

Part 1

Business Profile

1. Overview of Business Operation and Policy
1.1 Vision & Mission
Vision

KTIS Group is a leading organization with an outstanding world-class identity. It has maintained good governance, integrated closely with agricultural and industrial industry, maintained social awareness, added values and quality to sugar and its by products, and utilized clean and eco-friendly energy to sustain stability.


Mission

- The company operates its businesses with keen knowledge and experiences, creative ideas and professionalism in order to generate innovation and value to its products and services ranging from upstream to downstream.
- The company creates a sustainable source of raw materials in order to support a fully integrated business network for the production of high-quality products as well as the generation of clean and eco-friendly biomass energy.
- The company conducts its business with high ethics and integrity while maintaining good governance in both existing and new business investments for valuable return in both financial and non-financial forms back to the community, investors, customers, employees, farmers and stakeholders.


1.2 Business Overview

The Company and companies in KTIS group operate a fully-integrated sugar production and distribution business as No. 3 leader in Thailand. In addition to 3 sugar factories, of which 2 are owned by the Company and 1 is leased, the Company also have ethanol plant, bleached bagasse pulp plant, power plant and bio soil conditioner plant.

The Company's businesses can be divided into 2 fields:

1. Sugar Production and Distribution Business

The Company produces sugar and distributes its sugar products to domestic and international customers through KTIS, TIS and KTIS (Branch 3). Sugar products of the Company are refined sugar, white sugar and raw sugar.

2. Downstream Business

Byproducts such as molasses and bagasse from the Company's sugar production process lead to many downstream business opportunities as listed below:

(1) Bleached Bagasse Pulp and Pulp Mold Production and Distribution Business

The Company operates bleached bagasse pulp production and distribution business through EPPCO. The group's pulp factory is located near the Company's sugar plant and can produce pulp from bagasse which is a byproduct from the sugar production process. EPPCO has 3 types of bleached pulp products: dry pulp, wet pulp and packaging products from bagasse pulp (Pulp Mold).

(2) Ethanol Production and Distribution Business

The Company operates ethanol production and distribution business through EPC and uses molasses derived from the group's sugar factories as a primary raw material. At present, EPC manufactures and distributes 2 different grades of ethanol products: industrial alcohol and fuel alcohol.

(3) Electricity Generation and Sale Business

At present, the Company's sugar factories and bleached bagasse pulp factories are equipped with electricity and steam generating modules which use bagasse, a byproduct from production processes, as primary feedstock. The electricity and steam generated are used in the production processes of our 3 sugar factories and other factories. The surplus electricity is sold to the Electricity Generating Authority of Thailand (EGAT) and the Provincial Electricity Authorities (PEA) under the power purchase agreements (PPAs). KTBP has also been established to operate the 60MW biomass power plant which is currently in commercial operation. The Company have new power plants to be operated by TEP and RBPB with the capacity of 50 MW each in Uttaradit province and Nakhonsawan province.

(4) Bio Soil Conditioner Production and Distribution Business

The Group produces bio soil conditioner production and distribution business through KTBF and uses recycling filter cake from sugar production process and vinasse from the biogas and ethanol production process to be raw materials in bio soil conditioner products. KTBF has 3 types of bio soil conditioner products: powder, pellet and liquid.

1.3 Business Goals

The Company is committed to continuous development to build a solid foundation for its sustainable growth and development and to become a leading organization in vertical integration from Agricultural products to Industrial products by expanding our internal and external business links. The Company aim to create a superior value chain for the Company's businesses which include sugar and sweetener production, biomass power generation, ethanol production, bagasse pulp production, and bio soil conditioner production. All of the Company's products and by-products are eco-friendly and safe for consumers.

Business Goals :

- (1) Leader of Cane Business - The Company initiated a wide range of activities with an aim of developing the upstream businesses. Such activities include the cane breeding selection, the application of cane plantation management technology, the technical training for cane farmers, the development of farming tools and machineries, the use of soil conditioner which is a by-product in order to strengthen in security of supplies used in the production process.
- (2) Leader of Sugar Business – The Company has consistently invested in the sugar production business. Thanks to its massive production capacity, the Company commercially benefits from the economies of scale driven by its production effectiveness, lower costs of energy, and added value of products. Raw sugar is processed into high quality refined sugar and liquid sucrose for the food industry. This is an example of how the Company adds value to its products and reflect the Company's leadership in the sugar industry.
- (3) Leader of Bio Energy Business – With the expansion of its biomass power plant business, the Company has a large-scale electricity production capacity and earned extra income from its power generation business. Bagasse, which is a by-product of the sugar production process and complement the integrated value chain of our industrial and agricultural businesses.
- (4) Leader of Bio Product Business – The Company has allocated investment to the development of bagasse pulp products into high-quality and food-grade packages to add value to the Company's business and the society at large.
- (5) Leadership of Ethanol Business – For value-added creation, the Company uses molasses to produce fuel-grade and industrial-grade ethanol; and enhances its ethanol production process to effectively generate and make use of bio gas which is a by-product from the ethanol production. As a result, the Company's production and business chains are fully integrated and eco-friendly at every step, and contributes to the Company's leadership in this business.

(6) Leadership in Bio Soil Conditioner Business – By-products from the sugar and ethanol production processes are developed into valuable bio soil conditioner products which are good to enrich the soil quality, the farmers can save farming costs and increase the productivity effectively.

Journey to Sustainable Growth :

(1) Research and Development – The Company has invested in research and development initiatives, focusing on the cane breed improvement, and the development of energy crops, production technologies and machinery to sustain its growth momentum and leadership in the business complex through the diversification of products in consistent with the word “More Than Sugar”. The company’s portfolio includes the cane business, agricultural business, sugar and sweetener manufacturing business, biomass power business, and biomass product business.

(2) Development of Cane Farmers, Cane Farmer Network, and Raw Material Source - The Company has substantially invested in technical and R&D projects with a view to enhance the knowledge of cane farmers and the members of farmer network. In addition, the Company extended financial support to cane farmers to boost productivity in terms of the cane output per rai and the plantation area expansion. In addition to creating greater job opportunities for agricultural workers, the Company has also introduced and integrated advanced farming technologies to develop agriculture to new horizon. Farmers are encouraged to work as partners who help each other.

(3) Personnel Development – Human resources are one of its greatest assets for the Company and employees at all levels are continuously provided with learning opportunities which can help sharpen their functional skills and complement technique. Employees are encouraged to invent and be involved in innovation projects. As a part of its proactive human resources management process, the Company has worked with local and central educational institutes to offer opportunities to learn skills and knowledge relevant to the Company’s business to students to build a pool of qualified candidates.

Journey to Professional Integrity and Corporate Governance :

(1) Corporate Transparency - The Company has in place the Corporate Governance Handbook and has properly disclosed relevant information in accordance with applicable requirements in the spirit of transparency and integrity. As a result, every step of the Company’s processes is verifiable. The Company respects all of its stakeholders which include shareholders, executives, investors, employees, farmers, clients, suppliers, contractors, communities, governmental agencies, etc. In addition, the Company’s activities have been regularly audited by internal auditors and external auditors who are independent.

(2) Contribution to Social, Educational and Environmental Development – The Company has put importance to activities which contribute to the development of the society, education, and environment, and has encouraged relevant parties to join such activities. The Company’s corporate social responsibility programs such as “The Home, Temple, School and Factory Participation Program” which the participated local temples, communities and schools will be trained proper sugar cane farming knowledge. The society will be more wealthy from sugarcane and breeding species.

“The Green Village Program” will also bring benefits for the participated farmers and communities by joining hands in the fire prevention from burning cane during harvesting season. From the program the farmers will get better price by selling unburned cane. The factory will get better cane quality and also the reduction of pollution from smoke of fire on society etc.

(3) Promotion of Health and Occupational Safety – The wellness, life quality, and safety of the employees and surrounding communities are one of the Company’s main focuses which the Company has to strictly comply with the Health and Safety Law. Additional to the Law, the Company set up the teams to visit the community leaders, the religious leaders, including the nearby schools, and provide periodic medical check-up services to the residents of nearby communities. These activities has become the Company normal and continuous practice.

1.4 History and Milestones

Kaset Thai International Sugar Corporation Public Company Limited (“the Company”), formerly known as Kaset Thai Sugar Industry Company Limited, and companies in KTIS group are founded by Mr. Jaroon and Mrs. Hathai Siriviriyakul. With more than 51 years of professional experience in sugar business, KTIS group has extended into integrated sugar production business.

In 2013, the Company has converted into a public limited company and increased its registered capital from Baht 3,274,573,000 to Baht 3,888,000,000. In 2014, the Company has been listed on the Stock Exchange of Thailand which Baht 3,860,000,000 has been paid up and the security symbol "KTIS" on the Stock Exchange of Thailand. In 2015, the Company has increased its registered capital to Baht 3,888,000,010 and paid up capital Baht 3,860,000,010.

At the beginning, the group's sugar business was limited only to a sugar distribution in Nakhonsawan province. In 1967, Mr. Jaroon Siriviriyakul and a group of local distributors in Nakhonsawan province jointly acquired Mahakun Industry Company Limited, which has a sugar factory with the production capacity of 500 tons per day as a core asset, and renamed the company "Ruampol Enterprise Company Limited ("RPE"). With continuous improvement and development, the company's crushing capacity has increased from 500 tons of cane per day to 15,000 tons of cane per day.

In 1981, the Company acquired Thai Identity Sugar Factory Company Limited (TIS) and has continuously increased the production capacity of TIS's sugar plant to the current level of 18,000 tons of cane per day.

In 1988, the Company further acquired Kaset Thai Sugar Company Limited which then had the production capacity of 6,000 tons of cane per day. To strengthen the financial structure and liquidity position of Kaset Thai Sugar Company Limited, our leadership has forged business partnership with UT Group Partnership Limited, a Singapore-based company, in 2008 to establish Kaset Thai Sugar Industry Company Limited which has incorporated sugar factory of Kaset Thai Sugar Company Limited in its umbrella and has further expanded its production capacity to stand today as the world's largest sugar factory with the capacity of 55,000 tons of cane per day.

In 2003, the Siriviriyakul family expanded into downstream business by establishing a joint venture with Permsinpattana Company Limited and 2 Singapore-based companies, i.e. King Wan Corporation Limited and Xylem Investment Partnership Limited. The JV was named Environmental Pulp and Paper Company Limited ("EPPCO") to produce bleached pulp from bagasse which is a by-product of the sugar production process. At present, EPPCO can produce up to 100,000 tons of bleached pulp annually.

In 2004, the Siriviriyakul family founded a new company, namely Ekarat Pattana Company Limited ("EPC") under a joint venture with King Wan Industries Partnership Limited, Far East Distillers Partnership Limited and Sinotac Group Partnership Limited which are Singaporean entities to produce and sell ethanol from molasses. At present, EPC has the production capacity of 230,000 liters per day.

In 2010, the Siriviriyakul family commenced a new project that utilizes bagasse, a by-product from sugar production, for electricity generation. Kaset Thai Bio Power Company Limited ("KTBP") was established to run a 60MW biomass power plant which has commercially operated since 7 October 2013.

In 2011, the Siriviriyakul family furthered the advancement by recycling filter cake from sugar production process and vinasse from the biogas and ethanol production process into bio soil conditioner products. Kaset Thai Bio Fertilizer Company Limited ("KTBF") was established as a wholly-owned subsidiary of EPC in order to expand its integrated sugar business. KTBF has commercially operated and has the production capacity 15,000 tonnes of powder per year, 6,150 tons of pellets per year and 200,000 m³ of water per year.

To foster business growth through enhanced cane productivity and quality, in 2012 the Company furthered its cane farming and harvesting by purchasing 40 John Deere cane harvesters from T.K. Equipment Company Limited, an authorized dealer of John Deere in Thailand. As a condition under the cane harvester purchase agreement, John Deere will provide us training and consultation on the maintenance, repair, and development of our farming tools and equipment in order to increase the crop productivity of our farmers and in turn supply for our business operations.

In 2013, the Board and the shareholders' meeting approved the Company's acquisition of Thaikaluck Power Company Limited ("TEP") to operate a 50MW biomass power plant with bagasse provided directly by TIS. In addition, the Company has established Ruampol Bio Power Company Limited ("RPBP") to operate a 50MW biomass power plant with bagasse provided directly by Ruampol factory.

The Board and the shareholders' meeting also approved the establishment of Sapsirikaset Company Limited ("SSK") to be in charge of the acquisition of lands to support KTIS group's business expansion. In 2013, SSK has purchased a total of 2,629-1-16 rais from parties not related to the Company.

In September 2013, Sumitomo Corporation and Nissin Sugar Company Limited entered into the investment agreement to purchase the Company's ordinary shares worth up to Baht 2,650.0 million via 3S Holding Company Limited. As the companies are globally renowned trader and sugar manufacturer, the Company expects that the trilateral synergy will help strengthen the Company's competitiveness in the global market and business expansion in the Southeast Asia region.

In November 2013, the Board approved the establishment of (1) Lopburi International Sugar Company Limited ("LIS") to support the group's sugar business expansion, (2) Lopburi Bioethanol Company Limited ("LBE") to support the ethanol business expansion, and (3) Lopburi Biopower Company Limited ("LBP") to support the power business expansion. The Company is applying for applicable licenses and BOI investment privilege certificates for these companies.

In September 2014, the Board approved the establishment of (1) KTIS Biogas Power Company Limited ("KBGP") to support the power business expansion, and (2) KTIS Bio Power Company Limited ("KBE") to support the ethanol and biomass power business. The projects are still under further research.

In August 2015, the Board of Directors approved the establishment of: (1) Kaset Thai Wiwat Co., Ltd. ("KTW") to support KTIS Group's asset management, and (2) KTIS Research and Development Co., Ltd. ("KTIS R&D") to support KTIS Group's businesses and its growth aspiration.

1.5 Events and major activities in the year 2016

On Jan 10, 2016 The Company signed an MOU with King Mongkut's University of Technology Thonburi (Kmutt) for the cooperation in research for the development of production potential and educational support.

On July 21, 2016 The Company signed an MOU with Naresuan University for the cooperation in research and development of sugar cane and sugar technology.

On April 11, 2016 The Company signed an MOU with the University of Chiang Mai for the cooperation in research and development of sugar cane and sugar technology.

On September 20, 2016 The Company signed an MOU with The Scientific and Technological Research Institute of Thailand for the cooperation in research and development of the bio-technology in innovative products and the higher sugar cane productivity for sugar cane farmer group.

On September 22, 2016 KTIS group cooperated with Krung Thai Bank Public Co., Ltd. (KTB) to develop the financial facility called KTB e-LBD for electronic money transfer from bank to many contracted sugar cane farmers directly. This facility will save costs and times a lot for both the group and cane farmers in dealing with Bank either in paper works, document procedures and travelling cost.

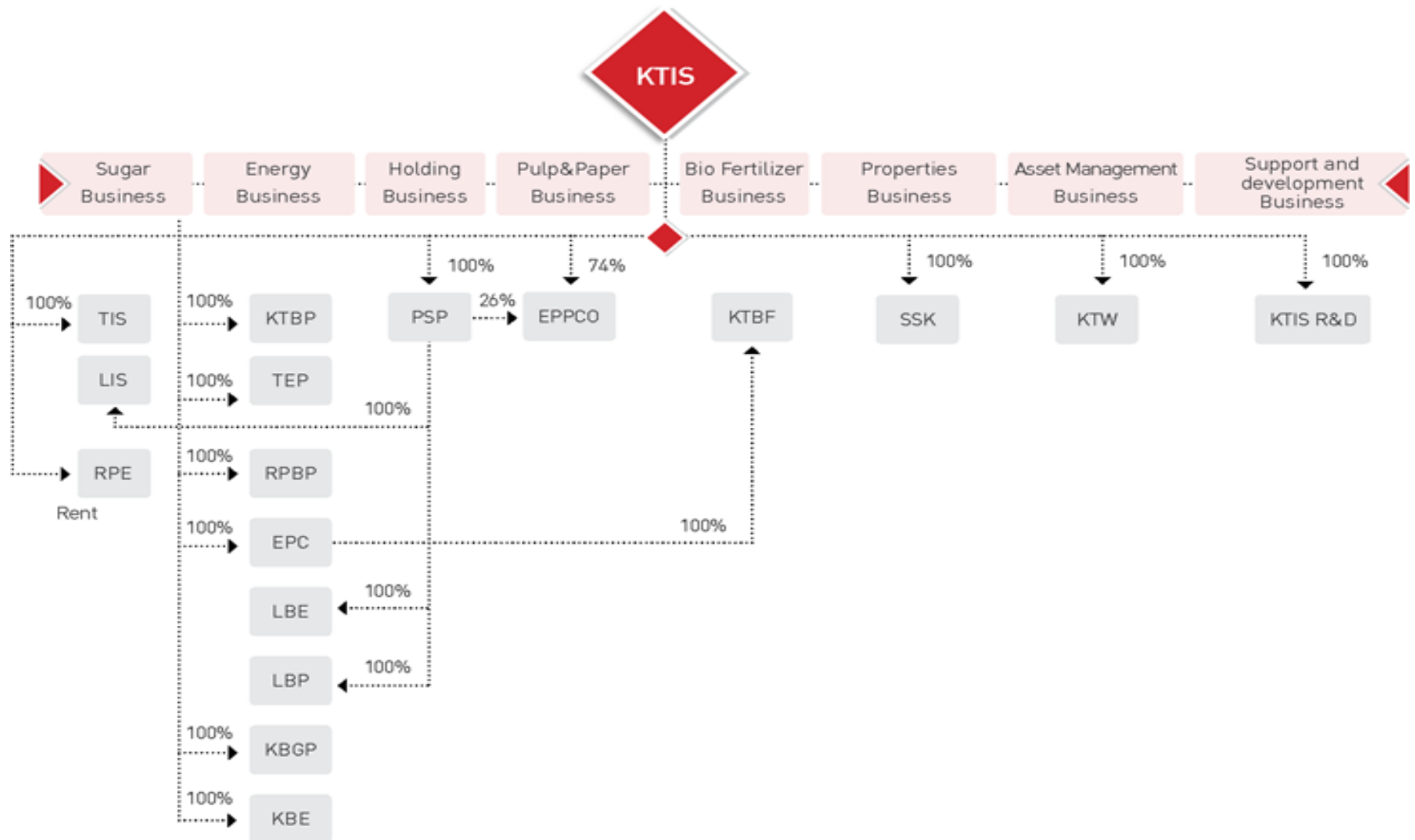
Presently, the Company had invested in 16 subsidiaries and leases fixed assets from Ruampol Enterprise Co., Ltd.(RPE) as detailed following :

Subsidiary	Type of Business	Shareholding (%)
Thai Identity Sugar Factory Co., Ltd.(TIS)	Sugar production and distribution to domestic and international markets	100.0
Ekarat Pattana Co., Ltd. (EPC)	Molasses-based ethanol production and distribution to domestic and international markets	100.0
Environment Pulp and Paper Co., Ltd.(EPPCO)	Production and distribution of bleached bagasse pulp and Pulp Mold to domestic and international markets	100.0 ¹
Kaset Thai Bio Power Co., Ltd. (KTBP)	Electricity generation	100.0
Permsinpattana Co., Ltd.(PSP)	A holding company which holds 26.0% shares of EPPCO	100.0
Kaset Thai Bio Fertilizer Co., Ltd.(KTBF)	Production and distribution of bio soil conditioner products	100.0 through EPC

Subsidiary	Type of Business	Shareholding (%)
Thaiekaluck Power Co., Ltd.(TEP)	Electricity generation	100.0
Sapsirikaset Co., Ltd.(SSK)	Land acquisition to support the group's business expansion	100.0
Ruampol Bio Power Co., Ltd.(RPBP)	Electricity generation	100.0
Lopburi International Sugar Co., Ltd.(LIS)	Sugar production and distribution (under consideration)	100.0 through PSP
Lopburi Bioethanol Co., Ltd.(LBE)	Ethanol production and distribution (under consideration)	100.0 through PSP
Lopburi Biopower Co., Ltd.(LBP)	Electricity generation and sale (under consideration)	100.00 through PSP
KTIS Biogas Power Co., Ltd.(KGBP)	Electricity generation and sale (under consideration)	100.0
KTIS Bio Energy Co., Ltd.(KBE)	Ethanol production and distribution (under consideration)	100.0
Kaset Thai Wiwat Co., Ltd. ("KTW")	Support company's asset management	100.0
KTIS Research and Development Co., Ltd. ("KTIS R&D")	Support company's businesses and its growth aspiration.	100.0

Directly holds 74.0% of the total shares and directly holds 26.0% of the total shares through Permsinpattana Co., Ltd.

Diagram1 : Corporate Business Structure (As at 31 December 2016)



2. Nature of Business
2.1 Revenue Structure

In 2016, Sugar and molasses revenue was 75.55% of the total revenue, another 24.45% of the total revenue was from downstream businesses such as pulp paper, electricity and ethanol etc. Details for 3 years were as follows:

	2014		2015		2016	
	Revenue (MB)	Percentage	Revenue (MB)	Percentage	Revenue (MB)	Percentage
1. Sugar and molasses sales revenue						
Domestic	5,902.5	29.4	6,404.8	33.1	5,261.9	35.1
International	9,741.9	48.4	8,713.5	45.1	6,074.0	40.5
Benefit from production and distribution of sugar	-	-	222.4	1.2	-	-
Total sugar and molasses sales revenue	15,644.3	77.8	15,340.6	79.4	11,336.0	75.5
2. Pulp sales revenue						
Domestic	424.2	2.1	323.8	1.7	220.8	1.5
International	1,174.0	5.8	981.7	5.1	675.4	4.5
Total pulp sales revenue	1,598.2	7.9	1,305.5	6.8	896.1	6.0
3. Ethanol sales revenue						
Domestic	1,740.3	8.6	1,638.6	8.5	1,634.4	10.9
International	0.00	0.00	0.0	0.0	0.0	0.0
Total ethanol sales revenue	1,740.3	8.6	1,638.6	8.5	1,634.4	10.9
4. Other sales revenue						
Electricity sales revenue	616.0	3.1	538.3	2.8	699.6	4.7
Revenue from other sales and services	521.3	2.6	505.2	2.6	439.5	2.9
Total other sales revenue	1,137.2	5.7	1,043.6	5.4	1,139.1	7.6
Total revenue	20,120.1	100.0	19,328.2	100.0	15,005.6	100.0

Source: The Company's financial statements.

2.2 Nature of Business
Sugar : Production and Distribution Business

The capacity of the Company's sugar factories is approximately 88,000 tons of cane per day. The Company produces and sales sugar to domestic and international customers. The products can be categorized into 3 types: refined sugar, white sugar, and raw sugar.

(1) Raw Sugar

Raw sugar crystals are dark brown in color and the color index of raw sugar ranges from 1,001- 3,800 ICUMSA¹. This type of sugar must be purified and processed into white sugar or refined sugar and cannot be consumed directly.

The Company specially produce J-spec raw sugar according to the Japanese regulatory standards, for export to Japan and acquires high J-spec raw market share.

(2) White Sugar

¹ ICUMSA is a standard unit for measuring sugar color factor. Sugar with higher purity has lower color index level.

White sugar is raw sugar that has been purified to remove impurities in sugar crystals. Its color is lighter than raw sugar, either light brown or white, and ranges from 46 – 1,000 ICUMSA. This type of product is typically used in soft drinks and convenience food businesses as well as household consumption.

(3) Refined Sugar

Refined sugar is raw sugar that, similarly to white sugar, has been processed to remove impurities in sugar crystal. Refined sugar has a higher level of purity than white sugar and is crystal white in color with the color index of 0 - 45 ICUMSA. This type of product is suitable for industries which required sugar with high purity index such as pharmaceutical industry and beverage and energy drinks industry.

Details of the Company's sugar products are shown in the table below:

Product	Color (ICUMSA)	Polarization ² (%)	Moisture (%)
J-Spec Raw Sugar	1001 - 3800	96.00 – 97.99	Not exceeding 0.6
Raw Sugar	1001 - 3800	Not less than 98.00	Not exceeding 0.6
White Sugar	46 - 1000	Not less than 99.50	Not exceeding 0.04
Refined Sugar	0 - 45	Not less than 99.80	Not exceeding 0.04

Source: KTIS.

Sugar : Market Conditions and Competition

Global Market Conditions

Sugar is one of the most important commodities in the world. Major sugar producers are Brazil, India, European Union, Thailand and China. Asia is the continent that records the highest sugar output, accounting for 35.4% of the global output in the production year 2015/2016. Thailand is the world's 3rd largest sugar producer but the domestic sugar consumption rate of Thailand is relatively small for its production. As a result, Thailand can export sugar in large quantity, being the 2nd largest sugar exporting country in the world.

Major Changes in Global Sugar Market in Past Decade

(1) Sugar Trade Liberalization in Brazil

When the sugar trade liberalization was first introduced and the controls were eventually relinquished in Brazil, it had caused structural changes to Brazilian sugar industry and significant increase in the country's sugar exports. As Brazil is the largest exporter in the world market, any factors effect Brazilian sugar industry, will have material impact on the global sugar market such as the movement of Brazilian Real, Brazil's sugar and ethanol policies etc.

(2) Lower Sugar Production in EU Countries

In 2004, the World Trade Organization (WTO) ruled that EU's sugar subsidies violated the General Agreement on Tariffs and Trade (GATT) and thus cut its support for EU's sugar production. Therefore, the refined sugar exports of EU under WTO's quota reduced from approximately 6.0 million tons per year to approximately 1.7 million tons per year. From 2017, EU will abandon the regulation which had been limiting their sugar production and expected to resume exports.

(3) Asian Economic Growth

The continuous economic growth of Asian countries, especially China, India and ASEAN countries, led to higher sugar consumption and production of the region. At present, Asia's sugar production is around 60-70 million tons per year while the consumption outpaces the production. Hence the need for sugar imports at more than 20.0 million tons each year.

(4) Higher Investment in Commodity Markets by Funds and Speculators

During the past 5-10 years, funds and speculators have increased their investment in commodity markets, especially agricultural commodities and sugar commodities. This has intensified the sugar price volatility and influence from non-fundamental factors, such as macro market, technical indicators, currencies, and ethanol parity.

(5) Sugar Demand and Supply

In 2015/2016, the global sugar output was forecast at approximately 177.3 million tons, decreasing from 183.0 million tons mainly due to El Nino effect while the consumption was expected to increase to approximately 179.6 million tons, 1.0% higher than the previous year's consumption of 177.8 million tons. Then the sugar supply balance turned to be deficit for the first time in 6 years. As a result, the global sugar price was in uptrend after getting away from the bottom.

In 2016/2017 the global balance remains tight. Centre/South Brazil's crop is expected to be smaller. In China the government is rumored to be considering a reduction in the import license and in India the domestic prices rally likely to be the signal that imports are required. Thus, although the global sugar output is forecast to increase to 180.6 million tons, the consumption should continue to grow to 181.7 million tons. Then the world supply/demand is expected to be deficit for the second time in a row.

Source: LMC International, Sugar and Sweeteners Market Report, Fourth Quarter 2016.

In the production year 2015/2016, Thailand produced 9.785 million tons of sugar while the domestic demand was only 2.6 million tons, leading to the excess of 7.185 million tons for export. Domestic sugar prices are controlled by the Ministry of Commerce according to the annual notification of the Central Committee on Goods and Services Prices regarding the sugar pricing and selling conditions.

In the production year 2015/2016, Thailand have 52 sugar mill and recorded the total sugar output of 9.785 million tons as shown below:

Producer	Number of Sugar Factory of Each	Sugar Output (Ton)	Market Share (%)
Mitr Phol Sugar Group	6	1,964,783.573	20.08
Thai Roong Ruang Sugar Group	8	1,388,626.389	14.19
Khon Kaen Sugar Group	5	773,602.420	7.91
KTIS Group	3	723,599.610	7.39
Korat Industry Sugar Group	2	578,060.000	5.91
Wangkanai Sugar Group	4	512,920.130	5.24
Cristalla Sugar Group	3	476,570.562	4.87
Banpong Sugar Group	2	436,435.884	4.46
Kumphawapi Sugar Group	2	301,413.935	3.08
Thai Kanchanaburi Sugar Group	2	287,642.833	2.94
Khonburi Sugar Group	1	286,197.030	2.92
Mitr Kaset Sugar Group	2	220,436.474	2.25
Others	12	1,835,360.421	18.76
Total	52	9,785,649.261	100

Source: 2015/2016 Cane and Sugar Production Report as of the End of Cane-Crushing Period, Office of Cane and Sugar Board.

Sugar : Competitive Strategy

(1) Security of Raw Material Supply

The Company has put importance to investments and developments in terms of academic sectors, service excellence, farmers' knowledge and cultivation system which contribute to better quality of sugar products and plantations. With a reliable source of quality raw material supplies, our sugar business and other downstream businesses are able to proceed for continuous and sustainable growth.

(2) Production Efficiency and Cost Reduction

The Company has steadily invested in our human resources and machineries in order to improve our production efficiency, and also planned to increase the sugar production capacity to capture the advantage of economies of scale, which will result in lower average costs. The Company employs a team of engineers who are capable of investing and developing our own machinery at the lower cost than purchases of imported machineries. In addition, this team of engineers can maintain and repair the majority of our machineries without third-party assistance.

(3) Mitigation of Impact of Natural Disasters

Recognizing the threats from natural disasters, such as drought and pest infection, to our raw material supply, the Company has developed several corrective and preventive measures by introducing innovations and techniques derived from the Company's researches and studies for better agricultural productivity. For examples the drip irrigation system which can solve the issue of water supply shortage during the dry season and the biological pest control technique which makes use of natural enemies such as *Trichogramma* spp., *Cotesia* sp. and Earwigs..

(4) Development of Value-Added Products

The Company strives to convert byproducts and waste into value-added products in order to increase the value for our shareholders and minimize waste from the sugar production processes. Under the visionary leadership of our management team, we aim to create an eco-friendly supply chain through the application of clean and eco-friendly technologies.

The Company has collaborated with Sumitomo Corporation Co., Ltd., our strategic partner and investor, and other world-class organization in continuously adding value to core products and byproducts.

Sugar : Distribution Channel
(1) Industrial Customers

Industrial customers purchase sugar products with the intent of using them as raw materials in their production process and typically procure sugar products in a large volume under annual purchase agreement. The Company has successfully attracted and retained industrial customers who comprise a large proportion of the Company's sales revenue as a result of the Company's reliability in terms of stable supply, fine quality, and punctual delivery. The industrial customers are as follows,

Type of Industrial Customer						
	2014		2015		2016	
	(Sales Record)		(Sales Record)		(Sales Record)	
	Quantity ¹ (Ton)	%	Quantity ¹ (Ton)	%	Quantity ¹ (Ton)	%
Beverage Industry	93,325.05	45.8	93,879.85	44.8	85,775.61	41.98
Food Industry	19,597.05	9.6	27,758.15	13.2	41,643.82	20.38
Dairy Products Industry	90,835.95	44.6	87,244.15	41.6	76,384.19	37.38
Candy	31.00	0.01	744.00	0.4	527.00	0.26
Total	203,789.95	100.0	209,626.15	100.0	204,330.62	100.0

Source: KTIS

¹ Consolidated sales of the following 3 sugar factories:

1. Sugar factory operated by Kaset Thai International Sugar Corporation Pcl. (KTIS)
2. Sugar factory operated by Thai Identity Sugar Co., Ltd. (TIS)
3. Sugar factory which KTIS has leased from Ruampol Enterprise Co., Ltd. (RPE) under a long-term lease agreement

(2) Distributors

The Company sells sugar by way of the "ex-factory" method to distributors which comprise a smaller proportion of the Company's sales revenue, compared to industrial customers. This is partially because the Company has to sell sugar to distributors at a discount to the prices announced by the Ministry of Commerce. The discount rates depend on the prevailing market conditions and demand.

(3) Overseas Customers

Sugar exports to Japan accounts for approximately 60.0% of the Company's total export sales. Most of overseas customers are sugar traders, including well-known companies such as Cargill International S.A., Bunge Agribusiness Singapore Pte. Ltd., Sumitomo Corporation, Marubeni Europe Plc. and Mitsubishi Corporation etc. The Company has particularly focused on Japanese traders as target customers for our J-Spec raw sugar.

Bleached Bagasse Pulp and Pulp Mold : Production and Distribution Business

The Company operates bleached bagasse pulp production and distribution business through EPPCO, which has the production capacity of approximately 100,000 tons per year. The factory is currently the only mill that can produce bleached bagasse pulp which is a byproduct from the Company's sugar production process. EPPCO has 3 types of bleached pulp products: dry pulp and wet pulp and packaging products from bagasse pulp (Pulp Mold)

(1) Dry Pulp

Dry pulp is made from bagasse with a moisture content of about 10 - 12%. It weighs about 250 kilogram per bale and has a brightness of no less than 80% ISO with TAPPI dirt count of less than 10 ppm. Dry pulp is a core product of bleached bagasse pulp business.

(2) Wet Pulp

Wet pulp is made from bagasse with moisture content of about 50. - 52.0%. It weighs about 225 kilograms per bale but has the same brightness and TAPPI dirt count as dry pulp. It can be used more easily than dry pulp in a paper manufacturing process because of its higher moisture content, which saves time in the re-boiling process. However, wet pulp has a shorter storage period than dry pulp and incurs higher transportation costs. Thus, EPPCO distributes wet pulp only to domestic customers.

(3) Packaging products from bagasse pulp (Pulp Mold)

Pulp Mold used bagasse pulp 100% as raw material to produce different types of packaging products at EPPCO factory. The products will be bio-degradation which are Eco friendly products consistent with the demand trend for products that save the environment in both domestic market and worldwide. The products will add value to EPPCO bagasse pulp.

Bleached Bagasse Pulp : Market Conditions and Competition

(1) Global Market

The global economic slowdown in 2016 had wide-scale impact on the pulp and paper industry, especially printing and writing paper, which was plagued with oversupply and decreasing purchase orders. Despite excessive supply, short fiber pulp from the producers in the Latin America strived to increase the pulp prices. Although, due to their clients could not increase the prices of finished products, their attempts met little success. Consequently, the selling price of long fiber pulp has declined by USD 10-15 per ton from Q1/2016 to Q4/2016 and the price of short fiber pulp decreased by USD 35-45 per ton between Q1/2016 to Q4/2016.

1.1) Selling Price of Pulp in December 2016

In Chinese market, the selling price of long fiber pulp decreased from USD 580-600 per ton recorded in December 2015 to USD 570-590 per ton in December 2016. The price of short fiber pulp decreased from USD 580-620 per ton in December 2015 to USD 500-510 per ton in December 2016. For other East Asian markets, the price of long fiber pulp decreased from USD 590-620 per ton in December 2015 to USD 590-610 per ton in December 2016, while the short fiber pulp decreased from USD 595-620 per ton in December 2015 to USD 500-520 per ton in December 2016 .

Source: PPI ASIA's report as of 9 December 2016

1.2) 2017 Global Market Outlook

In 2017, the trends of pulp and paper industry situation continue to decelerate from the world economic factors which show unclear signs of recovery. Combined with the conditions

of the oversupply of pulp & paper will impact the rise in prices especially short Bleached Eucalyptus wood pulp.

There will be investment plans to expand the long fiber pulp production capacity in North America approximately 1.5 million tons, short fiber pulp from Eucalyptus wood in South America approximately 3.0 million tons and short fiber pulp from Acacia in Indonesia approximately 1.5 million tons while the demand of paper still does not change much. .

While the demand of short fiber pulp will increase as forecast, but the oversupply still exists until the end of 2017, so the price could not go up.

(2) The Country Situation.

On Q3/2016 the pulp, paper and publication industry compared to the same quarter of the previous year found that the productivity index of pulp & paper increased consistently with the demand of packaging industry and the increase in export to Asian countries. However, the pulp exports had decreased in value, which resulted from the oversea buyers' economic uncertainty and slowdown in investment sectors but the export value increased in paper and publications for advertising business and educational books in Asian market.

The import value of paper pulp, waste paper and paper products reduced due to the increase in domestic production that could serve demand sufficiently.

2.1) Manufacturing Situation At Q3/2016

When compared to the same quarter of the previous year. It showed that the production index of paper pulp, writing paper, cardboard and corrugated paper increased 3.89, 15.06, 4.82 and 4.16 percent respectively. As the demand of packaging products for food, beverage industry and cosmetics had expanded in order to meet the needs of consumers and supported the export of paper and paper products to the Asian countries for their expansion trend. The output of writing paper reduced 2.94 percent due to the decrease of consumer demand and cheaper price of imported paper from abroad.

Compared to previous quarter, the production index of paper pulp, writing paper, cardboard, Kraft paper and corrugated paper increased 8.76 0.63 1.38 0.83 and 5.10 percent respectively as it was the delivery time to prepare the packaging paper and celebration cards on Christmas and New Year Festivals.

There were nine factories of paper production and packaging paper production requested for operation license, two factories requested for expansion, another 3 factories stopped operations while ten printing houses requested for operation license and two printing houses requested for expansion.

2.2) Export Situation At Q3/2016

1. paper pulp The export value USD 27.11 million dropped 42.45 and 24.90 percent from the same quarter of previous year and previous quarter due to the slowdown in exports of paper pulp to France which had economic volatility and slow industrial investment.

2. paper and paper products The export value USD 422.18 million increased 5.60 percent from the same quarter of previous year due to the increasing in export of packaging paper to Asian markets. Main markets are South Korea, Viet Nam and Indonesia .

3. the books and publications The export value USD 19.77 million increased 30.75 and 21.74 percent from the same quarter of previous year and previous quarter due to the expansion of export in advertising publications, and educational books to Indonesia and Hong Kong.

2.3) Import Situation At Q3/2016

1. paper pulp and paper scraps The import value USD 171.69 million decreased 1.77 percent from the same quarter of previous year due to the increase of production and self-sufficient but when compared to Q2/2016 there was an increase in import of chemical pulp

about 15.39 percent in order to serve the demand for paper and paper products for the festival at year end.

2. paper and paper products the import value USD 336.38 million decreased 6.45 percent from the same quarter of previous year and decreased 3.01 percent from the previous quarter. Although the increase in import of cardboard and packaging paper from abroad but the appreciation of baht currency caused the value to reduce.

3. publications the import value USD 87.25 million increased 57.37 percent from the same quarter of previous year and increased 6.39 percent from the previous quarter due to the increase in import of photo publications and premium publications which had high price from South Korea as there were many Singing Concerts and Artists Shows from South Korea in Thailand.

2.4) Related Government Policies

The Government's competitive advantage policies and financial policies to promote the small and medium enterprises (SMEs) will be the stimulus factors for expansion of the supported paper and packaging industry

The Ministry of finance still considers the proposals of the pulp and paper industry association of Thailand to change the export tax rate on eucalyptus wood from 0 percent to be more appropriate rate to be fair on business competition and prevent a shortage of raw materials. Since the shortage of eucalyptus wood as a raw material in the production of paper pulp caused by some private groups bought eucalyptus wood from farmers at higher price than those sold to pulp and paper production plants in the country and exported to Japan.

2.5) Summary and Trends

At Q3/2016, the production index of paper pulp, cardboard, Kraft paper, and publications increased from the same quarter of previous year and previous quarter due to the demand expansion for industrial packaging as well as the export expansion to Asian countries. For the production index of writing paper decreased compared to the same quarter of previous year due to low demand and cheap paper imports from abroad.

The export value of paper pulp decreased from the same quarter of previous year and previous quarter because of continuous low export to major countries i.e. France caused by the fluctuations in the economic and industrial sectors etc. For the export value of paper and paper products increased from the exports of packaging paper to Asian countries. In addition the export for books and publications had higher value than the previous quarter as the advertising publications and educational books expanded.

The import value of paper pulp and paper scraps decreased from the same quarter of previous year due to increase of domestic production and self-sufficiency. Compared to the previous quarter, there was an increase of chemical pulp imports to serve the demand at the

year-ended festivals. The import volume of paper and paper products reduced, but the import value increased derived from the import of higher-value publication i.e. photograph paper etc. from South Korea as there were many Singing Concerts and Artists Shows from South Korea in Thailand.

Thailand economic trends in the year 2017, the export will likely improve gradually and the weakening of Thai Baht help supporting the export expansion of paper pulp and paper industries, especially packaging paper. .

Source: the Office of industrial economics, Ministry of industry.

Bagasse pulp market situation 2016 , and trends in 2017 .

Although slow recovery of global economy and some countries in 2016, there were continuous demand of bagasse pulps both domestically and abroad. As the price of short fiber pulp still decreased worldwide because of over supply condition, some manufacturers changed to increase the proportion of low price short-fiber pulp from Eucalyptus wood for their productions.

Main industrial customers for bagasse pulp are Eco friendly packaging productions who use bagasse pulp as a raw material to create environmental products image which include printing paper and tissue paper customers.

In 2016, the company reduced the price according to the decrease in the world price of paper pulp, while the continuous purchase orders of bagasse pulp in the domestic and foreign markets still existed.

In 2017, the global and domestic economy will recover slowly, and demand of bagasse pulp still increase, especially foreign exports which will be benefit from the weakening of Thai Baht currency. As forecast, the company will produce bagasse pulp same quantity as 2016, which the production costs are still at a high level and the selling price will be considered suitably based on the world paper pulp price.

The largest paper pulp manufacturers in 2016 were as follows,

Manufacturer.	Capacity of production (' 000 tons).	The type of the raw materials.
Double A	560	Eucalyptus wood.
Phoenix Pulp & Paper	240	Eucalyptus wood.
Panjapol Pulp Industry	110	Eucalyptus wood.
SCG Paper	107	Eucalyptus CTMP
EPPCO	100	Bagasse
Siam Cellulose	86	Eucalyptus wood.
Fiber Pattana	20.	UHT box
Thai Gorilla Pulp	9.	Palm leaves.
Total	1,232	

Source : 2013 – 2015 Directory of the Thai Pulp and Paper Industries Association (TPPIA). .

Market situation of packaging products from bagasse pulp (pulp mold) 2016/2017

The growth of demand for Eco friendly packaging products, especially from bagasse pulp increases continuously. The large producers in China still have the production expansion plan to supply for the world's growing demand.

Thailand presently has two manufacturers of the packaging products from bagasse while such product requirements are growing continuously. The support and campaigns from the Government and private sectors have helped the growth of Eco friendly packaging products over 2016 and trends to grow continuously in 2017.

Bleached Bagasse Pulp : Competitive Strategy

(1) Reliable Raw Material Source

EPPCO has a strong raw material security as its bagasse supply is primarily provided by the Company and factories in KTIS group which altogether record the cane-crushing capacity of more than 10,000,000 tons of cane per year. This enables EPPCO to effectively plan its bagasse-based production in advance.

With the raw material security, EPPCO can provide its clients with reasonable assurance of EPPCO's ability to satisfy their demand.

(2) Low Cost of Raw Materials

EPPCO has lower production costs, compared to other pulp manufacturers, largely thanks to the short distance between EPPCO factory and the Company's factories being EPPCO's suppliers. The delivery of supply through conveyor belt system instead of trucks which leads to substantial save transportation costs.

(3) Environmental Friendliness

Bleached bagasse pulp of EPPCO is virgin pulp which is made from bagasse and thus is environmentally friendly. The increasing environmental awareness has led to the rise in demand for EPPCO's eco-friendly products. EPPCO's bleached bagasse pulp factory is the first pulping factory that is awarded the ISO 22000 food safety accreditation and the GMP&HACCP certification from SGS (Thailand) Co., Ltd. which guarantee that its products are safe for consumption and can be used as raw material for food packaging production.

Bleached Bagasse Pulp : Distribution Channel

(1) Domestic Distribution

EPPCO distributes bleached bagasse pulp directly to industrial customers on a monthly basis or as agreed with customers. Strategic customers of EPPCO include major leading paper product manufacturers in Thailand using eco-friendly pulp in their operations such as SCG Paper Pcl., Kimberly-Clark (Thailand) Co., Ltd., Berli Jucker Co. Ltd., Cellox Co. Ltd. and Biodegradable Packaging for Environment Co. Ltd. To promote customer satisfaction, EPPCO has

technical sales personnel who are highly knowledgeable and can provide customers with useful information for correct and efficient use of bleached bagasse pulp.

(2) Overseas Customers

Generally, distribution of bleached bagasse pulp to international markets is made through brokers. Our sales through spot contracts comprise approximately 90.0% of our total export sales while the remaining 10.0% is under long-term contracts. To mitigate associated risks, our selection of brokers is based on their ability to penetrate markets which have strong pulp demands and their credibility. EPPCO's management team has implemented proactive marketing activities such as participation in trade expos to attract new customers. Sales through brokers enable EPPCO to determine the price and quantity of the product it intends to sell at its discretion, without having to negotiate with the end customers. EPPCO's revenue is primarily from international sales which accounted for approximately 70-78% of its total revenue during the year. EPPCO's brokers include leading international companies such as Marubeni Corporation, OG Corporation, Beijing China Base Star Paper Co., Ltd. and Inter fiber Asia Pte. Ltd.

Pulp Mold products : Distribution channel

The sales proportion target is **about 90-95% for the foreign market and 5-10% for domestic market at the beginning**. The demand of domestic and foreign countries for eco-friendly products are still high, so the company continues to develop the type and variety of products to cope with the needs of consumers both domestically and abroad in the future.

(1) Export Sales

As the markets for Eco friendly packaging products are in Europe and America, so the company has to sell through the experienced sale agents and distributors for large volume distribution in order to reach the dealers and consumers which are better way than Original Equipment Manufacturer (OEM) or selling directly under its own brand abroad.

(2) Domestic Sales.

Domestic customers are environmental oriented group which the company has many distribution channels as follows,

- 2.1 Large retail and modern trade stores (Big C, Lotus, Makro, The Mall, TOP, Central, Department Store, Seven Eleven) under own brand and/or OEM for large retail stores.
- 2.2 Provincial wholesalers of packaging products, and sale agents across the country.
- 2.3 Direct sales to organizations, government agencies, hospital, schools, universities and other institutions.
- 2.4 Online Marketing (under development).

Ethanol : Production and Distribution Business

The Company operates ethanol production and distribution business through EPC and uses molasses derived from the group's sugar factories as a primary raw material which record the maximum production capacity of 230,000 liters per day or 75,900,000 liters per year. EPC is licensed to produce 3 different grades of ethanol products: potable alcohol, industrial alcohol and fuel alcohol. Presently, EPC manufactures industrial alcohol and fuel alcohol at the market.

Ethanol : Market Conditions and Competition

(1) Global Market Conditions

The ethanol price in USA fell 6.1% YOY in consistent with lower production costs. Its consumption increased 4.8% YOY due to USA policy to increase about 10.5% of ethanol blended in gasohol.

The ethanol price in Brazil increased 43.2% YOY in consistent with higher transportation costs due to inconvenient transportation caused by rain. The trends in ethanol price will increase slightly with the same direction as the oil price will be increased from OPEC group agreement to control the oil production. Meanwhile the world sugar price trends to be higher and Brazil sugar producers will switch to produce more sugar than ethanol. The ethanol consumption decreased 3.2% YOY due to higher domestic price of gasohol. People changed to use gasoline which contained no ethanol especially gasoline grade A and C

The ethanol price in the world market is projected to be between 0.47– 0.57 USD per liter.

Source : the ethanol price situation reports, Thailand's third quarter 2559 Bank of Thailand .

Ethanol : Domestic Market Conditions

The Thai ethanol reference price decreased 14.9% YOY due to lower oil price and lower costs of ethanol produced from cassava. The domestic demand for ethanol was approximately 3.6 million liters per day, up a little bit from previous year since the low oil price causes more cars driving in transportation. The consumption of gasohol increased 14.3% YOY which was 2,639.2 million liters.

At present, Thailand can annually produce 1,098 million liters of ethanol from molasses and 522 million liters from cassavas.

In 2016, there were a total of 21 ethanol production plants commercially operating in Thailand with the daily output capacity of 5.04 million liters in aggregate. The average ethanol demand is 3.6 million liters per day. Nonetheless, only a limited number of ethanol producers can operate at full capacity 365 days a year, the daily average output is less than the actual capacity. The major ethanol producers are:

	Company	Capacity	Production Material
1	Mitr Phol BioFuel Co., Ltd.(Chaiyaphum)	500,000	Molasses
2	E85 Co., Ltd.	500,000	Cassava /Starch
3	Ubon Bio Ethanol Co.,Ltd	400,000	Cassava /Cassava Chips
4	Thai Agro Energy PCL	350,000	Cassava/Chips/ Molasses
5	Khon Kean Alcohol Co.,Ltd (Bo Ploi)	300,000	Molasses
6	Taiping Ethanol Co Ltd.	300,000	Cassava
7	Ekarat Pattana Co.,Ltd	230,000	Molasses
8	Mitr Phol BioFuel Co., Ltd.(Kalasin)	230,000	Molasses
9	Maesod Clean Energy Co., Ltd.	230,000	Cane juice
10	Thai Sugar Ethanol Co.,Ltd	200,000	Molasses
	Other	1,800,000	
	Total	5,040,000	

Source : Department of Alternative Energy Development and Efficiency

Ethanol : Competitive Strategy

(1) Product Variety

EPC offers a wide range of products for different needs of customers in each industry. EPC's ethanol plant is licensed to produce 3 different grades of ethanol products: potable alcohol, industrial alcohol and fuel alcohol. The product variety has contributed to EPC's competitive edge in international markets over many other ethanol plants in Thailand which mostly are licensed to produce only fuel alcohol production for domestic distribution.

(2) Reliable Product Delivery

EPC's punctual and reliable product delivery to customers is one of its key strengths. With steady molasses supply from factories in KTIS group for its ethanol production process, EPC is safe from the raw material shortage issue and can punctually deliver products to its customers, leading to strong customer confidence and trust in EPC.

(3) Product Quality

Committed to achieving excellent quality standards, EPC has continuously attempted to develop the quality of its products. All ethanol products of EPC are therefore meet regulatory quality standards. In addition, EPC's distillation columns have been developed to accommodate the production of Korean B grade ethanol which is high quality product commonly sold in the international market.

(4) Marketing Strategy

Recognizing the intensifying competition in the energy industry, EPC has proactively formulated and implemented marketing strategy to grow its customer base, especially in offshore markets. This includes EPC's regular participation in meetings and training courses arranged for domestic and international ethanol producers to reap benefits from opportunities to meet with customers and intermediaries as well as to continuously expand its customer base.

Ethanol : Distribution Channel
(1) Domestic Customers

EPC produces ethanol with 99.5% purity for domestic oil dealers to use for blending as biofuels to support the government's policy to promote the consumption of alternative energy and the reduction of imported fuels and crude oil. EPC's major customers, defined as "traders" under Section 7², are PTT Pcl., Thai Oil Pcl. and Bangchak Petroleum Pcl. As of 31 December 2016, revenue from domestic sales of fuel alcohol accounted for 100% of the total annual revenue from ethanol sales.

(2) Overseas Customers

EPC's ethanol products are sold to overseas customers through distributors. Previously, EPC exported industrial alcohol with 95.5% purity and fuel alcohol with 99.5% purity to overseas markets. Following the implementation of the Ministry of Energy's policy to discontinue 91-octane gasoline sale on 1 January 2013, the rate of domestic ethanol consumption has risen and EPC has since discontinue its export of fuel alcohol and industrial alcohol to overseas markets.

Electricity : Generation and Distribution Business

The Company's sugar factories and bleached bagasse pulp factories are equipped with electricity and steam generating modules which use bagasse, a byproduct from sugar production, as primary feedstock. The electricity and steam generated are used in the production processes of our 3 sugar factories and other factories. The surplus electricity is sold to the Electricity Generating Authority of Thailand (EGAT) and the Provincial Electricity Authorities (PEA) under the power purchase agreements (PPAs) which the selling contracts will be under Feed in Tariff term instead of adder term in 2017. Kaset Thai Bio Power Co., Ltd. (KTBP) has been established to operate the 60MW biomass power plant which is currently in commercial operation. The Group has another two new power plants to be operated by TEP and RBPB with the capacity of 50 MW each in Uttaradit province and Nakhonsawan province which TEP has operated and sold electricity to EGAT since April, 2016 and RBPB is expected to operate in Q1/2017.

Electricity : Market and Competition
(1) Domestic Market and Industry

As the Power Development Plan 2015 (PDP 2015), The Ministry of Energy has developed the Thailand Integrated Energy Blueprint which is comprised of the following 5 master plans:

- 1) Thailand Power Development Plan (PDP);
- 2) Energy Efficiency Development Plan (EEDP);
- 3) Alternative Energy Development Plan (AEDP);
- 4) Natural Gas Management Plan; and
- 5) Oil Management Plan

Alternative Energy Development Plan (AEDP) aims to promote the renewable and alternative energy development in each zone to maximize their potentials. Over the past years, the growth of renewable energy looked well from the support by the Government sector as main factor to encourage the greater consumption of renewable energy to replace fossil fuel at least 20 percent. Currently the electricity generation can only be produced about 42

percent of the plan. In 2036 it is targeted to produce electricity generation from renewable energy about 19,684.40 MW.

The renewable energy groups that trend to increase more production are biomass energy, solar energy and energy from waste while wind energy is still far from the target. Biomass energy is one of the groups that the Government provides support because Thailand is an agricultural country and there are a lot of waste materials from agricultural farming which can be used as alternative fuels to produce electricity. Especially cane farming, the Ministry of industry plans to develop 300 million tons of sugar cane yield in the future.

(2) Domestic Electricity Use

In 2016, the Net Peak Generation Requirement was recorded at 29,619 MW on May 11, 2016 at 10.28 p.m. which was 8.30% higher than 27,346 MW in June 11, 2015 at 2.02 p.m. while October 2016, the peak load was still high at 26,015 MW.

(3) Domestic Electricity Generation Capacity

At the end of October 2016, the electricity generation capacity totaled 41,096 MW not including very small electricity producer. Details are as shown below:

EGAT	16,385 MW	40 %
Independent Power Producer (IPP)	14,994 MW	36 %
Small Power Producer (SPP)	5,885 MW	14 %
Electricity Import	3,878 MW	10 %
Total	41,096 MW	

The proportion of electricity generation from different types of fuel.

Natural gas	167,829 GWH	64 %
Imported coal and lignite	31,036 GWH	18 %
Import	16,438 GWH	10 %
Renewable energies	10,339 GWH	6%
Hydropower	2,863 GWH	2 %
Fuel oils	466 GWH	0.3 %

The Proportion of Renewable Energy for Electricity Generation

Renewable energy	Unit	Target 2036	2012	2013	2014	2016	3Months 2016	Target 2016
Wind	MW	3,002.00	111.73	222.71	224.47	233.90	233.90	7.8
Solar	MW	6,000.00	376.72	823.46	1,298.51	1,419.58	1,692.63	28.2
Waste	MW	550.00	42.72	47.48	65.72	131.68	146.38	26.6
Bio gas	MW	1,280.00	193.40	265.23	311.50	372.51	393.21	30.7
Small hydro power	MW	376.00	101.75	108.80	142.01	172.12	172.12	45.8
Bio mass	MW	5,570.00	1,959.95	2,320.78	2,451.82	2,726.60	2,726.60	49.0
Large hydro power	MW	2,906.00	-	-	-	2,906.40	2,906.40	100.0
Total	MW	19,684.00	2,786.27	3,788.46	4,494.03	7,962.79	8,271.24	42.0

Electricity : Competitive Strategy

In addition to the production efficiency which the Group has consistently enhanced through the continuous improvement of the electricity generation process, feedstock is another key success factor for the electricity business. The Group's biomass power plants use bagasse derived from the sugar production process as the primary feed stock . Additionally, the Group has developed the production process to reduce energy consumption for saving

bagasse and has also researched on a variety of energy crops to identify additional feedstock sources to increase its revenue from electricity business.

Electricity : Distribution Channel

Steam and electricity generated by the Group's power plants are used in 3 sugar factories and while the surplus electricity is sold to EGAT or PEA pursuant to each power plant's PPAs.

Bio Soil Conditioner : production and distribution business
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The Company has its own bio soil conditioner manufacturing plant in Nakhonsawan which processes filter cake and vinasse into bio soil conditioner products. There are 3 product types; powder product, pellet product and fluid product. Filter cake is derived from sugar production process while vinasse is from the biogas and ethanol production process. Kaset Thai Bio Fertilizer Company Limited (KTBF) was established at Taklee District, Tambon Nongpho, Nakhonsawan as arm of the Company's integrated sugar business. The plant produces and supplies bio soil conditioner products to the group's sugarcane farmers at 150,000 tons of powder product, 10,000 tons of pellet product and 200,000 tons of fluid product.

Bio Soil Conditioner:Market and Competition

At the early period of 2016, the drought situation caused very low rainfall in many areas. The unfavorable weather conditions have caused the overall agricultural productivity to drop, particularly in upland areas where groundwater irrigation is not viable and natural water source was unavailable. The suppliers of production factors like fertilizers and chemical herbicides were not aggressive amid the weak economy which has continued from the previous year until 2016. The shortage of water supply which prompted the government to order restriction on the irrigation for farming (particularly rice farming in river basin regions), additionally, many agricultural product prices were low and not worth to cultivate i.e. rice, corn, cassava etc. discouraged the utilization of production factors. As a result, bio soil conditioner manufacturers of different sizes opted for a conservative stance, focusing on protecting their territory rather than aggressively expanding the market. Promotional activities were also muted.

The clarity of market conditions is essential for the ability to rightly strategize the inventory planning for mass production. In order to avoid future overlaps in marketing of products, insight into the key elements of the market must be ensured.

Bio Soil Conditioner :Competitive Strategy

The Company has the policy to encourage its contracted farmers to use KTBF's products.

- (1) The Company and farmers jointly analyze the bio soil conditioner to identify which KTBF's products are suitable for their plantation.
- (2) As raw materials used in the bio soil conditioner production are sourced among the group, the Company's products are cheaper. Farmers can thus reduce their costs and increase productivity.
- (3) The Company treats the packaging as a priority and uses colored sacks with double seals for greater durability.
- (4) The Company offers delivery services for its bio soil conditioner products.
- (5) Periodic plant touring programs for the targeted farmers to see the production process and provide knowledge of the products usage technique
- (6) Run the demonstration farms so that the farmers are able to see the productivity resulted from the usage of bio soil conditioner products.
- (7) The Company advertises its products and activities through advertising media and local radio stations,
- (8) The Company conducts the products requirement surveys from contracted farmers in order to make production plan.
- (9) The Company has many research projects coordinated with the Institute of science and technology of Thailand for developing the production standards to create the customer confidence.

Bio Soil Conditioner:Distribution Channel

- (1) Sale to contracted cane farmers of the group.
- (2) Sale to general customers.
- (3) Sale to merchants, agricultural cooperatives, Agricultural Marketing Cooperative Limited (AMC)
- (4) Sale to neighboring countries such as Laos and Myanma

3. Risk Factors

Risks associated with the Company's operations

1. The risk of fluctuation in foreign exchange

The dramatic currency fluctuation has directly affected the group's business because more than 60% of its revenue is from exports of sugar products and the downstream businesses' eco-friendly products, and machinery import expenses are in USD currency.

USD to THB Chart

30 Nov 2015 05:00 UTC - 28 Nov 2016 05:48 UTC
 USD/THB close:35.54377 low:34.54972 high:36.36097



Source : www.xe.com

XE Currency Converter : USD to THB

The Company is aware of the foreign exchange risk and has established the Financial Risk Management Committee which is responsible for the governance of financial risk management framework and controls the financial plans to prevent the impact of the foreign exchange risk through various financial instruments such as Forward contract, Option contracts, and natural hedge. The Company keeps abreast of economic movements and analyzes factors that may affect the exchange rates in order to dynamically manage its foreign exchange risk amid the changes.

In Thailand's sugar and cane industry, the sugar cane price is primarily calculated on the selling price of Quota B sugar contracts and their forward exchange rates which are managed by Thailand Cane and Sugar Corporation. Thus, forward exchange rate in itself contributes to the sugar cane cost too. As a risk protection plan, the Company will do forward exchange rates in consistent with the exchange rate exercised by the Thailand Cane and Sugar Corporation.

It is important to note that such currency forwards can have either positive or negative aspect which will be recorded in the annual financial statements as the gain and loss on exchange rate. This is because of the different between fixed forward rate and the spot rates on the goods delivery dates under the Accounting Standard Basis. The Company is aware of the risk protection policy without speculation.

Risks associated with Sugar Production and Distribution Business

1. World Sugar Price

Sugar is a product with high price volatility, the price of sugar on the world market depends on many factors;

- Fundamental factors such as weather conditions, production, consumption, supply-demand by which the fluctuation of world sugar prices depends on supply and demand of the producing countries and the consumer countries.
- Technical factors, fund speculation in futures commodity markets, economic factors, and fuel prices which correlate with the prices of ethanol produced from sugar cane juice and molasses also influence the price fluctuation in the global sugar market.

The price volatility in the global market may adversely affect the Company's sales, particularly export sales, while the domestic sales are not directly impacted. As the cane prices rely on the sugar prices, so the low cane

prices will demotivate cane farmers and cause them to reduce cane planting or cane caring, hence lower cane supply available for sugar production.

To reduce the risks associated with the high volatility of sugar prices in the global market, the Company has the Sugar Pricing Policy to control the pricing volume not more or less than 10% of Quota B pricing volume so that the group's pricing and Quota B pricing are not so different. The sugar price will determine the cane price which is the main cost of sugar production.

The Company also has a working team consisting of experts and officers from the international leading trading company, to monitor and manage the prices of exported sugar. The working team's analysts keep abreast of the sugar prices in global markets, i.e. the New York No 11 sugar futures market and the London refined sugar futures market, the world economy, fuel prices, production and consumption figures, demands, supplies and stocks on a daily basis.

2. International Trade Barriers

At present, sugar export sales account for more than 60% of the Company's total sales and the major market is Japan. Therefore, changes in trade barriers introduced by importing countries such as tax policies, sugar import quota, national rules, or trade membership agreements may adversely affect the Company's competitiveness, production and export sales. As risk mitigation measures, the Company keeps abreast of the news from various sources, concludes the future contracts in order to manage production planning, inventory and logistics management to ship products on time, and cooperate with Sumitomo Corporation which is our major strategic partner on analyzing and determining the best approaches to deal with or alleviate unfavorable impact in the way that will best benefit the Company.

3. Sugar Cane Supply Adequacy and Quality

The level of precipitation in Thailand had been rather low since the beginning of 2016. However, from June 2016 onwards, the situation improved as the cane plantations in the Company's promotion areas received heavy and regular rainfall with good coverage. The rainfall was favorable to the growth of canes of contracted cane farmers and filled the reservoirs. These reservoirs were financed by the Company's advance payment, or by the government's financial support programs, or by loans from the Bank for Agriculture and Agricultural Cooperatives or by loans from the Cane and Sugar Fund with the Company as the loan guarantor. Since the water from these reservoirs supplied water to cane fully, the cane volume increased which were good for the sugar production and molasses too. There are also various measures that the Company regularly takes steps to reduce the risk of cane supply whether to expand the number of contractual farmers and planting fields, establishes more service centers.

Plentiful and continuous water supply during the cane growth period contributed to the good sugar content of harvested canes. The Company initiated the project to remove the cane trashes and sand and soil from harvested canes, the cane harvester driving training program, and the cane harvester and loader maintenance training programs. Moreover, the Company also performed other measures to reduce the risks of cane quality consistently and effectively i.e. adopting Information Technology to specify the mature cane for harvesting, pre-harvest quality assessment, cane harvester development plan (CHDP), minimizing the time lag between cane cutting and crushing, and fresh cane harvesting promotion. These efforts significantly improved the cane quality.

4 The risk from change of government policies

The Ministry of Industry proposed a restructuring plan for the cane and sugar industry and the plan was approved by the Cabinet on Tuesday 11 October 2016. There were 5 main points as follows,

- **Amendment of the Cane and Sugar Act and other relevant laws and rules to cover the use of canes for the ethanol production and other products;** This will increase the flexibility in the Company operations and enable the Company to produce more value added products other than sugar. Meanwhile the demand of cane will increase and cause intense competition. The Company has prepared the action plans to manage cane quantity and quality upon this risk.

- **Cane and sugar productivity improvement:** this will be beneficial to both cane farmers and the Company, particularly the goals to reduce burnt cane to be zero within 5 years and the promotion of modern agricultural techniques which are consistent to the direction of the Company's policy. Since the labor problem is an issue that discourages farmers to harvest green cane, so the Company and contracted farmers have substantially invested in cane harvester machines. Now the cane harvester machines have been developed consecutively to be more efficient, cheaper at many sizes. The Company intentionally continues to increase the cane harvesters and promotes cane farmers to do so as well as sharing knowledge with the Cane Association and cane farmers about the benefits of green cane harvesting. While the modern agricultural technology emphasizes on large-scale farming and mechanization for the economies of scale, the Company has supported the cooperation of cane farmers to join in large-scale farming and provides them with agricultural machines and advices.

- **Standard costs of cane and sugar and productivity standard;** the goal was to set the standard in the production efficiency of the sugar factory but still has to be defined in many details before it is enforced. Meanwhile, the Company has the policy to improve the efficiency of all machines and equipment which may need some investment and develop better production process.

- **Stabilization of Cane and Sugar Fund:** this will be an advantage to develop the cane and sugar industry as it is an organization that supports research and development. The Agency is also providing support to help farmers financially in a low interest rate loan for solving the drought situation and purchasing the cane harvester machines in order to solve the problem of burnt cane and labor shortage.

- **Establishment of Cane and Sugar Research and Development Institute:** For this cause is particularly helpful because it increases the potential and complete opportunity as well as the innovative development to produce more value-added products, and also as integrating the research projects with other relevant agencies conveniently.

5. The risk of bad debt from Crop Financing

As part of the crop financing program, the Company has financial support to its contracted cane farmers in form of advance payments, fertilizers and insecticides. The Company has strong measures in providing loan to selective farmers based on their intention, sincerity, abilities and securities. However, there is still the debt collecting risk arising from low crop productivity due to unfavorable weather conditions or dishonesty of borrowers. To alleviate this problem, the Company has supplementary measures to control risk at satisfactory level by adopting the information technology to specify clearly the targeted cane farm and show the photos of cane planting for the Credit Committee's consideration. The cane farming inspection performed by the factory's audit teams and the head office's internal audit team to ensure that the cane farmers' actions are in compliance with agreed financing conditions. Additionally, there are protection plans to prevent the financed cane from delivery to other sugar plants. In estimating the cane yield which reflects the farmers' ability to repay their loans, the Company has adopted the cane forecasting technique from cane academics, collecting relevant data such as precipitation levels and calculating precisely the cane quantity for sugar production. The Farmers with doubtful debts will be managed to reduce risk before new harvesting season. These measures reduce the occurrence of bad debts in financing to cane farmers.

Risks associated with Power Plant and Bleached Bagasse Pulp Business

1.Shortage of Raw Material (Bagasse) for Power Plant and Pulp Production

The business growth of the Company focuses on the production and distribution of electricity to the Electricity Generating Authority of Thailand (EGAT) and the Provincial Electricity Authority (PEA). In 2017, the Company will supply electricity to EGAT from its 3 power plants, namely KTBP, TEP and RBPB which have the output capacity of 60 MW, 50 MW and 50 MW respectively. These 3 biomass power plants primarily use bagasse, a byproduct derived from the cane crushing process of sugar mills, as feedstock. The bagasse quantity depends on the crushing cane volume and the energy utilization of sugar factory. Meanwhile the Company also has a bagasse pulp factory which uses bagasse as a raw material, so the bagasse allocation for supplying to the power plants and bagasse pulp factory should be managed appropriately. Thus, the uncertainty of sugar cane volume each year is a key factor that may pose a risk the Company's operations.

The Company therefore conducts the action plans to prevent risks by promoting the expansion of sugarcane yield both horizontally and vertically. With the action plans to increase the cane productivity tons per acre and expand the plantation areas. In addition, the Company has conducted studies and researches on the cultivation of alternative energy crops such as energy cane, Napier grass and reeds, which will ultimately benefit the cane farmers, the sugar and power plant businesses, the local communities and our country as a whole. The Company is quite confident that these efforts will strengthen the stability and sustainable growth of its power plant business.

With regard to its pulp production business, the Company has extensively researched on substitutes for bagasse such as energy cane, water hyacinth and Napier grass. In 2017, the Company will begin trial production of pulp from jute after testing result showed that the jute pulp could be produced under the appropriate cost and quality were in accordance with the requirements of the market. In addition, the group produces eco-friendly containers, value added products from bagasse pulp. Machinery and work processes have been continuously improved to enhance the production yield and minimize loss.

As bagasse is an important material for the pulp production and power plant business, the Company has focused on the machinery efficiency enhancement and work process improvement since 2014 to reduce the steam energy and electricity consumption of the sugar plants. This medium-term plan has been implemented and will complete in 2017 and progressively increase its available bagasse supply.

Risks associated with Ethanol Business**1. Risk from the uncertainty of Government Policy**

The use of ethanol as biofuel has been promoted clearly and the targets of ethanol-blended gasoline consumption have been defined in Alternative Energy Development Plan (AEDP). At present, the domestic consumption of ethanol is 3.5 million liters per day and, according to the AEDP will increase to 11.3 million liters in 2026.

However, occasional ethanol undersupply and oversupply are possible when there is an unbalance between the growth in ethanol demand and production capacity. The ethanol shortage may be caused by an unexpected surge in ethanol consumption and, in such circumstance; the prices of ethanol and molasses will certainly increase. Adequate supply of molasses from sugar mills of our Company will reduce the risk of raw material shortage. When some ethanol factories are unable to produce ethanol at their normal capacity because of raw material shortage, there may be special purchase orders for ethanol at higher than normal prices and this is a good opportunity for ethanol producers who are able to increase their production capacity to accommodate such buyers' needs.

In case of market oversupply, the negotiations with the Government agencies are necessary. The Thai Ethanol Producer Association will be the agency access to consultation with government agencies such as the Energy Policy and Planning Office (EPPO) and the Department of Energy Development and Efficiency (DEDE) to find the solutions which may increase the country's ethanol consumption corresponds to the production capacity through the retail gasoline price mechanism Including the adjustment of the national oil fund levy to boost the sales of E20 and E85 which have high levels of ethanol blending.

However, if the domestic ethanol fuel consumption drastically declines, our Company is able to produce and export the premium-quality ethanol as we have good relationship with many international ethanol traders. The Company also has the experience in dealing with export procedures and using the facilities of storage tanks at export terminal.

These risk management measures will minimize or prevent the undesired impacts from the uncertainty of government policies.

4. Assets for Business Operations
4.1 Core Operating Assets of the company and its subsidiaries

As of December 31, 2016, the company and its subsidiaries have core operating assets, as followings:

Items	Net Book Value (THB Million)	Ownership	Encumbrance
1.Land and land improvement 8,892 rai 3 Ngan 43.37 square wah.	300.59	owner	partly as Collateral Loan
2.Building and buildings improvements	1,698.00	owner	partly as Collateral Loan
3.Machinery and tooling	6,615.57	owner	Partly as Collateral Loan
4.Motor Vehicles	142.90	owner	Partly as Collateral Loan
5.Furniture, fixtures and office equipment	39.71	owner	-
6.Motor vehicles	466.53	owner	-
7.Assets under installation	1,587.80	owner	-
Total	10,851.10		

Note Items 1-4 are partly as collateral with the financial institutions for short and long term loans.

Intangible assets

Asset	Objective
Computer software	Computer program for work, which includes accounting software program, farmland record and sugar production, etc.

Trademarks

Trademark	Objective	Registration Date
	For refined sugar, sugar and raw sugar.	27 February 2013

Promotion privileges

By virtue of provisions of the Industrial Investment Promotion act of B.E. 2520, the subsidiaries were granted privileges by the Board of Investment which included exemption from payment of income tax for certain operations. The details of each privilege are as follows:

1. Certificate No.	1276/Or/2546	1826(2)/2547	1095(1)/2555	2590(5)/2556	1557(1)/2558	59-1195-0-00-1-0	59-0348-0-13-2-0	59-0268-0-00-2-0
2. Promotional privileges for	Paper pulp manufacturing	Ethanol manufacturing, pure alcohol for fuel manufacturing and fertilizer manufacturing	Electricity generating from biomass	Production of biological fertilizers or organic fertilizers	Electricity generating and stream production from biomass	Packaging for foods (Biodegradable)	Electricity generating and stream production from biomass	Biogas
3. The significant privileges are 3.1Exemption of corporate income tax for net income from promotional privileges and exemption of income tax on dividends paid from the profit of the operations throughout the period in which the corporate income tax is exempted	8 years	8 years	8 years	8 years	8 years	8 years	8 years	8 years

3.2A fifty percent reduction of the normal rate of corporate income tax on net income derived from the promoted operations for a period of five years after the expiration of the above corporate income tax exemption period.	Received	Not received	Received	Not received	Received	Not received	Received	Not received
4.Date of first earning operation income	14-Oct-04	14-Mar-08	7-Oct-13	Not yet Commence	7-Jul-16	31-Oct-16	Not yet Commence	Not yet Commence

4.2 Policy on Investment in Subsidiaries and Associate Companies

It is the Company's policy to invest only in businesses that are related to its core business and are beneficial to or support for the business operations of the Company in order to capture new sources of revenue and leverage its profitability. The Company will nominate an appropriate proportion of its representative directors to the boards of its subsidiaries or associate companies to oversee and steer their businesses towards the right direction and the best benefits of the Company.

5. Legal Dispute

As of December 31, 2016, the Company had no dispute which might have a potential negative impact in excess of 5% of the shareholders' equity per its consolidated financial statements as of the latest accounting period and the Company was not involved in any other dispute which would have a significant impact on its business.

6. General Information and Other Information
6.1 Company Information

Company Information	: Kaset Thai International Sugar Corporation Public Company Limited (the"Company")
Type of Business	: Production and distribution of sugar and connected secondary businesses such as the production and distribution of bleached white paper pulp, ethanol and electricity
BKK office	: 24 Aekphol Bldg., Vibhavadi Rangsit Rd., Din Daeng, Din Daeng, Bangkok
Head office and Factory	: 1/1 Moo 14 Nong Pho Sub-District, Taklee District, Nakhonsawan Province, Thailand
Factory (Branch 3)	: 1 Moo 7 Banmakhua Sub-District, Muang District, Nakhonsawan Province, Thailand
Registration number	: 0107556000116
Telephone	: (66) 2692-0869 to 73
Facsimile	: (66) 2246-9125 , (66) 2692-0876 , (66) 2246-9140
Homepage	: www.ktisgroup.com
Company Secretary	: Mr.Suchart Pipatanachaiyapong Tel. (66) 2692-0869 to 73 ext. 176
Investor Relations and Corporate Communications	: Ms.Monathy Ploisook Tel. (66) 2692-0869 to 73 ext. 193 ext. 26
E-mail	: ir@ktisgroup.com
Registered capital	: 3,888,000,010 Baht
Paid up Registered Capital	: 3,860,000,010 Baht

6.2 Subsidiary Information

Sugar Business:	Thai Identity Sugar Factory Co., Ltd.
Business Type:	Production and distribution of sugar
Registered Share Capital	1,215,000,000 Baht
Paid-up Share Capital	1,215,000,000 Baht
BKK office:	24 Aekphol Bldg., Vibhavadi Rangsit Rd., Din Daeng, Din Daeng, Bangkok Telephone (66) 2692-0869 to 73
Factory:	42/1 Moo 8 Ban Hardsuatan, Kungtapao Sub-District, Muang District, Uttaradit Province Telephone (66) 5544-9010-1, (66) 5540-7241-5

Sugar Business:	Lopburi International Sugar Co.,Ltd
Business Type:	Production and distribution of sugar
Registered Share Capital	2,000,000 Baht
Paid-up Share Capital	2,000,000 Baht
BKK office:	24 Aekphol Bldg., Vibhavadi Rangsit Rd., Din Daeng, Din Daeng, Bangkok Telephone (66) 2692-0869 to 73
Factory:	Lopburi Province

Energy Business:	Kaset Thai Bio Power Co., Ltd.
Business Type:	Production and distribution of electricity
Registered Share Capital	1,260,000,000 Baht
Paid-up Share Capital	1,260,000,000 Baht
BKK office:	24 Aekphol Bldg., Vibhavadi Rangsit Rd., Din Daeng, Din Daeng, Bangkok Telephone (66) 2692-0869 to 73
Factory:	555 Moo 14 Nong Pho Sub-District, Taklee District, Nakhonsawan Province Telephone (66) 56-338-123 to 5

Energy Business:	Ruamphol Bio Power Co.,Ltd
Business Type:	Production and distribution of electricity
Registered Share Capital	395,000,000 Baht
Paid-up Share Capital	395,000,000 Baht
BKK office:	24 Aekphol Bldg., Vibhavadi Rangsit Rd., Din Daeng, Din Daeng, Bangkok Telephone (66) 2692-0869 to 73
Factory:	77/77 Moo 7 Banmakhua Sub-District, Muang District, Nakhonsawan Province Telephone (66) 56-338-123 to 5

Energy Business:	Thaiekaluck Power Co.,Ltd
Business Type:	Production and distribution of electricity
Registered Share Capital	350,000,000 Baht
Paid-up Share Capital	350,000,000 Baht
BKK office:	24 Aekphol Bldg., Vibhavadi Rangsit Rd., Din Daeng, Din Daeng, Bangkok Telephone (66) 2692-0869 to 73
Factory:	42/2 Moo 8 Ban Hardsuatan, Kungtapao Sub-District, Muang District,Uttaradit Province Telephone (66) 2692-0869 to 73

Energy Business:	Lopburi Biopower Co.,Ltd
Business Type:	Production and distribution of electricity
Registered Share Capital	2,000,000 Baht
Paid-up Share Capital	2,000,000 Baht
BKK office:	24 Aekphol Bldg., Vibhavadi Rangsit Rd., Din Daeng, Din Daeng, Bangkok Telephone (66) 2692-0869 to 73
Factory:	Lopburi Province

Energy Business:	KTIS Biogas Power Co.,Ltd
Business Type:	Production and distribution of electricity
Registered Share Capital	1,000,000 Baht

Paid-up Share Capital	1,000,000 Baht
Head office:	24 Aekphol Bldg., Vibhavadi Rangsit Rd., Din Daeng, Din Daeng, Bangkok Telephone (66) 2692-0869 to 73
Factory:	Nakhonsawan Province

Paper Pulp Business:	Environment Pulp and Paper Co., Ltd.
Business Type:	Production and distribution of bleached paper pulp
Registered Share Capital	2,400,000,000 Baht
Paid-up Share Capital	2,400,000,000 Baht
BKK office:	(1) 24 Aekphol Bldg., Vibhavadi Rangsit Rd., Din Daeng, Din Daeng, Bangkok Telephone (66) 2692-0869 to 73
	(2) 133 Vibhavadi Rangsit Rd., Samsennai, Phayathai, Bangkok Telephone (66) 2692-0869 to 73
Factory:	9/9 Moo 1 Attavipach Rd., Nong Pho Sub-District, Taklee District, Nakhonsawan Province Telephone (66) 2247-0920

Fertilizer Business:	Kaset Thai Bio Fertilizer Co.,Ltd
Business Type:	Production and distribution of fertilizers and soil
Registered Share Capital	35,000,000 Baht
Paid-up Share Capital	35,000,000 Baht
BKK office:	24 Aekphol Bldg., Vibhavadi Rangsit Rd., Din Daeng, Din Daeng, Bangkok Telephone (66) 2692-0869 to 73
Factory:	888 moo 14 Nong Pho Sub-District, Taklee District, Nakhonsawan Province Telephone (66) 56-338-123 to 5

Energy Business:	Ekarat Pattana Co., Ltd.
Business Type:	Production and distribution of ethanol
Registered Share Capital	256,000,000 Baht
Paid-up Share Capital	256,000,000 Baht
BKK office:	(1) 24 Aekphol Bldg., Vibhavadi Rangsit Rd., Din Daeng, Din Daeng, Bangkok Telephone (66) 2692-0869 to 73
	(2) 133 Vibhavadi Rangsit Rd., Samsennai, Phayathai, Bangkok Telephone (66) 2692-0869 to 73
Factory:	9 Moo 14 Nong Pho Sub-District, Taklee District, Nakhonsawan Province Telephone (66) 56-338-333 , (66) 2644-8388 , (66) 2644-8130-2

Energy Business:	KTIS Bio Energy Co.,Ltd
Business Type:	Production and distribution of ethanol
Registered Share Capital	20,000,000 Baht
Paid-up Share Capital	20,000,000 Baht
BKK office:	24 Aekphol Bldg., Vibhavadi Rangsit Rd., Din Daeng, Din Daeng, Bangkok

	Telephone (66) 2692-0869 to 73
Factory:	Nakhonsawan Province

Energy Business:	Lopburi Bioethanol Co.,Ltd
Business Type:	Production and distribution of ethanol
Registered Share Capital	1,000,000 Baht
Paid-up Share Capital	250,000 Baht
BKK office:	24 Aekphol Bldg., Vibhavadi Rangsit Rd., Din Daeng, Din Daeng, Bangkok Telephone (66) 2692-0869 to 73
Factory:	Lopburi Province

Holding Business:	Permsinpattana Co., Ltd.
Business Type:	Shareholders engagement, which currently holds 26.0 per cent in EPPCO
Registered Share Capital	317,000,000 Baht
Paid-up Share Capital	317,000,000 Baht
Head office:	24 Aekphol Bldg., Vibhavadi Rangsit Rd., Din Daeng, Din Daeng, Bangkok Telephone (66) 2692-0869 to 73

Property Business:	Sapsirikaset Co.,Ltd
Business Type:	Real estate investment
Registered Share Capital	311,000,000 Baht
Paid-up Share Capital	311,000,000 Baht
Head office:	24 Aekphol Bldg., Vibhavadi Rangsit Rd., Din Daeng, Din Daeng, Bangkok Telephone (66) 2692-0869 to 73

Asset management Business:	Kaset Thai Wiwat Co., Ltd.
Business Type:	Support company's asset management
Registered Share Capital	61,000,000 Baht
Paid-up Share Capital	61,000,000 Baht
Head office:	24 Aekphol Bldg., Vibhavadi Rangsit Rd., Din Daeng, Din Daeng, Bangkok Telephone (66) 2692-0869 to 73

Support and Development Business:	KTIS Research and Development Co., Ltd.
Business Type:	Support company's businesses and its growth aspiration.
Registered Share Capital	10,000,000 Baht
Paid-up Share Capital	10,000,000 Baht
Head office:	24 Aekphol Bldg., Vibhavadi Rangsit Rd., Din Daeng, Din Daeng, Bangkok Telephone (66) 2692-0869 to 73

6.3 Other References

SEC	Securities and Exchange Commission, Thailand 333/3 Vibhavadi Rangsit Road, Chomphon, Chatuchak, Bangkok 10900 , Thailand Telephone: (66) 2695-9999
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	Facimile : (66) 2695-9660 Email: info@sec.or.th website : www.sec.or.th
SET	The Stock Exchange of Thailand 93 Ratchadapisek Road., Dindaeng, Bangkok 10400, Thailand. Telephone: (66) 2009-9000 Facimile: (66) 2009-9991 SET Contact Center : (66) 2009-9999 Email: SETCallCenter@set.or.th webset : www.set.or.th
Registrar	Thailand Securities Depository Co., Ltd. 93 Ratchadapisek Road., Dindaeng, Bangkok 10400, Thailand. Telephone: (66) 2009-9000 Facimile: (66) 2009-9991 SET Contact Center : (66) 2009-9999 Email: SETContactCenter@set.or.th webset : www.set.or.th/tsd
Auditor	EY Office Limited 137-136/193Lake Ratchada Office Complex, 33 th Floor New Ratchadapisek Road, Klongtoei, Bangkok, 10110, Thailand Telephone: (66) 2264-0777, (66)2661-9190 Facimile: (66) 2264-0789-90 Email: ernstyoung.thailand@th.ey.com webset : www.ey.com
Legal Advisor	Kudan and Partners Co.,Ltd 973 Preseident Tower,14 th Floor, Unit 14C Ploenchit Road, Lumpini,Pathumwan,Bangkok 10330,Thailand Telephone: (66) 2656 0818 Facimile: (66) 2656 0819