The rights of stakeholders as well must be recognised. The company treats these people with fairness and equality and without discrimination. Opportunities are opened for stakeholders to voice their concerns with channels available for them to submit complaints of wrongdoing or defects. Compensation measures is considered essential in the event of stakeholders has been damaged by infringement proceedings.
- (8) The Company is well aware of its duties and responsibility towards shareholders, stakeholders, the community and society as a whole. With responsible care for the environment, the Company participates in projects that encourage creativity and support of sustainable development which benefits the public. All will be conducted within the company's capacity.
- (9) Measures are imposed to prevent any person from exploiting the Company's inside information.
- (10) Measures and procedures are imposed for employees to report fraud or suspected fraud or violation of law or other unusual actions, which may significantly affect the reputation and financial position of the company. Report must be performed immediately to amend the defects or dissolve the impact without delay. Additional measures might be applied to prevent repeat incidents.

Responsibilities

- Board of Directors is responsible and accountable for imposing policy and governance that provide support systems to fight against corruption with efficiency and effectiveness. This will ensure the management to recognise the importance of anti-corruption endeavour and cultivate this principle into the corporate culture.
- Audit Committee has responsibility to review the company's accounting and finance systems, and other systematic functions including internal control, internal audit, and risk management. This performance will ensure that all operations meet international standards, and are adequate to enable efficient productivity.

- CEO and executives at all levels are responsible to establish an anti-corruption system and promote policies to combat corruption at full strength. They are dutiful to inform employees and all related agencies, about the attempt, including to review the appropriateness of the systems and measures to make sure that these tools comply with business change, regulations and provisions of various laws related.
- Audit Department is dutiful to review and make sure that all functions are done in line with the operational policies, guidelines, regulations, and orders. All activities must be approved by the authorization bodies and complied with relevant statutory provisions. Audit has to establish control systems adequately to prevent the risk of fraud and corruption that might happen. Suspicion of any fraud potential must be reported directly to the Audit Committee.
- Risk Management Committee is responsible for assessing the risk of fraud and corruption that may arise in the process. The Committee must present and update appropriate solutions for the Executive Committee and Board of Directors to review and consider setting measures accordingly to reduce the risks that may emerge.

Policy on community, social, and environmental responsibilities

The Company operates its business with transparency and fairness. Adhering to its commitment to the principles of good corporate governance, the Company is responsible to take care of the community, environment, and society. The Company insists to operate its business with ethics and in compliance with the relevant legislation. The Board of Directors has installed following policies to reflect its care of the environment, community and society as whole:

- (1) Do not conduct business or take any action that undermine the country or damages natural resources, the environment, or society as a whole.
- (2) Support activities that benefit the community and society with a focus on the environment, as well as the valued local cultures and traditions.
- (3) Earnestly instill in all employees awareness of responsibility towards society and the environment. Efforts to raise quality of life and safety for the community residents, as well as to contribute to the quality of society and overall environment are encouraged within the company's operation and in collaboration with government agencies.
- (4) Perform and control all activities in compliance with related laws and regulations.
- (5) Do not cooperate or support individuals whose businesses are illegal or a threat to the stability of society and the nation. The Company supports anti-fraud principles and rejects all forms of corruption.

Policy on notification of mishaps and complaints

Board of Directors established a policy on stakeholders' notification of mishaps and complaints which is in line with the good governance principle. The policy is a mechanism to encourage involvement of the stakeholders.

Upon the policy, stakeholders can submit their comments about the company's business or complaints directly to the company. They may notify the company of wrongdoing or unethical frauds, such as corruption or illegal conducts as well. Stakeholders who wish to contact directly to the company, you can send your message to the Audit Committee at the following addresses:

- **Postal mail**

Chairman of Audit Committee
27/1 Phaholyothin 37, Khwaeng Ladyao, Chatuchak District,
Bangkok 10900

- **Company's website** <http://www.thaiagroenergy.com/anticorruption>

- **Intranet** <http://www.intranet.com/TAE>

- **By phone**, contact the Internal Audit Department +66 (0) 81-8027001

- **E-Mail** : padetpai@yahoo.com and/or suphachai@thaiagroenergy.com

Protection of whistleblowers

Stakeholders can inform the Company about wrongdoing or complaints, as mentioned in (1) anonymously.

(1) Action after the whistleblowing

The Audit Committee will conduct investigation of information or facts that are reported or in complaints, as mentioned in (1), and present the case directly to the Board for acknowledgement and consideration.

(2) Corrective measures and compensation for damages

In case that there are stakeholders being damaged by the infringement caused by the company's operations, the company welcomes comments or complaints and will remedy the situation without delay, and will install measures to prevent such incidents, as well as consider a reasonable compensation for each sufferer, individually and on case by case basis.

Policy on giving/receiving gifts, assets, or other benefits

Aiming to encourage the company's management and employees to be aware of the anti-corruption principles, the Board of Directors has set guidelines and engaged in cultivating moral values into the staff members. Neither acceptance nor support of illegal actions or wrongful exploitation that will harm operations or reputation of the company are allowed. Guidelines are given as follows:

- (1) Prohibit directors, executives and employees to claim or receive gifts, assets, or any benefit from customers, suppliers, or from individuals and businesses associated with the company, whether for personal or other individual's interest. The prohibition must be applied intensely and with no exception whatsoever since the practice may influence decision to operate unfairly causing bias or embarrassment that could lead to a conflict of interests.

- (2) Gift receipt or gift giving on traditional occasion or festival must be of little value or without unreasonably excessive prices, such as souvenirs or promotional premiums. All employees should make their own judgement on this matter. If not sure, then consult or seek advice from their superiors. Always take into consideration the intention of the donor and recipient on this matter to determine the appropriate deed.
- (3) Receiving or giving gifts of cash, checks, vouchers, gold jewelry or valuables shall be deemed extremely inappropriate. This shall be presumed to be wrongful exploitation due to job responsibilities.
- (4) Any employee found guilty, through an investigation, of wrongful act or exploitation for both personal gain or for other individual's benefit, he/she will be disciplined in accordance with the company's rules uncompromisingly.

Policy on labour and human rights

The Company gives priority to unforced labour and fairness to all employees. The Board of Directors set a policy with following practices to assure its intention to comply with human rights principles:

- (1) The Company must operate in line with human rights principles and is obliged to provide all employees with better understanding about the human rights. They are supposed to take this competency as part of their operations and learn to reject activities that violate human rights.
- (2) Employees at all levels must learn to understand the laws related to their own duties and responsibilities and adhere to the legal orders strictly. If in doubt, seek advice from superiors or specialised legal counsel. Do not act following the understanding of oneself alone.
- (3) When employees have to work abroad, they should learn about the laws, tradition, and culture of the country of destination before departure. This will ensure the staff that their attendance in that territory is not illegal or against tradition and culture of the land.
- (4) The Company will use the principle of justice and sincerity in the management on monthly salary, wages and benefits, as well as conditions of employment. Unforced or involuntary labour and child labour are prohibited. Discrimination is not allowed and the company continues to support the equal opportunity for all employees and the good and proper working environment. The company is decisive to strictly follow the Acts relating to labour protection and Thailand's labour standard, as well as other provisions of laws and regulations.

Policy of political neutrality

The Company focuses on political neutrality and support democracy. Employees at all levels are encouraged to act their political rights under the rule of law as a good citizen and the company has initiated guidelines as follows:

- (1) As political neutrality is considered important, do not take part or endorse any political party or political authority.
- (2) The Company will not participate in or allow campaigns or advertising of political parties or any politician to be held in the area of the Company or using resources and assets of the company to do so.

- (3) The Company has no policies to provide financial support and/or any resources of the Company to any politician or political party either directly or indirectly.
- (4) The Company encourages employees at all levels adhering to democracy. They can use their political rights by the rule of law as a good citizen. They are able to express their views, join or support political activities, or perform political rights acutely, but outside working hours.
- (5) All employees can use their political rights as deemed ownership by acting individually, without using a position in the Company and the name or seal of the Company to induce others to pay subsidies or to provide support for any politician or political party.
- (6) The Company has no policy for employees at all levels to command or convinced by any means in making staff and subordinate to participate in the political activities of all types, which may cause conflicts within the organisation, and may damage the company in all terms.

The practice of good corporate governance

To achieve the objective of good corporate governance which reflects the effective, transparent and accountable management system, the Board has set guidelines of good corporate governance as follows as a tool to build trust and confidence among stakeholders.

(a) Guidelines for the Board

To illustrate the Company's intention to conduct the business professionally with transparency, integrity and responsibility toward all stakeholders, the following guidelines are set for the Board of Directors.

- (1) Perform duties in accordance with laws, regulations, the company's rules and resolutions made by the Meeting of the Board of Directors and the Meeting of shareholders.
- (2) Administer with honesty, neutrality, and independence in both decision making and acting.
- (3) Authorise management to fully handle daily operations, without unreasonable interference.
- (4) Have no interest in a business entity associated with the company's business, its affiliates or in competition with the company or its affiliates, whether directly or indirectly.
- (5) Avoid conflicts of interests leading to a clash between the person's self-interest and the company's to ensure proficient and effective management.
- (6) Administer with caution and avoid bond making that may later lead to a conflict with one's own duty.
- (7) Do not seek improper benefits generated from one's duty, either directly or indirectly.
- (8) Perform one's duties with full capacity to achieve maximum benefit to the company's business.
- (9) Do not take any action that may undermine the interests of the company, or produce benefits to other individuals or entities.
- (10) Strive to prevent and eliminate actions implied in a way of fraud. React quickly and decisively against deception to create moral values and good image for the organisation.

(b) Guidelines for management and employees

The Company is a manufacturer and distributor of ethanol for use as fuel. Its operation is considered value-added for stakeholders as it preserves environmental balance and beneficial value for the society as a whole. To maintain such favourable features and to continue evolvement consistently and sustainable in the future, the company launched the following guidelines for the management and employees.

- (1) Work with responsibility, integrity, commitment and dedication. Follow the rules, regulations, policies, and corporate culture by taking maximum interests of the company as first priority.
- (2) Respect confidentiality of customers, partners, and the company strictly. Take great care of restricted documents or information to ensure that any secret is not leaked to irrelevant individuals or outsiders.
- (3) Respect the privacy rights of employees. Avoid bringing information, both on operational and personal matters to discuss or criticize in a manner that would cause damage to the employees, or the overall image of the company.
- (4) Do not say or do anything that would lead to breakage or damage within the company, or individuals related to the company.
- (5) Maintain and contribute to the unity and solidarity among employees by supporting each other in ways that favour the interests of the company as a whole.
- (6) Conduct towards colleagues generously with courtesy to enhance relationships. Do not withhold information necessary for the performance of associates. Adapt to work with others, and honor others without claiming success of others falsely as a result of one's own work.
- (7) Be committed to being good and skilful by self development in a way that is beneficial to oneself and the company.
- (8) Learn to gain knowledge and experience in ways to strengthen one's proficiency in work and keep abreast of new technology constantly.
- (9) Adhere to morals while abstain from all vices. Do not behave in a way which may tarnish the company's or one's own reputation.
- (10) Inform immediate supervisors or the Audit Committee, once exposing to actions that indicate fraud or misconduct within the organisation.
- (11) Help in action to preserve the environment and working atmosphere as well as in the development to achieve the operational excellence.
- (12) Avoid giving or accepting things, receptions or any benefit from partners or other stakeholders related to the company's business. Otherwise must be in accordance with the company's regulations and order.

(c) Guidelines for human resources management

Duties of the Company's personnel administration include personnel recruitment, selection, development, and promotion. It is responsible to preserve the competent employees who are considered valuable asset of the enterprise. To promote a good image and achieve the goal of operating efficiency in the long run, personnel administration should pursue the practical guidelines as follows:

- (1) Be aware of the fact that employees are treated fairly, and are worthy as part of the organisation.
 - (2) Select individuals to employ to any position with fairness on consideration of qualifications, education, experience, physical condition and other criteria essential for the position.
 - (3) Assess to reward employees fairly on consideration of status and nature of the work and performance, and based on knowledge and capability of each employee.
 - (4) Arrange for annual performance evaluation of individual staff. The evaluation will be conducted by a superior in the working line of each employee based on the Company's regulations and practices.
 - (5) Take care of the employees' welfares and maintain working conditions as safe and good hygiene.
 - (6) Invite and encourage employees to express their opinions involving improvement for even greater efficiency and effectiveness of their work and the Company.
 - (7) Support the Company's policy to give training and seminars, which are necessary for the employees to achieve a higher level of proficiency and skill.
 - (8) Encourage employees to adopt and adhere to the company's policies for regularity, good relationships, and a better understanding of each other.
- Various schemes are presence with regard to the security and prosperity of all employees. The Company considers superiors in each department an important organ to handle personnel administration and management, and promote a good relationship between the Company and the employees. And everyone is involved in maintaining companionship among each other.

(d) Guidelines for accounting and finance practices.

It is essential for the Company's accounting and finance division to always keep all records accurate, complete, and verifiable, and in line with the Company's regulations and relating legal mandates. All employees must adhere to the principles of integrity and ethical duty as follows:

- (1) Authenticity of recording
 - (1.1) Records of all business transactions of the company must be correct and verifiable, without restrictions or exceptions whatsoever.
 - (1.2) Account posting and business records must be based on fact, without distortion or false entries on any purpose.
 - (1.3) Employees at all levels must conduct business operations correspondingly and in compliance with the company's regulations and specifications, with correct and complete documentation for business records. Always give enough information timely for the staff in charge of recording, preparing accounting transaction, and all finance duties can undertake the account posting accurately.

(2) Accounting and Financial Reporting

- (2.1) All employees must not conduct information distortion or create lists of false information, such as accounting and finance documentation, or performance data of the company.
- (2.2) The employees have to realise that the accurate report of accounting and finance is under the responsibility sharing among directors, executives and employees.
- (2.3) All the staff are responsible to prepare and/or provide correct, truthful, and complete detailed information to attach to the accounting and finance documentation.

(e) Guidelines for internal control

The Company has a corporate governance policy to enhance the business functions to become even more systematic, efficient, and effective as targeted. Preservation and the use of property or assets must be executed through economical and appropriate approaches, with careful assessment and risk management. Each unit must provide a standardised operational system with internal control which is rigid enough to control risk to exist at a reasonable level that does not significantly harm the operation of the company. Communications and development should be done to encourage participation and unity among employees. This leads to good cooperation in the work place with proper and verifiable performance that is coherent with laws and regulations concerned. Following guidelines are given for better accomplishment:

- (1) Provide enough Control Environment. Executives at all levels are directly responsible to take care and investigate operation systems within their own divisions to be consistently effective and agreeable to the Company's regulations. There must be a concise and verifiable internal control system and every unit must provide a handbook containing procedures set forth in its respective departments.
- (2) Provide Risk Assessment procedure. Each division has its own Risk Assessment on the job responsibilities and find proper approaches to control or eliminate the effect or reduce the potential of such risks. The company aims to engage all employees to assess and manage risk accordingly to help prevent damage that may occur.
- (3) Provide Control Activities in every function and level, with an acceptable risk-based inspection system. Each unit must provide a standardised operational system with sufficient internal controls which allow risks at a reasonable level that does not cause any harm to the company significantly.
- (4) Provide sufficient reliable and timely Information and Communications. Improve the efficiency of the Company's information technology system and have adequate information security to optimise the effectiveness of the performance and administration. This will enhance reliability and use of such information to communicate more widely both within and outside the organisation. This will facilitate communications and employee development leading to good cooperation in the work place with proper and verifiable performance that is coherent with laws and regulations concerned.

- (5) Provide Monitoring and Evaluation. Management at all levels must maintain and monitor operational systems within their departments for efficiency and in compliance with the regulations. The Audit Office will support all executives to provide internal control systems and conduct periodical checks appropriately to ensure that all agencies have an effective audit system and follow the steps given consistently. This practice will lead to improvement of the functional systems and even more efficiency throughout the business operations.
- (6) The inspection focuses on evaluation in a constructive manner and improvement of the system. The report prepared by the Audit Office and agreed by the division that owns the system will be taken into consideration of the Audit Committee for its approval before implementing it. Once appearing that there is a system in any division needing improvement for more efficiency or rigidity, all divisions concerned are dutiful to resolve and strengthen the system immediately. The company will assume such functions as part of the division responsibility which becomes part of the annual performance evaluation of the employees involved.

(f) Guidelines on the use of information and communication technology

Information and communication technology has become an important factor to promote the business and enhance the effectiveness of the work. The Company designates all employees to share responsibility by using this facility under regulations of the law and the Company's rules and standards set as follows:

- (1) The company provides safety management of the IT system by launching rules and orders for the employees to practice legally in accordance with the Computer Act.
- (2) Employees must abide by the following rules:
 - (2.1) Must comply with copyright law, the law governing computer usage regulations, and orders of the Company relating to the use of various information systems.
 - (2.2) Do not pirate software or intellectual property rights of others.
 - (2.3) Be aware of the fact that application of the Company's programmes is prohibited for personal use or for non-employee individuals to use. It is restricted for anyone to reproduce, distribute, commercially exploit, or make changes, whether it be partial or total of the Company's softwares, without the Company's permission.
 - (2.4) Prohibit the use of the Company's email system, whether it be one's own or other employees' accounts, to post or transmit any information or messages that are prejudicial to the security of the nation, religious, and monarchy. Consider not to post private messages or text content which invite credulous actions. Do not create a chain letter threatening data with a computer virus spreading within or outside the Company. Do not counterfeit the Company's email messages, without any exception.
 - (2.5) Do not use the Company's email to release the Company's news or other information to third parties, except authorised personnel in charge of the Company's public relations or promotions.

- (2.6) Do not download any file type without permission. And do not use network for entertainment to prevent decline of data reception-transmission effectiveness.
- (2.7) Do not use a computer network on offensive purpose which is contrary to the moral order, or aims to leak commercial confidential, or express personal comments.
- (2.8) The use of a computer or personal communication devices to be connected to the Company's network must receive a prior approval from CEO.
- (2.9) Must set a password every time when using computers in the company or outside on the Company's notebooks for safety of work performance. The password must be kept secret and should be changed at regular intervals, at least every three months.
- (2.10) Do not install a programme that can detect or capture all network traffic unless it has been authorised by CEO as a special case, in order to comply with the laws and other relevant regulations.
- (2.11) Must maintain good conditions of computers and other equipment in one's responsibility and take care to use the facilities properly.
- (3) The Company will monitor, follow-up, investigate, and control the employees' use of the IT systems. The practice aims to detect for doubtful or improper usage or potential to cause damage to the company, in order to protect the security of the Company's information systems.
- (4) If the Company finds that an employee has violated or failed to comply with the company's regulations and order, the violator will be considered having disciplinary punishment, and/or be punished by law as appropriate on a case by case basis.

(g) Guidelines on procurement

The Company set up a purchasing unit to operate various procurement in order to meet requirements of all offices, and to meet the required quality standards. The procedures and guidelines for procurement are as follows:

- (1) All procurements mainly focuses on the benefits and quality for the Company's operations. Supplies must meet the requirements of quality, price, quantities, and service with fast delivery. Every procurement must be made considerately on the basis of the Company's quality policy, safety, health and environmental schemes.
- (2) Employees who perform procurement have to plan well in advance to avoid purchasing in a rush mode without justifiable reasons.
- (3) The Company will not take advantage of its suppliers. It must take into account the benefits and damages that may occur in the company's image, reputation and character, in the eyes of outsiders.
- (4) Employees who are in charge must deliver a complete, clear, an accurate information to suppliers in a disclosure way, and provide equal opportunities among suppliers.
- (5) Employees should conduct hearing. Suggestions or complaints from suppliers would be essential for rectifying the problems to accomplish even more operational efficiency.
- (6) Employees in charge must keep information received from bidders or contestants confidential, and do not disclose to any other competitor.
- (7) Bids invited for all suppliers must be done equally in fair competition among traders.

- (8) Negotiation must be performed on the basis of business relationships with fair and open procedures for both parties up with proven references.
- (9) Maintain relationships with all business suppliers equally. Do not claim assets or other benefits, both directly and indirectly from any supplier unexceptionally whatsoever.
- (10) Management and authorised bodies must exercise discretion in procurement by acting a consultant, giving advices, and accept comment feedback from employees in charge with neutral and fair manner.
- (11) Management and authorized bodies must monitor and take care of procurement to ensure that all precedures are in compliance with the code of conduct in this regard stringently. Any violation found, the authority must conduct an investigation and consider providing a disciplinary punishment to the violator in compliance with the Company's procedure.
- (12) The Company encourages the procurement of Thai operators and/or the company's affiliates by taking into account that quality and the Company's benefits are an important criterion.
- (13) Procurement must be conducted systemically on an accurate technical basis, with a rigid control. The practice must be adjustable to comply with consistent changes in business trends

(h) Guidelines on safety, vocational health and environment

The Company is committed to prevention of accidents and environmental pollution by complying with laws and regulations related. Improvement has been continually performed to provide safety and environmental hygiene for all employees.

'Five S' Policy

'Five S' has been considered part of the Company's operation. Employees at all levels are involved. Supervisors are responsible for activities and supervision to promote an efficient and productive operation. Consistent improvement has been conducted to provide safety and a better working environment, as well as to raise awareness of great performance for greater operational effectiveness.

The Company's guidelines for safety, vocational health, and environmental hygiene are as follows:

- (1) Management and all employees must operate within the Quality Management System relating to Safety, Occupational Health, and Environment, in order to enhance the operational efficiency and effectiveness that would value the company's business.
- (2) Management and staff must adhere to and operate in accordance with the laws, policies, regulations and standards relating to quality, safety, vocational health and environment respectfully.
- (3) The Company will carry out all the way to control and prevent different forms of losses caused by fire, accidents, injury or illness from working, or any loss or damage to property. It is considered responsibility of management and employees to report incidents concerning a breach of security system, improper working practices, and error occurrence as set in the functional procedures. All staff must take care of maintaining a safe working environment and follow the procedures and regulations set by the Company earnestly.

- (4) The Company will provide a plan on emergency control and prevention for all operating areas. The organisation's emergency and crisis management plans focuses on preparation for and managing emergency incidents that may occur. Arrangement to resolve any crisis that could cause business interruption, damage the corporate fame and image is also deemed necessary.
- (5) The Company will launch PR campaigns to create awareness and understanding, and share information among employees and stakeholders involved. This effort aims to build awareness of the policy, regulatory procedures, and precautions in all aspects, including quality, safety, vocational health and environment, as well as how to act in response to emergency without causing harm to health, property and the environment.
- (6) The Company will promote awareness of the precept concerning quality, safety, vocational health and environment among employees and encourage them to hold these basis in their daily life practices.
- (7) The Company will train employees and expand the roles and responsibilities of supervisors in operational control to secure better safety system and consistent implementation of safety rules.
- (8) The Company will improve the safety and environmental measures to meet an international standard for quality of life of working people, and for a better environment.
- (9) The Company is involved extensively in social responsibility in terms of quality, safety, vocational health and environment. In recognition of the importance of the environment and the safety of stakeholders and other people involved, the Company works to maximise the use of natural resources, as well as promote social activities to protect the environment and improve the quality of life in the community based on the principles of sustainable development.

(i) Guidelines on reporting fraud or breach of law.

The Company has defined measures and procedures for the management to report to the Board of Directors and Audit Committee immediately in an occurrence of fraud or suspected fraud or a breach of laws, or other unusual actions, which may significantly affect the reputation and financial position of the company. The fraudulence includes:

- (1) Practices that cause conflicts of interest
- (2) Fraud or irregularity or a significant deficiency in internal control.
- (3) Violation of the regulations of the Securities and Exchange Commission and The Security Exchange of Thailand and other laws related to the Company's business.

The Board of Directors is responsible to remedy the situation and eliminate any impact caused by the incident immediately, including seeking measures to prevent such incidents. The Company urges employees to abide the laws and follow the guidance given:

- (1) Employees at all levels are required to comply with regulations and legal requirements relating in the arrangement of and recording the company's accounts and financial documents with accuracy, completion and perfection.

- (2) All employees must adhere to integrity and honesty value. Account booking and data filing must be accomplished honestly without bias. This value includes refusal to activities that are illegal or unethical, too.

(j) Guidelines on prevention of the use of inside information

The Company has defined measures and guidelines to prevent exploitation of the company's inside information that has not been disclosed to the public for personal or other individual's own benefit.

- (1) The Company has notified the Board of Directors and other executives to be aware of the obligation to report their shareholdings in the company of their spouse, minor children, and persons holding securities by proxy. They must as well report changes in shareholdings to Securities and Exchange Commission and be noticed of penalties defined by laws under the Securities and Securities Exchange Act.
- (2) "Directors" means the directors as defined by the end of this chapter and shall include persons holding management positions in accounting, finance, or a manager level and above or equivalent.
- (3) The Company prohibits directors, executives, managers, and employees who have access to the company's inside information from disclosing the internal confidences to third parties or the personnel who are not involved, and prohibits trading in securities of the company during one month before the launch of the company's financial statements to the public.
- (4) The Company prohibits directors, executives, managers, and employees from exploiting the Company's inside information that's not revealed publicly and is essential on changes of the company's share price, to seek personal gain and/or for trading of the company's securities. The company will proceed legal action against offenders and will provide disciplinary punishment to the violators reasonably and on case by case basis.
- (5) In case that directors, executives, managers, or employees are charged with a criminal offense under the Securities and Exchange laws, the Company will give the offenders severe penalties, either singly or as a combination.
 - (a) Cut salaries or compensation.
 - (b) Lay off, fired or dismissed from the positions of executive, manager, or employee regarding that the offenders are deliberately causing damage to the company. If the offender is a director, the company will propose the case to the meeting of the company's shareholders.
 - (c) Inform the offences to the SET and/or Office of the Securities and Exchange Commission.
 - (d) Notify police officers to precede the prosecution.
 - (e) Take any other action following the resolution set by the Board of Directors or the meeting of shareholders.

The Company expects its directors, executives and employees at all levels honestly report to their superiors on performances which are, or suspected, contrary to the principles of the use of the Company's inside information in for one's own benefit. It is the responsibility of those superiors to monitor and guide subordinates to utilise the internal data in compliance with the principles correctly.

(k) Guidelines on confidentiality

The Company has taken measures and guidelines on the treatment of trade secrets which are significant to the company's business and can not be disclosed to the public.

Confidentiality of the company

(1) Board of Directors, management and employees are required to maintain the confidentiality of information and documents that can not be disclosed and/or trade secrets, including the invention of the formula, which is the right of the company exclusively.

(2) Directors, executive officers, employees, and other staff members of the company will not disclose confidential information and documents, or trade secrets, for the other two years after their resignation.

(3) The management and employees must know the procedures and practices concerning information security, and must follow the rules strictly to prevent confidential information to be accidentally exposed.

Classification of secret information

(1) Trade secrets of the company must be concealed from leaking. Classification was set based on how important the data is, such as disclosable information, concealed information, confidential information, and top secret.

(2) The shared usage of the inside information must be practiced within the framework of duties and responsibilities of staff members as assigned only.

Providing information to third parties

(1) Only directors or executive members who are assigned by the company are able to give approval for the information to be disclosed to the public.

(2) Disclosure to other joint investors must be approved by a joint venture as well.

(3) To meet the requirements of SET and/or other relevant laws governing the disclosure of listed companies, the company has determined that individuals who desire information from the company can approach the Company Secretary to obtain the information.

Commenting on outsiders

Typically, executives and employees of the company must not disclose or give opinions to outside individuals. The management and employees should ask oneself whether it is their duty to answer questions from outsiders or not. If not, all are advised to refuse to express views or comments with courtesy and give advice to directly contact agencies as mentioned above.

Committees

(a) Audit Committee

Composition and properties of Audit Committee

- The Company's Audit Committee consists of at least three independent directors. Each has a term of three years. When some directors complete their term or are unable to hold the office until the end of the term, making the number of directors in the Audit Committee less than a certain amount required by the Board of Directors, the meeting shareholders must appoint new directors to fully complete the Committee. This has to be done immediately or not later than three months from the date of member incomplete to ensure continuity of operations. The Audit Committee shall have the following composition and properties.

(1) Must be appointed by the Company's Board of Directors or shareholders. In the event of the nomination of directors, the company must disclose the nominees' names, credentials, personal data, qualifications, and evidence of independence status by stating in the invitation of the meeting to seek approval and appointment of nominees to become directors of the Audit Committee.

(2) Must be independent directors with limit of authority as to be mentioned below :

(2.1) Not a director appointed by the Board of Directors to make decision on the operations of the company, subsidiaries, affiliates, and ventures similar to subsidiary. This director must not be one of the company's major shareholders or an authorised body to control the company or must not represent entities that have conflicts of interests. He/She can make a decision only in the form of a tribunal / Collective Decision.

(2.2) Not a director of a parent company, subsidiary, or venture similar to subsidiary which is listed as a public company.

(3) Must function in a manner as set forth by the Stock Exchange of Thailand under the statement of features and scope of operation of the audit committee.

(4) Must be knowledgeable and experienced enough to serve the Audit Committee. There must be at least one director in the committee who can review the reliability of financial statements. The company encourages the committee members to be trained and enhance their capability consistently to keep pace with the changes and maximise the overall performance of the Audit Committee.

(5) Audit Committee shall appoint a secretary and an assistant secretary of the Audit Committee. Responsibilities of the secretary and its assistant include arrangement of meetings of the Audit Committee, overseeing activities of the Audit Committee, as well as coordinating in submission of periodical reports to the Board of Directors.

The Company's Audit Committee comprises of 3 members. Mr. Suphachai Kaewfueng is the Secretary of the Audit Committee.

Name-Surname	Position	No. of attendance / No. of meeting in 2018
1. Mr. Padetpai Meekun-iam	Audit Committee Chairman	9/9
2. Mr. Virach Aphimeteetamrong*	Director	9/9
3. Mr. Satit Chanchaowakun	Director	9/9

Remark : * A director who is competent and experienced enough to review the reliability of the company's financial statements. Mr. Virach Aphimeteetamrong is a licensed auditor, and works as chairman of an audit firm, namely Dr. Virat and Associates Co., Ltd. He holds a bachelor's degree and master's degree in accounting and a master's degree and doctorate in business administration and finance

Scope of duties and authority of Audit Committee

• The Audit Committee of the Company has the scope of duties and responsibilities to the Board of Directors on the following matters:

(1) To review that the Company's financial reports are correct and disclosure of information are adequate.

(2) To review that the Company has established appropriate and effective internal control system and internal audit system, and observe the independence of the internal audit unit, as well as to approve the appointment, transfer and dismissal of the head of the internal audit unit or any other units responsible for the internal audit.

(3) To review that the Company abides by the law and regulations of the Securities and Exchange Commission and/or the regulations of the Stock Exchange of Thailand, or any relevant laws governing the Company's business.

(4) To review that the Company abides by the policy and guidelines of the Company's Anti-Corruption measure.

(5) To select and propose for appointment of the Company's auditor and the audit fee, as well as reappointment or removal of continuing auditor based on the trustworthiness, adequacy of the resources and audit work amount by the audit firm, as well as work experience of the personnel assigned to perform the financial audit of the Company; and to attend a meeting with the auditor without the presence of the management at least once a year.

(6) To consider the connected transactions or transactions that may involve conflict of interest and acquisition or disposition of assets in accordance with the laws and regulations of the Securities and Exchange Commission and/or the regulations of the Stock Exchange of Thailand to ensure that such transactions are appropriate and most beneficial to the Company.

(7) To review that the Company has established appropriate and effective Risk Management System.

(8) To review and consent to internal audit plan and procedure of the Internal Audit Department to be fully effective throughout the Company and its subsidiaries or companies within the same group.

(9) To review and proceed that the executives or management responsibility has established a system or procedure for receiving petitions or complaints including appropriate rectification and supervision over each petition or complaint case individually.

(10) To annually assess performance of the Audit Committee and report the assessment results to the Company's Board of Directors for acknowledgment and consideration at least once a year.

(11) To prepare the Report of the Audit Committee over the past year and disclose the report in the Company's Annual Registration Statements (Form 56-1) and the Annual Report (Form 56-2). The Report of the Audit Committee must be signed by the Chairman of the Audit Committee and must at least contain the following information.

- (A) Opinions concerning with the correctness, completeness and trustworthiness of the financial reports of the Company.
- (B) Opinions concerning with the adequacy of the Company's internal control system.
- (C) Opinions concerning with the Company's compliance with the laws and regulations of the Securities and Exchange Commission and/or regulations of the Stock Exchange of Thailand, or any relevant laws governing the Company's business.
- (D) Opinions concerning with the appropriateness of the auditor.
- (E) Opinions concerning with the connected transactions or transactions that may involve conflict of interest and acquisition or disposition of assets as stipulated by the laws.
- (F) The number of the Audit Committee's Meetings and attendance record for each of the Audit Committee Members each year.
- (G) Opinions or overall observation that the Audit Committee has received by performing according to the Charter as established by the Board of Directors.
- (H) Other reports which should be acknowledged by the shareholders and general investors under the duties and responsibilities as assigned by the Board of Directors of the Company.

(12) To perform other activities as delegated by the Company's Board of Directors with consent from the Audit Committee considering case-by-case.

(13) To periodically present the Report of the Audit Committee to the Company's Board of Directors for at least once every quarter.

The Audit Committee is responsible to the Board of Directors directly. The Board still has responsibility for the operations of the company and to outsiders.

In the event of a change in the scope of the Audit Committee's duties, the Board has to inform the resolution leading to the change and make lists of names and new scope of duties and responsibilities of the committee in a format required by the SET. The report must be delivered to the SET within three days from the date of such changes, in accordance with the requirements of the SET on the report sent through the electronic media.

- Within the duties performed by the Audit Committee, should any of the following transactions or actions be found or suspected to have significant impact to the Company's financial status and operating results, the Audit Committee shall report to the Company's Board of Directors so that the matter may be resolved within the time period that the Audit Committee deem appropriate.

- (1) Transaction having conflict of interest

- (2) Illegal conduct or irregularity or significant deficiency in the internal control system.

- (3) Violation of laws relating to the Securities and Exchange, regulations of the Stock Exchange of Thailand or laws relating to Company's business. Should the Company's Board of Directors or executives did not resolve the matter within the established time period, any one of the Audit Committee members may report of the said transaction or action to the Securities and Exchange Commission (SEC) or the Stock Exchange of Thailand.

- To fulfill the duties of the Audit Committee. The Audit Committee shall have the following powers:

- (1) Authority in relation to management

- Audit Committee has the power to invite management. Managers / Heads or employees of related companies attend the meeting to make comments or submit relevant and necessary documents.

- (2) Authority in relation to the internal auditor

- (A) It is required that the understanding be aligned between the auditors, Board of Directors and internal audit.

- (B) To approve the appointment, removal, transfer, dismissal and consideration of the merits of the head of the internal audit unit.

- (C) Guarantee the independence of the internal auditor.

- (D) The performance of the internal audit function is under the direct supervision and control of the Audit Committee. (Performance of internal audit units Must have supervision and control. In each year, the internal audit unit will have to work out what to do. Then submit to the Audit Committee for approval or approval. The order for the internal audit unit to perform the duties of the audit plan. Must be under the supervision of management or Chief Executive Officer. Because the required audit report will need to be corrected immediately. So that the management or chief executive can issue corrective orders in time).

(3) Authority in relation to the auditor.

(A) Review and evaluate the performance of the auditor.

(B) Propose the list of auditors to the Board of Directors. Along with the Annual audit fee. To obtain the appointment from the general meeting of shareholders, and to review and evaluate the performance of the auditor to propose the appointment of the former auditor or to dismiss the former auditor.

(C) Determine the rate of service pay and other consultants that the auditors serve.

(D) Upon receipt of facts from the auditor regarding suspected circumstances, the Chief Executive Officer or the person responsible for the conduct of the offense has committed an offense. The Audit Committee shall report the results of the preliminary examination to the SEC and the auditor within 30 days from the date of receipt of the report from the auditor. In the event that the Audit Committee fails to act as the auditor stated in the preceding paragraph. The auditor shall inform the SEC Office.

(4) Other powers.

Audit Committee has the power to inspect relevant persons and matters within the scope of authority and responsibility of the Audit Committee. It has the authority to hire specialists to consult and discuss opinions as deemed appropriate and appropriate by the Audit Committee. The units shall perform their roles and duties in relation to the Audit Committee as set out in the Attachment to the Charter. This is part of this charter.

(b) Risk Management Committee

Composition and properties of Risk Management Committee.

- Risk Management Committee comprises executives from all departments of the company. The committee's members are selected from employees in the manager level, with a number of at least one member from one department. The committee's members must have the following features:

(1) A person who is proficient and experienced with good understanding of features, functions and responsibilities as a member of the Risk Management Committee.

(2) Committee's members must be able to devote sufficient time to operate and should be trained and to enhance their knowledge consistently, in fields related to the implementation of the Risk Management Committee. This will help them to keep pace with the changes and enhance the efficiency of the committee.

(3) Risk Management Committee, as well as its Chairman, has a term lasting for one year. Committee's members, who are retired by rotation, may be re-appointed for another term. Unless retired by then, the members of Risk Management Committee will be retired on:

(a) Death

(b) Termination of an employee of the company

(c) Board of Directors vote for them to leave or be removed

(d) Resignation

(e) In case that a committee's member will resign before the end of the tenure, that member shall notify the company 1 (one) month in advance, along with reasons as for the Board of Directors will appoint another qualified person to replace the resigning member.

(4) Board of Directors or the Risk Management Committee will appoint suitable persons to be Secretary and Assistant Secretary of the committee. Both positions are responsible to arrange meetings, prepare agendas and documents and deliver all materials to all committee's members at least seven days before the meeting. The Risk Management Committee will have time to review the papers carefully and may request additional information prior to the meeting. The Secretary and its Assistant shall send the minutes to all members of the Risk Management Committee within seven days after each meeting. Certification of the minutes will be carried out in the next meeting of the committee. In addition, the Secretary is responsible for preparing information to report to the company's Board of Directors and Audit Committee.

(5) Secretary of the committee has not a right to vote unless the Secretary is a member of the committee. The right to vote is regarded as the right of a committee's member.

Risk Management Committee appointed by the Board of Directors is composed of following members:

Name - Surname	Position	No. of attendance / No. of meeting in 2018
1. Mr.Satit Chanchaowakun	Risk Management Chairman	4/4
2. Mr.Somchai Lovisuth	Director	4/4
3. Mr.Somtawin Boonbanyen	Director	4/4
4. Miss Kanyaphat Chinantdej	Director	4/4
5. Mrs.Somrudee Suwannaroop	Director	4/4

Mr. Suphachai Kaewfueng is the Secretary of the Committee.

Duties and Responsibilities of Risk Management Committee.

- Risk Management Committee plays an important role with duties as assigned by the Board of Directors as follows.
 - (1) Define a policy and operational framework to operate risk management of the Company, as well as giving advice to the Board of Directors and the Management regarding the organization's risk management, which must cover 9 categories of risk including Business risk, Production risk, Operation risk, SHE risk, Climate Change & Hazard Risk, Financial Risk, Compliance Risk, Intangible Assets Risk, and Corruption & Fraud Risk.
 - (2) Monitor and support the organisation's overall risk management (Enterprise Wide Risk Management). Emphasising the importance of risks (Risk Awareness), any operation concerned risk management must bring each factor into consideration before making a decision on what resources and processes to be properly use.
 - (3) Analyse and evaluate risks and potentials that may occur, including impact to both internal and external operation of the company.
 - (4) Present a work plan and report on the adequacy of the implementation following the roadmap and the risk control system to the Audit Committee and The Board of Directors at least once every quarter.
 - (5) Acts as a hub to oversee significant risks.
 - (6) Perform other duties as assigned by the Board of Directors.
 - (7) Risk Management Committee may consult independent experts if necessary at the expense of the company, subject to approval by the Board before proceeding.

- (8) Risk Management Committee is required to hold a meeting, at least once every quarter. The Chairman or members with a number of more than one half of the committee may call an additional meeting as it deems suitable and proper.
- (9) To be considered a quorum, each meeting of Risk Management Committee must consist of more than one half of its members attending the meeting by themselves. If the Chairman is not present at the meeting, the committee shall select one of its directors to act as chairman of the meeting.
- (10) Voting at the meeting shall be by a majority vote of the meeting. Chairman of the Risk Management Committee has not right of casting vote. Opinions of committee's directors both who agree and disagree to the voting issues must be recorded in the minutes as well.
- (11) Any director of the Risk Management Committee has a personal interest in a certain matter or an interest in any matter which is brought into the consideration of the meeting for vote, the director cannot cast his/her vote.
- (12) Risk Management Committee has an authority to invite those involved or who is seen suitable to attend the meeting or to explain the matter involved.

(c) Nomination and Remuneration Committee

Board of Directors has a resolution in the meeting of the Board at 12/2015 dated 17 December 2015, making approval for the appointment of the Nomination and Remuneration Committee (“NRC”) which shall have qualifications, duties and responsibilities as stipulated in the Charter of the Nomination and Remuneration Committee to start functioning on January 1, 2016 onwards.

NRC refers to the Nomination and Remuneration Committee of Thailand Agro Energy public Company Limited, Mrs.Somrudee Suwannaroop is the Secretary of the Committee. The NRC held 4 meetings in year 2018, which can be summarized as follows:

Name - Surname	Position	No. of attendance / No. of meeting in 2018
1. Mr.Kraisir Sirirungsi	Chairman of NRC	4/4
2. Mr.Satit Chanchaowakun	Director	3/4
3. Mr.Somchai Lovisuth	Director	4/4
4. Mr.Srihasak Arirachakaran	Director	4/4

Composition and properties of the Nomination and Remuneration Committee

- The Stock Exchange of Thailand has proposed principles on good corporate governance for listed companies that: “Apart from the Audit Committee that shall be provided as required, the Board of Directors of listed companies should consider providing Committees for good corporate governance”. Thus, the Board of Directors appointed a new sub-committee, recognised as Nomination and Remuneration Committee.

The composition and properties of the Nomination and Remuneration Committee, as stated in the charter, include:

- (1) NRC consists of at least 3 (three) directors and one, at least, must be an independent director who is not an employee or executive of the company.
- (2) When some directors complete their term or are unable to hold the office until the end of the term, making the number of NRC directors less than three, the Board of Directors must appoint new directors immediately or later than 3 (three) months from the date of member incompleteness to ensure continuity of NRC's operations
- (3) The meeting of NRC will consider selection and appointment of one of NRC's directors to become the committee's Chairman.
- (4) NRC will appoint an appropriate individual to hold the office of its Secretary. The HR manager will function as the Assistant Secretary. Both positions are responsible for arrangement of the NRC meeting, as well as being coordinator to present reports to the Board of Directors and other agencies involved (if any).
- (5) NRC's Secretary and Assistant Secretary are dutiful to attend the NRC meeting, but has not right to vote in any way or in any case.
- (6) NRC's directors must devote adequate time for the committee's operations and should be trained and strengthen their proficiency consistently in matters related to their duties and responsibilities, in order to keep pace with the changes and continuously enhance the NRC's effectiveness.
- (7) NRC Directors and Chairman have an office term of 3 (three) years. Upon the expiration of the term, the retired members may be reappointed to the office for another term.
- (8) Apart from retiring by rotation, NRC Directors will be retired on:
 - (a) death;
 - (b) Resignation
 - (c) Termination of Directors.
 - (d) The Board of Directors vote for them to leave or be removed.
 - (e) disqualified or prohibited under this charter.

In case that the a position of the committee is vacant, due to reasons other than retirement by rotation, the Board may appoint a qualified person to be an NRC member to replace the retired person. The new member will be in the position for the duration equal to the remaining time in term of the replaced one.

Duties and responsibilities of Nomination and Remuneration Committee.

- NRC has major duties and responsibilities as assigned by the Board of Directors, according to the Charter, as follows:

(a) Duties and responsibilities in relation to the nomination of directors and executives.

- (1) Consider the nomination process for directors to replace ones who are retiring by rotation or proposed for the vacant position and present the proposal to the Board of Directors for consideration to advance into Meeting of Shareholders to consider for appointment.
- (2) Consider and nominate suitable candidates to be appointed as members of sub-committees of the Board of Directors, in case that the position is vacant.
- (3) Consider the nomination of Chief Executive Officer or Managing Director in case of such a position is vacant for submission to the Board's consideration.

- (4) Propose mechanism to evaluate performance of the Board of Directors, CEO, or Managing Director and senior executives and follow-up the assessment to inform the Board of Directors to acknowledge and consider.
- (5) Assess the independence of directors on duty and propose ways to improve to the Board of Directors.
- (6) Consider the structure and properties of people who are elected as directors of the Board and sub-committees, by taking into account the diversity of skills, experience and expertise that are useful to the company and propose to the Board to consider or undertake amendments.
- (7) Determine the appropriateness of the qualifications of independent directors and propose ways of improvement to the Board.
- (8) Define and plan the succession process of the CEO and senior management to propose to the Board of Directors for consideration to advance the matter into the Meeting of Shareholders to approve on an individual basis.

(b) Duties and responsibilities in respect of the remuneration

- (1) Propose ways and means to pay remunerations to members of the Board of Directors and sub-committees appointed by the Board of Directors.
- (2) Propose policy on remuneration to the CEO or managing director and chief executive, in accordance with the results of the company's operations and determine mechanism for actual performance evaluation to (KEY PERFORMANCE INDICATOR) presented before the Board to seek approval.
- (3) Consider increase or changes in the budgets or salaries, wages and the money given as annual awards to employees below the executive level, in accordance with the results of the company's operations. It also determine mechanism for actual performance evaluation (KEY PERFORMANCE INDICATOR) before the Board of Directors for approval.
- (4) Propose suggestion on the structure of salaries, wages, benefits, and other welfares for directors, management, and employees in the forms of both monetary and non-monetary.
- (5) Consider offering of new securities. (Or warrants to purchase shares) to certain directors and employees prior to presentation to the Board of Directors to seek approval.

(c) Duties and responsibilities in general

- (1) Report on NRT's operations to the Board of Directors, at least once a year.
- (2) Has authority to hire consultants or specialists to consult and discuss or make comments as it deems appropriate and reasonable. The company is responsible for all costs incurred.
- (3) Has authority to invite executives and all those involved to attend a meeting or to submit every or all relevant documents as requested.
- (4) Perform any other duties as delegated by The Board of Directors.
- (5) Hold a meeting of NRC as its Chairman deems appropriate. The Secretary will submit documents for the meeting to the NRC Directors and other participants, at least 7 (seven) days before the meeting to allow time for the participants to consider or call for further information.

In addition, NRC Directors may call a meeting of NRC for issues within the committee's scope of duties and responsibilities as it deems appropriate. The Secretary will operate as mentioned in the preceding paragraph.

- (6) NRC Directors, who are ones of stakeholders in any matter that is under the committee's consideration, must not comment and vote on that matter. Names of those directors and their interests must be noted clearly in the meeting documentation.
- (7) To be considered a quorum, each NRC meeting must consist of more than one half of the committee's members.
- (8) Voting at the NRC meeting must be by majority vote of the meeting. The committee's Chairman has not right to cast arbitrary vote as . Opinions of directors both who vote for and con must be recorded in minutes of the meeting.

(d) The Corporate Governance Committee (“CG Committee”)

The Corporate Governance Committee (“CG Committee”) comprise of 1 (one) chairman and at least 2 (two) members, include any staffs or executives that was agreed by the CG Committee members to join the committee. The CG Committee shall appoint a suitable person as Secretary. Mrs. Prapatsorn Kantawong is the Secretary of CG Committee. The namelist of the CG Committee members that was appointed by the Board of Directors are as follows.

Name - Surname	Position	No. of attendance / No. of meeting in 2018
1. Mr.Anun Louharanoo	Chairman of CG Committee	1/1
2. Mrs. Somrudee Suwannaroop	Director	1/1
3. Ms.Kanyaphat Chinantdej	Director	1/1
4. Mr. Somtawin Boonbanyen	Director	1/1

Composition and Qualification of CG Committee

(1) Office term of CG Committee

(A) The CG Committee members has a three-year term of office each. The member of CG Committee who is retired by rotation maybe re-appointed.

(B) In event that the term of the CG Committee has ended or it can no longer serve until the term ends, resulting in a lesser number of members as specified in (1) above, the Board of Directors shall nominate and appoint new CG Committee member(s) to complete the CG committee immediately or at least within three months after the date with incomplete members as described in (1) above.

(2) The Corporate Governance Committee of which members are executives whom already receive monthly salary and other benefits as the Company's employees; therefore, there are no additional remunerations.

Authorities, Duties and Responsibilities of the CG Committee

(1) To consider and propose to the Board of Directors to determine the policy, rule and practice guidelines for activities in accordance with corporate governance principles.

(2) To prepare the Corporate Governance Handbook to be adhered and followed by the directors, executives and employees at every level, which must be regarded as important duties to operate in accordance with corporate governance principles and must not be neglected by everyone.

(3) To monitor, improve and promote effective corporate governance culture and practice within the organization.

(4) To consider forms of self-assessment of the performance of the Board of Directors and subcommittees including offering opinions to propose to the Board of Directors for consideration on a yearly basis.

(5) Other Duties and Responsibilities.

(a) To regularly report the operation of the CG Committee to the Board of Directors at least once every year for disclosure in the Annual Registration Statements (Form 56-1) and Annual Reports (Form 56-2) in accordance with the good corporate governance.

(b) To have authority to hire consultants or experts to provide advice and/or opinions as deemed appropriate on a case-by-case basis. The Company shall be responsible for the incurred expenses.

(c) To have authority to invite executives and/or relevant persons of any level for briefing meetings or submission of related documents.

(d) To perform any other tasks as assigned by the Board of Directors on a case-by-case basis.

Nomination of Directors and Chief Executive Officer

Selection of persons to be appointed as directors of the company in 2018 was made through the shareholders' meeting. Board of Directors considered nominees based on experience, knowledge, and qualifications required by laws, by recruiting of the company's NRC to select candidates for such positions. Then, the meeting of shareholders elected directors, in accordance with the rules and procedures set forth in the articles of the company.

Appointment of Board of Directors

Composition, nomination, appointment, removal or termination of office of directors are set out in the company's articles, which can be summarised as follows:

(1) The Board of Directors shall consist of not less than five directors, and not less than one-half of the directors must be resident in the Kingdom. All must be qualified under the laws.

(2) The meeting of shareholders elect directors, according to the rules and procedures below.

(a) A shareholder has one vote for each share held.

(b) Each shareholder can vote to elect one or several persons to be directors, in the event of electing several directors, a shareholder can offer his/her votes no matter how many to any or several candidates.

(c) A candidate who receives the highest votes in descending order are elected as directors of the Board of Directors in a number that shall have a casting vote at that meeting. If the number of persons, elected in descending order having tied with each other, larger than the number of directors appointed or elected at that time, the Chairman must cast the arbitrary vote.

(3) One-third of the current directors in the Board of Directors must be retired in the annual general meeting of shareholders every year. If the number cannot be divided into three parts, consider using the number nearest to one third. Use raffle drawing to decide which directors to be retired in the first and second years after the company's being listed. For the subsequent years, the directors who are in office for the longest time shall retire. Directors retired by rotation may be reelected to the post one more time.

(4) Any director who wish to resign from the post shall submit his/her resignation to the company. The resignation is effective from the date of resignation arrives to the company.

(5) In case that the a position in the Board is vacant, due to reasons other than retirement by rotation, the Board may appoint a qualified person, who has not prohibition under the laws concerning public companies, and/or regulations of the Securities and the SET, to be a director to replace the retired person in the next Board meeting. If time in the term of the vacant position is less than two months, the new member will be in the position for the duration equal to the remaining time in the term of the replaced one.

Resolutions of the Board shall be made by votes of not less than three-fourths of the remaining directors.

(6) The meeting of shareholders may vote for any director to retire from office before the expiration of the term, by the vote of not less than three-fourths of the shareholders present at the meeting and entitled to vote, and holding shares amounting to not less than one-half of the shares held by the shareholders present at the meeting and entitled to vote.

Composition and appointment of Independent Directors

Board of Directors will jointly consider the initial properties of persons to be appointed as independent directors, based on qualifications and disqualification of directors as defined in the public company act, laws relating to securities and the SET and notification of the Capital Market Commission, including relevant rules, regulations and/or regulations issued by the Board of Directors. The Board also consider selection of independent panel from experts who are experienced and other appropriate qualifications. The Board will propose the nominees into the meeting of shareholders' consideration for appointment as independent directors. It is the company's policy to appoin at least one third of the total membership to be independent directors of which number must not less than three persons.

Qualifications of Independent Directors

- (1) Hold no more than 1 (one) per cent of the shares with voting rights of the company, its subsidiaries, and affiliates. They are not ones of the major shareholders or controlling shareholders of the company. Their reports on shareholding must be inclusive of the shares held by related persons of the independent directors as well.
- (2) Not or never be a director joining in the company's administration of employees and workers. They must not be consultants who receive a regular salary or controlling shareholders of the company, its subsidiaries, affiliates, ventures similar to subsidiary, parent company, or major shareholder or controlling person of the company. They are qualified if being clear from the foregoing relationships not less than two years before being appointed. The prohibition does not include the case of independent directors was a government official or consultant of a government agency which is a major shareholder or controlling person of the company.
- (3) Have blood ties or by legal registration, in aspect of father, mother, spouse, siblings, offspring. They must not be spouses of the children of the company's executives, major shareholders, controlling shareholders, or a person who has been nominated as executive or controlling person of the company or its subsidiaries.

- (4) Not have or never have had business relationship with the company, its subsidiaries, affiliates, major shareholders, or controlling persons in a manner that may impede their independent judgment. They must not be or have never been a significant shareholder or controlling shareholders of the businesses of which owners have business relationships with the company, its subsidiaries, affiliates, major shareholders or controlling shareholders. They become qualified if being clear from the foregoing relationships not less than two years before being appointed.

Not be or never have been a significant shareholder or controlling shareholders of the businesses of which owners have business relationships with the company, its subsidiaries, affiliates, major shareholders, or controlling shareholders. They become qualified if being clear from the foregoing relationships not less than two years before being appointed. The business relationships mentioned above include usual commercial transaction, rental or lease of real estates, provisions concerning assets or services or offering or receiving financial assistance with obtaining loans or guarantees to assets pledged as collateral for liabilities. Prohibition also covers other similar circumstances, which make the company or its contract parties liable for debt payment amounting at least 3 (three) per cent of the net tangible assets of the company, or at least 20 (twenty) million baht, whichever is lower. The calculation of such indebtedness shall follow the method used in calculating the value of the connected transaction relatively in pursuance of the Notification of The SET Board of Governors regarding Disclosure of Information and Operations of Listed Companies Concerning the Connected Transactions. However, such debt must be considered a sum in the total debt incurred during a year before a business relationship with the person exists.

- (5) Not or never have been an auditor of the company, its subsidiaries, affiliates, major shareholders, or Controlling shareholders and a significant shareholder. They must not be or have never been controlling shareholders or partners of an audit firm of which auditor works for the company, its subsidiaries, affiliates, major shareholders, or controlling person. Exception is provided for the case that has exempted from such properties for not less than two years prior to the appointment.
- (6) Not or never have been provider of any professional service, including serving as legal counsel or financial advisor, whose service fee accounts more than 2 (two) million baht per year from the company, its subsidiaries, affiliates, major shareholders, or controlling shareholders of the company and a significant shareholder. Also, they must not be or have never been controlling shareholders or partners of such service provider firms. Exception is provided for the case that has exempted from such properties for not less than two years prior to the appointment.
- (7) Not or never have been a director appointed as a representative of the company's directors, its major shareholders or shareholders who are related to the major shareholders of the company.

- (8) Do not operate a business with the same nature and in significant competition with the business of the company and its subsidiaries. Also, they must not be a significant partner of a partnership company, or a director, an employee, a salaried consultant. They must not hold more than 1 (one) per cent of the shares with voting rights of any other company operating business which has the same nature and in competition with the business of the company or its subsidiaries.
- (9) Not having any characteristics which make it impossible to provide an independent opinion about the company.

After being appointed as an independent director with qualifications in accordance with (1) to (9) as mentioned above, the independent director may be assigned by the Board of Directors to make a decision in the operational affairs of the company, parent company, subsidiaries, affiliates, ventures similar to subsidiary, major shareholders or controlling person of the company. Any decision must be made in the form of collective decision.

If the person appointed as an independent director has or used to have a business relationship, or offer or used to offer professional service with compensation exceeding the amount determined under paragraph (4) or (6) as mentioned above, he/she will receive a waiver of the prohibition upon the conclusion of the Board to ensure that the appointment of such a person has no impact on the performance and the independence of commentary. Following facts and information must be disclosed in the notice of the General Meeting of Shareholders of which agenda includes the appointment of independent directors.

- (a) Nature of the business relationship or professional service of such persons that are not in accordance with the procedure.
- (b) Reasons and necessity to maintain the appointment of such persons as independent directors
- (c) Conclusion of the Board for the proposal to appoint such persons as independent directors.

Evaluation of the performance of the Board

Board of Directors has set guidelines and provide evaluation of its own performance of the entire Board on an annual basis. Each year, an assessment topic is modified appropriately to the situation of the company. The evaluation will be conducted on four main topics — Structure of the Board, The Company's Strategy and Direction, Monitoring and Evaluation of the Management. Responsibilities and Duties of the Board. The aim is not set to evaluate the performance of any individual director. The evaluation has determined for the assessment operator to identify the strengths and weaknesses and functions that need improvement. The evaluation objectives are as follows:

- (a) To ensure more effectiveness in the function of the Board, resulted from the full awareness of their responsibilities.
- (b) To help improve the relationship between the Board of Directors and management.
- (c) The Board will jointly consider the evaluation result and
- (d) Define guidelines for the improvement of Board's functions in the coming years.

Succession and Development Plans for Directors and Executives

(1) The Board shall take steps to ensure that company has appropriate recruitment and selection systems for staff or employees to assume the duties and responsibilities in key administrative positions at all levels.

(2) The company has senior executives who are secondary to CEO to carry out the work if the CEO is unable to perform his duties.

(3) The company has set following development plans for its directors and management:

(a) The company has a policy to promote and facilitate educational accomplishments among the directors with the ongoing training courses delivered by Thai Institute of Directors Association (IOD) and other courses. This helps to enhance the understanding of director roles and, at the same time, these directors will be fully aware of the company's business nature.

(b) The company continually promotes education among its executives and employees, such as the Company Secretary, audit staff, and accountants, etc. Training courses related to regular work are given to enhance their knowledge and ability to catch up new techniques all the time.

Meeting of the Board of Directors

According to the policy, the company's Board of Directors holds a meeting at least once every three months, with additional meetings to be held as necessary. Each meeting is completed with a clear agenda and the meeting notice sent to those involved seven days in advance. This will help the Board's member have time for study all information prior to meeting. Minutes of the meeting in a hard copy format will be approved by the Board before being filed and ready for the Board and other relevant bodies to check.

Remuneration of Directors and Executives

According to the Public Companies Act B.E. 2535, Article 90, First Paragraph provides that "Prohibits the Company to pay money or assets to its directors except for remuneration compensation as per the regulations of the Company".

The company's Article 30 stipulates that "the directors are entitled to receive remuneration from the company in the form of meeting allowance, pension, bonus payments, or other benefits, in accordance with the regulations or by the consideration of the Meeting of Shareholders. This could be defined as an exact amount, or a criteria, that will be set forth from time to time, or until it is changed. In addition, directors may receive allowances and welfares, according to the company's rules". Herewith, the Board would like to clarify the structure of directors' remuneration in 2015, which consisted of the following items:

Elements of Compensation

(1) Payment for The Board of Directors:

(1.1) Monthly remuneration was paid as a fixed amount every month.

The Chairman received 45,000 baht per month, and the 30,000 baht per month for each director. This format has been used since the 2013 onwards without any changes whatsoever until these days.

(1.2) Annual remuneration, which must be approved by the shareholders' meeting each year, varied according to the Company's operating results of each year. For the past year 2018, the Annual General Meeting of Shareholders Year 2018 resolved to approve the annual remunerations for ten Directors, totaling Baht 2,250,000, using the same basis as every past year by which 1.5 parts are given to the Chairman of the Board at Baht 321,426, Vice Chairman and 9 Directors by which 1 part at Baht 214,286 each person.

(2) Other Committees receive remunerations, in addition to (1), as follows:

(2.1) The Audit Committee members each receive fixed monthly remuneration. The Chairman of the Audit Committee receives Baht 15,000 per month, with the other Audit Committee Members receiving Baht 10,000 per month per person. The above remuneration rates have been used since year 2013 without any changes.

(2.2) The Nomination and Remuneration Committee shall receive compensation by each occasion of attended meeting, 15,000 Baht an attendance for Chairman and 10,000 Baht a attendance for other members. The above remuneration rates have been used since January 1, 2016 without any changes.

(2.3) The Risk Management Committee shall receive compensation by each occasion of attended meeting, 15,000 Baht an attendance for Chairman and 10,000 Baht an attendance for other members. Executives whom already receive monthly salary and other benefits as the Company's employees; therefore, there are no additional remunerations. The above remuneration rates have been used since year 2018 without any changes.

(2.4) The Corporate Governance Committee of which members are all executives whom already receive monthly salary and other benefits as the Company's employees; therefore, there are no additional remunerations.

The Company does not provide any other remuneration or offer any other privileges to the Directors other than what mentioned in (1) and (2) above.

The Company has set remuneration for directors and executives at an appropriate level and rate. The remuneration is sufficient to maintain quality management members without excessive payment and at a level comparable to other companies in the same industry or business. Factors used for consideration include experience, obligations, extent of their roles and responsibilities. In respect of the remuneration of executives, the consideration would adhere to the principles and policies set by the Board of Directors, which is determined by obligations and responsibilities, performance of each executive, and results of the company's operations.

Control of the use of inside information

(1) It is specified for the management to report their shares holding in the company and changes in core holdings to The Securities and Exchange Commission (SEC) under Section 59 of the Securities Exchange Act of B.E. 2535 including provisions for the law to be amended in the future (if any).

The word "executive" means a director, manager or the first four in the executive level lower than manager, or all those serve in the position equivalent to the fourth level. The definition extends to all persons holding management positions, or equivalent, in accounting or finance who are responsible for preparation and submission of reports concerning securities holding of the company, either on its own behalf, spouses, and minor children, to the SEC.

(2) Prohibit directors, executives, managers and employees who have access to inside information of the company to disclose materials as such to third party or other inapposite personnel. Prohibition also includes trading in securities of the company during the first month of the previous financial statement prior to publicising.

(3) Prohibit directors, executives, managers and employees to exploit the company's inside information, which has not been publicised and is substantial for changes of the company's stock price, for personal gain or for purchasing the company's securities. Any violation of the above provisions, the company will take legal proceedings and punish the guilty individually, in accordance with the cause and effect of the incident on a case by case basis.

(4) In the case of executives, managers and employees conduct a criminal offense under the laws relating to securities and the SET, the company will place a heavy punishment, either singly or in combination as follows:

- (a) Cut salaries or wages, compensation, and other benefits.
- (b) Fired or laid off from being a director, executive, manager, or employee since the action is intentionally causing damage to the company. If the offender is one of the Board's member, the company must raise the issue in the Meeting of Shareholders to consider punishment.
- (c) Report the crime to the Stock Exchange of Thailand and/or the Securities and Exchange Commission (SEC).
- (d) Notify the police to take legal proceedings.
- (e) Take any other action as approved by the Board of Directors or the Meeting of Shareholders.

Remuneration of Auditor

Audit Committee recommended to the Board of Directors to propose the Annual General Meeting of Shareholders for the year 2018 to approve the appointment of one of the following nominees; Miss Kamonthip Lertwitworatthep Certified Public Account Registration No. 4377, and/or Miss Sathida Rattananurak, Certified Public Account Registration No. 4753, and/or Ms. Siriwan Nitdamrong, certified public accountant no. 5906 of EY Office Limited to be the auditor of the company for the year 2018, with compensation as follows :

Particular (Unit: baht)	Paid compensation	
	2017	2018
(1) Annual audit fee	560,000	560,000
(2) Verification fee for quarter financial report, 125,000 baht per quarter: Total 3 quarters	375,000	375,000
(3) Audit fee for financial statements, submitted to Board of Investment (BOI)	100,000	100,000
(4) Total compensation of auditor	1,035,000	1,035,000

Remark No compensation to be paid in the coming year

Code of best practices in compliance with the SET

The Company determined for its Board of Directors to follow the Code of Best Practices for listed companies as guided by of the Stock Exchange of Thailand. The Board must understand and be aware of their roles and responsibilities. It must act with integrity, accordingly to the laws and the company's articles, as well as the resolutions of the Meeting of Shareholders, by taking into account the interests of the company and its major shareholders. The Board must be policymaker, and must specify target and business goals, as well as determine business plans and budgets of the company. Its responsibilities also include supervising the management to perform according to the defined policies, plans and budgets with efficiency and effectiveness for the best interests of the company and its shareholders as a whole.

Policy on conflicts of interest

The Company determined measures to prevent conflicts of interest that may arise from the company's transaction and persons who may have a conflict or be part of the stakeholders. These people will not be able to take part in the approval of such transactions. Pricing or compensation will be subject to the normal course of business and general trading conditions for the best benefit of the company. Board of Directors must work to ensure that the company operates in compliance with laws relating to securities and the SET, and in line with the Capital Market Commission and the Stock Exchange of Thailand. The company must follow the requirements on disclosure of related party transactions, the acquisition or disposal of major assets of the company, and must comply stringently with accounting standards set by Accountants Association.

In addition, the company will provide either Audit Committee or an independent expert, depending on type of case, to review and comment on the appropriateness of prices and reasonableness of the transactions. Disclosure of relating transactions will be carried out in accordance with the rules and procedures of the SEC and the SET. The revelation must be noted as a remark attached to the financial statements, which have been audited or reviewed by the company's auditors, placed in Annual Report Form (Form 56-1) and Annual Report (Form 56-2).

Internal control system

The company has a corporate governance policy to govern all departments to function efficiently and effectively.

The company focusses on proper and economical usage of the company's assets. Effective and careful assessment and risk management are applied consistently. Each agency must provide a standardised internal controls system that is sufficient to control the risk to exist at a reasonable level that does not affect significantly to the enterprise. Communications and development are injected for the employees in the unit to become unity and eager to work in compliance with rules of Good Practices, as well as laws and regulations related, and be ready for evaluation and monitoring constantly. The following guidelines are, as well, given :

(1)CONTROL ENVIRONMENT is designed to define duties and responsibilities of executives at all levels in maintaining and monitoring the system within their departments with efficiency and effectiveness. All functions must be carried out in accordance with the company's operational regulations under rigid internal control systems, and must be ready for checking. All agencies must prepare a manual procedure to set forth in their respective departments.

(2)RISK ASSESSMENT will be provided by each agency to assess the risks in their responsibilities and find ways to control by eliminating the effect or reducing risk potential. The Company aims to engage employees at all levels to assess and manage risk accordingly, in order to help to prevent damages that may occur.

(3)CONTROL ACTIVITIES must be employed in all functions and at all levels, with a consideration on the level of risk that is acceptable. Each agency must provide a standardised system with sufficient internal controls to restrain the risk to a reasonable level that will not affect significantly of the company.

(4)INFORMATION AND COMMUNICATIONS must be adequate, reliable and timely. IT improvement and adequate information security systems will enhance the company's efficiency and maximise the effectiveness of the work and administration. Reliability is another value resulted from IT's efficiency. The use of IT should be encouraged for more communications among staff members both within and outside the organization. Injection of IT communications will enhance unity among all employees and urge them to work in compliance with rules of Good Practices, as well as laws and regulations related.

(5)MONITORING AND EVALUATION is imposed as the responsibility of managers at all levels to maintain and monitor the internal operation systems within their departments to perform efficiently. They must ensure that all operations are conformed to the regulations of practices set by the company. The Audit Office will support all executive agencies in the provision of an internal control system and will conduct periodical checks to

ensure that all agencies have an effective system. All practices must follow the steps given continually which will lead to improvement of the company's overall operational system to become even more effective.

(6) Inspection will be conducted in a constructive manner and focuses on improvement for better systems. Reports prepared by the Audit Office and agreed by the agency that owns the system will be taken into the consideration of the Board of Directors to seek its approval before implementation. In case that a system in a department needs improvement, it is considered the duty of all agencies involved to solve the problem immediately. The company will assume such functions as the agency's responsibility and as part of the annual performance evaluation of the employees involved.

(10) Corporate Social Responsibility: CSR



Policy and Overview

The Company is committed to proceeding its management and business practices with full awareness of the importance of the corporate social responsibility and stakeholders, including shareholders, customers, suppliers, employees, communities and the society in its vicinity. Guidance was provided for all employees to deal with stakeholders on the principles of good corporate governance. Campaigns are initiated to raise awareness and encourage the employees to be part of communal activities aiming to improve the lives of workers and surrounding communities. The policy and guidelines were set to cover the four-dimension of sustainable development :

(1) Environment

The company is committed to environmentally responsible operations with the following principles:

- Follow and comply with laws and regulations relating to the environment.
- Development and improvement of production processes and management systems to eliminate waste from factory pollution that affect the environment in accordance with the environmental standard ISO14000: 2015.
- Raising awareness among staff at all levels of responsibility for the environment both inside and outside the manufacturing plants.
- Action plans are implemented and monitored continuously.
- Improvement of the area within and around the plant to become the Green Plant.

(2) Safety and Occupational Health.

Safety and occupational Health must be priority in the all practices of the employees. It is the company's basic responsibility and an essential factor to success with sustainable growth. The following policies and practices are given:

- Always in Compliance with laws and regulations related to safety and hygiene.
- Control and limit the risk of unsafe operation.
- Provide protection measures and protective equipment all the while of the employees' work.
- Provide consistent training to prevent accidents and to resolve accidents.
- Establishment of Safety, Occupational Health and Environment Committee to initiate plans, monitor, and evaluate implementations as required by the plans.

(3) Resources Preservation

The Company recognises the importance of using resources efficiently. The strategic management of resources are set as follows:

- (a) Energy Preservation.
 - Use biogas from wastewater treatment as renewable fuel.
 - Reduce electricity consumption by using high efficiency and energy saving equipment.
 - Provide Energy Audit to manage electricity use for maximum performance.
 - Provide training for employees to understand and recognise their responsibility in energy saving in every function of the factory.
- (b) Water Resources and Wastewater Treatment.
 - Check fresh water treatment systems and equipment in the pipeline on schedule to prevent the loss of water from leakage or malfunctioning of devices.
 - Reuse water from the sewage treatment system in the production process of ethanol.
 - Check water quality regularly to avoid the impact of ethanol production.
 - Do not drain the treated waste water out of the plant to external areas, in order to conform with the Zero Discharge standard.
 - Promote the consumption of water economically.
- (c) Management of Air Pollution.
 - Improve the efficiency of biogas systems to prevent gas leakage, on a regular basis.
 - Check fuel combustion as scheduled to enhance the quality control of air emitted from the chimney to be complied with standards set by the Department of Industry.
 - Inspect air quality every six months.

(4) Community

The company recognises that "society" is an important mechanism to drive the company's business to achieve sustainability and solid growth. The company sees that development should extend from the small society within the organization where employees are essential to strengthen competitiveness to the larger communal society, and to the nation as a whole. Various activities are carried out to achieve the goal set by the company.

(a) The Enterprise

- Develop skills of the employees at all levels and create a knowledge-based organisation to achieve Competence Management.

- Encourage participation among employees and urge them to express their opinions towards the organisation.

- Encourage employees to participate in community development.

(b) Community

- Preservation of resources and environment.

- Promote and improve quality of life.

- Promote education and learning among youths in the community.

- Promote learning, cultural awareness, moral and religious values among youths as to build a strong foundation for them to improve their the quality of life.

(c) Nationally

- Support environmental preservation.

- Support learning and raising awareness of social responsibility among youths.

Operation and Reporting

The Company is in the process of project initiation to reflect that business development can go hand in hand with social responsibility. A CSR task force was established and the company has appointed an expert as a consult to the working team. In the beginning stage, the CSR team planned to launch a sustainability report to disseminate to personnel involved to encourage their awareness of the company's CSR policy and operations. Focuses are set on making energy cleaner and sustainable growth, which serve the company's vision "As a leader in the development of renewable energy to environmental and social quality".

The policy of doing business on clean energy has been cultivated to become the corporate culture which display in the care of the environment of both inside and outside the organization, as well as the community in vicinity and other people involved. The Company recognises the importance of good corporate governance, integrity, accountability, and transparent disclosure of information. Moreover, the company always makes sure that its operations are performed in compliance with laws and regulations in all respects. These values are mechanism to enhance the company's business operations to grow and continue to progress along with all stakeholders to achieve sustainable and continuous improvement.

Furthermore, the company is committed to environmentally friendly operations. Focusing on development and improvement of the production processes and environmental management, the company, however, is devoted to work for social responsibility both within and outside the organization, and on networking society.

Green principle was developed to reflect sustainable development to ensure implementation of the scheme for social responsibility. The company's policy stated that all employees and all staff working on behalf of the company must acknowledge and uphold the policy. The involved agencies are responsible for creating and maintaining good relationships with all stakeholders and provide a channel of communication and comment feedback.

Stakeholders

Shareholders and Investors

Shareholders and investors of the company means all shareholders funds, investors, and securities analysts, as well as interests in earnings and changes in the price of securities of the company. The company operates its business with honesty, integrity and ethics, with an intention to develop the business to achieve progressive growth. Aiming to generate a reasonable return on investment to shareholders and investors continuously and sustainably, the company is committed to functioning by adhering to the principle of treating shareholders equally and with respect.

Customers

The company is committed to the production and distribution of ethanol for use as fuel with standardised quality, by taking into account safety standards in its operations. Recognising the importance of customer satisfaction, the company injected the ISO 9001: 2015 quality standard into the enterprise and created the corporate quality policy, saying "Creating awareness of and attention to the needs of customers in a responsible manner with sincere and speed". With regard to continuity of the business operations, the company is determined to follow its development policy featured as "Continuous development and improvement of production processes".

Suppliers and/or creditors

The company's policy demands creating good relationships with business suppliers and/or creditors. Based on mutual support of both parties, the company operates its businesses with respect to all suppliers and/or creditors, and treats them equally for the best interests of the company. All are executed in compliance with the covenants to avoid situations causing conflicts of interest and to achieve mutual benefits for all parties.

Competitors

With a policy defining the treatment of competitors, the company adheres to the rules of fair competition. The enterprise will not chase after confidential information of the competitors in dishonest or inappropriate mean. The competition will be conducted fairly and without distortions or using any fraudulent or incorrect path that offends good competition.

Staff employees

The company draws its special attention to the employees. Emphasis is placed on working conditions that must be safe and hygienic, and with safety conscious among the workforce, which is an important asset of the company. It is the employees who contributes to promoting and helping the organisation to achieve its business goals. With respect of human rights, the company launched a policy to provide staff employees with development for them to achieve a better quality of life. Good conditions of employment, safety, welfares and fair manner are provided, as well as opportunities to develop their proficiency. The company has a commitment to environmentally friendly practices. Aiming to prevent defect incidents or accidents, the operation processes are done accordingly to the rules and regulations to eliminate any negative impact on the employees and environment.

Government and regulators

The company is functioning with an aim to strengthen and improve the prosperity of the country as a whole. Abided by the laws, regulations, rules, and regulations, the enterprise progresses along with the respected traditional business trail. It also cooperates fully with the government and regulators to build knowledge and understanding of renewable energy industry, and continues to develop for Thailand to have sustainable energy in all forms. To achieve the breakthrough, the company focuses on information exchange, links, and exchange of technology among entrepreneurs from abroad. Provision of suggestion to the development of the industry and lectures to create new knowledges are also essential for good understanding of the society on the country's energy progress.

Community and Society

As a responsible member of community and society, the company will walk side by side with them. Before the establishment of the project to develop renewable energy, the company conducted a hearing procedure for people in the nearby communities to express their opinions and give comments, at the same time, the company provided them with clear information and answered all queries. The company allowed the public in the surrounding area to join in the project operation from the beginning. When completed, the company opened for those living in the area not far from the project and were capable and interested in the renewable energy business to apply to work with the company. Thus, the bond between the company and the locals was created, resulting in a complementary relationship and a sense of involvement in the community development.

In addition, the company focuses on the compliance with standards relating to safety, security, health and the environment. It takes into account the impact on the environment, natural resources, the company, and surrounding communities. To promote awareness of the aforementioned values is one of the company's significant tasks, which also include supporting youth education, religion support, activities for public benefits, community and society development, environmental preservation, and natural resources conservation.

Guidelines on Roles of Stakeholders.

The Company's framework as publicised in the Annual Report (Form 56-2) and on the company's website demands every member in the organisation to adopt and follow the practical guidelines in respect of the rights of all stakeholders. Whether they are the company's members – employees and executives – or external stakeholders, such as shareholders, creditors, competitors, customers, suppliers, society, and the environment, the company will not allow any action to violate the rights of those stakeholders.

Measures or means are provided to encourage the engagement of stakeholders. Disclosure of relevant information on various issues is well managed for all stakeholders. They can send reports and/or complaints directly to the company or through the Audit Committee, without management attendance, by post or E-Mail Address : suphachai@thaiagroenergy.com, without revelation of the senders' names. Upon the complaints, the Audit Committee will conduct investigation and present the result to the Board to determine a reasonable compensation and appropriate measures to prevent the violation. This will be done on a case by case basis.

The Company established rules, conditions and a method to report on interests of directors, executives and associated individuals, in accordance with Section 89/14 of the Securities and Securities Exchange Act (4th issue) B.E. 2551. Safety and environment policies were founded as well. Employees are encouraged to follow such policies to ensure all parties involved that the company is fully aware of safety and the environment and well prepared for constantly evolving.

Operations affecting social responsibility

The Company has not legal dispute or being accused on implementation causing environmental impacts. Recognises the meaning of dependable and supportive community, along with its business functions, the company has dedicated to development of the communities around the plants. Public utilities, such as roads, and sewers were developed. The responsibilities extend to creating jobs for the community and organising joint activities for major festivals, resulting a good relationship between the company operation and community.

Social activities 2018

Since 2017, the Company collaborate with community leader and representatives of the villagers around the factory at Suphanburi province to found the committee of "Cooperation for Community Development Social and environmental sustainability". In 2018, the project was completed, with details as follows.

Project	Amount (Baht)
1.The Project to build toilets for people in community.	150,000
2.The Project to buy exercise machine.	106,900
3. The Project to build multipurpose building.	300,000
4.The Project to embed drainge pipe with manhole, 138 Metres.	336,000
5.To give air conditions to elderly service center .	70,620
6.To Support the youth football competition, SuphanBuri Provincial Administration Organization.	2,500,000
Total amount	3,463,520



Children days activities, giving presents to students at Baan Sa Bua Kam School



The Project to build multipurpose building at a budget of Baht 300,000 to Wat Wang Nam Jone as a part of Cooperation for Community Development Social and environmental sustainability project.



The Project to embed drainage pipe with manhole at village no.7 Baan Sa Bua Kam, distance 138 Metres at a budget of Baht 339,000, for preventing the flood. This project is a part of Cooperation for Community Development Social and environmental sustainability project.



The Project to build toilets for people in village no. 15 Nhongmakhamong, Danchang, Suphanburi at a budget of Baht 150,000 as a part of Cooperation for Community Development Social and environmental sustainability project.



The Project to buy exercise machine at a budget of Baht 106,900 to village no. 10 Nhongmakhamong, Danchang, Suphanburi as a part of Cooperation for Community Development Social and environmental sustainability project.



To give 3 air conditions to elderly service center, Nhongmakhamong, Danchang, Suphanburi at a budget of Baht 66,000 as a part of Cooperation for Community Development Social and environmental sustainability project.

Prevention of corruption participation

The Company is committed to anti-corruption principles and opposing all forms of corruption. The Board of directors defined a policy to fight against corruption and encourage its members, management, and employees at all levels to be aware of the dangers of corrupt activities. The Board emphasise the cultivation of righteous values among the company's personnel to increase confidence of all stakeholders and develop the enterprise to obtain long-term sustainability.

Directors, executives and employees at all levels of the company are prohibited to take action or to accept corruption of all forms both directly and indirectly. The prohibition extended to all the company's businesses domestically and internationally, and to all agencies involved. Inspections and reviews on activities to support the anti-corruption policies are regularly conducted. Practices and requirements of various operations are reviewed to be updated and able to keep pace with business changes. Regulations and provisions of relevant laws are defined as follows:

- (1) Directors, executives, and employees at all levels must adhere to the company's anti-corruption policy. They must not involve in any unethical business or corrupting activities, whether directly or indirectly.
- (2) All employees shall not overpass corruption-related acts that may affect the company. They must notify the incident to a superior or personnel in charge and cooperate in the investigation. If in doubt, consult a supervisor or personnel assigned by the company to perform business ethical control.
- (3) The company will ensure fairness and protect employees who report corruption related to the company. Protective measures for complainants or who cooperate in fraud reporting were provided with the company's specifications and guidelines to identify complaints of stakeholders.
- (4) Those who commit fraud, corrupt, and unethical business actions must be considered receiving disciplinary punishment as regulated by the company. Furthermore, they may have to be punished by law, if the action is illegal.
- (5) The company has to disseminate its anti-corruption procedures to other individuals who are dealing with the company's business for good understanding and encourage them to comply with the procedures.
- (6) To operate in accordance with the anti-corruption principles, the company has implemented various approaches, summarised as follows:
- (7) Policy against corruption was imposed to cover the personnel administration thoroughly, from the nomination process and personnel selection to promotion, training, evaluation, and to remuneration. Supervisors at all levels have to communicate with employees to understand the business activities in their care and must monitor all works to ensure efficiency with effectiveness in the employees' performance.
- (8) For functions with high-risk of corruption, the company's executives and all employees must operate with caution, especially in the following matters:
 - (a) Do not offer to pay or agree to pay bribes, or demand bribes from any person or entity, in any form, whether directly or indirectly.
 - (b) Receiving or giving donations or grants must be transparent and legitimate to ensure that donations or funds not be used as an excuse for bribery.
 - (c) Do not accept or give bribes in business operation of all kinds. Whether it is the company's own operations or a dealing with public sector, it must be performed with transparency and integrity, and in accordance with the laws seriously.

(11) Internal control and risk management

Report of Audit Committee

Board of Directors defined that Audit Committee is independent from the Board. During 2018, Audit Committee held a total of 9 meetings to consider many significant issues independently. The committee also has meetings with accounting auditors, internal auditors and managers are invited to attend the meetings to give further information and clarification adequately. Summary of the meetings is as follows:

Name-Surname	Position	No. of attendance / No. of meeting in 2018
1. Mr. Padetpai Meekun-iam	Audit Committee Chairman	9/9
2. Mr. Virach Aphimeteetamrong*	Director	9/9
3. Mr. Satit Chanchaowakun	Director	9/9

The Audit Committee reported its performance to the Board of Directors as a result of operation of the Audit Committee are as follows.

- (1) Reviewing the Company's quarterly and annually financial statements for year 2018. It was agreed that they were accurate and reliable. They were duly prepared in conformity with the generally accepted accounting standards with sufficient and appropriate disclosure of information.
- (2) Consider the internal audit plan and scope for the year 2018, covering significant risks as well as anti-corruption practices. And the adequacy of the Company's internal control system. It has recommended the management to improve the system and the shortcomings to be more concise and more appropriate.
- (3) To review and give importance to the administration of good corporate governance in accordance with the laws relating to the business operation of the Company. It emphasizes the accuracy and completeness of information disclosed to all stakeholders fairly and equally, can be referenced and verified in a transparent manner.
- (4) Review of Acquisition and Disposition of Assets Including connected transactions or transactions that may cause conflict of interest occurred in the year 2018, the transaction is considered as a normal price and conditions of business.
- (5) To review the risk management system and anti-corruption corrupt practices in the year 2018. It recommended the management to improve the system and defects to be more concise and more appropriate.
- (6) To review progress on various lawsuits in the year 2018. It is recommended that the management closely monitor the progress of the case with the concise and appropriate.
- (7) Review the administrative process of the administration regarding clues. In the year 2018, no complaint was made through the notification channel.

- (8) To evaluate the self-performance of the Audit Committee, both individual and group, in the year 2018, to identify the strengths. Weaknesses and issues that need to be addressed. The Audit Committee has jointly considered the results of the evaluation and set up a way to improve the efficiency of the work in the next year.
- (9) To consider the selection of the auditor and fix the remuneration of the auditor from the office of EY Company Limited to be the auditor of the company for the year 2019. To propose to the Board of Directors. To nominate Annual General Meeting of Shareholders for the year 2019 appointed Ms. Kamolthip Lertwitworathep, certified public accountant no. 4377, and/or Ms. Satida Rattananuruk, certified public accountant no. 4753, and/or Ms. Siriwan Nitamrong, Certified Public Account Registration No. 5906 of EY Office Limited, to be the financial auditor for year 2019 with the yearly audit fee of Baht 1,050,000 and the audit financial statements to present the Board of Investment (BOI) at Baht 100,000 per promotion certificate.
- (10) Considering the internal audit plan and scope for the year 2018 as well as the human resource and staff quality development of the internal audit unit to be adequate. To be consistent and able to handle the workload of duties and responsibilities efficiently, effectively.

In 2018 Audit Committee was independently performed various tasks as assigned. The Board of Directors and management emphasizes the administration that is based on the principles of corporate governance, business ethics. With a focus on risk factors that may affect the company, all functions must be carried out in compliance with legal requirements. Preparation of financial reports must be accurate and reliable, according to generally accepted accounting standards, with disclosure of information and operational transparency, and a suitable system of internal controls. The reviews found no significant defect at all.

Assessment on adequacy of internal control

Meeting of the Board of Directors No. 2/2019 on 18 February 2019 approved the evaluation results on the adequacy of internal controls which internal audit had conducted in accordance with the criteria set by Securities Exchange Commission (SEC) and in compliance with the internal control framework (COSO2013), which consists of five elements with 17 principles:

1. INTEGRITY: The organisation demonstrates its firm commitment to the values of integrity (integrity) and ethics.
2. OVERSIGHT: The Committee is independent from management, and must oversee (oversight) development and implementation of internal controls.
3. OVERSIGHT: Management has to provide a structure of reporting network to determine adequate authority and responsibility of each agency to ensure the organisation's achievement to the objectives under the supervision (oversight) of the Board.
4. Organisation demonstrates a commitment to the attracting, developing and retaining talented personnel.
5. Organisation defines personnel to be responsible and accountable for internal control operation, in order to achieve the objectives of the organisation.
6. Corporate objectives must be clear enough to identify and assess the risks which related the activities to achieving the objectives of the organisation.

7. Organisation identifies and analyses all types of risks that may affect the achievement of the objectives set for an entire organisation.

8. Organisation must consider possibilities of fraud, in its risks assessment, to achieve corporate objectives.

9. Organisation can identify and assess the changes that may cause impact on internal controls.

10. Organisation has measures to reduce risks to an acceptable level. Otherwise, this might obstruct the achievement to the objectives of the organization.

11. Organisation choose and takes corporate development activities with a common control system to help support the achievement of objectives.

12. Organization has control practices through a policy, which defines expectation and procedures to enable it practical.

13. Organisations has involving and quality information to encourage on-schedule internal control.

14. Corporate communication within the organisation shall include objectives and responsibilities of the agency on the internal control scheme. This is necessary to support the internal control to be carried out as planned.

15. Organisation has to communicate with outside agencies on issues that may have an impact on internal controls.

16. Organisation monitors and evaluates internal controls to ensure that internal controls are carried out properly and adequately.

17. Organisation evaluates internal control deficiencies on a timely manner and inform the person who is responsible, including senior management and the Board as deems appropriate.

The Board viewed that the company has internal control systems sufficiently to control transactions with major shareholders, directors, executives or related persons. To control other issues, the Board also viewed that the company has enough and appropriate internal control already.

Implementation of Internal Control

Audit Committee is responsible to verify that the company has appropriate and effective internal control and internal audit systems. It has to review of the company's performance to be conformed with the laws relating to securities and the SET, including the SET's regulations and other laws relating to the company's business operations. The committee hold a meeting, at least once every quarter to consider and take actions to correct financial reports and to define disclosure of information completely and adequately. The committee also take cares of related transaction or matters that may cause conflicts of interests to be performed in accordance with the laws relating to capital market and the SET. The company's auditor will attend the meeting with the Audit Committee to give observations on the result of the company's accounting audit.

In addition, the company also has an internal audit department to audit the company's internal controls and report to Audit Committee on a quarterly basis. However, since June 2013 until recently, the company had hired Banchi Kitjakarn Co., Ltd., an auditing firm to carry out additional monitoring and evaluation of the adequacy and effectiveness of internal control systems of critical functions. The firm reports directly to Audit Committee to leverage the corporate governance of the company. Presently, the company ended the hiring of Banchi Kitjakarn already. However, the Committee may consider hiring an internal auditor by outsource means to monitor internal control matters as deemed necessary for the operation in the future.

Audit Committee approved the appointment of Mr. Supachai kaewfueng to be Manager of Internal Audit. The approval was made on the consideration of Supachai's qualifications and experience. He was trained adequately to perform such function effectively.

Audit Committee is responsible for considering the independence of the internal audit department and comment on the appointment, removal, and relocation the incumbent internal audit manager who is responsible for internal audit within the company.

(12) Related Party Transactions

Procedures to approve transaction

Once the Company is required to make transactions with persons who may have a conflict, Board of Directors, taking into account the best interests of the Company, will request comments from Audit Committee on the need, rationale, and suitability of the transaction. Consideration will be made on conditions that must be in line with nature of normal business practices in the industry and a comparison with the third party or the market price. In case that the Committee has not expertise to consider the potential transaction, the Company will provide a specialist, such as auditors; property appraisers; and law offices; which are independent from the Company and the persons with conflict potential; to give opinions on such transactions. The opinion will be used in the decision making procedures of Board of Directors and/or Audit Committee and/or shareholders, as the case.

In addition, the Company forbids management or other personnel who may have a conflict of interest, or stakeholders to be involved in the approval of matters relating to their interests, both directly and indirectly. The Board must ensure that the Company operates in compliance with laws, regulations, and notifications of the Securities Exchange Commission and the SET. Disclosure of information on related transactions, the acquisition or disposal of major assets of the Company or its subsidiaries must be operated in compliance with accounting standards as defined by the Accounting and CPA Thailand. The disclosure of the transactions must be noted in the remark affix to financial statements, which have been audited or reviewed by the Company's auditors, Annual Registration Statement (Form 56-1), and Annual Report (Form 56-2) upon the Securities Act and the Securities Exchange Act.

Policy and trend of transactions in the future.

Since being listed on the stock exchange, the Company has not used credit lines in conjunction with LANNA RESOURCES Public Company Limited, due to a condition of a commercial bank. The bank will offer credits to the company on a condition that after being listed, Bank will consider providing financial support to the Company within limits of the credit facilities combined with LANNA RESOURCES Public Company Limited. However, in the future, if the Company has to do transactions with persons who may have a conflict of interest, the Company must continue to comply with the measures and procedures for approval as set by the Company. The Company's directors and stakeholders who have an interest conflict will not be able to participate in the approval process of such transactions. So, the decision to enter into such transactions will not give rise to conflicts of interest and will provide the best interest for all shareholders.



Financial position and Operating results

Key Financial data

Management's discussion and analysis

Part 3

Financial position and operating results

(13) Key financial data

Financial Statements

Auditor's report in summary

The Financial statements of Thai Agro Energy Public Company Limited, audited by an auditor who is a Certified Public Accountant (CPA) from The EY Office Co., Ltd., can be summarised as follows:

CPA Auditor's report

The auditor has audited the financial statements of Thai Agro Energy Public Company Limited which comprise the consolidated statements of financial position as of 31 December 2016, 2017 and 2018, statement of comprehensive income, statement of changes in shareholders' equity, and cash flows for the years then ended on the same date, including a notation to summarise the significant accounting policies and notes on other matters.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with Thai Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so. Those charged with governance are responsible for overseeing the Company's financial reporting process.

Auditor's Responsibilities

My objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Thai Standards on Auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Thai Standards on Auditing, I exercise professional judgement and maintain professional skepticism throughout the audit. I also :

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

I communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

I also provide those charged with governance with a statement that I have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on my independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, I determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. I describe these matters in my auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, I determine that a matter should not be communicated in my report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Comment

Auditor's opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Thai Agro Energy Public Company Limited as at 31 December 2018, its financial performance and cash flows for the year then ended in accordance with Thai Financial Reporting Standards.

Summary of financial position and results of operations Consolidated

Statements of Financial Position Years 2016-2018						
Financial position	2016		2017		2018	
	Baht million	Percent	Baht million	Percent	Baht million	Percent
Assets						
<i>Current assets</i>						
Cash and cash equivalent	37.05	1.15	35.31	1.25	32.19	0.85
Current investments – open fund	0.96	0.03	1.02	0.03	1.04	0.03
Trade & Other receivable	165.55	5.13	212.81	7.52	275.89	7.31
Inventories	126.11	3.91	122.90	4.34	141.61	3.76
Advance payments for Purchase of goods	543.60	16.85	38.42	1.36	545.13	14.45
Current tax assets	-	-	9.56	0.34	9.56	0.25
Other current assets	31.99	1.00	4.53	0.16	4.33	0.12
<i>Total current assets</i>	905.26	28.07	424.55	15.00	1,009.75	26.77
<i>Non-current assets</i>						
Property, plant, and equipment	2,314.39	71.76	2,398.32	84.74	2,756.06	73.06
Intangible assets	2.35	0.07	1.87	0.07	2.66	0.07
Deferred tax assets	2.48	0.08	3.46	0.12	3.03	0.08
Other non-current assets	0.70	0.02	2.09	0.07	0.77	0.02
<i>Total non-current assets</i>	2,319.92	71.93	2,405.74	85.00	2,762.52	73.23
Total assets	3,225.18	100.00	2,830.29	100.00	3,772.27	100.00
<i>Liabilities and shareholders' equity</i>						
<i>current liabilities</i>						
Short-term loans from financial institutions	986.64	30.59	899.07	31.77	1,174.71	31.14
Trade and other payables	182.33	5.65	159.81	5.65	145.54	3.86
Current portion of liabilities under finance lease agreements	2.80	0.09	3.25	0.11	2.09	0.06
Current portion of long-term loans	180.00	5.58	117.76	4.16	102.00	2.70
Income taxes payable	1.16	0.04	-	-	22.29	0.59
Provision for short-term employee benefits	2.55	0.08	4.09	0.14	2.29	0.06
Other current liabilities	14.91	0.46	13.55	0.48	21.24	0.56
<i>Total current liabilities</i>	1,370.39	42.49	1,197.53	42.31	1,470.16	38.97
<i>Non-current liabilities</i>						
Liabilities under finance lease agreements - net of current portion	3.96	0.12	2.58	0.09	0.71	0.02
Long-term loans - net of current portion	117.76	3.65	-	-	525.97	13.94
Provision for long-term employee benefits	1.43	0.05	2.27	0.08	3.23	0.09
<i>Total non-current liabilities</i>	123.15	3.82	4.85	0.17	529.91	14.05
Total liabilities	1,493.54	46.31	1,202.38	42.48	2,000.07	53.02
Shareholders' equity						
Share capital						
Registered	1,000.00	31.01	1,000.00	35.33	1,000.00	26.51
Issued and fully paid up	1,000.00	31.01	1,000.00	35.33	1,000.00	26.51
Share premium	188.79	5.85	188.79	6.67	188.79	5.00
Capital reserve for share-based payment transactions	0.56	0.02	0.56	0.02	0.56	0.02
Retained Earnings						
Appropriated – statutory reserve	100.00	3.10	100.00	3.53	100.00	2.65
Appropriated – general reserve	-	-	192.00	6.79	192.00	5.09
Unappropriated	442.29	13.71	146.56	5.18	290.85	7.71
<i>Total shareholders' equity</i>	1,731.64	53.69	1,627.91	57.52	1,772.20	46.98
Total liabilities and shareholders' equity	3,225.18	100.00	2,830.29	100.00	3,772.27	100.00

Statement of Comprehensive Income Year 2016-2018

Operational results	2016		2017		2018	
	Baht million	Percent	Baht million	Percent	Baht million	Percent
<u>Income</u>						
Sales	2,415.07	99.86	2,470.52	99.91	2,696.07	99.93
Other incomes	3.28	0.14	2.24	0.09	1.78	0.07
Total revenues	2,418.35	100.00	2,472.76	100.00	2,697.85	100.00
<u>Costs and expenses</u>						
Cost of sales	2,111.84	87.33	2,219.67	89.76	2,257.91	83.69
Selling expenses	9.52	0.39	7.15	0.29	17.03	0.63
Administrative expenses	68.16	2.82	91.41	3.70	58.10	2.15
Loss from flood event	-	-	73.32	2.97	2.25	0.08
Total expenses	2,189.52	90.54	2,391.55	96.72	2,335.30	86.55
Profit (loss) before financial expenses.	228.83	9.46	81.21	3.28	362.55	13.45
Financial expenses	37.79	1.56	32.85	1.33	40.79	1.51
Profit before income tax expense	191.04	7.90	48.36	1.95	321.76	11.94
Income tax expenses	(12.94)	(0.54)	0.50	0.02	(27.49)	(1.20)
Profit for the year	178.10	7.36	48.86	1.98	294.28	10.91
Earnings per share (Fully Diluted) (Baht)	0.18	-	0.05	-	0.09	-
Earnings per share (Weighted Average) (Baht)	0.18	-	0.05	-	0.29	-
Par value (Baht)	1.00	-	1.00	-	1.00	-

Statements of Retained Earnings Year 2016-2018

(Unit: Million Baht)

Operational results	2016	2017	2018
Earnings (Deficit) unappropriated quoted	414.19	442.29	146.56
Profit for the year	178.10	48.86	294.28
Profit (loss) other comprehensive income for the year	-	(2.59)	-
Profit for allocation	592.29	488.56	440.84
<u>Less</u> dividends paid	(150.00)	(150.00)	(150.00)
Legal Reserve	-	-	-
General reserve	-	(192.00)	-
Earnings (Deficit) unappropriated forward	442.29	146.56	290.84

Statements of Cash Flows Year 2016-2018

(Unit: Million Baht)

Operational results	2016	2017	2018
<u>Cash flow from operating activities</u>			
Profit before tax	191.04	48.36	321.76
Adjustments to reconcile profit before tax to net cash provided By (paid from) operating activities			
Depreciation and amortization	125.47	146.58	159.41
Reduction of inventory to net realizable value	-	0.55	(0.55)
Gain on sales of property, plant and equipment	(0.52)	-	-
Gain on sales of current investments	(0.19)	(0.06)	(0.01)
Loss on write-off machinery, equipments and intangible assets	0.58	0.23	-
Provision for long-term employee benefits	1.28	0.39	2.28
Allowance for impairment in advance payments for cassava chips	6.87	-	-
Interest income	37.62	32.64	40.22
Interest expense			
Profit from operations activities before changes in operating assets and liabilities	361.99	228.52	522.98
Operating assets (increase) decrease			
Trade and other receivables	36.17	(47.27)	(63.07)
Inventories	11.50	2.65	(18.15)
Advance payment for purchase for goods	27.65	505.18	(506.71)
Other current assets	(11.35)	27.47	0.19
Other non- current assets	0.02	(1.38)	1.31
Operating liabilities increase (decrease)			
Trade and other payables	87.14	(29.00)	(39.83)
Other current liabilities	(1.36)	(0.54)	4.66
Provision for long-term employee benefits	(1.13)	(1.25)	(3.11)
Cash from operating activities	510.63	684.38	(101.73)
Cash received from interest income	0.15	0.17	0.13
Cash paid for interest payments	(36.10)	(33.04)	(36.89)
Cash paid for income tax	(13.94)	(10.55)	(4.77)
Net cash from operating activities	460.74	640.96	(143.26)
<u>Cash flow from investing activities</u>			
Acquisitions of property, plant and equipment	(122.10)	(221.63)	(491.01)
Acquisitions of current investments	(565.00)	(150.00)	-
Acquisitions of intangible assets	(0.18)	(0.16)	(1.37)
Proceeds from sales of current investments	565.00	150.00	-
Proceeds from sales of property, plant and equipment	0.52	-	-
Net cash provided by (used in) investing activities	(121.76)	(221.79)	(492.38)
<u>Cash flows from financing activities</u>			
Increase in short-term loans from financial institution (Decrease)	21.70	(87.57)	275.64
Increase in long-term loans from financial institution	-	-	627.97
Repayment of long-term loans	(180.00)	(180.00)	(117.76)
Cash paid for liabilities under finance lease agreements	(2.73)	(3.34)	(3.34)
Cash paid for dividend	(150.00)	(150.00)	(149.99)
Net cash used in financing activities	(311.03)	(420.91)	632.52
Net increase (decrease) in cash and cash equivalents	27.95	(1.74)	(3.12)
Cash and cash equivalents at beginning of year	9.10	37.05	35.31
Cash and cash equivalents at end of year	37.05	35.31	32.19

Summary of key financial ratios Year 2016-2018				
Ratio	Measurement	2016	2017	2018
<u>Current ratio</u>				
Current ratio	Times	0.66	0.35	0.69
Quick ratio	Times	0.15	0.21	0.21
Cash flow ratio	Times	0.35	0.50	(0.11)
Accounts receivable turnover ratio	Times	13.26	13.32	12.10
The average collection period	Days	27.14	27.02	29.75
Turnover of goods	Times	171.38	173.94	112.39
The average sale period finished products	Days	2.10	2.07	3.20
Payable turnover ratio	Times	20.73	17.47	26.32
Repayment period	Days	17.37	20.61	13.68
Cash Cycle	Days	11.87	8.48	19.27
<u>Ratio of ability to make profits</u>				
Gross margin	%	12.56	10.15	16.25
Operating margin	%	9.34	3.20	13.38
Other profit margins	%	0.14	0.09	0.07
Net profits margin	%	7.36	1.98	10.91
Return on equity	%	10.37	2.91	17.31
<u>Ratio of operating performance</u>				
Ratio of return on assets	%	5.51	1.61	8.91
Return on fixed assets*	%	13.20	8.29	17.60
Turnover of Assets	Times	0.75	0.82	0.82
<u>Financial policy ratio</u>				
Ratio of debt to equity	Times	0.86	0.74	1.13
Interest coverage ratio*	Times	13.53	20.50	(1.84)
Obligations coverage ratio -Cash basis.	Times	1.13	1.24	(0.13)
Dividend payout	%	84.22	307.02	84.95

(14) Management's Discussion and Analysis

Overall performance

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	(0.46)	(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 17.97 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	Unit	Year 2018	Year 2017	Increase (Decrease)	%
NET PROFIT	Million Baht	294.28	48.86	245.42	502.29
NET PROFIT PER SHARE	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, other current assets and other non-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.

Report of the Board of Directors' Responsibilities for Financial Statements

The financial statements of Thai Agro Energy Public Company Limited for the year 2018 are prepared in accordance with the notification of the Department of Business Development Re: Prescribing the Acquisition Requirement in the Financial Statements which is in compliance with the Accounting Act BE 2000 and has complied with accounting standards prescribed in the Accounting Profession Act BE 2004

The Board of Directors is responsible for the financial statements of Thai Agro Energy Public Company Limited for the purpose of ensuring the financial position. The actual and reasonable results of the operations and cash flows are accurately recorded. The financial statements have been prepared in accordance with generally accepted accounting principles, taking into account the appropriate accounting policy and consistency with the Company. We also consider the sufficiency of provisioning for uncertain items. Or it could have a significant impact on future business by disclosing important information in notes to the financial statements. And auditors have expressed their views in the auditor's report.

In this regard, the Board of Directors has appointed the Audit Committee consisting of independent and non-executive directors, which have fully qualified by the Securities and Exchange Commission (SEC) to review the financial statements. Ensure compliance with accounting standards, Review the internal control system Internal audit and risk management systems are appropriate and effective. To operate transparently in accordance with the company's regulations. And in accordance with the provisions of the various laws. To involve and supervise the conflict of interest, as well as to consider and propose the appointment of the Company's auditors. The Audit Committee has expressed the opinion in the report of the Audit Committee as shown in the Annual Report for the year 2018.

February 21, 2019

On behalf of the Board of Directors of Thai Agro Energy Public Company Limited



(Mr. Suroj Subhasavasdikul)
Chairman of the board



(Mr. Anun Louharanoo)
Acting Chief Executive Officer



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Independent Auditor's Report

To the Shareholders of Thai Agro Energy Public Company Limited

Opinion

I have audited the accompanying financial statements of Thai Agro Energy Public Company Limited (the Company), which comprise the statement of financial position as at 31 December 2018, and the related statements of comprehensive income, changes in shareholders' equity and cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In my opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Thai Agro Energy Public Company Limited as at 31 December 2018, its financial performance and cash flows for the year then ended in accordance with Thai Financial Reporting Standards.

Basis for Opinion

I conducted my audit in accordance with Thai Standards on Auditing. My responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of my report. I am independent of the Company in accordance with the Code of Ethics for Professional Accountants as issued by the Federation of Accounting Professions as relevant to my audit of the financial statements, and I have fulfilled my other ethical responsibilities in accordance with the Code. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Key Audit Matters

Key audit matters are those matters that, in my professional judgement, were of most significance in my audit of the financial statements of the current period. These matters were addressed in the context of my audit of the financial statements as a whole, and in forming my opinion thereon, and I do not provide a separate opinion on these matters.

I have fulfilled the responsibilities described in the Auditor's Responsibilities for the Audit of the Financial Statements section of my report, including in relation to these matters. Accordingly, my audit included the performance of procedures designed to respond to my assessment of the risks of material misstatement of the financial statements. The results of my audit procedures, including the procedures performed to address the matters below, provide the basis for my audit opinion on the accompanying financial statements as a whole.

Key audit matter and how audit procedures respond is described below.

Revenue recognition

Revenue from sales is a significant account because the amount of revenue from sales is material and directly affects the Company's profit or loss. Major revenue of the Company is derived from production and distribution of ethanol which fluctuates in accordance with selling prices and current demands. There are therefore risks with respect to the amount and timing of revenue recognition of the Company.

I have examined the revenue recognition of the Company by assessing and testing the Company's IT system and its internal controls with respect to the revenue cycle by making enquiry of responsible executives, gaining an understanding of the controls and selecting representative samples to test the operation of the designed controls, applying a sampling method to select sales agreements to assess whether revenue recognition was consistent with the conditions of the relevant agreement, and whether it was in compliance with the Company's policy, on a sampling basis, examining supporting documents for actual sales transactions occurring during the year and near the end of the accounting period, reviewing credit notes that the Company issued after the period-end and performing analytical procedures on disaggregated data to detect possible irregularities in sales transactions throughout the period, particularly for accounting entries made through journal vouchers.

Other Information

Management is responsible for the other information. The other information comprise the information included in annual report of the Company, but does not include the financial statements and my auditor's report thereon. The annual report of the Company is expected to be made available to me after the date of this auditor's report.

My opinion on the financial statements does not cover the other information and I do not express any form of assurance conclusion thereon.

In connection with my audit of the financial statements, my responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or my knowledge obtained in the audit or otherwise appears to be materially misstated.

When I read the annual report of the Company, if I conclude that there is a material misstatement therein, I am required to communicate the matter to those charged with governance for correction of the misstatement.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with Thai Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Company's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

My objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes my opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Thai Standards on Auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Thai Standards on Auditing, I exercise professional judgement and maintain professional skepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify my opinion. My conclusions are based on the audit evidence obtained up to the date of my auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

I communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that I identify during my audit.

I also provide those charged with governance with a statement that I have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on my independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, I determine those matters that were of most significance in the audit of the financial statements of the current period and are therefore the key audit matters. I describe these matters in my auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, I determine that a matter should not be communicated in my report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

I am responsible for the audit resulting in this independent auditor's report.



Kamontip Lertwitworatep

Certified Public Accountant (Thailand) No. 4377

EY Office Limited

Bangkok: 18 February 2019

Thai Agro Energy Public Company Limited

Statement of financial position

As at 31 December 2018

(Unit: Baht)

	<u>Note</u>	<u>2018</u>	<u>2017</u>
Assets			
Current assets			
Cash and cash equivalents	7	32,191,300	35,313,249
Current investments - open fund		1,036,827	1,025,890
Trade and other receivables	8	275,888,441	212,814,805
Inventories	9	141,607,556	122,901,621
Advance payments for purchase of goods	10	545,127,582	38,419,212
Current tax assets		9,559,492	9,559,492
Other current assets		<u>4,333,308</u>	<u>4,523,143</u>
Total current assets		<u>1,009,744,506</u>	<u>424,557,412</u>
Non-current assets			
Property, plant and equipment	11	2,756,063,957	2,398,322,031
Intangible assets	12	2,662,311	1,866,142
Deferred tax assets	21	3,033,208	3,463,877
Other non-current assets		<u>768,760</u>	<u>2,084,560</u>
Total non-current assets		<u>2,762,528,236</u>	<u>2,405,736,610</u>
Total assets		<u><u>3,772,272,742</u></u>	<u><u>2,830,294,022</u></u>

The accompanying notes are an integral part of the financial statements.

Thai Agro Energy Public Company Limited

Statement of financial position (continued)

As at 31 December 2018

(Unit: Baht)

	<u>Note</u>	<u>2018</u>	<u>2017</u>
Liabilities and shareholders' equity			
Current liabilities			
Short-term loans from financial institutions	13	1,174,712,145	899,068,029
Trade and other payables	14	145,536,882	159,812,022
Current portion of liabilities under finance lease agreements	15	2,094,663	3,254,811
Current portion of long-term loans	16	102,000,000	117,757,191
Income tax payable		22,285,607	-
Provision for short-term employee benefits	17	2,291,033	4,089,548
Other current liabilities		<u>21,237,376</u>	<u>13,550,090</u>
Total current liabilities		<u>1,470,157,706</u>	<u>1,197,531,691</u>
Non-current liabilities			
Liabilities under finance lease agreements - net of current portion	15	709,629	2,583,978
Long-term loans - net of current portion	16	525,968,432	-
Provision for long-term employee benefits	17	<u>3,234,253</u>	<u>2,267,991</u>
Total non-current liabilities		<u>529,912,314</u>	<u>4,851,969</u>
Total liabilities		<u>2,000,070,020</u>	<u>1,202,383,660</u>
Shareholders' equity			
Share capital			
Registered			
1,000,000,000 ordinary shares of Baht 1 each		<u>1,000,000,000</u>	<u>1,000,000,000</u>
Issued and fully paid up			
1,000,000,000 ordinary shares of Baht 1 each		1,000,000,000	1,000,000,000
Share premium		188,795,985	188,795,985
Capital reserve for share-based payment transactions		556,451	556,451
Retained earnings			
Appropriated - statutory reserve	18	100,000,000	100,000,000
Appropriated - general reserve	26	192,000,000	192,000,000
Unappropriated		<u>290,850,286</u>	<u>146,557,926</u>
Total shareholders' equity		<u>1,772,202,722</u>	<u>1,627,910,362</u>
Total liabilities and shareholders' equity		<u>3,772,272,742</u>	<u>2,830,294,022</u>

The accompanying notes are an integral part of the financial statements.

Thai Agro Energy Public Company Limited

Statement of comprehensive income

For the year ended 31 December 2018

(Unit: Baht)

	<u>Note</u>	<u>2018</u>	<u>2017</u>
Profit or loss:			
Revenues			
Sales	22	2,696,075,842	2,470,518,630
Other income		<u>1,777,317</u>	<u>2,245,182</u>
Total revenues		<u>2,697,853,159</u>	<u>2,472,763,812</u>
Expenses			
Cost of sales	19	2,257,914,803	2,219,675,914
Selling and distribution expenses		17,034,842	7,154,341
Administrative expenses		58,098,085	91,409,749
Damage from flood	20	<u>2,250,927</u>	<u>73,317,726</u>
Total expenses		<u>2,335,298,657</u>	<u>2,391,557,730</u>
Profit before finance cost and income tax		362,554,502	81,206,082
Finance cost		<u>(40,791,563)</u>	<u>(32,848,657)</u>
Profit before income tax		321,762,939	48,357,425
Income tax	21	<u>(27,485,679)</u>	<u>498,857</u>
Profit for the year		<u>294,277,260</u>	<u>48,856,282</u>
Other comprehensive income:			
<i>Other comprehensive income not to be reclassified to profit or loss in subsequent periods</i>			
Actuarial loss		-	(3,244,880)
Less: Income tax effect	21	<u>-</u>	<u>648,976</u>
Other comprehensive income not to be reclassified to profit or loss in subsequent periods - net of income tax		<u>-</u>	<u>(2,595,904)</u>
Other comprehensive income for the year		<u>-</u>	<u>(2,595,904)</u>
Total comprehensive income for the year		<u>294,277,260</u>	<u>46,260,378</u>
Earnings per share			
Basic earnings per share	23		
Profit for the year		<u>0.29</u>	<u>0.05</u>

The accompanying notes are an integral part of the financial statements.

Thai Agro Energy Public Company Limited

Statement of cash flows

For the year ended 31 December 2018

(Unit: Baht)

	<u>2018</u>	<u>2017</u>
Cash flows from operating activities		
Profit before tax	321,762,939	48,357,425
Adjustments to reconcile profit before tax to net cash provided by (paid from) operating activities:		
Depreciation and amortisation	159,409,025	146,577,031
Reduction of inventory to net realisable value (reversal)	(555,027)	555,027
Loss on write-off machinery, equipment and intangible assets	-	230,576
Gain on sales of current investments	(10,937)	(61,200)
Provision for long-term employee benefits	2,277,607	386,670
Interest income	(128,972)	(171,534)
Interest expenses	<u>40,227,673</u>	<u>32,643,316</u>
Profit from operating activities before changes in operating assets and liabilities	522,982,308	228,517,311
Operating assets (increase) decrease		
Trade and other receivables	(63,074,466)	(47,272,931)
Inventories	(18,150,908)	2,654,360
Advance payment for purchase of goods	(506,708,370)	505,185,355
Other current assets	189,101	27,466,169
Other non-current assets	1,315,800	(1,381,520)
Operating liabilities increase (decrease)		
Trade and other payables	(39,827,681)	(28,998,668)
Other current liabilities	4,656,781	(539,562)
Provision for long-term employee benefits	<u>(3,109,860)</u>	<u>(1,255,230)</u>
Cash from (used in) operating activities	(101,727,295)	684,375,284
Cash received from interest income	129,802	177,288
Cash paid for interest expenses	(36,891,634)	(33,038,651)
Cash paid for income tax	<u>(4,768,669)</u>	<u>(10,554,040)</u>
Net cash from (used in) operating activities	<u>(143,257,796)</u>	<u>640,959,881</u>

The accompanying notes are an integral part of the financial statements.

Thai Agro Energy Public Company Limited

Statement of cash flows (continued)

For the year ended 31 December 2018

(Unit: Baht)

	<u>2018</u>	<u>2017</u>
Cash flows from investing activities		
Acquisitions of property, plant and equipment	(491,009,415)	(221,630,289)
Acquisitions of current investments	-	(150,000,000)
Acquisitions of intangible assets	(1,373,077)	(157,740)
Proceeds from sales of current investments	-	150,000,000
Net cash used in investing activities	<u>(492,382,492)</u>	<u>(221,788,029)</u>
Cash flows from financing activities		
Increase (decrease) in short-term loans from financial institution	275,644,116	(87,568,495)
Increase in long-term loans from financial institution	627,968,432	-
Repayment of long-term loan	(117,757,191)	(180,000,000)
Cash paid for liabilities under finance lease agreements	(3,340,031)	(3,337,424)
Cash paid for dividend	(149,996,987)	(150,000,000)
Net cash from (used in) financing activities	<u>632,518,339</u>	<u>(420,905,919)</u>
Net decrease in cash and cash equivalents	(3,121,949)	(1,734,067)
Cash and cash equivalents at beginning of year	<u>35,313,249</u>	<u>37,047,316</u>
Cash and cash equivalents at end of year (Note 7)	<u><u>32,191,300</u></u>	<u><u>35,313,249</u></u>
Supplemental cash flows information		
Non-cash related transaction from investing activities		
Accounts payables from purchases of equipment and intangible assets	60,069,998	34,505,370
Acquisitions of equipment under finance lease agreements	-	1,993,124

The accompanying notes are an integral part of the financial statements.

Thai Agro Energy Public Company Limited
Statement of changes in shareholders' equity
For the year ended 31 December 2018

(Unit: Baht)

Note	Issued and fully paid up share capital	Share premium	Capital reserve for share-based payment transactions	Retained earnings		Total
				Statutory reserve	Unappropriated	
				Appropriated	Unappropriated	
				General reserve		
Balance as at 1 January 2017	1,000,000,000	188,795,985	556,451	100,000,000	442,297,548	1,731,649,984
Profit for the year	-	-	-	-	48,856,282	48,856,282
Other comprehensive income for the year	-	-	-	-	(2,595,904)	(2,595,904)
Total comprehensive income for the year	-	-	-	-	46,260,378	46,260,378
Dividend paid	-	-	-	-	(150,000,000)	(150,000,000)
Unappropriated retained earnings transferred to general reserve	-	-	-	-	(192,000,000)	-
Balance as at 31 December 2017	1,000,000,000	188,795,985	556,451	100,000,000	146,557,926	1,627,910,362
Balance as at 1 January 2018	1,000,000,000	188,795,985	556,451	100,000,000	146,557,926	1,627,910,362
Profit for the year	-	-	-	-	294,277,260	294,277,260
Other comprehensive income for the year	-	-	-	-	-	-
Total comprehensive income for the year	-	-	-	-	294,277,260	294,277,260
Dividend paid	-	-	-	-	(149,984,900)	(149,984,900)
Balance as at 31 December 2018	1,000,000,000	188,795,985	556,451	100,000,000	290,850,286	1,772,202,722

The accompanying notes are an integral part of the financial statements.

Thai Agro Energy Public Company Limited
Notes to financial statements
For the year ended 31 December 2018

1. General information

Thai Agro Energy Public Company Limited (“the Company”) was incorporated as a limited company and domiciled in Thailand and was transformed to be a public limited company under Thai laws on 18 October 2007. Its parent company is Lanna Resources Public Co., Ltd., which is a public limited company incorporated in Thailand. The Company operates in Thailand and is principally engaged in production and distribution of ethanol for fuel. The registered office of the Company is at 888/114, Ploenchit Road, Lumpini, Pathumwan, Bangkok.

2. Basis of preparation

The financial statements have been prepared in accordance with Thai Financial Reporting Standards enunciated under the Accounting Professions Act B.E. 2547 and their presentation has been made in compliance with the stipulations of the Notification of the Department of Business Development dated 11 October 2016, issued under the Accounting Act B.E. 2543.

The financial statements in Thai language are the official statutory financial statements of the Company. The financial statements in English language have been translated from the Thai language financial statements.

The financial statements have been prepared on a historical cost basis except where otherwise disclosed in the accounting policies.

3. New financial reporting standards

(a) Financial reporting standards that became effective in the current year

During the year, the Company has adopted the revised financial reporting standards and interpretations (revised 2017) which are effective for fiscal years beginning on or after 1 January 2018. These financial reporting standards were aimed at alignment with the corresponding International Financial Reporting Standards with most of the changes and clarifications directed towards disclosures in the notes to financial statements. The adoption of these financial reporting standards does not have any significant impact on the Company’s financial statements.

(b) Financial reporting standards that will become effective for fiscal years beginning on or after 1 January 2019

The Federation of Accounting Professions issued a number of revised and new financial reporting standards and interpretations (revised 2018) which are effective for fiscal years beginning on or after 1 January 2019. These financial reporting standards were aimed at alignment with the corresponding International Financial Reporting Standards with most of the changes directed towards clarifying accounting treatment and providing accounting guidance for users of the standards.

The management of the Company believes that most of the revised financial reporting standards will not have any significant impact on the financial statements when they are initially applied. However, the new standard involves changes to key principles, as summarised below.

TFRS 15 Revenue from Contracts with Customers

TFRS 15 supersedes the following accounting standards together with related Interpretations.

TAS 11 (revised 2017)	Construction contracts
TAS 18 (revised 2017)	Revenue
TSIC 31 (revised 2017)	Revenue - Barter Transactions Involving Advertising Services
TFRIC 13 (revised 2017)	Customer Loyalty Programmes
TFRIC 15 (revised 2017)	Agreements for the Construction of Real Estate
TFRIC 18 (revised 2017)	Transfers of Assets from Customers

Entities are to apply this standard to all contracts with customers unless those contracts fall within the scope of other standards. The standard establishes a five-step model to account for revenue arising from contracts with customers, with revenue being recognised at an amount that reflects the consideration to which an entity expects to be entitled in exchange for transferring goods or services to a customer. The standard requires entities to exercise judgement, taking into consideration all of the relevant facts and circumstances when applying each step of the model.

The management of the Company is currently evaluating the impact of this standard to the financial statements in the year when it is adopted.

(c) Financial reporting standards related to financial instruments that will become effective for fiscal years beginning on or after 1 January 2020

During the current year, the Federation of Accounting Professions issued a set of TFRSs related to financial instruments, which consists of five accounting standards and interpretations, as follows:

Financial Reporting Standards:

TFRS 7 Financial Instruments: Disclosures

TFRS 9 Financial Instruments

Accounting Standard:

TAS 32 Financial Instruments: Presentation

Financial Reporting Standard Interpretations:

TFRIC 16 Hedges of a Net Investment in a Foreign Operation

TFRIC 19 Extinguishing Financial Liabilities with Equity Instruments

These TFRSs related to financial instruments make stipulations relating to the classification of financial instruments and their measurement at fair value or amortised cost (taking into account the type of instrument, the characteristics of the contractual cash flows and the Company's business model), calculation of impairment using the expected credit loss method, and hedge accounting. These include stipulations regarding the presentation and disclosure of financial instruments. When the TFRSs related to financial instruments are effective, some accounting standards, interpretations and guidance which are currently effective will be cancelled.

The management of the Company is currently evaluating the impact of these standards to the financial statements in the year when they are adopted.

4. Significant accounting policies

4.1 Revenue recognition

Sales of goods

Sales of goods are recognised when the significant risks and rewards of ownership of the goods have passed to the buyer. Sales are the invoiced value, excluding value added tax, of goods supplied after deducting discounts and allowances.

Interest income

Interest income is recognised on an accrual basis based on the effective interest rate.

4.2 Cash and cash equivalents

Cash and cash equivalents consist of cash in hand and at banks, and all highly liquid investments with an original maturity of three months or less and not subject to withdrawal restrictions.

4.3 Investments

Investments in securities held for trading are stated at fair value. Changes in the fair value of these securities, which is determined from their net asset value, are recorded in profit or loss.

On disposal of an investment, the difference between net disposal proceeds and the carrying amount of the investment is recognised in profit or loss.

4.4 Trade receivables

Trade receivables are stated at the net realisable value. Allowance for doubtful accounts is provided for the estimated losses that may be incurred in collection of receivables. The allowance is generally based on collection experiences and analysis of debt aging.

4.5 Inventories

Finished goods and work in process are valued at the lower of cost (under the weighted average method) and net realisable value. Such cost includes all production cost and attributable factory overheads.

Raw materials and supplies are valued at the lower of cost (under the weighted average method) and net realisable value and are charged to production costs whenever consumed.

Net realisable value is selling price in the ordinary course of business less the estimated costs of completion and the estimated cost necessary to make sale.

4.6 Property, plant and equipment and depreciation

Land is stated at cost. Buildings and equipment are stated at cost less accumulated depreciation and allowance for loss on impairment of assets (if any).

Depreciation of buildings and equipment is calculated by reference to their costs on the straight-line basis over the following estimated useful lives:

Buildings and amenities	5 - 30	years
Machinery and equipment	5 - 30	years
Office equipment	3, 5, 15	years
Motor vehicles	5	years

No depreciation is provided for land, land improvement, and assets under construction and installation.

Depreciation is included in determining income.

An item of property, plant and equipment is derecognised upon disposal or when no future economic benefits are expected from its use or disposal. Any gain or loss arising on disposal of an asset is included in profit or loss when the asset is derecognised.

4.7 Government grants related to assets

Government grants are recognised when there is reasonable assurance that the grants will be received and all attached conditions will be complied with. Government grants related to assets are presented as a deduction to the value of the related assets and are recognised in profit or loss over the useful life of the assets as a reduced depreciation expense.

4.8 Intangible assets

Intangible assets are carried at cost less accumulated amortisation and accumulated impairment losses (if any).

Intangible assets with finite lives are amortised on a systematic basis over the economic useful life and tested for impairment whenever there is an indication that the intangible asset may be impaired. The amortisation period and the amortisation method for such intangible assets are reviewed at least at each financial year end. The amortisation expense is charged to profit or loss.

A summary of the intangible assets with finite useful lives is as follows:

	<u>Useful lives</u>
Computer software	3, 5, 10 years

4.9 Related party transactions

Related parties comprise individuals or enterprises that control, or are controlled by, the Company, whether directly or indirectly, or which are under common control with the Company.

They also include associated companies, and individuals or enterprises which directly or indirectly own a voting interest in the Company that gives them significant influence over the Company, key management personnel, directors, and officers with authority in the planning and direction of the Company's operations.

4.10 Long-term leases

Leases of property, plant or equipment which transfer substantially all the risks and rewards of ownership are classified as finance leases. Finance leases are capitalised at the lower of the fair value of the leased assets and the present value of the minimum lease payments. The outstanding rental obligations, net of finance charges, are included in long-term payables, while the interest element is charged to profit or loss over the lease period. The assets acquired under finance leases is depreciated over the shorter of the useful life of the asset and the lease period.

Leases of property, plant or equipment which do not transfer substantially all the risks and rewards of ownership are classified as operating leases. Operating lease payments are recognised as an expense in profit or loss on a straight line basis over the lease term.

4.11 Foreign currencies

The financial statements are presented in Baht, which is also the Company's functional currency.

Transactions in foreign currencies are translated into Baht at the exchange rates ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are translated into Baht at the exchange rate ruling at the end of reporting period.

Gains and losses on exchange are included in determining income.

4.12 Impairment of assets

At the end of each reporting period, the Company performs impairment reviews in respect of the property, plant and equipment and other intangible assets whenever events or changes in circumstances indicate that an asset may be impaired. An impairment loss is recognised when the recoverable amount of an asset, which is the higher of the asset's fair value less costs to sell and its value in use, is less than the carrying amount. In determining value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs to sell, an appropriate valuation model is used. These calculations are corroborated by a valuation model that, based on information available, reflects the amount that the Company could obtain from the disposal of the asset in an arm's length transaction between knowledgeable, willing parties, after deducting the costs of disposal.

An impairment loss is recognised in profit or loss.

4.13 Employee benefits

Short-term employee benefits

Salaries, wages, bonuses and contributions to the social security fund are recognised as expenses when incurred.

Post-employment benefits

Defined contribution plans

The Company and its employees have jointly established a provident fund. The fund is monthly contributed by employees and by the Company. The fund's assets are held in a separate trust fund and the Company's contributions are recognised as expenses when incurred.

Defined benefit plans

The Company has obligations in respect of the severance payments it must make to employees upon retirement under labor law. The Company treats these severance payment obligations as defined benefit plans.

The obligations under the defined benefit plan is determined by a professionally qualified independent actuary based on actuarial techniques, using the projected unit credit method.

Actuarial gains and losses arising from defined benefit plans are recognised immediately in other comprehensive income.

Past service costs are recognised in profit or loss on the earlier of the date of the plan amendment and the date that the Company recognised restructuring - related costs.

4.14 Provisions

Provisions are recognised when the Company has a present obligation as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

4.15 Income tax

Income tax expense represents the sum of corporate income tax currently payable and deferred tax.

Current tax

The Company provides income tax in the accounts at the amount expected to be paid to the taxation authorities, based on taxable profits determined in accordance with tax legalisation. Corporate income tax rate is 20 percent for non-promoted operations and exemption from corporate income tax for promoted operations.

Deferred tax

Deferred income tax is provided on temporary differences between the tax bases of assets and liabilities and their carrying amounts at the end of each reporting period, using the tax rates enacted at the end of the reporting period.

The Company recognises deferred tax liabilities for all taxable temporary differences while they recognise deferred tax assets for all deductible temporary differences and tax losses carried forward to the extent that it is probable that future taxable profit will be available against which such deductible temporary differences and tax losses carried forward can be utilised.

At each reporting date, the Company reviews and reduces the carrying amount of deferred tax assets to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilised.

The Company records deferred tax directly to shareholders' equity if the tax relates to items that are recorded directly to shareholders' equity.

4.16 Fair value measurement

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between buyer and seller (market participants) at the measurement date. The Company applies a quoted market price in an active market to measure their assets and liabilities that are required to be measured at fair value by relevant financial reporting standards. Except in case of no active market of an identical asset or liability or when a quoted market price is not available, the Company measures fair value using valuation techniques that are appropriate in the circumstances and maximises the use of relevant observable inputs related to assets and liabilities that are required to be measured at fair value.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorised within the fair value hierarchy into three levels based on categories of input to be used in fair value measurement as follows:

Level 1 - Use of quoted market prices in an observable active market for such assets or liabilities

Level 2 - Use of other observable inputs for such assets or liabilities, whether directly or indirectly

Level 3 - Use of unobservable inputs such as estimates of future cash flows

At the end of each reporting period, the Company determines whether transfers have occurred between levels within the fair value hierarchy for assets and liabilities held at the end of the reporting period that are measured at fair value on a recurring basis.

5. Significant accounting judgements and estimates

The preparation of financial statements in conformity with financial reporting standards at times requires management to make subjective judgements and estimates regarding matters that are inherently uncertain. These judgements and estimates affect reported amounts and disclosures; and actual results could differ from these estimates. Significant judgements and estimates are as follows:

Leases

In determining whether a lease is to be classified as an operating lease or finance lease, the management is required to use judgement regarding whether significant risk and rewards of ownership of the leased asset has been transferred, taking into consideration terms and conditions of the arrangement.

Allowance for diminution in inventory value

In determining an allowance for diminution in inventory value, the management needs to make judgement in estimating loss from slow moving and deteriorated inventories including the effect from declining in net realisable value of inventories.

Property, plant and equipment and depreciation

In determining depreciation of plant and equipment, the management is required to make estimates of the useful lives and residual values of the plant and equipment and to review estimated useful lives and residual values when there are any changes.

In addition, the management is required to review property, plant and equipment for impairment on a periodical basis and record impairment losses in the period when it is determined that their recoverable amount is lower than the carrying amount. This requires judgements regarding forecast of future revenues and expenses relating to the assets subject to the review.

Deferred tax assets

Deferred tax assets are recognised for deductible temporary differences and unused tax losses to the extent that it is probable that taxable profit will be available against which the temporary differences and losses can be utilised. Significant management judgement is required to determine the amount of deferred tax assets that can be recognised, based upon the likely timing and level of estimate future taxable profits.

Post-employment benefits under defined benefit plans

The obligation under the defined benefit plan is determined based on actuarial techniques. Such determination is made based on various assumptions, including discount rate, future salary increase rate, mortality rate and staff turnover rate.

6. Related party transactions

During the years, the Company had significant business transactions with related parties. Such transactions, which are summarised below, were concluded on agreed upon between the Company and those related parties.

	<u>2018</u>	<u>2017</u>	(Unit: Baht) <u>Transfer Pricing Policy</u>
<u>Transactions with parent company</u>			
Dividend paid	76,500,000	76,500,000	Declared rate

As at 31 December 2018 and 2017, there are no outstanding balance between the Company and related companies.

Directors and management's benefits

During the years ended 31 December 2018 and 2017, the Company had employee benefit expenses payable to its directors and management as below.

	<u>2018</u>	<u>2017</u>	(Unit: Baht)
Short-term employee benefits	28,164,342	26,366,515	
Post-employment benefits	1,957,325	2,490,583	
Total	<u>30,121,667</u>	<u>28,857,098</u>	

7. Cash and cash equivalents

	(Unit: Baht)	
	<u>2018</u>	<u>2017</u>
Cash	26,311	19,460
Bank deposits	32,164,989	35,293,789
Total	<u>32,191,300</u>	<u>35,313,249</u>

As at 31 December 2018, bank deposits in savings accounts carried interests at the rates between 0.10 and 0.38 percent per annum (2017: between 0.10 and 0.38 percent per annum).

8. Trade and other receivables

	(Unit: Baht)	
	<u>2018</u>	<u>2017</u>
Trade receivables	238,528,362	207,063,051
Other receivables	6,368,162	1,401,251
Value added tax refundable	30,989,244	-
Accrued income	-	4,347,000
Interest receivable	2,673	3,503
Total trade and other receivables	<u>275,888,441</u>	<u>212,814,805</u>

The outstanding balances of trade receivables as at 31 December 2018 amounting to Baht 238.5 million (2017: Baht 207.1 million) are undue trade receivables.

9. Inventories

	(Unit: Baht)					
	Cost		Reduce cost to net realisable value		Inventories - net	
	<u>2018</u>	<u>2017</u>	<u>2018</u>	<u>2017</u>	<u>2018</u>	<u>2017</u>
Finished goods - Ethanol	23,685,243	17,051,071	-	(555,027)	23,685,243	16,496,044
Work in process	12,275,716	18,312,280	-	-	12,275,716	18,312,280
Raw materials	94,018,509	78,178,747	-	-	94,018,509	78,178,747
Supplies	11,628,088	9,914,550	-	-	11,628,088	9,914,550
Total	<u>141,607,556</u>	<u>123,456,648</u>	<u>-</u>	<u>(555,027)</u>	<u>141,607,556</u>	<u>122,901,621</u>

During 2018, the Company reversed the write-down of cost of inventories by Baht 0.6 million, and reduced the amount of inventories recognised as cost during the year. (2017: The Company reduced cost of inventories by Baht 0.6 million, to reflect the net realisable value. This was included in cost of sales.)

10. Advance payments for purchase of goods

During the year, the Company had significant business transactions with local companies in respect of purchases of molasses and cassava chips under the purchase of molasses agreement and cassava chips agreement. To comply with the conditions in the agreements, as at 31 December 2018, the Company had paid advance payments for purchase of molasses amounting to Baht 545.1 million (2017: Baht 38.4 million).

11. Property, plant and equipment

(Unit: Baht)

	Land and land improvement	Building and amenities	Machineries and equipment	Office equipment	Motor vehicles	Assets under construction and installation	Total
Cost							
1 January 2017	230,558,380	254,919,738	2,132,571,822	18,973,439	28,891,317	424,569,604	3,090,484,300
Additions	49,224,251	9,415,953	104,378	1,151,707	1,816,900	168,389,779	230,102,968
Write-off	-	-	(1,306,017)	(168,239)	(80,000)	-	(1,554,256)
Transfers in (out)	-	55,722,826	500,866,728	-	-	(556,589,554)	-
31 December 2017	279,782,631	320,058,517	2,632,236,911	19,956,907	30,628,217	36,369,829	3,319,033,012
Purchase	16,394,415	3,058,848	9,272,977	1,909,717	119,000	485,681,163	516,436,120
Transfers in (out)	-	158,312,541	2,043,552	-	-	(160,356,093)	-
31 December 2018	296,177,046	481,429,906	2,643,553,440	21,866,624	30,747,217	361,694,899	3,835,469,132
Accumulated depreciation							
1 January 2017	-	72,873,328	667,305,775	15,582,312	20,334,003	-	776,095,418
Depreciation for the year	-	11,026,507	130,652,189	1,492,477	2,768,071	-	145,939,244
Depreciation on write-off	-	-	(1,110,038)	(166,476)	(47,167)	-	(1,323,681)
31 December 2017	-	83,899,835	796,847,926	16,908,313	23,054,907	-	920,710,981
Depreciation for the year	-	17,563,922	136,824,033	1,527,417	2,778,822	-	158,694,194
31 December 2018	-	101,463,757	933,671,959	18,435,730	25,833,729	-	1,079,405,175
Net book value							
31 December 2017	279,782,631	236,158,682	1,835,388,985	3,048,594	7,573,310	36,369,829	2,398,322,031
31 December 2018	296,177,046	379,966,149	1,709,881,481	3,430,894	4,913,488	361,694,899	2,756,063,957
Depreciation for the year							
2017 (Baht 119 million included in manufacturing cost, and the balance in selling and distribution expenses and administrative expenses)							145,939,244
2018 (Baht 156 million included in manufacturing cost, and the balance in selling and distribution expenses and administrative expenses)							158,694,194

As at 31 December 2018, the Company had an outstanding balance of the construction of Wastewater Evaporation Plant amounting to Baht 350.9 million (2017: Nil). The construction has been financed with loans from a financial institution. Borrowing costs amounting to Baht 4.4 million were capitalised during the year (2017: Nil). The weighted average rate of 2.9 to 3.7 percent per annum has been used to determine the amount of borrowing costs eligible for capitalisation.

As at 31 December 2018, the Company has office equipment and motor vehicles under financial lease agreements with net book value amounting to Baht 4.8 million (2017: Baht 7.6 million).

The Company has mortgaged part of its land and construction thereon and machinery with net book value as at 31 December 2018 amounting to approximately Baht 1,613.6 million (2017: Baht 1,713.6 million) as collateral for short-term and long-term loans and credit facilities granted by a commercial bank as discussed in Note 13 and 16.

As at 31 December 2018, certain machineries and equipment, office equipment and motor vehicles have been fully depreciated but are still in use. The gross carrying amount before deducting accumulated depreciation of those assets amounted to approximately Baht 92.0 million (2017: Baht 75.0 million).

12. Intangible assets

The net book value of intangible assets which are computer software as at 31 December 2018 and 2017 is presented below.

	(Unit: Baht)	
	<u>2018</u>	<u>2017</u>
Cost	9,116,986	7,605,986
Less: Accumulated amortisation	<u>(6,454,675)</u>	<u>(5,739,844)</u>
Net book value	<u><u>2,662,311</u></u>	<u><u>1,866,142</u></u>

A reconciliation of the net book value of intangible assets for the years 2018 and 2017 is presented below.

	(Unit: Baht)	
	<u>2018</u>	<u>2017</u>
Net book value at beginning of year	1,866,142	2,346,190
Additions	1,511,000	157,740
Write-off	-	(1)
Amortisation for the year	<u>(714,831)</u>	<u>(637,787)</u>
Net book value at end of year	<u><u>2,662,311</u></u>	<u><u>1,866,142</u></u>

13. Short-term loans from financial institutions

	(Unit: Baht)			
	<u>Interest rate (percent per annum)</u>		<u>2018</u>	<u>2017</u>
	<u>2018</u>	<u>2017</u>	<u>2018</u>	<u>2017</u>
Promissory notes	2.75 - 2.95	2.75 - 3.00	882,905,000	633,209,723
Trust receipts	2.75	2.75 - 2.85	<u>291,807,145</u>	<u>265,858,306</u>
Total			<u><u>1,174,712,145</u></u>	<u><u>899,068,029</u></u>

Credit facilities of short-term loans from financial institutions is secured by the mortgage of part of the Company's land and construction thereon and machinery as discussed in Note 11.

14. Trade and other payables

	(Unit: Baht)	
	<u>2018</u>	<u>2017</u>
Trade payables	62,996,703	108,561,101
Other payables	81,322,534	50,021,189
Dividend payables	1,217,645	1,229,732
Total trade and other payables	<u>145,536,882</u>	<u>159,812,022</u>

15. Liabilities under finance lease agreements

	(Unit: Baht)	
	<u>2018</u>	<u>2017</u>
Liabilities under finance lease agreements	2,887,577	6,227,608
Less: Deferred interest expenses	(83,285)	(388,819)
Total	2,804,292	5,838,789
Less: Portion due within one year	(2,094,663)	(3,254,811)
Liabilities under finance lease agreements - net of current portion	<u>709,629</u>	<u>2,583,978</u>

The Company has entered into the finance lease agreements with leasing companies for rental of office equipment and motor vehicles for use in its operations, whereby it is committed to pay rental on a monthly basis. The term of the agreement is 3 and 5 years.

Future minimum lease payments required under the finance lease agreements were as follows:

	(Unit: Baht)		
	<u>As at 31 December 2018</u>		
	Less than 1 year	1-5 years	Total
Future minimum lease payments	2,171,975	715,602	2,887,577
Deferred interest expenses	(77,312)	(5,973)	(83,285)
Present value of future minimum lease payments	<u>2,094,663</u>	<u>709,629</u>	<u>2,804,292</u>

	(Unit: Baht)		
	As at 31 December 2017		
	Less than		
	1 year	1-5 years	Total
Future minimum lease payments	3,560,344	2,667,264	6,227,608
Deferred interest expenses	(305,533)	(83,286)	(388,819)
Present value of future minimum lease payments	<u>3,254,811</u>	<u>2,583,978</u>	<u>5,838,789</u>

16. Long-term loans

	(Unit: Baht)	
	<u>2018</u>	<u>2017</u>
Long-term loans	627,968,432	117,757,191
Less: Current portion	<u>(102,000,000)</u>	<u>(117,757,191)</u>
Long-term loans - net of current portion	<u>525,968,432</u>	<u>-</u>

Movements in the long-term loans during the year ended 31 December 2018 are summarised below.

	(Unit: Baht)
Balance as at 31 December 2017	117,757,191
Add: Additional borrowings	627,968,432
Less: Repayment during the year	<u>(117,757,191)</u>
Balance as at 31 December 2018	<u>627,968,432</u>

On 6 November 2013, the Company entered into long-term loan agreement with a local bank, obtaining loan facilities of Baht 845 million, for the debt refinance with an another local bank. On 18 December 2013, the Company withdrew the loan for the debt refinance and repaid all of short-term and long-term loans to that local bank totaling Baht 837.8 million. The loan initially carries interest rate at THBFIX reference rate plus 1.75 percent per annum for the first year, and the interest rate increases by 0.05 percent per annum from the second to fifth year. The loan is repayable within 5 years in 10 semi-annually installments of Baht 90 million during the first to ninth installment, and remaining balance is repayable in the tenth installment. The repayment period is from June 2014 to December 2018. The loan is secured by the mortgage of a part of the Company's land and construction thereon and machinery as discussed in Note 11.

Subsequently, on 7 March 2014, the Company executed a memorandum attached to the long-term loan agreement made with the bank to revise certain conditions and debt service coverage ratios.

On 15 May 2018, the Company entered into long-term loan agreement with a local bank, obtaining loan facilities of Baht 418 million. The loan carries interest at 3M THBFIX reference rate plus 1.95 percent per annum and is repayable the first installment in the last day of the eighteenth month since the Company withdrew the loan (8 June 2018). The loan is repayable within 6 years in 10 semi-annually installments of Baht 42 million during the first to ninth installment, and remaining balance is repayable in the tenth installment. The loan is secured by the mortgage of a part of the Company's land and construction thereon and machinery as discussed in Note 11.

Subsequently, on 8 November 2018, the Company entered into another long-term loan agreement with the same bank, obtaining loan facilities of Baht 300 million. The loan carries interest at 3M THBFIX reference rate plus 1.95 percent per annum and is repayable the first installment in the last day of the sixth month since the Company withdrew the loan (15 November 2018). The loan is repayable within 5 years in 10 semi-annually installments of Baht 30 million each. The loan is secured by the mortgage of a part of the Company's land and construction thereon and machinery as discussed in Note 11.

Such loan agreements contain covenants that, among other things, require the Company to maintain certain financial ratios according to the agreement such as debt to equity and debt service coverage ratios at the rate prescribed in the agreement.

As at 31 December 2018, the Company could maintain certain financial ratios as specified in the long-term loan agreement (2017: the Company could not maintain certain financial ratios as specified in the loan agreement. However, the Company had obtained a waiver letter for the condition to maintain certain financial ratios for the years ended 31 December 2017 from a bank on 29 January 2018. As at 31 December 2017 the long-term loan of Baht 117.8 million is current portion of long-term loan).

17. Provision for long-term employee benefits

Provision for long-term employee benefits, which represents compensations payable to employees after they retire, was as follows:

	(Unit: Baht)	
	<u>2018</u>	<u>2017</u>
Provision for long-term employee benefits at beginning of year	6,357,539	3,981,219
Included in profit or loss:		
Current service cost	2,204,174	334,221
Interest cost	73,433	52,449
Included in other comprehensive income:		
Actuarial (gain) loss arising from		
Demographic assumptions changes	-	815,174
Financial assumptions changes	-	(205,079)
Experience adjustments	-	2,634,785
Benefits paid during the year	<u>(3,109,860)</u>	<u>(1,255,230)</u>
Provision for long-term employee benefits at end of year	<u><u>5,525,286</u></u>	<u><u>6,357,539</u></u>
Provision for long-term employee benefits		
Current	2,291,033	4,089,548
Non-current	<u>3,234,253</u>	<u>2,267,991</u>
	<u><u>5,525,286</u></u>	<u><u>6,357,539</u></u>

Line items in profit or loss under which long-term employee benefit expenses are recognised are as follows:

	(Unit: Baht)	
	<u>2018</u>	<u>2017</u>
Cost of sales	387,185	68,579
Selling and distribution and administrative expenses	<u>1,890,422</u>	<u>318,091</u>
Total expenses recognised in profit or loss	<u><u>2,277,607</u></u>	<u><u>386,670</u></u>

In 2018, the Company expects to pay Baht 2.3 million of long-term employee benefits during the next year (2017: Baht 4.1 million).

As at 31 December 2018, the weighted average duration of the liabilities for long-term employee benefit is 9 years and 13 years (2017: 9 years and 13 years).

Significant actuarial assumptions are summarised below:

	(Unit: percent per annum)	
	<u>2018</u>	<u>2017</u>
Discount rate	2.4, 2.9	2.4, 2.9
Salary increase rate	5.0, 6.0	5.0, 6.0
Turnover rate	2.9 - 34.4	2.9 - 34.4

The result of sensitivity analysis for significant assumptions that affect the present value of the long-term employee benefit obligation as at 31 December 2018 and 2017 are summarised below:

	(Unit: Baht)	
	<u>As at 31 December 2018</u>	
	<u>Increase 0.5%</u>	<u>Decrease 0.5%</u>
Discount rate	(21,197)	23,083
	<u>Increase 1.0%</u>	<u>Decrease 1.0%</u>
Salary increase rate	53,121	(46,059)
	<u>Increase 20.0%</u>	<u>Decrease 20.0%</u>
Turnover rate	(101,209)	149,554

	(Unit: Baht)	
	<u>As at 31 December 2017</u>	
	<u>Increase 0.5%</u>	<u>Decrease 0.5%</u>
Discount rate	(156,686)	170,211 (85,659)
	<u>Increase 1.0%</u>	<u>Decrease 1.0%</u>
Salary increase rate	339,588	(294,837)
	<u>Increase 20.0%</u>	<u>Decrease 20.0%</u>
Turnover rate	(653,765)	964,853

On 13 December 2018, The National Legislative Assembly passed a resolution approving the draft of a new Labour Protection Act, which is in the process being published in the Royal Gazette. The new Labour Protection Act stipulates additional legal severance pay rates for employees who have worked for an uninterrupted period of twenty years or more. Such employees are entitled to receive compensation at a rate of not less than that of the last 400 days. This change is considered a post-employment benefits plan amendment and the Company has additional liabilities for long-term employee benefits of Baht 0.6 million. The Company will reflect the effect of the change by recognising past services costs as expenses in the profit or loss of the period in which the law is effective.

18. Statutory reserve

Pursuant to Section 116 of the Public Limited Companies Act B.E. 2535, the Company is required to set aside to a statutory reserve at least 5 percent of its net profit after deducting accumulated deficit brought forward (if any), until the reserve reaches 10 percent of its registered share capital. The statutory reserve is not available for dividend distribution. Presently, the Company has fully set aside a statutory reserve.

19. Expenses by nature

Significant expenses classified by nature are as follows:

	<u>2018</u>	<u>2017</u>
		(Unit: Baht)
Raw materials and consumables used	1,937,407,699	1,954,051,551
Changes in inventories of finished goods and work in process	(597,608)	(9,116,701)
Depreciation and amortisation	159,409,024	146,577,031
Salaries, wages and other employee benefits	98,610,299	88,738,146
Electricity and fuel expenses	39,277,052	50,154,186
Repair and maintenance expenses	29,331,733	26,767,601
Distribution expenses	16,734,952	6,952,420

20. Damage from flood event

In October 2017, it was inundated by flood, which caused the collapse of a part of the vinasse reservoirs at the Company's ethanol plant, resulting in overflows of treated vinasse into a village and some related agricultural areas. The Company therefore had to pay compensation and the Ministry of Industry ordered to shut down its ethanol plant temporarily in order to repair the damaged reservoirs to a safe level. The Company investigated the damages and recorded damage from flood of Baht 73.3 million and Baht 2.3 million in profit or loss for the year 2017 and 2018, respectively.

However, the Company has insurance covering the damages on which it is in the process of claiming compensation from the insurance company.

21. Income tax

Income tax for the years ended 31 December 2018 and 2017 are made up as follows:

	(Unit: Baht)	
	<u>2018</u>	<u>2017</u>
Current income tax:		
Current income tax charge	27,055,010	-
Adjustment in respect of income tax of previous year	-	(164,539)
Deferred tax:		
Relating to origination and reversal of temporary differences	430,669	(334,318)
Income tax reported in the statements of comprehensive income	<u>27,485,679</u>	<u>(498,857)</u>

The amounts of income tax relating to each component of other comprehensive income for the years ended 31 December 2018 and 2017 are as follows:

	(Unit: Baht)	
	<u>2018</u>	<u>2017</u>
Deferred tax on actuarial loss	-	648,976

The reconciliation between accounting profit and income tax is shown below.

	(Unit: Baht)	
	<u>2018</u>	<u>2017</u>
Accounting profit before tax	321,762,939	48,357,425
Applicable tax rate	20%	20%
Accounting profit before tax multiplied by income tax rate	64,352,588	9,671,485
Adjustment in respect of income tax of previous year	-	(164,539)
Effects of:		
Promotional privileges (Note 22)	(39,669,854)	(14,733,793)
Non-deductible expenses	3,494,489	720,954
Additional expense deductions allowed	(1,347,031)	(512,142)
Unrecognised unused tax losses	-	4,066,078
Others	655,487	453,100
Total	<u>(36,866,909)</u>	<u>(10,005,803)</u>
Income tax reported in the statement of comprehensive income	<u>27,485,679</u>	<u>(498,857)</u>

As at 31 December 2018, the Company has unused tax losses totaling Baht 20.3 million, on which deferred tax assets have not been recognised. (2017: Baht 20.3 million)

The unused tax losses amounting to Baht 20.3 million will expire in the year 2022.

The components of deferred tax assets and deferred tax liabilities are as follows:

	(Unit: Baht)	
	Statements of financial position as at 31 December	
	<u>2018</u>	<u>2017</u>
Deferred tax assets		
Government grants	5,249,516	4,876,444
Financial leases	296,641	748,468
Provision for short-term employee benefits	261,519	246,806
Provision for long-term employee benefits	646,850	364,501
Actuarial loss	-	648,976
Total	<u>6,454,526</u>	<u>6,885,195</u>
Deferred tax liabilities		
Accumulated depreciation - Machineries	<u>3,421,318</u>	<u>3,421,318</u>
Total	<u>3,421,318</u>	<u>3,421,318</u>
Deferred tax assets, net	<u>3,033,208</u>	<u>3,463,877</u>

22. Promotional privileges

The Company has received the promotional privileges under the Investment Promotion Act B.E. 2520 as approved by the Board of Investment as follows:

Certificate No.	1760(2)/2546	2078(9)/2551
Date	26 December 2003	19 November 2008
1. Promotional privileges for	Manufacture of alcohol	Manufacture of ethanol (99.5%)
2. Significant privileges		
2.1 Exemption from corporate income tax on income derived from the promoted operations (commencing from the date of earning operating income) and exemption from income tax on dividend paid from the income of the promoted operations throughout the period in which the corporate income tax is exempted.	8 years (expired)	8 years (will expire on 1 April 2020)
2.2 Allowance to carry-forward the annual loss from promoted operations incurred during the corporate income tax exemption period to offset with net income incurred thereafter (after exemption period in 2.1).	5 years	5 years
2.3 Exemption from import duty on raw and essential materials or products used for manufacture for export commencing from the first import date.	1 year	1 year
3. Date of first earning operating income	31 January 2005	2 April 2012

As a promoted company, the Company has to comply with certain conditions and restrictions provided for in the promotional certificates.

The Company's operating revenues for the years ended 31 December 2018 and 2017 were domestic sales, which were divided between promoted and non-promoted operations are summarised below:

	(Unit: Baht)	
	<u>2018</u>	<u>2017</u>
Revenues from sales		
Promoted operations	1,538,770,800	1,461,624,145
Non-promoted operations	1,157,305,042	1,008,894,485
Total	<u>2,696,075,842</u>	<u>2,470,518,630</u>

23. Earnings per share

Basic earnings per share is calculated by dividing profit for the year (excluding other comprehensive income) by the weighted average number of ordinary shares in issue during the year.

	<u>2018</u>	<u>2017</u>
Profit for the year (Baht)	294,277,260	48,856,282
Weighted average number of ordinary shares (shares)	1,000,000,000	1,000,000,000
Earnings per share (Baht)	0.29	0.05

24. Segment information

Operating segment information is reported in a manner consistent with the internal reports that are regularly reviewed by the chief operating decision maker in order to make decisions about the allocation of resources to the segment and assess its performance.

The one main reportable operating segment of the Company is production and distribution of ethanol-for-fuel and the single geographical area of their operations is Thailand. Segment performance is measured based on operating profit or loss, on a basis consistent with that used to measure operating profit or loss in the financial statements. As a result, all of the revenues, operating profits and assets as reflected in these financial statements pertain exclusively to the aforementioned reportable operating segment and geographical area.

For the year 2018, the Company has revenue from 3 major customers in amount of Baht 1,209 million, Baht 770 million and Baht 266 million (2017: revenue from 3 major customers in amount of Baht 1,137 million, Baht 674 million and Baht 379 million).

25. Provident fund

The Company and its employees have jointly established a provident fund in accordance with the Provident Fund Act B.E. 2530. Both employees and the Company contribute to the fund monthly at the rate of 2 to 15 percent of basic salary. The fund, which is managed by Bank of Ayudhaya Public Company Limited, will be paid to employees upon termination in accordance with the fund rules. The contributions for the year 2018 amounting to approximately Baht 3.4 million (2017: Baht 3.0 million) were recognised as expenses.

26. Dividend paid

Dividends	Approved by	Total Dividends (Baht)	Dividend per share (Baht)	Paid on
<u>2018</u>				
Final dividends in respect of operation income from BOI promoted operation for the period from 1 July 2017 to 31 December 2017	Annual General Meeting of the shareholders on 19 April 2018	50,000,000	0.05	18 May 2018
Interim dividends in respect of operation income from BOI promoted operation for the period from 1 January 2018 to 30 June 2018	Board of Directors' meeting on 16 August 2018	99,984,900	0.10	14 September 2018
Total		149,984,900	0.15	
<u>2017</u>				
Final dividends in respect of operation income from BOI promoted operation for the period from 1 July 2016 to 31 December 2016	Annual General Meeting of the shareholders on 24 April 2017	50,000,000	0.05	23 May 2017
Interim dividends in respect of operation income from BOI promoted operation for the period from 1 January 2017 to 30 June 2017	Board of Directors' meeting on 17 August 2017	100,000,000	0.10	15 September 2017
Total		150,000,000	0.15	

In addition, the 2017 Annual General Meeting of the shareholders approved to set aside a general reserve of Baht 192 million.

27. Commitment and contingent liabilities

27.1 Capital commitments

As at 31 December 2018, the Company had capital commitments of approximately Baht 88.4 million, relating to the construction of Vinasse Evaporation Reservoirs (2017: the construction of Vinasse Evaporation Reservoirs of approximately Baht 10.6 million).

27.2 Operating lease commitments

The Company has entered into several lease agreements in respect of the lease of office building space and other services. The terms of the agreements are generally between 1 and 5 years.

Future minimum lease and other service payments required under these operating lease and service contracts were as follows:

	(Unit: Million Baht)	
	As at 31 December	
	<u>2018</u>	<u>2017</u>
Payable:		
In up to 1 year	4.7	5.4
In over 1 year and up to 5 years	4.0	7.5

27.3 Long-term service and purchase commitments

- a) The Company entered into a power supply agreement with the Provincial Electricity Authority for a period of one year, commencing 21 December 2010 to 20 December 2011, and being automatically renewed for every one-year period. The Company shall pay power supply at the rate as stipulated in the agreement.
- b) The Company had commitments under the purchase of molasses agreement with 15-years duration under which the price is to be determined every 5 years commencing the first year in 2005. The price for the first three years is that stipulated in the agreement and for the fourth and fifth year, using the average actual market price of the first three years for comparison and the quantity to purchase of molasses are those stipulated in the agreement. For the sixth year onwards, the price is to be determined in each year. In addition, the Company had additional two commitments under the purchase of molasses agreements with 5-year duration under which the price is to be determined before shipment in the next period and the quantity to purchase of molasses are those stipulated in the agreement.

27.4 Guarantees

As at 31 December 2018, there were outstanding bank guarantees of approximately Baht 5.0 million to guarantee contracted performance for using of electric to the Provincial Electricity Authority (2017: Baht 5.2 million).

28. Litigation

In September 2011, a company sued the Company for its alleged non-compliance with the cassava chip purchase agreement dated 21 January 2011 and memorandum dated 29 April 2011, claiming a compensation for damage of Baht 186.9 million. On 8 November 2011, the Company submitted the testimony and countersued that company, claiming a compensation for damage of Baht 82.4 million. Subsequently, on 9 October 2014, the Civil Court dismissed the lawsuit filed by that company and ordered it to make payments for purchases of cassava chip that the Company paid in advance of Baht 6.9 million which together with interest expense of 7.5 percent per annum, calculated from 8 November 2014 (the countersue date) until completion of payment. In addition, that company shall pay for charges and partial lawyer fee for the Company. However, on 3 December 2014, the Company lodged an appeal with the Court of Appeal. On 9 February 2016, the Appeal Court affirmed the judgment of the Civil Court.

Subsequently on 7 April 2016, the Company lodged an appeal with the Supreme Court and on 18 May 2018, the Company sued that company for bankruptcy case. Presently, the case is under consideration of the Courts. As at 31 December 2018, the Company has not received such payment. However, the Company recorded allowance for impairment for the full amount of the advance paid to that company.

29. Fair value hierarchy

As at 31 December 2018 and 2017, the Company had the assets that were measured at fair value using different levels of inputs as follows:

	(Unit: Baht)			
	<u>As at 31 December 2018</u>		<u>As at 31 December 2017</u>	
	<u>Level 2</u>	<u>Total</u>	<u>Level 2</u>	<u>Total</u>
Assets measured at fair value				
Current investments - open fund	1,036,827	1,036,827	1,025,890	1,025,890

30. Financial instruments

30.1 Financial risk management

The Company's financial instruments, as defined under Thai Accounting Standard No.107 "Financial Instruments: Disclosure and Presentations", principally comprise cash and cash equivalents, current investments - open fund, trade and other receivables, trade and other payables, liabilities under finance lease agreements, short-term and long-term loans. The financial risks associated with these financial instruments and how they are managed is described below.

Credit risk

The Company is exposed to credit risk primarily with respect to trade receivables. The Company manages the risk by adopting appropriate credit control policies and procedures and therefore does not expect to incur material financial losses. In addition, most of the Company's receivables are the oil companies which have good reputation and financial position. The maximum exposure to credit risk is limited to the carrying amounts of trade receivables as stated in the statement of financial position.

Interest rate risk

The Company's exposure to interest rate risk relates primarily to its cash at banks, liabilities under finance lease agreements and interest-bearing short-term and long-term loans. However, since most of the Company's financial assets and liabilities bear floating interest rates or fixed interest rates which are close to the market rate, the interest rate risk is expected to be minimal.

Significant financial assets and liabilities classified by type of interest rate are summarised in the table below, with those financial assets and liabilities that carry fixed interest rates further classified based on the maturity date, or the repricing date if this occurs before the maturity date.

(Unit: Million Baht)

	As at 31 December 2018					Effective interest rate (% per annum)
	Fixed interest rates		Floating interest rate	Non- interest bearing	Total	
Within 1 year	Over 1-5 years					
Financial assets						
Cash and cash equivalents	-	-	31.3	0.9	32.2	0.10 - 0.38
Current investments - open fund	-	-	-	1.0	1.0	-
Trade and other receivables	-	-	-	275.9	275.9	-
	-	-	31.3	277.8	309.1	
Financial liabilities						
Short-term loans from financial institutions	1,174.7	-	-	-	1,174.7	2.75 - 2.95
Trade and other payables	-	-	-	145.5	145.5	-
Liabilities under finance lease agreements	2.1	0.7	-	-	2.8	0.27 - 15.32
Long-term loans from financial institution	-	-	628.0	-	628.0	3M THBFIX+1.95
	<u>1,176.9</u>	<u>0.7</u>	<u>628.0</u>	<u>145.5</u>	<u>1,951.0</u>	

(Unit: Million Baht)

As at 31 December 2017

	Fixed interest rates				Total	Effective interest rate (% per annum)
	Within 1 year	Over 1-5 years	Floating interest rate	Non- interest bearing		
Financial assets						
Cash and cash equivalents	-	-	24.3	11.0	35.3	0.10 - 0.38
Current investments - open fund	-	-	-	1.0	1.0	-
Trade and other receivables	-	-	-	212.8	212.8	-
	-	-	24.3	224.8	249.1	
Financial liabilities						
Short-term loans from financial institutions	899.1	-	-	-	899.1	2.75 - 3.00
Trade and other payables	-	-	-	159.8	159.8	-
Liabilities under finance lease agreements	3.2	2.6	-	-	5.8	0.27 - 15.32
Long-term loans from financial institution	-	-	117.8	-	117.8	3M THBFIX+1.95
	902.3	2.6	117.8	159.8	1,182.5	

Foreign currency risk

The Company assumes no foreign currency risk from purchase and sale transactions and borrowings since most of the transactions are denominated in Thai Baht.

30.2 Fair values of financial instruments

Since the majority of the Company's financial instruments are short-term in nature and loans carrying interest at rates close to the market interest rates, their fair value is not expected to be materially different from the amounts presented in the statement of financial position.

31. Capital management

The primary objective of the Company's capital management is to ensure that it has an appropriate capital structure in order to support its business and maximise shareholder value. As at 31 December 2018, the Company's debt-to-equity ratio was 1.1:1 (2017: 0.74:1).

32. Approval of financial statements

These financial statements were authorised for issue by the board of directors of the Company on 18 February 2019.



**Mobile Meeting of the Board of Directors no. 1/2019
and visit the construction of a wastewater evaporation plant
“EVAPORATOR SYSTEM FOR
BIO METHANATED SPENT WASH 3,000 M3/DAY”**



**In 2018, Thai Agro Energy Pcl. has been received
the Quality Management System certification
(ISO 9001:2015) and the Environmental Management
System certification (ISO 14001:2015)**

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Investors can find more information about Thai Agro Energy Public Company Limited on the Company's Form 56-1 shown on the company's website www.thaiagroenergy.com or the Securities and Exchange Commission's websites www.sec.or.th