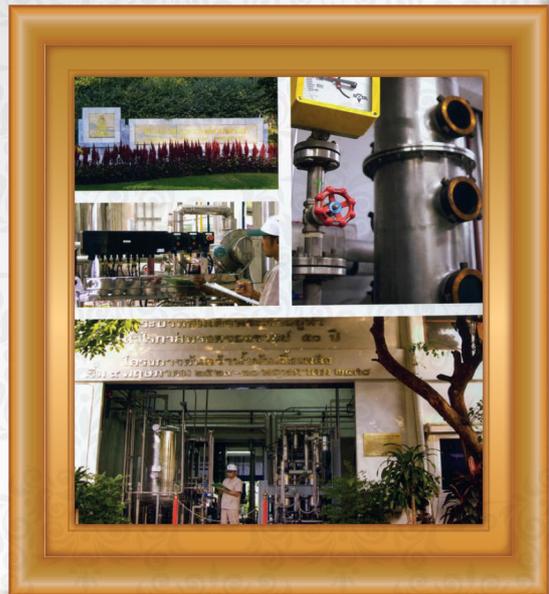
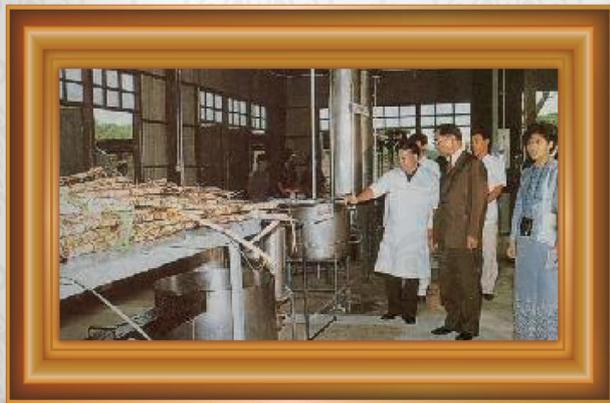




# THAI AGRO ENERGY PUBLIC COMPANY LIMITED



“ANNUAL  
REPORT  
2016”



THAI AGRO ENERGY PUBLIC COMPANY LIMITED



*In Loving Memory*



HIS MAJESTY  
BHUMIBOL ADULYADEJ



December 5, 1927- October 13, 2016

## CONTENTS

Report of the Board of Directors	5
Board of Directors	6
The company's management	8
<b>PART 1 : Business Engagement</b>	
1. Business Policy and Overview	10
2. Business Operation	10
3. Risk Factors	32
4. Properties Used in Business Operations	35
5. Legal Controversy	37
6. General Information and Others	38
Profile of Directors and Executives	39
Details of The Holding position in Related Companies of the executives	56
Information of office and head of internal audit and corporate governance	58
<b>PART 2 : Management and Corporate Governance</b>	
Report of Audit Committee	60
Report of the Nomination and Remuneration Committee	61
Report of Risk Management Committee	62
7. Securities and Shareholder Information	63
8. Management Structure	65
9. Corporate Governance	73
10. Corporate Social Responsibility	108
11. Internal Control	117
12. Related Transaction	119
<b>PART 3 : Financial Position and Operational Results</b>	
13. Financial Highlights	122
14. Management Discussion and Analysis : MD&A	129
<b>Financial Statements and Independent Auditor's report</b>	134



## Report of the Board of Directors to shareholders



On behalf of the Board of Directors of  
Thai Agro Energy Public Company Limited

**(Mr. Visit Noiphan)**  
Chairman

I, on behalf of the Board of Directors of Thai Agro Energy Public Company Limited (the "Company"), hereby, announces the results of the operations in the previous year. In 2016, the Company's revenue was up to 2,418.35 million baht, with a net profit of 178.10 million baht.

In the year 2016, average ethanol demand increased from 3.49 million liters per day in 2015 to 3.66 million liters per day when compared to the same period of 2015, the demand for ethanol in 2016 increased 4.87%. This resulted from world crude oil price still maintaining in low side at the average 41 USD per barrel and the increase in number of cars including the government campaign encouragement in issuance of the retail oil pricing policy in country. However, the country ethanol demand was still lower than projected demand in accordance with the Alternative and Renewable Energy Development Plan Year (AEDP) 2015-2036 which estimated ethanol demand in 2016 at 3.94 million liters per day whilst ethanol sales price was decreasing following the world crude oil price decreasing trend.

According to AEDP, the target for the demand of ethanol is 4.3 million litres per day in 2017. Department of Energy Business has been under reviewing process to consider using ethanol in transportation sector. In particular, the monitoring of any consequences has been undertaken after the effectiveness of the mandate of gasohol 91. This is to ensure whether there will be no shortage in ethanol supply in country.

According to the gasoline retail business plan, in 2018, there will be only Gasohol E10(95), E20, E85 and Gasoline available in the retail market. At the end of the plan in 2036, there will be only Gasohol E20 and E85. This has been expected that once the mandate of Gasohol 91 has been implemented according to the plan, there will be more consumers using E10 (95), E20 and E85 resulting that the ethanol demand shall be expedited to increase as planned.

Meanwhile, the volatility of the world crude oil price has continued and this has been forecasted that the world crude oil price shall be at average level of 50-60 USD per barrel, increasing from average price in 2016 due to world economic growth and the decrease in crude oil production either from world oil producers or from OPEC and non-OPEC. These situations have important positive impacts to the ethanol sales price in country, as a result, the company net profit.

Moreover, the company has strategy to enhance its competitiveness by improving the production efficiency to reduce costs and expenses continually. Cassava has been used in TAE2 to increase cost competitiveness. This is to improve the business operation in order to pay dividends as committed in the policy continually. The Company strives to develop business's sustainable growth coupled with good governance and environmental stewardship and care with due regards to the impact on the community and society as a whole.

The Board of Directors would like to thank all shareholders for their trust and is committed to fulfilling its mission to ensure sustainable growth and returns to the society and to our shareholders considerably.





# Board of Directors

THAI AGRO ENERGY PUBLIC COMPANY LIMITED



01



02



03



04



05

01

**Mr. Visith Noiphan**  
Independent Director and Chairman of the Board

02

**Mr. Kraisi Sirirungsi**  
Vice Chairman, Chairman of Nomination and Remuneration Committee  
and Authorized Director

03

**Mr. Suroj Subhasavasdikul**  
Vice Chairman and Authorized Director

04

**Mr. Anan Louharanoo**  
Director and Authorized Director

05

**Mr. Somchit Limwathanakura**  
Director and Authorized Director



06



07



08



09



10



**Mr. Srihasak Arirachakaran**

Director, Authorized Director and Nomination and Remuneration Committee



**Mr. Somchai Lovisuth**

Director, Authorized Director and Chief Executive Officer



**Mr. Padetpai Meekun-iam**

Independent Director and Chairman of Audit Committee



**Mr. Virach Aphimeteetamrong**

Independent Director and Audit Committee



**Mr. Satit Chanchaowakun**

Independent Director, Audit Committee and Chairman of the Risk Management Committee



# The company's management

THAI AGRO ENERGY PUBLIC COMPANY LIMITED



01



02



03



04



05



06



07

01

Mr. Mongkhon Sunnanon  
Plant Director

02

Mrs. Somrudee Suwannaroop  
Administrative Officer Director and Company Secretary

03

Miss Kanyaphat Chinandej  
Marketing and Sourcing Director

04

Mr. Anan Rayaruji  
Assistance Plant Director

05

Mr. Korn Thangviroon  
Assistance Plant Director

06

Miss Theeranan Khunakasem  
Accounting and Finance Manager

07

Mr. Suphachai Kaewfuang  
Internal Audit Department Manager

# Business Engagement

Business Policy and Overview

Business Operation

Risk Factors

Properties Used in Business Operations

Legal Controversy

General Information and Others



## 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 per cent purity by volume. Produced for use as fuel, this ethanol has a molecular formula of  $C_2H_5OH$  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.

	Line 1	Line 2
Raw material	Molasses	Molasses or cassava
Installed capacity	165,000 litres/day	200,000 litres/day
Commencement	31 Jan 2005	2 Apr 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.

## 1.1 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 9001/2008
- (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
- 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
- Manupulate 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

- Utilise 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 executives 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.

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.

## 1.2 Changes and key developments

### 1.2.1 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.

Recognised 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.

### 1.2.2 Significant milestones

2003
<ul style="list-style-type: none"> <li>▪ 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.</li> <li>▪ The company received a business license for production and distribution of ethanol from Department of Industry on 22 September 2003.</li> <li>▪ 26 Decemeber, the company received BoI promotional certification for the Production Line 1 from the Board of Investment (BoI).</li> </ul>
2004
<ul style="list-style-type: none"> <li>▪ Completion of the construction of the ethanol production plant (Production Line 1: production of ethanol using molasses)</li> </ul>

<b>2005</b>
<ul style="list-style-type: none"> <li>▪ 31 January, the company began production and distribution of ethanol from Line 1 for the first time.</li> <li>▪ 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.</li> </ul>
<b>2006</b>
<ul style="list-style-type: none"> <li>▪ LANNA purchased 200,000 common shares from the company's existing shareholders making the company's share number increase from 19,875,000 to 20,075,000, accounting for 75.75 percent of the shares sold.</li> <li>▪ January, the company began using bio gas produced from the well no 1 which is equipped with Anaerobic Baffled Reactor (ABR) technology.</li> <li>▪ 31 March, 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</li> <li>▪ 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.</li> </ul>
<b>2007</b>
<ul style="list-style-type: none"> <li>▪ 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.</li> <li>▪ 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.</li> <li>▪ 18 October, 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.</li> <li>▪ 25 December, the company was authorized by the Excise Department to be able to export ethanol.</li> </ul>
<b>2008</b>
<ul style="list-style-type: none"> <li>▪ 19 November, the company received BoI promotion certification for the Production Line 2 from the Board of Investment (BoI).</li> </ul>
<b>2009</b>
<ul style="list-style-type: none"> <li>▪ 30 June, the company was accredited ISO 9001:2008 and ISO 14001:2004 from UKAS, England, and Thailand's NAC under the authorization of SGS (Thailand).</li> </ul>

<b>2010</b>
<ul style="list-style-type: none"> <li>▪ 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).</li> </ul>
<b>2011</b>
<ul style="list-style-type: none"> <li>▪ January, the company commenced a test-run of the Line 2's cassava-based ethanol production machinery.</li> <li>▪ May, the company began using bio gas produced from well no 2, equipped with Up flow Anaerobic Sludge Blanket (UASB) technology.</li> <li>▪ 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.</li> <li>▪ 22 July, 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.</li> <li>▪ 3rd quarter, the company improved the Production Line 2 to facilitate the production of ethanol from molasses.</li> </ul>
<b>2012</b>
<ul style="list-style-type: none"> <li>▪ March, the company began using bio gas produced from well no 3, equipped with Modified Covered Lagoon (MCL) technology.</li> <li>▪ 2 April, the company was able to produce and distribute molasses-based ethanol from Production Line 2 for the first time.</li> </ul>
<b>2013</b>
<ul style="list-style-type: none"> <li>▪ September, 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.</li> </ul>
<b>2014</b>
<ul style="list-style-type: none"> <li>▪ June, The capital, again, was increase 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.</li> </ul>
<b>2015</b>
<ul style="list-style-type: none"> <li>▪ 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.</li> </ul>

- June, the company invested in the installation of Bio-Scrubber to eliminate hydrogen sulfide (H<sub>2</sub>S), the gas existing in bio-gas using as fuel for the production of steam and electricity. The new facility helps reduce the amount of Sox 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

- In November, 2016 the Company started Phase 2 of Hydrogen Sulfide Removal (H<sub>2</sub>S) project in the Biogas (Bio-Scrubber) to increase the efficiency of air pollution prevention.

## 2. Nature of Business

### Revenue Structure

Type of incomes	2014		2015		2016	
	Million baht	Per cent	Million baht	Per cent	Million baht	Percent
Revenue from sales						
- Denatured ethanol <sup>1)</sup>	2,495.12	99.79	2,600.32	99.91	2,415.07	99.86
- Raw materials and agricultural produce <sup>2)</sup>	1.16	0.04	-	-	-	-
<b>Total revenue from sales</b>	<b>2,496.28</b>	<b>99.83</b>	<b>2,600.32</b>	<b>99.91</b>	<b>2,415.07</b>	<b>99.86</b>
Other revenues <sup>3)</sup>	4.15	0.17	2.25	0.09	3.28	0.14
<b>Total revenue</b>	<b>2,500.43</b>	<b>100.00</b>	<b>2,602.57</b>	<b>100.00</b>	<b>2,418.35</b>	<b>100.00</b>

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) Revenue from the sales of raw materials and other agricultural produce includes the sales of processed and fresh cassava, sugar cane and molasses.

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

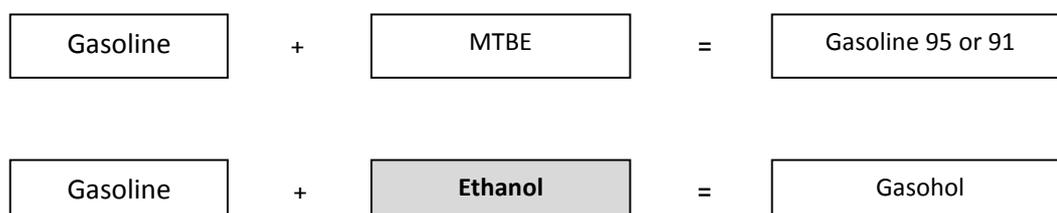
### 2.1 Product features

#### (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<sub>2</sub>H<sub>5</sub>OH as its molecular formula. Its boiling point is 78 degree Celsius. This flammable, colourless 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 (CO<sub>2</sub>), 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.

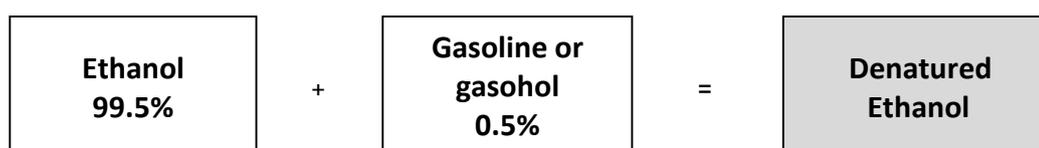


Ethanol production process at Thai Agro Energy is divided into two production lines:

	Production Line 1	Production Line 2
Raw materials	Molasses	Molasses or cassava
Installed capacity	165,000 liters/day	200,000 liters/day
Commencement	31 January 2005	2 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. 2543).

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	ProductionLine 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 January 2005	2 April 2012
Expiry dates of benefits received.	30 January 2013	1 April 2020
<b>Tax incentives</b>		
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 Jan 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 Bol's approval	✓	✓

Besides, The company has been certified Quality Management System ISO 9001:2008 and Environmental Management System ISO 14001: 2004 certifications from UKAS, England. 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.

## 2.2 Marketing and competitiveness

### 2.2.1 Competitive strategy

#### 1. Product quality

According to the policy, the company focuses on manufacturing the premium-quality ethanol to meet the customer's requirement. Recognising 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 recognised 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 2017, 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.

### 2.2.2 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.

### 2.2.3 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.

### 2.2.4 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.

## 2.2.5 Industry and competitive

### Situation

Ethanol consumption demand in year 2016 averaged at 3.66 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 2016 at 3.94 million liters per day. Nonetheless, ethanol demand in 2016 increased by 4.87 percent from year 2015 due to policy and promotion by the Government sector whilst the average ethanol selling price decreased in line with the global oil prices that remained low during the year.

The Department of Energy Business, Ministry of Energy, is currently in the process of reviewing fuel consumption in the transport sector to promote the use of ethanol. In particular, the discontinuation of Gasohol E10 (Octane 91) has been postponed from the original plan from January 2017 to January 1, 2018 to avoid putting strain on ethanol supply as the producers could not produce ethanol as planned at the end of year 2016. According to the current plan, only few types of gasoline will be available in year 2018, including Gasohol E10 (Octane 95), E20, E85 and Benzene and then by year 2027, there will only be Gasohol E10 (Octane 95), E20 and E85 and finally in 2036, only two types of gasoline will be available including Gasohol E20 and E85. Nonetheless, should Gasohol E10 (Octane 91) be discontinued as planned, certain number of car users will turn to Gasohol E10 (Octane 95) and also Gasohol E20 and E85 as there are a number of gas stations available for the car owners offering different types of gasoline with pricing differences as the incentive. Thus, as more consumers are using gasoline with higher blend of ethanol such as in Gasohol E85 or E20, the ethanol consumption demand will be achieved as planned sooner than anticipated.

**Table: Consumption of ethanol used as fuel 2012-2016**

(unit: million litres)	2012	2013	2014	2015	2016
Consumption volume	508.94	948.55	1,181.88	1,273.08	1,334.91
Average daily consumption	1.39	2.60	3.24	3.49	3.66

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

### 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.

During the past few years, consumption of gasohol in Thailand has consistently risen: from 12.17 million litres per day in 2012, the amount increased to 27.65 million litres per day in 2016, making 17.84% of CAGR per year. The positive trend followed on from the increase

in the number of new vehicles compatible with gasohol featuring higher ratios of ethanol. Lower retail prices of oil in Thailand, due to a downtrend in oil prices on international markets, spurred gasohol consumption dramatically.

Average daily gasohol consumption shot up by 68% in 2013 from the previous year. The fact that the government ordered discontinuation of gasoline 91 trade, forcing consumers to switch to gasohol, spurred domestic demand for gasohol in leaps and bounds and a steadily rising trend has been ongoing.

**Table: Gasohol sales 2012-2016**

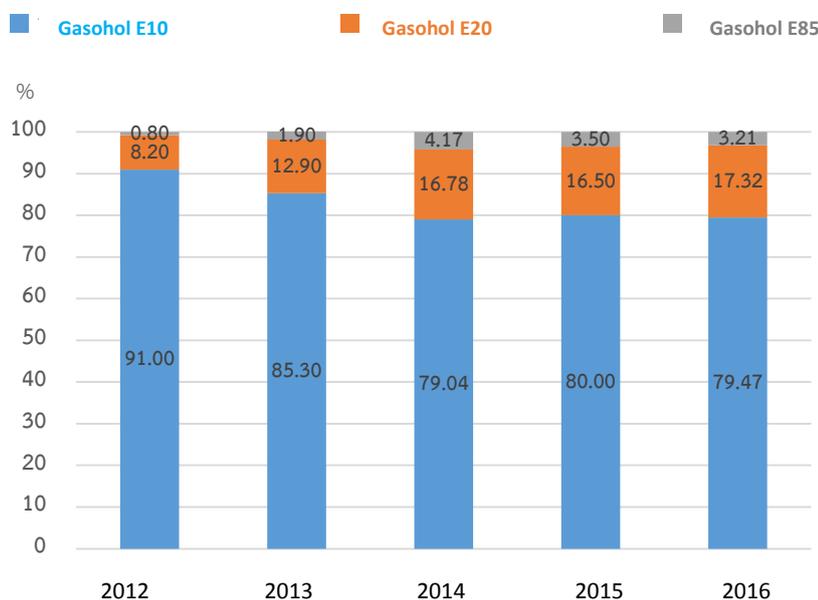
(Unit: million litres)	2012	2013	2014	2015	2016
Annual sales volume	4,454.73	7,469.89	8,007.92	9,130.33	10,118.37
Daily sales volume	12.17	20.46	21.94	25.01	27.65

Source: Department of Energy Business, Ministry of Energy

Besides increasing sales volumes, consumption of gasohol by type is also revealing. From 2012, 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.

While E10 continued to decline, sales of E85 languished in 2016 as the price difference compared to other oil types was too low to attract consumers.

**Graph: Proportion of gasohol consumption by type 2012-2016**



Source: Department of Energy Business, Ministry of Energy

Nevertheless, oil traders continued to increase the number of service stations equipped to cope with more E20 and E85. As of end-2016, there were 3,303 E20 service stations and 973 for E85.

**Table: Oil Price Structure as of February,14 2017**

(Unit: baht/litre)	Gasoline 95	Gasohol 95	Gasohol 91	Gasohol E20	Gasohol E85
Contribution to oil fund	6.3100	0.3500	0.3500	-	-
Subsidy rate	-	-	-	3.0000	9.3500
Marketing margin	2.4304	1.5592	1.5513	2.3975	4.2535
Retail price	35.3600	28.2500	27.9800	25.7400	20.2900

### 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 2011/2012-2015/2016

Year	Sugar cane plantation (million rai)	Average yield (tonnes/rai)	Sugar cane to mill (million tonnes)	Molasses produced (million tonnes)
2011/2012	9.00	11.82	97.98	4.39
2012/2013	9.25	11.35	100.00	4.55
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

Source: The Cane and Sugar Office

In 2015/2016 sugarcane plantations in the surveyed communal area expanded to 11.01 million rai, up by 0.48 million rai or 4.56% 2014/2015. The increase resulted from a government policy to transform rice paddies in areas deemed unsuitable or inappropriate into sugar cane plantations cassava, palm oil, and maize. Sugarcane is a good economic crop to promote. Because it can be used in all parts, to add value to the industry continuously. While drought from the end of 2014 until 2018 has been affecting the quantity and quality of sugarcane yields. Sugarcane production dropped the lowest in 5 years. Sugar cane yield fell to 94.05 million tons, down 11.91 million tons or 11.24 percent from the year 2014/2015.

### Competition

As of 2016, there were 22 operating ethanol production plants in Thailand, with a total installed capacity of 5.04 million litres per day. The ethanol production facilities can be categorised by raw material types as follows:

- 10 ethanol plants using molasses – total capacity: 2.28 million litres/day
- 1 ethanol plants using molasses and sugar cane syrup – total capacity: 230,000 liters/day
- 4 ethanol plants using cassava and molasses – total capacity: 700,000 litres/day
- 7 ethanol plants using cassava – total capacity: 1.83 million litres/day

## Operating Ethanol Plants

Ethanol Plant	Province	Capacity (litres/day)	Main raw material
1 Thai Agro Energy Plc, Phase 1	Suphanburi	150,000	Molasses
2 Khon Kaen Alcohol co., Ltd.*	Khon Kaen	150,000	Molasses
3 Khon Kaen Alcohol Co., Ltd. (Bo Phloy)*	Kanchanaburi	300,000	Molasses
4 Thai Sugar Ethanol Co., Ltd.*	Kanchanaburi	200,000	Molasses
5 K.I. Ethanol Co., Ltd.*	Nakhon Ratchasima	200,000	Molasses
6 Green Petrol Co., Ltd. (Kalasin)*	Kalasin	230,000	Molasses
7 Mitrphol Biofuel Co., Ltd. (Chaiyaphum)*	Chaiyaphum	500,000	Molasses
8 Ekarat Phatthana Co., Ltd.*	Nakhon Sawan	230,000	Molasses
9 Thai Rungrueng Energy Co., Ltd.*	Saraburi	120,000	Molasses
10 Mitrphol Biofuel Co., Ltd. (Dan Chang)*	Suphanburi	200,000	Molasses
11 Mae Sot Clean Energy Co., Ltd.*	Tak	230,000	Sugar cane syrup
12 Ratchaburi Ethanol Co., Ltd.*	Ratchaburi	150,000	Cassava chips/ molasses
13 E.S. Power Co., Ltd.*	Sakaew	150,000	Cassava chip/molasses
14 Thai Alcohol Plc*	Nakhon Pathom	200,000	Cassava chip/molasses
15 Thai Agro Energy Plc., Phase 2	Suphanburi	200,000	Cassava chip/molasses
16 Sapsin Co., Ltd.	Lopburi	200,000	Cassava chip
17 Tai Ping Ethanol Co., Ltd.	Sakaew	300,000	Fresh cassava
18 P.S.C. Starch Production Co., Ltd.	Cholburi	150,000	Fresh cassava/ cassava chip
19 Thai Ethanol Power Plc.	Khon Kaen	130,000	Fresh Cassava
20 E 85 Co., Ltd	Prachinburi	500,000	Fresh cassava/liquid cassava
21 Ubon Bio Ethanol Co., Ltd	Ubon Ratchathani	400,000	Fresh cassava/cassava chip
22 Sima Inter Product Co., Ltd.	Chachoengsao	150,000	Fresh cassava/cassava chip
<b>Total production capacity (as of March 2016)</b>		<b>5,040,000</b>	

Source: Thai Ethanol Manufacturing Association

Remark: \* Ethanol production plants operated by sugar mill entrepreneurs

The Company's market share increased from 10.20% in 2011 to 13.17% in 2012, but the figure dropped to 7.07% in 2013. Although ethanol demand nearly doubled, the Company's sales stayed at the same level as 2012.

In 2016 the Company's market share stood at 7.93%, Decrease from market share in 2015 due to shortage of molasses.

Year	Domestic consumption of ethanol (Million litres)	Company's sales volume of conversion ethanol (Million litres)	Company's market share (%)
2012	508.94	67.05	13.17
2013	948.55	67.06	7.07
2014	1,181.88	97.80	8.27
2015	1,273.08	104.30	8.19
2016	1,334.91	105.92	7.93

Source: Department of Alternative Energy Development and Efficiency

## 2.2.6 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

To promote ethanol production and application, the government, through the auspices of the Excise Department, issued a Notification on Implementation of Tax Exemption for Distilled Spirits *Sam Thab* (ethanol) to be Blended with Other Fuels, issued on 25 February 2005. The Notification requires those applying for applicable tax exemption to keep an electronic database and report accordingly to the Excise Department.

## 2.3 Product supply

### 2.3.1 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: 2008 certification and Environmental Management System ISO 14001: 2004 certification from UKAS of the UK.

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 mat, has been in operation since 31 January 2005.

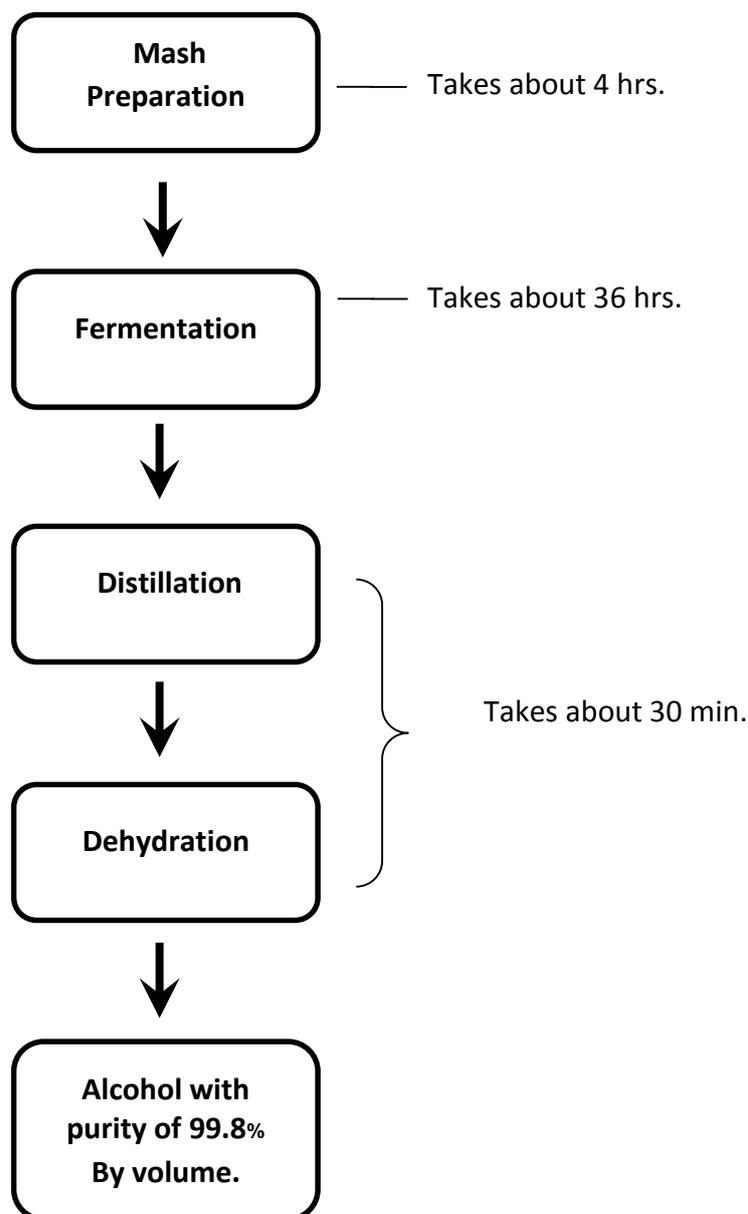
Line 2, which started commercial output in April 2012, has in fact only used molasses as raw material. Upgrading is on the way to enable cassava chip processing. Selection of raw material for Line 2 is based on the Company's production plans and costs.

### 2.3.2 Production capacity

Details	2015		2016	
	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)	37,857,442	66,105,916	35,647,051	69,453,986
% of capacity installed	69.15	100.16	65.11	105.23
<b>Total</b> installed capacity (unit: litres)	120,750,000		120,750,000	
<b>Total</b> actual production volume (unit: litres)	103,963,358		105,101,037	
<b>% of total capacity installed</b>	86.10		87.04	

Remark: Production Line 2 commenced operation in April 2012

### 2.3.3 Production and production process



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

#### **1. Mash Preparation**

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.

### 2.3.4 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.

In 2016, the Company continues to use molasses as raw material. As of 31 December 2016, the Company had already ordered 64% of its molasses requirement for 2017.

## **2. Chemicals**

Apart from molasses, the main raw material, the Company uses other chemical substances in the production of ethanol. In 2014-2016, chemical ingredients accounted for 1.87% 1.42% and 1.68% 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.

### **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 to raw materials supply**

Molasses is the main raw material used to produce ethanol, contributing more than 80 percent to the overall ethanol production cost. The volume of molasses produced each year depends on the volume of sugarcane entered into the process of the sugar factories in that year. Being an agricultural product, various factors affect the volume of sugarcane, for example, the size of land used to plant sugarcane which varies by the price of sugarcane comparing to other crops, climate, crop disease, and water level. Accordingly, TAE has entered into long-term sale and purchase agreements with domestic molasses sellers in order to conclude the volume and delivery schedule of molasses each year. This allows efficient management on molasses inventory and ethanol production. The risk of stoppage or reduced production due to inadequate molasses is also decreased.

#### **(2) Risk of fluctuations in prices of major raw material**

Molasses is the main raw material used to produce ethanol, contributing more than 80 percent to the overall ethanol production cost, and changes on the price of molasses thus has an impact to the cost of ethanol production. The price of molasses varies by the supply and demand, following the same trend as the price of sugar. Also, the price of molasses is seasonal; the price is low during the harvest season due to high amount of molasses in the market, and the price will then increase as molasses in the market decreases. Therefore, if the molasses price jumps 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 of reliance on suppliers of major raw materials**

TAE purchases molasses from Mitr Phol Sugar Company Limited ("Mitr Phol") in a longterm agreement at 40-50 percent of annual molasses consumption. The reason is that the sugar factory of Mitr Phol is located nearby the production plants of TAE which helps decrease the cost of molasses. Regardless, TAE always engages in long-term molasses purchase agreements with other producers annually in order to decrease its dependence on any one vendor.

#### **(4) Risk of reliance 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.

#### **(5) Risk from government policy**

Department of Energy Business is in the process of reviewing bio-fuel management plan (Oil Plan 2015) in accordance with current situation, especially after the announcement of termination of gasohol 91, starting from January 1, 2018. Also reviewing plan on promotion of the production of gasohol E85, due to gasohol E85 was promoted by using money from Oil Fund to maintain price difference to be lower when compared to other alternative fuels. TAE recognizes such risk and aims to manage the production and distribution of ethanol at the highest efficiency, with emphasis on product quality and good relationship with customers, ensuring minimal impact from government policy.

#### **(6) Risk from global oil prices**

As gasohol is a mixture of ethanol and gasoline, significant and continuous fluctuate and downtrend of the global oil price will definitely affect the demand of ethanol for gasohol production, and ethanol producers will be pressed to reduce their ethanol selling prices. Recognizing this risk, TAE has endeavored to improve ethanol production process in order to decrease ethanol production cost. Also, any support will be made for the government in order to promote gasohol usage according to the Alternative Energy Development Plan B.E. 2558–2579 (AEDP 2015).

#### **(7) Risk from using biogas as the primary fuel to produce steam and electricity used 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. Mindful of this risk, TAE has strengthened the structure of its biogas wells and added an unit that closely monitors all biogas-related systems. Regular maintenance ensures that the biogas can be produced consistently and efficiently. In addition, the Company holds insurance policies against all types of natural disaster that would minimize the impact of any unforeseen natural calamity.

## **(8) Risk of environmental impact**

TAE places emphasis and recognizes the health impacts to the surrounding community, with great care to the environment and potential pollution. Treated spent wash will never be discharged to the public, with rigorous zero discharge practice. Additionally, bio scrubbers is used for removal hydrogen sulfide in biogas, which is used for steam and power generation. Thus, the resulting biogas is clean and has better quality, to minimize air pollution that would have an impact on the surrounding community.

## **(9) Risk of liquidity, in case the Company is unable to comply with conditions set forth in a loan agreement with a financial institution**

### **(9.1) Ability to maintain Debt-to-Equity Ratio (D/E) and Debt Service Coverage Ratio (DSCR) as specified by commercial banks**

TAE has a long-term loan agreement with a commercial bank, with the remaining loan as at year end of 2016 of Baht 297.76 million. Accordingly, TAE is able to follow the terms and maintain its financial ratios as required. TAE also has short-term loan agreements with three financial institutions with the amount totaling Baht 1,700 million for working capital used to purchase molasses as raw material. As at end of year 2016, the actual used amount of the short-term loan was Baht 986.64 million. TAE well recognizes this risk and thus manage its cash flow with prudence in order to prevent default of the loan agreements.

### **(9.2) Ability to maintain the ratio of the stake held by Lanna Resources Public Company Limited (“Lanna”) at not less than 50% of all TEA’s shares**

The lending commercial bank has stipulated a condition concerning the maintenance of shareholding of LANNA in TAE of no less than 50 percent of all shares during the whole duration of the loan agreement. Therefore, if LANNA sells its shares in TAE and the shareholding proportion in TAE decreases to less than 50 percent of all shares, TAE has the risk of breaching the loan agreement condition, and the lending bank may demand a full repayment of loan, 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.

### **(9.3) Risk of inability to pay dividends to shareholders**

The lending commercial bank has stipulated that TAE may not pay dividend to its shareholders if TAE is unable to follow the conditions in the loan agreement – such as, D/E and DSCR maintenance, shareholding of LANNA, etc. – TAE will not be able to pay dividend to its shareholders, including LANNA. In the past, TAE was never unable to follow the terms and it can maintain the required ratios.

## 4. The Company's assets used for doing business

### 4.1 The Company possesses various assets that it utilises in doing business

As of 31 December 2016, the Company's total assets used in doing business were as follows:

Type/characteristic of asset	Ownership	Obligation As of 31 Dec. 16	Net Book ValueAs of 31 Dec. 16 (million baht)
Land comprising agricultural plots and desiccation ponds, located in Tambol Nong Makhamong, Dan Chang district, Suphanburi Province. Total area: 953-3-87 rai	Owner	Land and buildings mortgaged with commercial banks	65.14
		-	43.07
Land for biogas production: Well 3, located in Tambol Nong Makhamong, Dan Chang district, Suphanburi Province. Total area: 12-3-28 rai	Owner	-	1.95
Land for slops water wells, located in Tambol Nong Makhamong, Dan Chang district, Suphanburi Province. Total area: 128-3-63 rai	Owner	Land and buildings 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 and buildings mortgaged with commercial banks	4.42
Land for truck parking yards, located in Tambol Nong Makhamong, Dan Chang district, Suphanburi Province. Total area: 244-3-50 rai	Owner	Land and buildings mortgaged with commercial banks	24.82
		-	2.47
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 and buildings 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 and buildings mortgaged with commercial banks	10.63
Land improvement	Owner	-	56.79
Machinery and equipment	Owner	Machinery with loan finance by commercial banks	1,465.27
Buildings and construction	Owner	-	182.04
Office equipment	Owner	-	3.39
Vehicles	Owner	-	8.56
Assets under construction and installation	Owner	-	424.57
<b>Total</b>			<b>2,314.39</b>

## 4.2 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.

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.

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

On September 23, 2011 a corporation ("the plaintiff") filed a petition in the civil court accusing the Company ("the defendant") of non-compliance with the terms of cassava chip purchase as per a contract dated January 21, 2011 and an agreement dated April 29, 2011. The plaintiff claimed damages from the Company amounting to 186.85 million baht. On November 8, 2011, the Company submitted its testimony in the case and filed a counterclaim for damages caused by the plaintiff amounting to 82.41 million baht. On October 9, 2014, the Southern Bangkok Civil Court, as the court of first Instance, dismissed the plaintiff's petition and directed the plaintiff to repay to the defendant the cost of the cassava chips that the defendant had paid in advance, together with interest up to the date of filing the petition. The total payment from the plaintiff to the defendant was set at 6,869,477.50 baht. Moreover, interest at 7.50% per annum was required by the court to be paid by the plaintiff to the defendant calculated from November 8, 2011, when the defendant filed its counterclaim, until the obligated payment was completed. The plaintiff was ordered to pay the court fees for the defendant based on its winning the lawsuit, including the defendant's attorney fees amounting to 30,000 baht. Other requests by the plaintiff and the defendant were lifted and folded.

Subsequently, on December 3, 2014, the Company ("The Plaintiff" in the counterclaim) appealed the judgment of the Court of First Instance in respect of damages. The Company filed an appeal claiming compensation of 75.5 million baht. On January 5, 2015, the defendant (in the counterclaim) petitioned the Court to mitigate the execution and appealed the judgement of the Court of First Instance on the initial order to dismiss the indictment of the defendant in that judgement.

On February 9, 2016, the Southern Bangkok Civil Court read the judgement of the Court of Appeal upholding the judgement of the Court of First Instance. The appeal fees were folded.

On April 7, 2016, the Company lodged an appeal with the Supreme Court. Presently, the case is under consideration of the Supreme Court.

## 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 <sup>th</sup> floor, Ploenchit Road, Khwaeng Lumpini, Pathumwan District, Bangkok 10330 Tel 02-627-3890-4, 02-225-4380-4 Fax 02-627-3889
Factory:	9 Moo 10, Dan Chang-Samchuk Road, Tambol Nong Makhamong, Dan Chang District, Suphanburi Province
Website:	<a href="http://www.thaiagroenergy.com">www.thaiagroenergy.com</a>
Securities registrar:	The Thailand Securities Depository Co., Ltd., 62 The Stock Exchange of Thailand Building, Ratchadaphisek Road, Khlongtoey, Bangkok 10110 Tel: 02-2292000
Auditor:	Ms. Saifon Inkaew, Auditor Registration Number 4434 and/or Mr. Wichart Lokatekrawee, Auditor Registration Number 4451 and/or Miss Satida Ratananurak, Auditor Registration Number 4753 of EY Office Co., Ltd.  Address: 193/136-137 Lake Ratchada Building, 33 <sup>rd</sup> floor, Ratchadaphisek Road, Khlongtoey, Bangkok 10110 Tel: 02-264-0777 Fax: 02-264-0789

## Profile of Directors



**1. Full name :** Mr. Visith Noiphan

**Position :** Independent Director and Chairman of Board of Directors

**Nationality :** Thai

**Age :** 83 years

**Education :**

- Master of Engineering (Sanitary Engineering), Chulalongkorn University
- Bachelor of Engineering (Civil Engineering), Chulalongkorn University
- Diploma of National Defence, Thailand National Defence College (NDC), 24th Generation
- Certificate of Industrial Hygiene, Cincinnati University, U.S.A.
- Certificate of International Program in Environmental Aspect of Industrial Development, North Carolina University, U.S.A.
- Certificate of Industrial Safety, US Department of Labour
- Curriculum of Director Accreditation Program of Institute of Director (IOD)
  - Director Accreditation Program (DAP) 5/2003
  - Role of Chairman Program (RCP) 20/2008

**Duration of Director:** Member of the Board of Directors, Thai Agro Energy Public Company Limited effective from October 18, 2007, totaling 10 years

**Meeting Attendance:** 9 of 12 times

**Number of Company's Share on December 31, 2016:** 911,320 shares or 0.09 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, 2016)**

- 2007 to present, Chairman and Independent 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
3	1	-None-

### Details of director / executive positions in other businesses

NO.	TYPE OF COMPANY	TYPE OF DIRECTOR	POSITION	COMPANY
1	Listed companies	Independent director	Chairman	Bangsaphan Barmill PCL
2	Listed companies	Independent director	Chairman	TPI Polene PCL
3	Public company	Independent director	Chairman	Sahaviriya Plate Mill PCL

**2. Full name :** Mr. Kraisi Sirirungsi

**Position :** Vice Chairman , Authorized Director and Chairman of Nomination and Remuneration Committee

**Nationality :** Thai

**Age:** 66 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 10 years

**Meeting Attendance:** 12 of 12 times

**Number of Company's Share on December 31, 2016:** 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, 2016)**

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



#### 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 co., ltd

**3. Full name:** Mr. Suroj Subhasavasdikul  
**Position:** Director and Authorized Director

**Nationality:** Thai

**Age:** 74 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 10 years

**Meeting Attendance:** 11 of 12 times

**Number of Company's Share on December 31, 2016:** 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, 2016)**

- 2007 to present, Vice Chairman 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	Director	Director	Lanna Resources PCL
2	Limited Company	Director	Director	United Bulk Shipping Pte.Ltd

**4. Full name:** Mr. Anan Louharanoo  
**Position:** Director and Authorized Director  
**Nationality:** Thai  
**Age:** 64 years  
**Education:**

- Bachelor of Accounting, Thammasart University
- Bachelor of Law, Thammasart 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



**Duration of Director:** Member of the Board of Directors, Thai Agro Energy Public Company Limited effective from October 18, 2007, totaling 10 years

**Meeting Attendance:** 12 of 12 times

**Number of Company's Share on December 31, 2016:** 4,771,895 shares and Spouse 2,622 shares Total amount 4,775,517 shares or 0.47 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, 2016)**

- 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	Independent director	Chairman	Lanna Resources PCL
2	Listed companies	Independent director	Chairman of Audit Committee	Thailand Carpet Manufacturing 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

- 5. Full name** : Mr. Somchit Limwathanakura  
**Position** : Director and Authorized Director  
**Nationality** : Thai  
**Age** : 78 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 10 years

**Meeting Attendance:** 11 of 12 times

**Number of Company's Share on December 31, 2016:** 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, 2016)**

- 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	Foreign Advisor	UT International Co., Ltd.

**6. Full name:** Mr. Srihasak Arirachakaran  
**Position:** Director, Authorized Director and Nomination and Remuneration Committee



**Nationality :** Thai

**Age :** 57 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

**Duration of Director:** Member of the Board of Directors, Thai Agro Energy Public Company Limited effective from October 18, 2007, totaling 10 years

**Meeting Attendance:** 11 of 12 times

**Number of Company's Share on December 31, 2016:** 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, 2016)**

- 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	3	-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
4	Limited Company	Director	Director	PT. Singlurus Pratama
3	Limited Company	Director	Director	PT. Lanna Mining Services
4	Limited Company	Director	Director	PT. Lanna Harita Indonesia

**7. Full name:** Mr. Somchai Lovisuth

**Position:** Director, Authorized Director, Chief Executive Officer  
Nomination and Remuneration Committee, Risk Management  
Committee and Chairman of the Corporate Governance Committee

**Nationality:** Thai

**Age:** 68 years

**Education:**

- Master in Production Management & Manufacturing Technology,  
University of Strathclyde, U.K.
- 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 10 years

**Meeting Attendance:** 12 of 12 times

**Number of Company's Share on December 31, 2016:** 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, 2016)**

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

#### 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
-None-				



**8. Full name :** Mr. Padetpai Meekun-iam  
**Position :** Independent Director and Chairman of Audit Committee  
**Nationality :** Thai  
**Age :** 72 years  
**Education :**



- Master in Engineering, Mechanism, Georgia Institute of Technology U.S.A
- 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 10 years

**Meeting Attendance:** 11 of 12 times

**Number of Company's Share on December 31, 2016:** 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, 2016)**

- 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
3	-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	QTC Energy PCL
2	Listed companies	Independent director	Chairman of Audit Committee	MBK Resort PCL

**9. Full name:** Mr. Virach Aphimeteetamrong  
**Position :** Independent Director and Audit Committee  
**Nationality :** Thai  
**Age :** 73 years  
**Education :**



- Ph.D. in Finance, University of Illinois, U.S.A.
- 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 4 years

**Meeting Attendance:** 10 of 12 times

**Number of Company's Share on December 31, 2016:** 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, 2016)**

- 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	2	-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.

**10. Full name** : Mr. Satit Chanchaowakun  
**Position** : Independent Director, Audit Committee, Nomination and Remuneration Committee and Chairman of the Risk Management Committee  
**Nationality** : Thai  
**Age** : 67 years



**Education :**

- Master in Business Management, Thammasart 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 4 years

**Meeting Attendance:** 10 of 12 times

**Number of Company's Share on December 31, 2016:** 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, 2016)**

- 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	Thai Airline Holding Co., Ltd.

# Management and Company Secretary



**1. Full name** : Mrs. Somrudee Suwannaroop

**Position** : Administrative Officer Director and Company Secretary

**Nationality** : Thai

**Age** : 48 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 3 years

**Number of Company's Share on December 31, 2016:** 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, 2016)**

- 2014 to present, Administrative Officer Director and 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.

**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 :** Mr. Mongkhon Sunnanon

**Position :** Plant Director

**Nationality :** Thai

**Age :** 65 years

**Education :**

- Bachelor in Engineering (Mechanical), Chulalongkorn University

**Duration of Position :** Since 2011 to present ,Total 6 years

**Number of Company's Share on December 31, 2016:** None

**Shares held by other persons:** 200,000 shares and Spouse 250,000 shares Total amount 450,000 shares or 0.045 percent of the paid-up capital

**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, 2016)**

- 2011 to present, Plant Director, Thai Agro Energy Pcl.
- 2016 to present, Risk Management Committee, Thai Agro Energy Pcl.
- 2016 to present, Corporate Governance Committee.



**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
1	LIMITED PARTNERSHIP	PARTNER	PARTNER	MSN CONSULTANT

**3. Full name** : Miss Kanyaphat Chinandej

**Position** : Marketing and Sourcing Director

**Nationality** : Thai

**Age** : 50 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 8 years

**Number of Company's Share on December 31, 2016:** 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, 2016)**

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



**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 Rayaruji  
**Position** : Assistance Plant Director  
**Nationality** : Thai

**Age** : 43 years

**Education** :

- Master in Business Administration, Ramkhamhaeng University

**Duration of Position** : Since 2011 to present, Total 6 year

**Number of Company's Share on December 31, 2016**: 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, 2016)**

- 2011 to present, 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 Thangviroon  
**Position** : Assistance Plant Director  
**Nationality** : Thai

**Age** : 57 years

**Education** :

- Master in Business Administration, Bangkok University

**Duration of Position** : Since November 15,2016 to present

**Number of Company's Share on December 31, 2016**: 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, 2016)**

- 2016 to present, 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 Manager

**Nationality :** Thai

**Age :** 39 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 2 year

**Number of Company's Share on December 31, 2016:** 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, 2016)**

- 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 :** 44 years

**Education :**

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

**Duration of Position :** Since 2007 to present, Total 9 years

**Number of Company's Share on December 31, 2016:** 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, 2016)**

- 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-



## List of Management who resigned during the year

**1. Full name** : Mr. Wiwat Teerawanichpong

**Position** : Deputy Chief Executive Officer

**Nationality** : Thai

**Age** : 56 years

**Education** :

- M.B.A., Finance University of Scranton Pennsylvania U.S.A.,
- Food Science, Kasetsart University

**Duration of Position** : Since January 4, 2016 to July 31, 2016

**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, 2016)**

- January 4, 2016 to July 31, 2016, Deputy Chief Executive Officer , Thai Agro Energy Pcl.



---

**2. Full name** : Mr. Voraphong Rungtivasuwan

**Position** : Assistance Plant Director

**Nationality** : Thai

**Age** : 50 years

**Education** :

- Bachelor of Science Program in Microbiology Chulalongkon University

**Duration of Position** : Since October 1, 2015 to October 15, 2016

**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, 2016)**

- October 1, 2015 to October 15, 2016, Assistance Plant Director, Thai Agro Energy Pcl.





## 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. QTC ENERGY PCL
8. INTOUCH HOLDINGS PCL
9. TRIS CORPORATION CO., LTD.
10. TPI POLENE PCL
11. UT INTERNATIONAL CO., LTD.
12. THAI AIRLINE HOLDING CO., LTD.
13. BANGKOK CHAIN HOSPITAL PCL
14. BANGSAPHAN BARMILL PCL
15. DIAMOND ROOFING TILES PCL
16. CWORN SEAL PCL
17. METRO SYSTEM CORPORATION PCL
18. LALIN PROPERTY PCL
19. SUPHALAI PCL
20. SAHAVIRIYA PLATE MILL PCL
21. AUDIT OFFICE DR. WIRAT AND ASSOCIATES CO., LTD.
22. THAILAND CARPET MANUFACTURING PCL
23. MBK RESORT PCL
24. SPC HOME IDEA CO., LTD.
25. SNC FORMER PCL
26. MSN CONSULTANT LIMITED PARTNERSHIP
27. NICHA WELL CO.,LTD.
28. WITCORP PRODUCTS CO., LTD.
29. LANNA POWER GENERATION 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	Company
<b>1. Suphachai Kaewfuang</b> - Audit Department Manager - Secretary of Audit Committee - Secretary of Risk Management	43	None	None	<u><b>Education</b></u> 2536-2537 : University Institute of Technology Tanyaburi Bachelor's degree in B.B.A. (Accounting) 2534-2535 : Rajamangala Institute of Technology Phanakorn , Advanced Certificate (Accounting)  <u><b>Training</b></u> - 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) - Enterprose 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)  <u><b>The Board Of Directors Of Listed Companies</b></u> -None-  <u><b>Special Events(Current)</b></u> -None -	Jun 2007-Present	Audit Department Manager	Thai Agro Energy PCL

# Management and Corporate Governance

Securities and Shareholder Information

Management Structure

Corporate Governance

Corporate Social Responsibility

Internal Control

Related Transaction





## Report of Audit Committee

Company's Board of Director has assigned an Audit Committee who be independence and not related to any executives to consider the material point. They also met with auditors. Internal auditor Also, invite relevant executives to attend the meeting. To provide more information and clarification as it should, with emphasis on good corporate governance policy and efficient and effective internal audit system.

In the year 2016, the Audit Committee held 9 meetings with attendance record of each member of the Audit Committee as follows:

Name-Surname	Positions	No.of attendance/No of meeting in 2016
Mr.PadatpaiMeekun-iam	Audit Committee Chairman	9/9
Mr.VirachAphimeteetamrong	Director	9/9
Mr.SstitChanjavanakul	Director	7/9

To ensure and confidence in reasonable correctness and sufficiency of disclosure in company's materiality information and to be complied with the general accepted accounting standards, company's quarterly and annual financial statements of year 2016, including related party transaction and conflict of interests, had been verified with administrative department and audit section, by invited auditor to joint in every meeting of considering in quarterly and annual financial statement. Moreover, an Audit Committee and auditor had jointed in a meeting without company's executives to considering in scope and plan of annual auditing of auditor.

Verifying internal control system, confirming audit plan, and acknowledging audit report, together with observing and improving its result, to emphasize on internal control performance to be under international standards and sufficiently, by continually reported to Company's Board of Directors, including to confirming that Company has complied with any and all related laws, regulation, and rules. Moreover, there were verifying Collective Action Coalition plan of Private Sector Collective Action Coalition Anti-Corruption.

Screening and selecting auditor and determining proper compensation and reported to Company's Board of Directors to propose to the meeting of shareholders for consideration and assigning to be company's auditor of year 2017.

In 2016, an audit committee has independently practiced on any and all tasks assigned by Company's Board of Directors, which emphasized on good corporate governance, business ethics, any risks that may influenced to company, complying with all related laws, preparing correct and trustful financial statement under the general accepted accounting standards, transparency disclosure on all information and operations, sufficiency and proper internal control system, and no materiality deficiency.

On February22, 2017

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 two meetings in year 2016, which can be summarized as follows.

(1) The NRC has established rule for salary adjustments of employees for year 2017 and for the bonus payments for employees for year 2016

(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 via the Company's website ([www.thaiagroenergy.com](http://www.thaiagroenergy.com)) from October 1, 2016 to December 31, 2016. It appeared that no shareholders proposed any meeting agenda nor new director nomination for the Annual General Meeting of Shareholders Year 2017.

(3) The NRC has considered nomination of directors in place of directors retired by rotation at the Annual General Meeting of Shareholders Year 2017, having established method and procedures for the nomination as follows:

(3.1) 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.

(3.2) 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.

(3.3) 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 2017 for its consideration.

(4) The NRC considered the remunerations of the Board of Directors and sub-committees by considering the scope of duties and responsibilities 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 2017 for its consideration.

Dated: February 10, 2017

On behalf of the Nomination and Remuneration Committee

**(Mr. Kraisi Sirirangsri)**

Chairman of NRC



## Report of Risk Management Committee

The Board of Directors has established the Risk Management Committee comprising directors and executives from all departments of the Company, from the department manager or above, with at least one member from each department, who are authorized to consider problems or risk factors that may possibly impact the operations of the Company and its subsidiary companies. According to the good corporate governance principles, effective risk management procedures are established for every aspect of the operations in order to minimize the risks and mitigate their impacts, decrease unpredictability of the overall operations, and promote success. Resources are used effectively for indication, evaluation, and appropriate risk management according to the ever-changing circumstances.

During year 2016, the Risk Management Committee held four meetings altogether in order to consider and assess possible risks that may occur and establish risk prevention and risk mitigation measures by focusing on effective risk management suitable with the economic, social and environmental situations which may affect current and future business operations of the Company. The report can be summarized as follows:

(1) Consideration of the process and risk management plan in order to ensure that the risk management is efficient and sufficient for appropriate risk level that is acceptable and in line with the operations of the Company and its subsidiary companies.

(2) Consideration of the risk factors, including monitoring and supervision of the risk management in all aspects of the Company and its subsidiary companies 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 established rule and prepared self-assessment forms to assess the performance of the Risk Management Committee as a whole and individual for year 2016 for the assessor to indicate strengths, weaknesses and matters that needed improvements. The Risk Management Committee together considered the results of the assessment and established guidelines for achieving a more effective operation of the Risk Management Committee.

(4) Risk management policy and significant risk management of the Company and its subsidiary companies have been disclosed in details within the Annual Registration Statement Year 2016 (Form 56-1) and the Annual Report Year 2016 (Form 56-2). In the past year 2016, due to the operation of the Risk Management Committee, the risks were able to be controlled to the level which incurred no impact to the operations of the Company and its subsidiary companies. The Committee supervises the risk management responsibly and carefully for the benefits of the Company, shareholders, and all stakeholders.

Dated: March 14, 2017

On behalf of the Risk Management Committee

**(Mr. Satit Chanjavanakul)**

Chairman of Risk Management Committee

## Part 2

### Management and corporate governance

#### 7. Securities and Shareholder Information

##### 7.1 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.

##### 7.2 Shareholders

List of 10 major shareholders of the company. As of March 14,2017, the list is as follows<sup>1)</sup>

Shareholder names	Number of shares	Per cent
1. Lanna Resources Public Company Limited <sup>2)</sup>	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
Total shares held by Sirirangsi Group	45,300,000	4.53
4. Chaturaphruek Group		
4.1 Mr.Bunsin Chaturaphruek	15,675,980	1.57
4.2 Mrs. Hang Chaturaphruek	16,113,213	1.61
4.3 Mr. Manunsom Chaturaphruek	18,733	0.00
Total shares held by Chaturaphruek Group	31,807,926	3.18
5. Limwathanagura Group		
5.1Mr. Somchit Limwathanagura	28,322,657	2.83
5.2Mr. Noppadon Limwathanagura	3,018,867	0.30
Total shares held by Limwathanagura Group	31,341,524	3.13
6. Tantisunthon Group		
6.1 Mr. Wisit Tantisunthon	17,373,000	1.74
6.2 Mr.Tawee Tantisunthon	53,415	0.005
6.3 Miss Vanida Tantisunthon	31,500	0.003
Total shares held by Tantisunthon Group	17,457,915	1.75
7. Susangkornkarn Group		
7.1Miss Kun Susangkornkarn	5,131,500	0.51
7.2 Mr. Kan Susangkornkarn	2,980,600	0.30
Total shares held by Susangkornkarn Group	8,112,100	0.81
8. Miss Phanni Srisawat	8,100,000	0.81
9. Louharanoo Group		
9.1 Mr.Anun Louharanoo	4,771,895	0.48
9.2 Mr. Arkhom Louharanoo	2,000,000	0.20
Total shares held by Louharanoo Group	6,771,895	0.68
10. Mr.Somkiart Limsong	5,720,492	0.58
<b>Total</b>	<b>711,846,648</b>	<b>71.18</b>

Remark 1) Source: The roster of shareholders as of the closing date for suspension of share transfer as of 14 March, 2017, made by The Thailand Securities Depository Co., Ltd. (TSD)

2) List of 10 major shareholders of Lanna Resources Plc., as of November 1, 2016

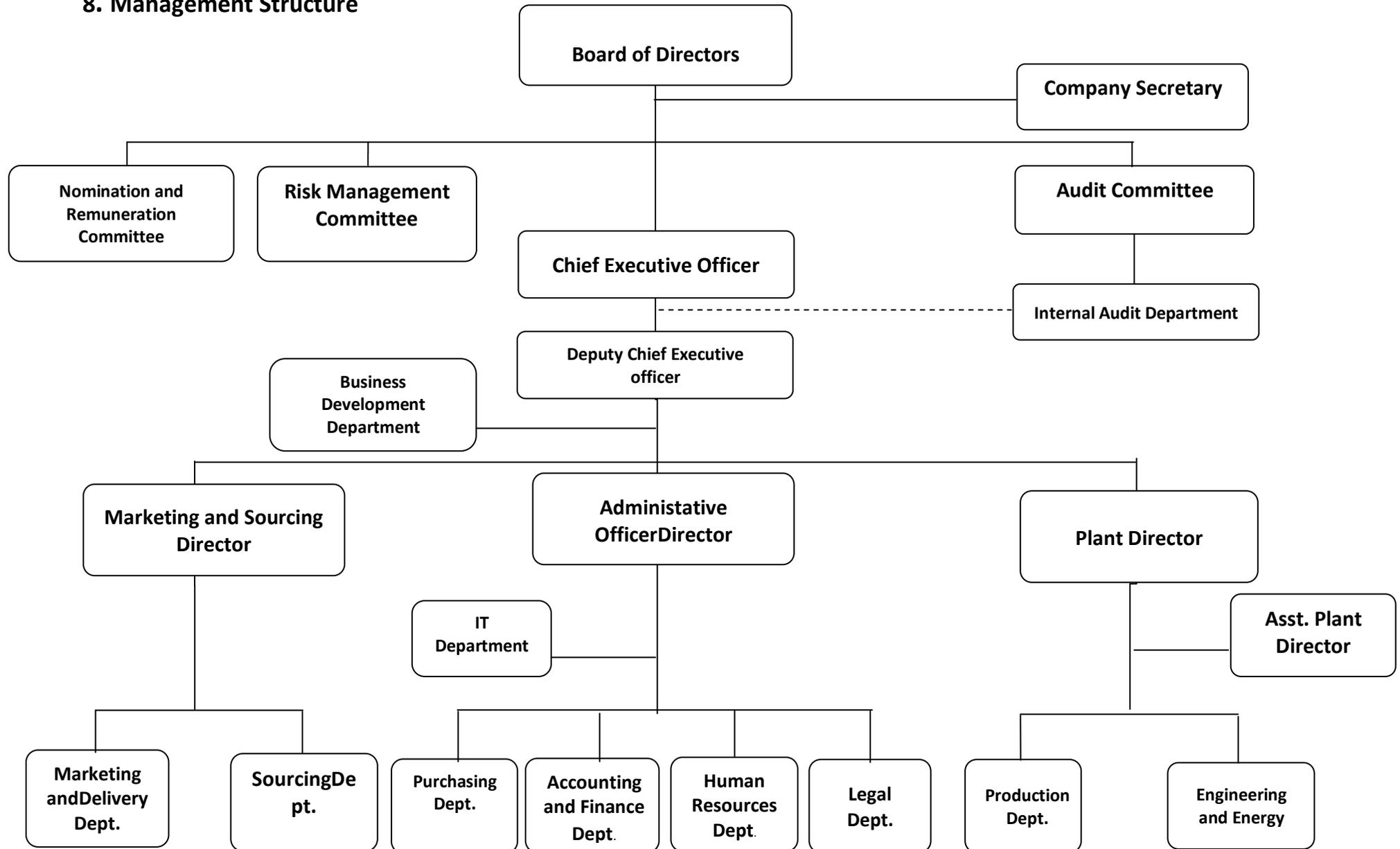
Shareholder names	Number of shares	Per cent
1. Siam City Cement Public Company Limited <sup>1)</sup>	237,525,030	45.24
2. Mr.ThaweechatJurankun	61,736,000	11.76
3. Sirirangsi Group	42,697,781	8.13
4.Tantisunthon Group	33,511,253	6.38
5. Limsong Group	33,433,460	6.38
6. Loetphanitkun Group	9,395,500	1.79
7. Thai NVDR	7,035,800	1.34
8. Mr.WiloetWongaphisamphoe	4,444,400	0.85
9. Sukpisarn Group	1,950,000	0.37
10.East fourteen limited-Emerging markets small cap series	1,833,750	0.35
11.Other Shareholder	91,436,705	17.42
Total	524,999,679	100.00

**Remark<sup>1)</sup>** The Siam City Cement Public Company Limited and its management forms the largest group of shareholders comprising the Siam City Cement Public Company Limited, Mr. WanchaiTosomboonholding totally 237,525,030shares, representing 45.24%of the paid-up capital, and all of the shares have voting rights.The group has assigned three representatives to act as non-executive directors in the company, namely Mr. Paul Heinz Hugentobler, Mr. SorathepRangchaikul, and Mr. WanchaiTosomboon. The three directors have not authority to bind the company in any way.

### 7.3 Dividend Policy

The company's policy is to pay no less than 60per cent of the net profit as stated in the company's financial statements each year. An amount of each year's dividendis 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 three committees, namely Audit Committee, Risk Management Committee and Nomination and Remuneration 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:

### 8.1 Board of Directors

The Board of Directors comprises a total of 10 members. In 2015 and 2016, the company's Board of Directors held 12 and 12 meetings respectively. Details of attendance of each director are as follows:

Name of Director	No of attendance / No. of Meeting in 2015	No. of attendance / No. of meeting in 2016
1. Mr. Visith Noiphan	12/12	9/12
2. Mr. Suroj Subhasavasdikul*	12/12	11/12
3. Mr. Kraisi Sirirungsi*	10/12	12/12
4. Mr. Anun Louharanoo*	11/12	12/12
5. Mr. Somchit Limwathanagura	12/12	12/12
6. Mr. Srihasak Arirachakaran*	10/12	11/12
7. Mr. Somchai Lovisuth	12/12	12/12
8. Mr. Padetpai Meekun-im	11/12	11/12
9. Mr. Virach Aphimeteetamrong	11/12	10/12
10. Mr. Satit Chanjavanakul	9/12	10/12

Remark : \* Directors of the Board No. 2-4 and No. 6 are directors who are representatives of Lanna Resources Public Company Limited. Mrs. Somruedi Suwanrup was the company's secretary.

### 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

### 8.2 Executive Team

The company has a total of six executive members.

Name-Surname	Position
1. Mr. Somchai Lovisuth	Chief Executive Officer
2. Mr. Mongkhon Sunnanon	Plant Director
3. Miss Kanyaphat Chinandej	Marketing and Sourcing Director
4. Mrs. Somrudee Suwannaroop	Administrative Officer Director
5. Mr. Anan Rayaruji	Assistant Plant Director
6. Mr. Korn Tangviroon*	Assistant Plant Director

Remark \* On 15 November 2016 Mr. Korn Tangviroon inaugurated Assistant Factory Director in replacement of Mr. Voraphong Rungtivasuwan who resigned on 15 October 2016.

## **Responsibilities of CEO**

Chief Executive Officer 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.

1. 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.

2. 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.

3. 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.

4. 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.

5. 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.

6. 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.

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

3.2 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.

3.3 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:

4.1 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.

4.2 Other expenses in addition to the above 4.1 can be approved at a time or a list of up to one million baht.

5. CEO has authority to approve for amortization and disposal of damaged / outdated / discontinued to use property. The amortized and sold property must have a cost or purchase price of up to 100,000 baht and a net book value of up to 10,000 baht within one month, and the combination required the acquisition at a cost less than one million baht.

6. CEO has authority to reserve provisions and write-offs of the company up to 50,000 baht at a time and/or by not more than one million baht in the past one fiscal year. CEO must report the matter to the Board once every other month.

#### **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 welfare 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

4.1 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.

4.2 Contact authorities to negotiate and sign a Memorandum of Understanding on co-financing in a primary stage for a period not exceeding one year.

4.3 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

### **8.3 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 company. 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.

4.1 Register of Committee

4.2 Notice and minutes of board meeting

4.3 Notice and minutes of meeting of shareholders

4.4 The company's annual report

4.5 Report of executive directors' stakes

5. Other actions according to the notification of the Capital Market Commission

## 8.4 Remuneration of Directors and Executives

### 8.4.1 Remuneration in cash

#### 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 2016 is as follows.

Name-Surname	Position	Unit: baht		
		Remuneration	Bonus	Total
1.Mr.Visith Noiphan	Chairman	540,000	321,426	861,426
2.Mr.Suroj Subhasavasdikul	Vice Chairman	360,000	214,286	574,286
3.Mr.Kraisi Sirirungsi	Vice Chairman Chairman of the Nomination and Remuneration Committee	360,000 30,000	214,286	604,286
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 Nomination and Remuneration Committee Expert Director	360,000 20,000 120,000	214,286	714,286
7.Mr.Somchai Lovisuth	Director Nomination and Remuneration Committee	360,000 20,000	214,286	594,286
8.Mr.Padetpai Meekun-iam	Independent Director / Audit Committee Chairman	360,000 180,000	214,286	754,286
9.Mr.Virach Aphimeteetamrong	Independent Director/ Audit Committee	360,000 120,000	214,286	694,286
10.Mr. Satit Chanjavanakul	Independent Director/ Audit Committee Nomination and Remuneration Committee	360,000 120,000 10,000	214,286	704,286
Total		4,400,000	2,250,000	6,650,000

Remark : Mr. Sihasak Arirachakaran was appointed Director Expert by the Meeting of the Board of Directors No. 19/2554 dated 22 December 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.

#### Executive Remuneration

Company pays remuneration to executives in the form of salary and annual bonus. 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)
2014	7	17.12
2015	7*	20.23
2016	8*	17.97

Remark Number of executives includes those who resigned during the year 2015.

### 8.4.2 Other compensation

-NA-

## 8.5 personnel

### 8.5.1 Number of personnel

As of 31 December 2016, the company employed a total of 214 employees (excluding six management members), dividing to 172 full-time staff members and 42 daily-waged workers as listed below.

Department	Full-time staff (person)	Daily-waged worker (person)	Total (person)
Financial Accountant	7	-	7
Human Resources	8	-	8
Purchasing	2	-	2
Legal Affairs	2	-	2
Information Technology	4	-	4
Audit	2	-	2
Special Project	1	-	1
Business Development and Marketing	2	-	2
Factory Management	2	-	2
Production	42	3	45
Engineering and Energy	81	8	89
Department of Mass and Factory Administration	4	9	13
Administration and Management of Distillery Slop	2	16	18
Warehouse and Raw material Control	12	6	18
Occupational Safety and Health	1	-	1
Total	172	42	214

### 8.5.2 Labour Disputation

-NA-

### 8.5.3 Employee Compensation

#### Compensation in Cash

In the years 2014, 2015, and 2016, the company paid compensation to employees (excluding management) totally 47.01 million baht, 51.56 million baht, and 58.19 million baht respectively as compensation in the form of salaries, bonuses, overtime, contributions to the fund, and housing rents.

#### Other compensations

-NA-

### 8.5.4 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.

## 9. Corporate Governance

### 9.1 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 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.

#### **9.1.1 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<sup>13</sup> 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.

### 9.1.2 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>
- **Byphone**, contact the Internal Audit Department +66 (0) 81-8027001
- **E-Mail** : [padetpai@yahoo.com](mailto:padetpai@yahoo.com) and/or [suphachai@thaiagroenergy.com](mailto: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.

### 9.1.3 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.

### 9.1.4 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.

### 9.1.5 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

## 9.2 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.

### 9.2.1 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.

### **9.2.2 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 evolution 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.

### 9.2.3 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.

### 9.2.4 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  
Records of all business transactions of the company must be correct and verifiable, without restrictions or exceptions whatsoever.
2. Account posting and business records must be based on fact, without distortion or false entries on any purpose.
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.

4. Accounting and Financial Reporting
  - (A) 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.
  - (B) The employees have to realise that the accurate report of accounting and finance is under the responsibility sharing among directors, executives and employees.
  - (c) All the staff are responsible to prepare and/or provide correct, truthful, and complete detailed information to attach to the accounting and finance documentation.

#### 9.2.5 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.

### **9.2.6 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:
  - (a) Must comply with copyright law, the law governing computer usage regulations, and orders of the company relating to the use of various information systems.
  - (b) Do not pirate software or intellectual property rights of others.
  - (c) 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.
  - (d) 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.
  - (e) 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.

- (f) Do not download any file type without permission. And do not use network for entertainment to prevent decline of data reception-transmission effectiveness.
- (g) 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.
- (h) The use of a computer or personal communication devices to be connected to the company's network must receive a prior approval from CEO.
- (i) 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.
- (j) 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.
- (k) 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.

### **9.2.7 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 disciplinarypunishment 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

### **9.2.8 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 providesafety 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.

#### **9.2.9 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.

#### **9.2.10 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) Cuts 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 proceed 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 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.

### **9.2.11 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.

## 9.3 Committees

### 9.3.1 Company's Board of Directors

#### Structure of the Board of Directors

Name-Surname	Position
1. Mr.Visith Noiphan	Chairman
2. Mr.Suroj Subhasavasdikul	Vice Chairman and Authorised Signatory
3. Mr.Kraisii Sirirungsi	Vice Chairman and Authorised Signatory
4. Mr.Anun Louharanoo	Director and Authorised Signatory
5. Mr.Somchit Limwathanagura	Director and Authorised Signatory
6. Mr.Srihasak Arirachakaran	Director and Authorised Signatory
7. Mr.Somchai Lovisuth	Director and Authorised Signatory, and Chief Executive Officer
8. Mr.Padetpai Meekun-iam	Director and member of Audit Committee
9. Mr.Virach Aphimeteetamrong	Director and member of Audit Committee
10. Mr.Satit Chanjavanakul	Director and member of Audit Committee

#### Composition and properties of the Board of Directors

1. Board of Directors shall consist of not less than five members, whoe 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.

2. Composition of the Board of Directors must be formed with memebers 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.

3. 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.

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

5. 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 relected to the office.

6. 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.

7. 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.

8. 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.

9. 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.

10. To enable all directors to be fully devoted time and efforts to their duties, the company's Board of Directors set numbers of enterprises that each director can hold a position for:

11. Holding a position of directors in listed companies should not exceed the number as follows:

12. Executive Director or Full-time Director, for up to four companies

13. 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

1. 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.

2. 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.

3. 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).

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

5. 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 organisational structure 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, Subcommittee, 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.

6. 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.

7. Board of Directors may delegated one or several directors in subcommittees 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.

8. 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.

9. Board of Directors must provide a meeting at least once every three months and arrange performance evaluation of the Board of Directors annually.

10. 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.

11. 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.

12. 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.

13. 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.

### **9.3.2 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:

- 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.
- 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 3members:

Name-Surname	Position	No. of attendance / No of meeting in 2016
1. Mr.Padetpai Meekun-iam	Audit Committee Chairman	9/9
2. Mr.Virach Aphimeteetamrong*	Director	9/9
3. Mr.Satit Chanjavanakul	Director	7/9

**Remark:\*** A director who is competent and experienced enough to review the reliability of the company's financial statements. Mr. ViratAphimeteetamrong 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 inbusiness administration and finance

Mr. Suphachai Kaewfueng is the Secretary of the Audit Committee.

#### Scope of duties and authority of Audit Committee

1.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 policyand 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.

2. 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.

(A) Transaction having conflict of interest  
 (B) Illegal conduct or irregularity or significant deficiency in the internal control system.

(C) 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.

### 9.3.3 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 retire by rotation, may be re-appointed for another term. Unless retired by then, the members of Risk Management Committee will be retired on:

- (1) Death
- (2) Termination of an employee of the company
- (3) Board of Directors vote for them to leave or be removed
- (4) Resignation
- (5) 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 2016
1. Mr.SatitChanjavanakul*	Risk Management Chairman	4/4
2. Mr.SomchaiLovisuth	Director	4/4
3. Mr.MongkhonSunnanon	Director	4/4
4. MissKanyaphatchinandej	Director	4/4
5. Mrs.SomrudeeSuwannaroop	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, advise the Board and the management on issues concerning risk management in the enterprise level, which covers four categories, including Strategic Risks (S), Operational Risks (O), Financial Risks (F), and Compliance Risk (C).
- (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.

### **9.3.4 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 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, The NRC held two meetings in year 2016, which can be summarized as follows:

Name - Surname	Position	No. of attendance / No. of meeting in 2016
1. Mr.Sirirungsi Sirirungsi	Chairman of NRC	2/2
2. Mr.Satit Chanjavanakul	Director	1/2
3. Mr.Somchai Lovisuth	Director	2/2
4. Mr.Srihasak Arirachakaran	Director	2/2

Mrs.Somrudee Suwannaroop is the Secretary of the Committee.

#### 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:
  - (1)death;
  - (2)Resignation
  - (3)Termination of Directors.
  - (4)The Board of Directors vote for them to leave or be removed.

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:

##### **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 or 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.

##### **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.

#### **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.

#### **9.4 Nomination of Directors and Chief Executive Officer**

Selection of persons to be appointed as directors of the company was made through the shareholders' meeting. Board of Directors considered nominees based on experience, knowledge, and qualifications required by laws. This was due to the company then had not established 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.

##### **9.4.1 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.

#### **9.4.2 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.
- (5) 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.
- (6) 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. 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.

#### **9.4.3 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.

#### **9.4.4 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.

#### **9.4.5 Meeting of the Board of Director**

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.

#### **9.5 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 45,000baht per month, and the 30,000baht per month for each director. This format has been used since the 2013 onwards without any changes whatsoever until these days.

(1.2) Board of Directors, comprising ten members, received annual bonuses totaling 2,250,000baht in 2015. The bonus is paid once a year, following the same guidelines as stated in 2014 which defined the Chairman would receive 1.5part, amounting 321,426baht. Chairman and directors, would receive 1 part accounting 214,286baht for each. For sub-committees, following extra compensations were paid in addition to (1) :

(2) The Audit Committee receives monthly compensation,

(2.1) which pays as a fixed amount every month. The Chairman received 15,000 baht per month, and the 10,000 baht per month for each director. This format has been used since the 2013 onwards without any changes whatsoever until these days.

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.

### **9.6 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<sup>ฉ</sup> 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.

## 9.7 Remuneration of Auditor

Audit Committee recommended to the Board of Directors to propose the Annual General Meeting of Shareholders for the year 2015 to approve the appointment of one of the following nominees; Ms. Saifon Inkaew, Auditor Registration Number 4434 and/or Mr. Wichart Lokatekrawee, Auditor Registration Number 4451 and/or Miss Satida Ratananurak, Auditor Registration Number 4753 of EY Office Co., Ltd. to be the auditor of the company for the year 2015, with compensation as follows:

Particular (Unit: baht)	Paid compensation	
	2015	2016
(1) Annual audit fee	450,000	480,000
(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	925,000	955,000

Remark No compensation to be paid in the coming year

## 9.8 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



### 10.1 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:

#### 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: 2004.
- 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.

### **(1) 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.

### **(2) 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.

### **(3) 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.

## 10.2 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.

### 10.2.1 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: 2008 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.

### 10.2.2 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](mailto: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 (4<sup>th</sup> 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.

### 10.3 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.

## 10.4 Social activities 2016



On January 7, 2016, Thai Agro Energy Public Company Limited donated the money to support "Don Chedi Memorial Day".



On January 8, 2016, Thai Agro Energy Public Company Limited attended Children's Day event, held at Baan sra bua kum School, Nong Makha Mong, Dan chang , Suphanburi.



On March 3, 2016, Thai Agro Energy Public Company Limited Joined the donation blood to the Red Cross district branch Dan Chang. Suphan Buri at Dan Chang District Auditorium



On April 11, 2016, Thai Agro Energy Public Company Limited. Joined with Sub-district Administration Organization to feed the elderly and those who participated in the celebration of Songkran Festival 2016 at Nong Makha Mong



On April 16, 2016, Thai Agro Energy Public Company Limited joined with Sub-district Administration Organization (Ban Dong U Thong Community And Ban Bua Ngam community) in the celebration of the Songkran Festival 2016 at Wat Sra Bua Kham and supported the budget of 20,000 Baht.



On May 15, 2016, Thai Agro Energy Public Company Limited has joined co-sponsored to construction Ubosoth of U-Thong temple. Nong Makha, Amphoe Dan Chang, Suphan Buri



On July 2, 2016, Thai Agro Energy Public Company Limited has supported the budget and sent employees to participate. Improve the school building and playground for children at SraBuaKram School. NongMakhaMong,D Chang, Suphanburi.



On August 11, 2016, Thai Agro Energy Public Company Limited sponsored a budget for the event and sent employees to join the cycling program with Ban Wang Nam Joon Health District hospital, NongYaSai, Suphanburi.



On Sunday 23 October 2016, Thai Agro Energy Public Company Limited attend Wreath laying ceremony King Rama V at Dan Chang District Auditorium

## 10.5 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:
  1. 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.
  2. 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.
  3. 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

### 11.1 Report of Audit Committee

Board of Directors defined that Audit Committee is independent from the Board. During 2016, Audit Committee held a total of nine 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:

Reviewing the company's quarterly financial statements for year 2016, including related transaction, Items that might have a conflict of interest. The meeting was held together with the management and audit department. The auditor was invited to attend that meeting as well. The auditor always attend all meetings with the agenda relating to the consideration of quarterly and annual financial statements to ensure the proper preparation of the statements with adequate essential substances, and disclosure of important information in accordance with generally accepted accounting standards. In addition, Audit Committee had a meeting with the auditor, without management attendance, to determine the scope of the annual audit plan as proposed by the auditor.

Reviewing the internal control system for cautious performance. The committee approved the audit plan and acknowledged the audit results, as well as followed up and improved the outcome of the investigation with focus on making the internal audit conformed with international standards, and adequately adjusted where was needed. Audit Committee reports on the investigation results to the Board of Directors regularly and reviews the company's operations to be compliance with the laws, regulations and related requirements. In addition, a review of a working plan on the Collective Action Coalition, a project for Thailand's private sector to fight against corruption, was conducted.

Considering the selection of auditors and their remuneration to present to the Board of Directors. The Board would propose the matter to the General Meeting of Shareholders to seek approval of the appointment of the auditors for year 2017.

In 2016 Audit Committee was independently performed various tasks as assigned. The Board of Directors and management emphasises 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.

### 11.2 Assessment on adequacy of internal control

Meeting of the Board of Directors No. 2/2017 on 22 February 2017 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.

### **11.3 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 (detailed personal data of the Internal Audit Manager appeared in Appendix 3).

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**

### **12.2 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 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.

### **12.3 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 offers 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 Operational Results

Financial Highlights

Management Discussion and Analysis : MD&A



## Part 3

### Financial position and results of operations

#### 13. Key financial data

##### 13.1 Financial Statements

###### 13.1.1 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 2014, 2015 and 2016, 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.

### **13.1.2 Comment**

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 2016, its financial performance and cash flows for the year then ended in accordance with Thai Financial Reporting Standards.

**13.2 Summary of financial position and results of operations**  
**Consolidated Statements of Financial Position Years 2014-2016**

Financial position	2014		2015		2016	
	Baht million	Per cent	Baht million	Per cent	Baht million	Per cent
<b>Assets</b>						
<i>Current assets</i>						
Cash and cash equivalent	22.26	0.66	9.10	0.28	37.05	1.15
Current investments – open fund	0.43	0.01	0.78	0.02	0.96	0.03
Trade & Other receivable	195.00	5.76	201.71	6.22	165.55	5.13
Inventories	113.47	3.35	137.61	4.25	126.11	3.91
Advance payments for Purchase of goods	629.23	18.59	578.13	17.84	543.60	16.85
Other current assets	36.23	1.07	20.64	0.64	31.99	1.00
<b>Total current assets</b>	<b>996.62</b>	<b>29.44</b>	<b>947.97</b>	<b>29.25</b>	<b>905.26</b>	<b>28.07</b>
<i>Non-current assets</i>						
Property, plant, and equipment	2,372.89	70.10	2,286.82	70.55	2,314.39	71.76
Intangible assets	2.04	0.06	2.96	0.09	2.35	0.07
Deferred tax assets	12.95	0.38	2.81	0.09	2.48	0.08
Other non-current assets	0.50	0.01	0.72	0.02	0.70	0.02
<b>Total non-current assets</b>	<b>2,388.38</b>	<b>70.56</b>	<b>2,293.31</b>	<b>70.75</b>	<b>2,319.92</b>	<b>71.93</b>
<b>Total assets</b>	<b>3,385.00</b>	<b>100.00</b>	<b>3,241.28</b>	<b>100.00</b>	<b>3,225.18</b>	<b>100.00</b>
<i>Liabilities and shareholders' equity</i>						
<i>current liabilities</i>						
Short-term loans from financial institutions	963.15	28.45	964.93	29.77	986.64	30.59
Trade and other payables	133.99	3.96	67.91	2.10	182.33	5.65
Income taxes payable	-	-	2.50	0.08	1.16	0.04
Current portion of liabilities under finance lease agreements	0.91	0.03	1.45	0.04	2.80	0.09
Current portion of long-term loans	180.00	5.32	180.00	5.55	180.00	5.58
Provision for short-term employee benefits	2.54	0.08	2.76	0.09	2.55	0.08
Other current liabilities	12.17	0.36	15.26	0.47	14.91	0.46
<b>Total current liabilities</b>	<b>1,292.76</b>	<b>38.19</b>	<b>1,234.81</b>	<b>38.10</b>	<b>1,370.39</b>	<b>42.49</b>
<i>Non-current liabilities</i>						
Liabilities under finance lease agreements - net of current portion	4.32	0.13	4.09	0.13	3.96	0.12
Long-term loans - net of current portion	477.76	14.11	297.76	9.19	117.76	3.65
Provision for long-term employee benefits	0.99	0.03	1.07	0.03	1.43	0.05
<b>Total non-current liabilities</b>	<b>483.07</b>	<b>14.27</b>	<b>302.92</b>	<b>9.35</b>	<b>123.15</b>	<b>3.82</b>
<b>Total liabilities</b>	<b>1,775.83</b>	<b>52.46</b>	<b>1,537.73</b>	<b>47.44</b>	<b>1,493.54</b>	<b>46.31</b>
<b>Shareholders' equity</b>						
Share capital						
Registered	1,000.00	29.54	1,000.00	30.85	1,000.00	31.01
Issued and fully paid up	1,000.00	29.54	1,000.00	30.85	1,000.00	31.01
Share premium	188.79	5.58	188.79	5.82	188.79	5.85
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	2.95	100.00	3.09	100.00	3.10
Unappropriated	319.82	9.45	414.19	12.78	442.29	13.71
<b>Total shareholders' equity</b>	<b>1,609.17</b>	<b>47.54</b>	<b>1,703.55</b>	<b>52.56</b>	<b>1,731.64</b>	<b>53.69</b>
<b>Total liabilities and shareholders' equity</b>	<b>3,385.00</b>	<b>100.00</b>	<b>3,241.28</b>	<b>100.00</b>	<b>3,225.18</b>	<b>100.00</b>

## Statement of Comprehensive Income Years 2014-2016

Operational results	2014		2015		2016	
	Baht million	Per cent	Baht million	Per cent	Baht million	Per cent
<b>Income</b>						
Sales	2,496.28	99.83	2,600.32	99.91	2,415.07	99.86
Other incomes	4.15	0.17	2.25	0.09	3.28	0.14
Total revenues	2,500.43	100.00	2,602.57	100.00	2,418.35	100.00
<b>Costs and expenses</b>						
Cost of sales	2,165.52	86.61	2,244.29	86.23	2,111.84	87.33
Selling expenses	7.38	0.30	9.93	0.38	9.52	0.39
Administrative expenses	42.01	1.68	38.30	1.47	68.16	2.82
Total expenses	2,214.91	88.58	2,292.52	88.09	2,189.52	90.54
Profit (loss) before financial expenses.	285.52	11.42	310.05	11.91	228.83	9.46
Financial expenses	57.26	2.29	50.06	1.92	37.79	1.56
Profit before income tax expense	228.26	9.13	259.99	9.99	191.04	7.90
Income tax expenses	(8.95)	(0.36)	(15.72)	(0.60)	(12.94)	(0.54)
Profit for the year	219.31	8.77	244.27	9.39	178.10	7.36
Earnings per share(Fully Diluted) (Baht)	0.22	-	0.24	-	0.18	-
Earnings per share (Weighted Average) (Baht)	0.24	-	0.24	-	0.18	-
Par value(Baht)	1.00	-	1.00	-	1.00	-

## Statements of Retained Earnings Years 2014-2016

(Unit: Million Baht)

Operational results	2014	2015	2016
Earnings (Deficit) unappropriated quoted	200.51	319.82	414.19
Profit for the year	219.31	244.27	178.10
Profit (loss) other comprehensive income for the year	-	0.10	-
Profit for allocation	419.82	564.19	592.29
<b>Less</b> dividends paid	(100.00)	(150.00)	(150.00)
Legal Reserve	-	-	-
Earnings (Deficit) unappropriated forward	319.82	414.19	442.29

## Statements of Cash Flows Years 2014-2016

(Unit: Million Baht)

Operational results	2014	2015	2016
<b><u>Cash flow from operating activities</u></b>			
Profit before tax	228.26	259.99	191.04
Adjustments to reconcile profit before tax to net cash provided			
By (paid from) operating activities			
Depreciation and amortization	105.82	121.92	125.47
Gain on sales of property, plant, and equipment	(0.68)	(0.56)	(0.52)
Gain on sales of current investments	(0.43)	(0.34)	(0.19)
Loss on write-off machinery, equipments and intangible assets	-	0.29	0.58
Provision for long-term employee benefits	0.87	0.42	1.28
Allowance for impairment in advance payments for cassava chips	-	-	6.87
Interest income	(0.26)	(0.17)	(0.16)
Interest expense	57.08	49.86	37.62
Profit from operations activities before changes in operating assets and liabilities	390.66	431.41	361.99
Operating assets (increase) decrease			
Trade and other receivables	(13.31)	(11.58)	36.17
Inventories	(29.32)	(24.14)	11.50
Advance payment for purchase for goods	(262.35)	51.10	27.65
Other current assets	(19.08)	15.65	(11.35)
Other non-current assets	(0.04)	(0.22)	0.02
Operating liabilities increase (decrease)			
Trade and other payables	62.22	(56.79)	87.14
Other current liabilities	2.63	3.20	(1.36)
Provision for long-term employee benefits	(2.28)	-	(1.13)
Cash from operating activities	129.13	408.63	510.63
Cash received from interest income	0.27	0.17	0.15
Cash paid for interest payments	(59.79)	(49.50)	(36.10)
Cash paid for income tax	-	(3.10)	(13.94)
<b>Net cash from operating activities</b>	<b>69.61</b>	<b>356.20</b>	<b>460.74</b>
<b><u>Cash flow from investing activities</u></b>			
Acquisitions of property, plant and equipment	(316.39)	(43.08)	(122.10)
Acquisitions of current investments	(601.00)	(692.00)	(565.00)
Acquisitions of intangible assets	(0.91)	(1.72)	(0.18)
Proceeds from sales of current investments	601.00	692.00	565.00
Cash receipt from government grants	8.62	4.87	-
Proceeds from sales of property, plant and equipment	2.13	0.56	0.52
<b>Net cash provided by (used in) investing activities</b>	<b>(306.55)</b>	<b>(39.37)</b>	<b>(121.76)</b>
<b><u>Cash flows from financing activities</u></b>			
Increase in short-term loans from financial institution	218.46	1.79	21.70
Repayment of long-term loans	(180.00)	(180.00)	(180.00)
Cash paid for liabilities under finance lease agreements	(0.04)	(1.78)	(2.73)
Cash paid for dividend	(180.00)	(150.00)	(150.00)
Proceeds from the capital increase	388.79	-	-
<b>Net cash used in financing activities</b>	<b>247.21</b>	<b>(329.99)</b>	<b>(311.03)</b>
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>10.27</b>	<b>(13.16)</b>	<b>27.95</b>
Cash and cash equivalents at beginning of year	11.99	22.26	9.10
<b>Cash and cash equivalents at end of year</b>	<b>22.26</b>	<b>9.10</b>	<b>37.05</b>

## Summary of key financial ratios

Ratio	Measurement	2014	2015	2016
<b><u>Current ratio</u></b>				
Current ratio	Times	0.77	0.77	0.66
Quick ratio	Times	0.17	0.17	0.15
Cash flow ratio	Times	0.06	0.28	0.35
Accounts receivable turnover ratio	Times	13.43	13.11	13.15
The average collection period	Days	26.81	27.46	27.37
Turnover of goods	Times	140.38	174.91	171.38
The average sale period finished products	Days	2.56	2.06	2.10
Payable turnover ratio	Times	25.14	25.27	20.73
Repayment period	Days	14.32	14.25	17.37
Cash Cycle	Days	15.06	15.27	12.11
<b><u>Ratio of ability to make profits</u></b>				
Gross margin	%	13.25	13.69	12.56
Operating margin	%	11.27	11.84	9.34
Other profit margins	%	0.17	0.09	0.14
Ratio of cash to make profits	%	24.74	115.73	204.27
Net profits margin	%	8.77	9.39	7.36
Return on equity	%	16.18	14.75	10.37
<b><u>Ratio of operating performance</u></b>				
Ratio of return on assets	%	6.99	7.37	5.51
Return on fixed assets	%	9.58	10.48	7.74
Turnover of Assets	Time	0.80	0.79	0.75
<b><u>Financial policy ratio</u></b>				
Ratio of debt to equity	Time	1.10	0.90	0.86
Interest coverage ratio	Time	4.99	6.19	6.05
Obligations coverage ratio -Cash basis.	Time	0.19	1.11	1.13
Dividend payout	%	68.40	61.41	84.22

## Report of the Board of Directors' Responsibilities for Financial Statements

The financial statements of Thai Agro Energy Public Company Limited for the year ended December 31, 2016 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. 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 2016.

February 27, 2017

On behalf of the Board of Directors of Thai Agro Energy Public Company Limited



(Mr. Visith Noiphan)

(Mr. Somchai Lohvisut)

Chairman of the board

Chief Executive Officer

## 14. Management's Discussion and Analysis

### 14.1 Overall performance

The Company's revenue of the year 2016 was Baht 2,418.35 million, decreased by 7.08 percent from the previous year while the net profit in year 2016 was Baht 178.10 million, decreased by 27.09 percent. This was due to the prevailing low crude oil and fuel oil prices which suppressed the selling price of ethanol. The average ethanol selling price in the year 2016 decreased by 8.54 percent from the previous year. However the ethanol sales volume in year 2016 increased by 1.54 percent due to the increasing consumption of fuel oil when oil prices were low.

### 14.2 Analysis of operating results

Revenue	Year 2016		Year 2015		Increase (Decrease)	
	Baht Million	%	Baht Million	%	Baht Million	%
Revenue from Ethanol Business	2,415.07	99.86	2,600.32	99.91	(185.25)	(7.12)
Other Revenue	3.28	0.14	2.25	0.09	1.03	45.78
<b>Total Revenue</b>	<b>2,418.35</b>	<b>100.00</b>	<b>2,602.57</b>	<b>100.00</b>	<b>(184.22)</b>	<b>(7.08)</b>

#### REVENUE:

The Company's total revenue in year 2016 was Baht 2,418.35 million, decreased from the previous year by Baht 184.22 million or 7.08 percent, due to the following reasons.

(1) The revenue from ethanol sales was Baht 2,415.07 million or 99.86 percent of total revenue, decreased by Baht 185.25 million or 7.12 percent from the same period last year due to the decrease in ethanol selling price as explained above.

(2) The other revenue was Baht 3.28 million or 0.14 percent of total revenue, increased by Baht 1.03 million or 45.78 percent from the same period of last year. This was due to the income from the sales of Fusel Oil.

Expenses	Year 2016		Year 2015		Increase (Decrease)	
	Baht Million	% Sale	Baht Million	% Sale	Baht Million	% Sale
Cost of sale	2,111.84	87.44	2,244.29	86.31	(132.45)	(5.90)
Selling and administrative expense	77.68	3.22	48.23	1.85	29.45	61.06
Financial cost	37.79	1.56	50.06	1.93	(12.27)	(24.51)
Income tax expense	12.94	0.54	15.72	0.60	(2.78)	(17.68)
<b>Total Expenses</b>	<b>2,240.25</b>	<b>92.76</b>	<b>2,358.30</b>	<b>90.69</b>	<b>(118.05)</b>	<b>(5.01)</b>

#### Expenses

The Company's expenses in year 2016 was Baht 2,240.25 million, decreased by Baht 118.05 million or 5.01 percent from the previous year, due to the following reasons;

(1) Cost of ethanol sales in year 2016 decreased by Baht 132.45 million or 5.90 percent from the previous year. This was due to raw material prices decreased over last year.

(2) Selling and administrative expenses in year 2016 increase by Baht 29.45 million or 61.06 percent from the previous year. This was due to an increase in cost of transportation, administration expenses, allowance for doubtful accounts advance payment on future purchases and Acceptance of transfer some of production cost due to the temporary shutdown of production lines No.1 between Octobers to December 2016.

(3) Financial expenses in year 2016 decreased by Baht 12.27 million or 24.51 percent from the previous year. This was due to short term and long term loan repayment, resulting in a decrease in interest expense.

(4) Profit from ethanol business in year 2016 for production line No.2, was exempted from corporate income tax on the earnings from the ethanol business as an privilege received the Board of Investment Promotion, B.E. 2520. However corporate income tax for production line No.1 decreased by Baht 2.78 million since the investment promotion has already expired.

Gross Profit	Year 2016		Year 2015	
	Baht Million	%	Baht Million	%
Revenue from sales	2,415.07	100.00	2,600.32	100.00
Less cost of sales	2,111.84	87.44	2,244.29	86.31
<b>Gross Profit</b>	<b>303.23</b>	<b>12.56</b>	<b>356.03</b>	<b>13.69</b>

### Gross profit

The Company's gross profit in year 2016 was Baht 303.23 million or 12.56 percent of the sales revenue, as compared with the gross profit of Baht 356.03 million or 13.69 percent of the sales revenue in the previous year. This was due to a decrease in sales prices as described above.

EBITDA AND EBITDA MARGIN (Baht Million)	Year 2016	Year 2015	Increase (Decrease)	%
EBITDA	353.62	431.30	(77.68)	(18.01)
EBITDA MARGIN	14.62	16.57	(1.95)	-

### EBITDA & EBITDA MARGIN

The Company's EBITDA (Earnings before financial expenses, corporate income tax, depreciation and amortization) in year 2016 was Baht 353.62 million, a decrease from the previous year by 18.01 percent. The Company's EBITDA MARGIN in year 2016 was 14.62 percent of the total revenues, a decreased by 1.95 percent from the previous year.

NET PROFIT & NET PROFIT MARGIN (Baht Million)	Year 2016	Year 2015	Increase (Decrease)	%
NET PROFIT	178.10	244.27	(66.17)	(27.09)
NET PROFIT PER SHARE (BAHT)	0.18	0.24	(0.06)	(25.00)
NET PROFIT MARGIN	7.36	9.39	(2.02)	-

## Net profit

The Company's net profit in year 2016 was Baht 178.10 million or net earnings of Baht 0.18 per share. When compared with the same period of last year, the net profit decreased by 27.09 percent due to the decrease in sale revenue. The Company's net profit margin in year 2016 was 7.36 percent of the total revenues, a decrease by 2.02 percent as compared with 9.39 percent of the same period last year.

Financial Position	Unit: Million Baht		Increase (Decrease)	
	As at December 31, 2016	As at December 31, 2015	Million Baht	%
Total Assets	3,225.18	3,241.28	(16.10)	(0.50)
Total Liabilities	1,493.53	1,537.73	(44.20)	(2.87)
Total Shareholder's Equity	1,731.65	1,703.55	28.10	1.65
<b>Book Value-Baht per Share</b>	<b>1.73</b>	<b>1.70</b>	<b>0.03</b>	<b>1.76</b>
<b>Remark: Registered per value of Baht 1 per share</b>				

## STATEMENT OF FINANCIAL POSITION:

**ASSETS:** The Company's total assets as at December 31, 2016 decreased from the end of 2015 by Baht 16.10 million or a decrease of 0.50 percent. The total assets consisting of:

(1) Current assets decreased from the end of 2015 by Baht 42.71 million or a decrease of 4.51 percent, due to (A) cash and cash equivalent increased from the year end 2015 by Baht 27.95 million or 307.14 percent; (B) Current investments increased by Baht 0.18 million or a increase of 23.08percent. (C)trade accounts receivable and other receivables decreased from the year end 2015 by Baht 36.16million or an decrease of 17.93 percent; (D) inventories decreased from the end of 2015 by Baht 11.50 million or an decrease of 8.36 percent, most of which were molasses, (E) advances payment for purchase goods decreased by Baht 34.53 million or a decrease of 5.97 percent, and (F) other current assets increased by Baht 11.35 million or an increase of 54.99percent, most of which came from tax receivables.

(2) Non-current assets increased from the year end 2016 by Baht 26.61 million or an increase of 1.16 percent, due to (A) land plant, and equipment increased from the year end 2015 by 27.57 million or 1.21 percent, (B) Other non-current assets decreased by Baht 0.96 million or a decrease of 14.79percent.

**LIABILITIES:** The Company's total liabilities as at December 31, 2016 decreased from the year end 2015 by Baht 44.20 million or a decrease of 2.87 percent, consisting of: (A) Trade accounts payable and other accounts payable increased from the year end 2015 by Baht 114.42 million or an increase of 168.49 percent, most of which were molasses cost. (B) Short term and long term loans decreased by Baht 158.30 million or a decrease of 10.97 percent, due to loan repayment, and (C) Other liabilities decreased by Baht 0.32 million or 1.18percent, most of which were finance lease,provision for employee benefits and tax.

**TOTAL SHAREHOLDERS' EQUITY:** The total shareholders' equity of the Company as at December 31,2016 increased from the year end 2015 by Baht 28.10 million 1.65 percent, the share's book value increased from Baht 1.70 per share to Baht 1.73 per share, due to the increase of company net profit.

Cash Flows	Unit: Million Baht	
	Year 2016	Year 2015
Cash Flows from (used in) Operating Activities	460.74	356.20
Cash Flows from (used in) Investing Activities	(121.76)	(39.37)
Cash Flows from (used in) Financing Activities	(311.03)	(329.99)
Net Increase (Decrease) in Cash	27.95	(13.16)
Cash at the Beginning of the Period	9.10	22.26
<b>Cash at the End of the Period</b>	<b>37.05</b>	<b>9.10</b>

### CASH FLOWS

(1) The Company's net cash used in operating activities in year 2016 was Baht 460.74 million, consisting of: (A) income before corporate income tax at Baht 191.04 million; (B) depreciation at Baht 170.95 million; (C) a decrease in operating assets of Baht 63.99 million due to an decrease in trade receivable and advance payments for purchase of goods and an increase in other current assets ; (D) increase in operating liabilities at Baht 84.65 million due to an increase in account and other payable, while provision for long-term employees benefits and other current liabilities decreased; (E) Interest income at Baht 0.15 million baht; (F) interest expense at Baht 36.10 million, and (G) Corporate income tax at 13.94 million.

(2) The Company's net cash used in investment activities in year 2016 was Baht 121.76 million which consists of: (A) an increase in equipment at Baht 122.10 million, most of which were constructions of Hydrogen Sulfide Treatment Plant, Biogas Burner System and Construction of Molasses Tanks; (B) Purchase of intangible assets in the amount of Baht 0.18 million, mainly computer programs, and (C) sales of assets amount to Baht 0.52 million.

(3) The Company's net cash used in financing activities in year 2016 was Baht 311.03 million which included (A) short-term loan at Baht 21.70 million, (B) financial leases repayment at Baht 2.73 million, (C) long-term loan repayment at Baht 180.00 million and (D) dividend payment at Baht 150.00 million.

### 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.

### 14.3 IMPACT TO FUTURE OPERATIONS

The Department of Energy Business (DOEB) is currently reviewing the National Oil Plan 2015 which focuses on phasing out of gasohol 91 in the domestic oil retailing market from January 2018. The review is to be concluded within the first quarter of 2017. If the plan for phasing out of gasohol 91 is still unclear, the department will not consider to narrow the retail price gap between gasohol E20 and other gasoline products. Moreover, the expected growth of domestic oil demand in 2017 is 5%, a decrease from the previous year of 7% due to an increase of the world's oil price. The two factors will affect the ethanol volume and the price for the company in the year 2017.

Meanwhile, the world's crude oil price is still volatility at the average of 50-60 USD per barrel, an increase from previous year average of 41 USD per barrel due to the expansion of global economic and OPEC and non-OPEC reduce the crude oil production. This is an important factor that benefits the ethanol price and company profit. However, the company has the policy to enhance the competitiveness by improving the efficiency of production and decreasing the production cost continuously in order to sustain the business growth and the dividend policy.

---



**EY Office Limited**  
33rd Floor, Lake Rajada Office Complex  
193/136-137 Rajadapisek Road  
Klongtoey, Bangkok 10110  
G.P.O.Box 1047, Bangkok 10501,Thailand  
Phone: +66 2264 9090  
Fax: +66 2264 0789-90  
ey.com

**บริษัท สำนักงาน อีวาย จำกัด**  
ชั้น 33 อาคาร เลอรัชดา  
193/136-137 ถนน รัชดาภิเษก  
คลองเตย กรุงเทพฯ 10110  
ตู้ ป.ณ.1047 กรุงเทพฯ 10501  
โทรศัพท์: +66 2264 9090  
แฟกซ์: +66 2264 0789-90  
ey.com

## 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 2016, 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 2016, 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 under the Royal Patronage of His Majesty the King 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 describe 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:

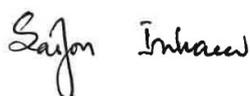
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinion. The risk of not detecting 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.

The engagement partner on the audit resulting in this independent auditor's report is Mrs. Saifon Inkaew.



Saifon Inkaew  
Certified Public Accountant (Thailand) No. 4434

EY Office Limited  
Bangkok: 22 February 2017

**Thai Agro Energy Public Company Limited**

**Statement of financial position**

**As at 31 December 2016**

(Unit: Baht)

	<u>Note</u>	<u>2016</u>	<u>2015</u>
<b>Assets</b>			
<b>Current assets</b>			
Cash and cash equivalents	7	37,047,316	9,101,662
Current investments - open fund		964,690	779,178
Trade and other receivables	8	165,547,628	201,708,246
Inventories	9	126,111,008	137,609,210
Advance payments for purchase of goods	10	543,604,567	578,127,841
Other current assets		<u>31,989,312</u>	<u>20,639,500</u>
<b>Total current assets</b>		<u>905,264,521</u>	<u>947,965,637</u>
<b>Non-current assets</b>			
Property, plant and equipment	11	2,314,388,882	2,286,816,051
Intangible assets	12	2,346,190	2,956,116
Deferred tax assets	20	2,480,583	2,815,148
Other non-current assets		<u>703,040</u>	<u>723,040</u>
<b>Total non-current assets</b>		<u>2,319,918,695</u>	<u>2,293,310,355</u>
<b>Total assets</b>		<u>3,225,183,216</u>	<u>3,241,275,992</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 2016

(Unit: Baht)

	Note	2016	2015
<b>Liabilities and shareholders' equity</b>			
<b>Current liabilities</b>			
Short-term loans from financial institutions	13	986,636,524	964,934,032
Trade and other payables	14	182,331,135	67,908,352
Current portion of liabilities under finance lease agreements	15	2,804,604	1,449,412
Current portion of long-term loan	16	180,000,000	180,000,000
Income tax payable		1,159,087	2,497,507
Provision for short-term employee benefits	17	2,545,386	2,758,341
Other current liabilities		14,906,761	15,262,222
<b>Total current liabilities</b>		<u>1,370,383,497</u>	<u>1,234,809,866</u>
<b>Non-current liabilities</b>			
Liabilities under finance lease agreements - net of current portion	15	3,956,711	4,091,798
Long-term loan - net of current portion	16	117,757,191	297,757,191
Provision for long-term employee benefits	17	1,435,833	1,069,914
<b>Total non-current liabilities</b>		<u>123,149,735</u>	<u>302,918,903</u>
<b>Total liabilities</b>		<u>1,493,533,232</u>	<u>1,537,728,769</u>
<b>Shareholders' equity</b>			
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
Unappropriated		442,297,548	414,194,787
<b>Total shareholders' equity</b>		<u>1,731,649,984</u>	<u>1,703,547,223</u>
<b>Total liabilities and shareholders' equity</b>		<u>3,225,183,216</u>	<u>3,241,275,992</u>
		-	-

The accompanying notes are an integral part of the financial statements.

-----  
 Directors  
 -----

Thai Agro Energy Public Company Limited

Statement of comprehensive income

For the year ended 31 December 2016

(Unit: Baht)

	Note	<u>2016</u>	<u>2015</u>
<b>Profit or loss:</b>			
<b>Revenues</b>			
Sales	21	2,415,075,148	2,600,323,060
Other income		<u>3,279,665</u>	<u>2,247,906</u>
<b>Total revenues</b>		<u>2,418,354,813</u>	<u>2,602,570,966</u>
<b>Expenses</b>			
Cost of sales	19	2,111,838,070	2,244,292,468
Selling expenses		9,519,466	9,931,559
Administrative expenses		<u>68,159,046</u>	<u>38,296,969</u>
<b>Total expenses</b>		<u>2,189,516,582</u>	<u>2,292,520,996</u>
<b>Profit before finance cost and income tax expenses</b>		228,838,231	310,049,970
Finance cost		<u>(37,794,156)</u>	<u>(50,058,915)</u>
<b>Profit before income tax expenses</b>		191,044,075	259,991,055
Income tax expenses	20	<u>(12,941,314)</u>	<u>(15,717,198)</u>
<b>Profit for the year</b>		<u>178,102,761</u>	<u>244,273,857</u>
<b>Other comprehensive income:</b>			
<i>Other comprehensive income not to be reclassified to profit or loss in subsequent periods</i>			
Actuarial gain		-	127,740
Less: Income tax effect	20	<u>-</u>	<u>(25,548)</u>
Other comprehensive income not to be reclassified to profit or loss in subsequent periods - net of income tax		<u>-</u>	<u>102,192</u>
<b>Other comprehensive income for the year</b>		<u>-</u>	<u>102,192</u>
<b>Total comprehensive income for the year</b>		<u>178,102,761</u>	<u>244,376,049</u>
<b>Earnings per share</b>			
Basic earnings per share	22		
Profit for the year		<u>0.18</u>	<u>0.24</u>

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 2016

(Unit: Baht)

	Note	Issued and fully paid up		Capital reserve	Retained earnings		Total
		share capital	Share premium	for share-based payment transactions	Appropriated - statutory reserve	Unappropriated	
<b>Balance as at 1 January 2015</b>		1,000,000,000	188,795,985	556,451	100,000,000	319,818,738	1,609,171,174
Profit for the year		-	-	-	-	244,273,857	244,273,857
Other comprehensive income for the year		-	-	-	-	102,192	102,192
Total comprehensive income for the year		-	-	-	-	244,376,049	244,376,049
Dividend paid	25	-	-	-	-	(150,000,000)	(150,000,000)
<b>Balance as at 31 December 2015</b>		<u>1,000,000,000</u>	<u>188,795,985</u>	<u>556,451</u>	<u>100,000,000</u>	<u>414,194,787</u>	<u>1,703,547,223</u>
<b>Balance as at 1 January 2016</b>		1,000,000,000	188,795,985	556,451	100,000,000	414,194,787	1,703,547,223
Profit for the year		-	-	-	-	178,102,761	178,102,761
Other comprehensive income for the year		-	-	-	-	-	-
Total comprehensive income for the year		-	-	-	-	178,102,761	178,102,761
Dividend paid	25	-	-	-	-	(150,000,000)	(150,000,000)
<b>Balance as at 31 December 2016</b>		<u>1,000,000,000</u>	<u>188,795,985</u>	<u>556,451</u>	<u>100,000,000</u>	<u>442,297,548</u>	<u>1,731,649,984</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 2016**

(Unit: Baht)

	<u>2016</u>	<u>2015</u>
<b>Cash flows from operating activities</b>		
Profit before tax	191,044,075	259,991,055
Adjustments to reconcile profit before tax to net cash provided by (paid from) operating activities:		
Depreciation and amortisation	125,470,535	121,923,096
Loss on write-off machinery, equipments and intangible assets	578,461	289,544
Gain on sales of property, plant and equipment	(523,363)	(558,614)
Gain on sales of current investments	(185,512)	(344,284)
Provision for long-term employee benefits	1,280,214	425,517
Allowance for impairment in advance payments for cassava chips	6,869,478	-
Interest income	(161,830)	(173,522)
Interest expenses	37,615,700	49,861,426
Profit from operating activities before changes in operating assets and liabilities	361,987,758	431,414,218
Operating assets (increase) decrease		
Trade and other receivables	36,168,416	(11,584,347)
Inventories	11,498,202	(24,142,537)
Advance payment for purchase of goods	27,653,796	51,107,444
Other current assets	(11,349,812)	15,651,191
Other non-current assets	20,000	(224,300)
Operating liabilities increase (decrease)		
Trade and other payables	87,141,313	(56,789,414)
Other current liabilities	(1,362,139)	3,206,936
Provision for long-term employee benefits	(1,127,250)	-
Cash from operating activities	510,630,284	408,639,191
Cash received from interest income	154,032	173,959
Cash paid for interest expenses	(36,100,149)	(49,502,593)
Cash paid for income tax	(13,945,169)	(3,104,979)
<b>Net cash from operating activities</b>	<u>460,738,998</u>	<u>356,205,578</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 2016**

(Unit: Baht)

	<u>2016</u>	<u>2015</u>
<b>Cash flows from investing activities</b>		
Acquisitions of property, plant and equipment	(122,104,533)	(43,081,763)
Acquisitions of current investments	(565,000,000)	(692,000,000)
Acquisitions of intangible assets	(178,400)	(1,722,100)
Proceeds from sales of property, plant and equipment	523,364	558,621
Proceeds from sales of current investments	565,000,000	692,000,000
Cash receipt from government grants	-	4,871,798
<b>Net cash used in investing activities</b>	<u>(121,759,569)</u>	<u>(39,373,444)</u>
<b>Cash flows from financing activities</b>		
Increase in short-term loans from financial institution	21,702,492	1,787,871
Repayment of long-term loan	(180,000,000)	(180,000,000)
Cash paid for liabilities under finance lease agreements	(2,736,267)	(1,779,699)
Cash paid for dividend	<u>(150,000,000)</u>	<u>(150,000,000)</u>
<b>Net cash used in financing activities</b>	<u>(311,033,775)</u>	<u>(329,991,828)</u>
<b>Net increase (decrease) in cash and cash equivalents</b>	27,945,654	(13,159,694)
Cash and cash equivalents at beginning of year	<u>9,101,662</u>	<u>22,261,356</u>
<b>Cash and cash equivalents at end of year (Note 7)</b>	<u><u>37,047,316</u></u>	<u><u>9,101,662</u></u>
<b>Supplemental cash flows information</b>		
Non-cash related transaction from investing activities		
Increase (decrease) in accounts payables from purchases of equipment and intangible assets	27,281,469	(9,289,043)
Acquisitions of equipment under finance lease agreements	3,447,500	1,541,122

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 2016

#### 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 its presentation has been made in compliance with the stipulations of the Notification of the Department of Business Development dated 28 September 2011, 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

Below is a summary of financial reporting standards that became effective in the current accounting year and those that will become effective in the future.

##### (a) Financial reporting standards that became effective in the current year

During the year, the Company has adopted the revised (revised 2015) and new financial reporting standards and accounting treatment guidance issued by the Federation of Accounting Professions which become effective for fiscal years beginning on or after 1 January 2016. These financial reporting standards were aimed at alignment with the corresponding International Financial Reporting Standards, with most of the changes directed towards revision of wording and terminology, and provision of interpretations and accounting guidance to users of standards. The adoption of these financial reporting standards does not have any significant impact on the Company’s financial statements.

## **(b) Financial reporting standard that will become effective in the future**

During the current year, the Federation of Accounting Professions issued a number of the revised financial reporting standards and interpretations (revised 2016) and new accounting treatment guidance which is effective for fiscal years beginning on or after 1 January 2017. These financial reporting standards were aimed at alignment with the corresponding International Financial Reporting Standards with most of the changes directed towards revision of wording and terminology, and provision of interpretations and accounting guidance to users of standards.

The management of the Company believes that the revised and new financial reporting standards and interpretations and new accounting treatment guidance will not have any significant impact on the financial statements when they are initially applied.

### **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, work in process and raw materials are valued at the lower of cost (under the weighted average method) and net realisable value. Cost of finished goods and work in process includes cost of material, labour and overheads. Net realisable value is selling price in normal course of business less other costs incurred to sell the goods.

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.

#### 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 Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalised as part of the cost of the respective assets. All other borrowing costs are expensed in the period they are incurred. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds.

#### 4.8 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.

#### 4.9 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

#### 4.10 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.

#### 4.11 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.

#### 4.12 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.

#### 4.13 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.

#### **4.14 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 are determined by a professionally qualified independent actuary based on actuarial techniques, using the projected unit credit method.

Actuarial gains and losses arising from post-employment benefits are recognised immediately in other comprehensive income.

#### **4.15 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.

#### **4.16 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.

### 4.17 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 technique 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 categorise 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:

### **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, arose in the ordinary course of business and were concluded on agreed upon between the Company and those related parties.

	(Unit: Baht)		
	<u>2016</u>	<u>2015</u>	<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 2016 and 2015, there are no outstanding balance between the Company and related companies.

### Directors and management's benefits

During the years ended 31 December 2016 and 2015, the Company had employee benefit expenses payable to its directors and management as below.

	(Unit: Baht)	
	<u>2016</u>	<u>2015</u>
Short-term employee benefits	23,282,024	25,290,422
Post-employment benefits	755,418	936,178
Total	<u>24,037,442</u>	<u>26,226,600</u>

## 7. Cash and cash equivalents

	(Unit: Baht)	
	<u>2016</u>	<u>2015</u>
Cash	38,862	36,857
Bank deposits	37,008,454	9,064,805
Total	<u>37,047,316</u>	<u>9,101,662</u>

As at 31 December 2016, bank deposits in savings account carried interests at the rates between 0.37 and 0.38 percent per annum (2015: between 0.37 and 0.38 percent per annum).

## 8. Trade and other receivables

The outstanding balances of trade and other receivables as at 31 December 2016 amounting to Baht 163.8 million (2015: Baht 200.3 million) are undue trade accounts receivable. The remaining balances are other receivables.

## 9. Inventories

(Unit: Baht)

	Cost		Reduce cost to net realisable value		Inventories - net	
	2016	2015	2016	2015	2016	2015
Finished goods - Ethanol	9,026,209	15,618,192	-	-	9,026,209	15,618,192
Work in process	17,220,441	16,789,115	-	-	17,220,441	16,789,115
Raw materials	90,803,999	95,423,626	-	-	90,803,999	95,423,626
Supplies	9,060,359	9,778,277	-	-	9,060,359	9,778,277
Total	126,111,008	137,609,210	-	-	126,111,008	137,609,210

## 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 2016, the Company had paid advance payments for purchase of molasses and cassava chips amounting to Baht 543.6 million (2015: Baht 578.1 million).

## 11. Property, plant and equipment

(Unit: Baht)

	Land	Land improvement	Building and amenities	Machineries and equipment	Office equipment	Motor vehicles	Assets under construction and installation	Total
<b>Cost</b>								
1 January 2015	158,995,264	56,785,878	256,199,329	1,808,311,547	18,969,461	30,338,159	589,515,552	2,919,115,190
Additions	2,291,638	-	7,308	8,168,603	1,338,028	1,623,037	21,888,878	35,317,492
Disposal/write-off	-	-	(86,435)	(2,779,804)	(1,477,306)	(4,398,205)	-	(8,741,750)
Transfers in (out)	-	-	-	213,784,237	-	-	(213,784,237)	-
31 December 2015	161,286,902	56,785,878	256,120,202	2,027,484,583	18,830,183	27,562,991	397,620,193	2,945,690,932
Additions	12,485,600	-	101,400	5,186,716	1,069,184	5,090,500	128,916,451	152,849,851
Disposal/write-off	-	-	(1,301,864)	(1,480,847)	(1,511,598)	(3,762,174)	-	(8,056,483)
Transfers in (out)	-	-	-	101,381,370	585,670	-	(101,967,040)	-
31 December 2016	173,772,502	56,785,878	254,919,738	2,132,571,822	18,973,439	28,891,317	424,569,604	3,090,484,300
<b>Accumulated depreciation</b>								
1 January 2015	-	-	54,263,036	453,606,343	14,697,546	23,656,535	-	546,223,460
Depreciation for the year	-	-	9,882,758	106,892,909	2,041,021	2,286,947	-	121,103,635
Depreciation on disposal/ write-off	-	-	(54,765)	(2,563,036)	(1,440,081)	(4,394,332)	-	(8,452,214)
31 December 2015	-	-	64,091,029	557,936,216	15,298,486	21,549,150	-	658,874,881
Depreciation for the year	-	-	9,534,171	110,822,063	1,795,327	2,547,022	-	124,698,583
Depreciation on disposal/ write-off	-	-	(751,872)	(1,452,504)	(1,511,501)	(3,762,169)	-	(7,478,046)
31 December 2016	-	-	72,873,328	667,305,775	15,582,312	20,334,003	-	776,095,418
<b>Net book value</b>								
31 December 2015	161,286,902	56,785,878	192,029,173	1,469,548,367	3,531,697	6,013,841	397,620,193	2,286,816,051
31 December 2016	173,772,502	56,785,878	182,046,410	1,465,266,047	3,391,127	8,557,314	424,569,604	2,314,388,882
<b>Depreciation for the year</b>								
2015 (Baht 120 million included in manufacturing cost, and the balance in selling expenses and administrative expenses)								121,103,635
2016 (Baht 113 million included in manufacturing cost, and the balance in selling expenses and administrative expenses)								124,698,583

As at 31 December 2016, the Company has motor vehicles under financial lease agreement with net book value amounting to Baht 8.3 million (2015: Baht 5.5 million).

The Company has mortgaged part of its land and construction thereon and machinery with net book value as at 31 December 2016 amounting to approximately Baht 1,108.0 million (2015: Baht 1,143.4 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.

During 2014, the Company received the subsidy of Baht 8.6 million from the subsidy agreement with the Energy Conservation Promotion Fund under “Biogas Technology for Industry Project”. In addition, the Company recorded accrued receipt from the subsidy of Baht 4.9 million from the subsidy agreement with the Energy Conservation Promotion Fund under “Biogas Technology for Industry Project”. The Company received such subsidy on 7 January 2015. However, the Company is required to comply with the terms under the aforementioned agreements.

As at 31 December 2016, 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 66.4 million (2015: Baht 59.6 million).

## 12. Intangible assets

The net book value of intangible assets which are computer software as at 31 December 2016 and 2015 is presented below.

	(Unit: Baht)
As at 31 December 2016	
Cost	7,453,746
Less: Accumulated amortisation	<u>(5,107,556)</u>
Net book value	<u><u>2,346,190</u></u>
As at 31 December 2015	
Cost	7,720,240
Less: Accumulated amortisation	<u>(4,764,124)</u>
Net book value	<u><u>2,956,116</u></u>

A reconciliation of the net book value of intangible assets for the years 2016 and 2015 is presented below.

	(Unit: Baht)	
	<u>2016</u>	<u>2015</u>
Net book value at beginning of year	2,956,116	2,037,142
Additions	162,050	1,738,450
Write-off	(24)	(15)
Amortisation for the year	<u>(771,952)</u>	<u>(819,461)</u>
Net book value at end of year	<u><u>2,346,190</u></u>	<u><u>2,956,116</u></u>

**13. Short-term loans from financial institutions**

(Unit: Baht)

	Interest rate (percent per annum)			
	<u>2016</u>	<u>2015</u>	<u>2016</u>	<u>2015</u>
Promissory notes	2.85 - 3.10	3.10 - 3.30	757,265,500	862,956,500
Trust receipts	2.85	3.10	229,371,024	101,977,532
Total			<u>986,636,524</u>	<u>964,934,032</u>

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>2016</u>	<u>2015</u>
Trade payables	145,588,681	58,170,714
Other payables	36,742,454	9,737,638
Total trade and other payables	<u>182,331,135</u>	<u>67,908,352</u>

**15. Liabilities under finance lease agreements**

(Unit: Baht)

	<u>2016</u>	<u>2015</u>
Liabilities under finance lease agreements	7,560,708	6,580,570
Less: Deferred interest expenses	(799,393)	(1,039,360)
Total	<u>6,761,315</u>	<u>5,541,210</u>
Less: Portion due within one year	(2,804,604)	(1,449,412)
Liabilities under finance lease agreements - net of current portion	<u>3,956,711</u>	<u>4,091,798</u>

The Company has entered into the finance lease agreements with leasing companies for rental of 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)		
	As at 31 December 2016		
	Less than 1 year	1-5 years	Total
Future minimum lease payments	3,225,631	4,335,077	7,560,708
Deferred interest expenses	(421,027)	(378,366)	(799,393)
Present value of future minimum lease payments	<u>2,804,604</u>	<u>3,956,711</u>	<u>6,761,315</u>

	(Unit: Baht)		
	As at 31 December 2015		
	Less than 1 year	1-5 years	Total
Future minimum lease payments	1,883,589	4,696,981	6,580,570
Deferred interest expenses	(434,177)	(605,183)	(1,039,360)
Present value of future minimum lease payments	<u>1,449,412</u>	<u>4,091,798</u>	<u>5,541,210</u>

## 16. Long-term loan

	(Unit: Baht)	
	<u>2016</u>	<u>2015</u>
Long-term loan	297,757,191	477,757,191
Less: Current portion	<u>(180,000,000)</u>	<u>(180,000,000)</u>
Long-term loan - net of current portion	<u>117,757,191</u>	<u>297,757,191</u>

Movements in the long-term loan during the year ended 31 December 2016 are summarised below.

	(Unit: Thousand Baht)
Balance as at 31 December 2015	477,757
Less: Repayment during the year	<u>(180,000)</u>
Balance as at 31 December 2016	<u>297,757</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 year, and remaining balance is repayable in the tenth year. 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.

The loan agreement contains several covenants which, 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 2016 and 2015, the Company could maintain certain financial ratios as specified in the long-term loan agreement.

**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>2016</u>	<u>2015</u>
<b>Provision for long-term employee benefits at beginning of year</b>	3,828,255	3,530,478
Included in profit or loss:		
Current service cost	1,165,478	300,764
Interest cost	114,736	124,753
Included in other comprehensive income:		
Actuarial (gain) loss arising from		
Demographic assumptions changes	-	(591,168)
Financial assumptions changes	-	582,872
Experience adjustments	-	(119,444)
Benefits paid during the year	<u>(1,127,250)</u>	<u>-</u>
<b>Provision for long-term employee benefits at end of year</b>	<u><u>3,981,219</u></u>	<u><u>3,828,255</u></u>
 <b>Provision for long-term employee benefits</b>		
Current	2,545,386	2,758,341
Non-current	<u>1,435,833</u>	<u>1,069,914</u>
	<u><u>3,981,219</u></u>	<u><u>3,828,255</u></u>

Line items in profit or loss under which long-term employee benefit expenses are recognised are as follows:

	(Unit: Baht)	
	<u>2016</u>	<u>2015</u>
Cost of sales	453,887	213,102
Selling and administrative expenses	<u>826,327</u>	<u>212,415</u>
Total expenses recognised in profit or loss	<u><u>1,280,214</u></u>	<u><u>425,517</u></u>

The Company expects to pay Baht 2.5 million of long-term employee benefits during the next year (2015: Baht 2.8 million).

As at 31 December 2016, the weighted average duration of the liabilities for long-term employee benefit is 14 years (2015: 14 years).

Significant actuarial assumptions are summarised below:

	(Unit: percent per annum)	
	<u>2016</u>	<u>2015</u>
Discount rate	2.9, 3.0	2.9, 3.0
Salary increase rate	5.7, 7.6	5.7, 7.6
Turnover rate	8.0 - 34.0	8.0 - 34.0

The result of sensitivity analysis for significant assumptions that affect the present value of the long-term employee benefit obligation as at 31 December 2016 are summarised below:

	(Unit: Baht)	
	<u>Increase 0.5%</u>	<u>Decrease 0.5%</u>
Discount rate	(84,840)	92,484
Salary increase rate	92,494	(85,659)
Turnover rate	(108,835)	119,716

## 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:

	(Unit: Baht)	
	<u>2016</u>	<u>2015</u>
Raw materials and consumables used	1,880,432,987	2,011,449,753
Changes in inventories of finished goods and work in process	(6,160,657)	9,601,456
Depreciation and amortisation	125,470,535	121,923,096
Salaries, wages and other employee benefits	86,553,716	81,659,787
Electricity and fuel expenses	20,515,231	25,269,646
Repair and maintenance expenses	13,463,286	14,558,825

## 20. Income tax

Income tax expenses for the years ended 31 December 2016 and 2015 are made up as follows:

	(Unit: Baht)	
	<u>2016</u>	<u>2015</u>
<b>Current income tax:</b>		
Current income tax charge	12,606,749	5,602,486
<b>Deferred tax:</b>		
Relating to origination and reversal of temporary differences	<u>334,565</u>	<u>10,114,712</u>
<b>Income tax expense reported in the statements of comprehensive income</b>	<u>12,941,314</u>	<u>15,717,198</u>

The amounts of income tax relating to each component of other comprehensive income for the years ended 31 December 2016 and 2015 are as follows:

	(Unit: Baht)	
	<u>2016</u>	<u>2015</u>
Deferred tax on actuarial gain	<u>-</u>	<u>25,548</u>

The reconciliation between accounting profit and income tax expenses is shown below.

	(Unit: Baht)	
	<u>2016</u>	<u>2015</u>
Accounting profit before tax	<u>191,044,075</u>	<u>259,991,055</u>
Applicable tax rate	20%	20%
Accounting profit before tax multiplied by income tax rate	38,208,815	51,998,211
Effects of:		
Promotional privileges (Note 21)	(28,283,572)	(38,047,947)
Non-deductible expenses	2,625,126	716,771
Additional expense deductions allowed	(117,023)	(15,045)
Others	507,968	1,065,208
Total	<u>(25,267,501)</u>	<u>(36,281,013)</u>
Income tax expenses reported in the statement of comprehensive income	<u>12,941,314</u>	<u>15,717,198</u>

The components of deferred tax assets and deferred tax liabilities are as follows:

	(Unit: Baht)	
	Statements of financial position	
	<u>2016</u>	<u>2015</u>
<b>Deferred tax assets</b>		
Government grants	4,147,659	4,731,913
Financial leases	1,352,266	1,108,242
Provision for short-term employee benefits	140,357	202,262
Provision for long-term employee benefits	287,167	219,597
Total	<u>5,927,449</u>	<u>6,262,014</u>
<b>Deferred tax liabilities</b>		
Accumulated depreciation - Machineries	3,421,318	3,421,318
Actuarial gain	25,548	25,548
Total	<u>3,446,866</u>	<u>3,446,866</u>
<b>Deferred tax assets, net</b>	<u>2,480,583</u>	<u>2,815,148</u>

## 21. 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 2016 and 2015 were domestic sales, which were divided between promoted and non-promoted operations are summarised below:

	(Unit: Baht)	
	<u>2016</u>	<u>2015</u>
Revenues from sales		
Promoted operations	1,507,508,145	1,646,948,656
Non-promoted operations	907,567,003	953,374,404
Total	<u>2,415,075,148</u>	<u>2,600,323,060</u>

## 22. 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>2016</u>	<u>2015</u>
Profit for the year (Baht)	178,102,761	244,273,857
Weighted average number of ordinary shares (shares)	1,000,000,000	1,000,000,000
Earnings per share (Baht)	0.18	0.24

## 23. 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 2016, the Company has revenue from 3 major customers in amount of Baht 809 million, Baht 711 million and Baht 469 million (2015: revenue from 3 major customers in amount of Baht 977 million, Baht 863 million and Baht 566 million).

## 24. 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 2016 amounting to approximately Baht 2.9 million (2015: Baht 2.5 million) were recognised as expenses.

## 25. Dividend paid

Dividends	Approved by	Total Dividends (Baht)	Dividend per share (Baht)	Paid on
<b><u>2016</u></b>				
Final dividends in respect of operation income from BOI promoted operation for the period from 1 July 2015 to 31 December 2015	Annual General Meeting of the shareholders on 18 April 2016	50,000,000	0.05	18 May 2016
Interim dividends in respect of operation income from BOI promoted operation for the period from 1 January 2016 to 30 June 2016	Board of Directors' meeting on 18 August 2016	100,000,000	0.10	16 September 2016
Total		150,000,000	0.15	
<b><u>2015</u></b>				
Final dividends in respect of operation income from BOI promoted operation for the period from 1 July 2014 to 31 December 2014	Annual General Meeting of the shareholders on 20 April 2015	50,000,000	0.05	20 May 2015
Interim dividends in respect of operation income from BOI promoted operation for the period from 1 January 2015 to 30 June 2015	Board of Directors' meeting on 20 August 2015	100,000,000	0.10	18 September 2015
Total		150,000,000	0.15	

## 26. Commitment and contingent liabilities

### 26.1 Capital commitments

As at 31 December 2016, the Company had capital commitments of approximately Baht 33.7 million, relating to the construction of Bio Scrubber and Biogas Burner (2015: the construction of Bio Scrubber of approximately Baht 33.3 million).

### 26.2 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>2016</u>	<u>2015</u>
Payable:		
In up to 1 year	4.2	4.1
In over 1 year and up to 5 years	0.5	3.3

### 26.3 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-year 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. In addition, the Company had additional two commitments under the purchase of molasses agreements with 5-years 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.
- c) As at 31 December 2015, the Company had commitment under service agreement with regard for the engineer consulting of Baht 0.4 million (2016: Nil).

## 26.4 Guarantees

As at 31 December 2016, there were outstanding bank guarantees of approximately Baht 5.1 million issued by the bank on behalf of the Company to guarantee contractual performance under the license for production and distribution of ethanol-for-fuel from the Excise Department and to guarantee contracted performance under the license for using of electric to the Provincial Electricity Authority (2015: Baht 5.1 million issued by the bank on behalf of the Company to guarantee contractual performance under the license for production and distribution of ethanol-for-fuel from the Excise Department and to guarantee contracted performance under the license for using of electric to the Provincial Electricity Authority).

## 27. 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. Presently, the case is under consideration of the Supreme Court. As at 31 December 2016, the Company has not received such payment; therefore, the Company recorded allowance for impairment in advance paid to that company for a whole amount.

## 28. Fair value hierarchy

As at 31 December 2016 and 2015, the Company had the assets that were measured at fair value using different levels of inputs as follows:

	(Unit: Baht)			
	As at 31 December 2016		As at 31 December 2015	
	Level 2	Total	Level 2	Total
<b>Assets measured at fair value</b>				
Current investments - open fund	964,690	964,690	779,178	779,178

## 29. Financial instruments

### 29.1 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 and other 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 and other 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 2016						
	Fixed interest rates		Floating interest rate	Non- interest bearing	Total	Effective interest rate (% per annum)
	Within 1 year	Over 1-5 years				
<u>Financial assets</u>						
Cash and cash equivalents	-	-	35.2	1.8	37.0	0.37 - 0.38
Current investments - open fund	-	-	-	0.9	0.9	-
Trade and other receivables	-	-	-	165.5	165.5	-
	-	-	35.2	168.2	203.4	
<u>Financial liabilities</u>						
Short-term loans from financial institutions	-	-	986.6	-	986.6	2.85 - 3.10
Trade and other payables	-	-	-	166.6	166.6	-
Liabilities under finance lease agreements	2.8	4.0	-	-	6.8	2.29 - 15.32
	2.8	4.0	986.6	166.6	1,160.0	

(Unit: Million Baht)

As at 31 December 2015						
	Fixed interest rates		Floating interest rate	Non- interest bearing	Total	Effective interest rate (% per annum)
	Within 1 year	Over 1-5 years				
<u>Financial assets</u>						
Cash and cash equivalents	-	-	6.5	2.6	9.1	0.37 - 0.38
Current investments - open fund	-	-	-	0.8	0.8	-
Trade and other receivables	-	-	-	201.7	201.7	-
	-	-	6.5	205.1	211.6	
<u>Financial liabilities</u>						
Short-term loans from financial institutions	-	-	964.9	-	964.9	3.10 - 3.30
Trade and other payables	-	-	-	67.9	67.9	-
Liabilities under finance lease agreements	1.4	4.1	-	-	5.5	2.29 - 15.30
	1.4	4.1	964.9	67.9	1,038.3	

As at 31 December 2016, long-term loan from bank of Baht 297.8 million (2015: Baht 477.8 million) carries interest 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.

### ***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.

## **29.2 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.

A fair value is the amount for which an asset can be exchanged or a liability settled between knowledgeable, willing parties in an arm's length transaction. The fair value is determined by reference to the market price of the financial instrument or by using an appropriate valuation technique, depending on the nature of the instrument.

## **30. Capital management**

The primary objective of the Company's capital management is to ensure that it has an appropriate financial structure and preserves the ability to continue its business as a going concern.

The Company manages its capital position with reference to its debt-to-equity ratio. As at 31 December 2016, the Company's debt-to-equity ratio was 0.85:1 (2015: 0.90:1).

## **31. Approval of financial statements**

These financial statements were authorised for issue by the authorised directors of the Company on 22 February 2017.



**The Stock Exchange of Thailand**, by Corporate Governance Development led by Mr.Pakorn Malakul Na Ayudhya, Corporate Specialist, Corporate Social Responsibility Meet Mr.Somchai Lovisuth Chief Executive Officer and the Board of Directors of Thai Agro Energy Public Company Limited to discuss the CG comments. And Investor Relations on April 21, 2016.

## THAI AGRO ENERGY PUBLIC COMPANY LIMITED

### Head Office:

888/114 Mahatun Plaza Bldg., 11 th FL., Lumpini,  
Pathumwan, Bangkok 10330  
Thailand  
Office:+66(0)2627-3890-94, 0-255-4380-84  
Fax: +66 (0)2627-3889

### Factory Danchang:

9 Moo 10 Danchang-Samchuk Rd, Nhongmakamong,  
Danchang, Supanburi 72180  
Office:+66 (0)35-418-351-4  
Fax:+66 (0)35-418-355  
[www.thaiagroenergy.com](http://www.thaiagroenergy.com)



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](http://www.thaiagroenergy.com) or the Securities and Exchange Commission's websites [www.sec.or.th](http://www.sec.or.th)