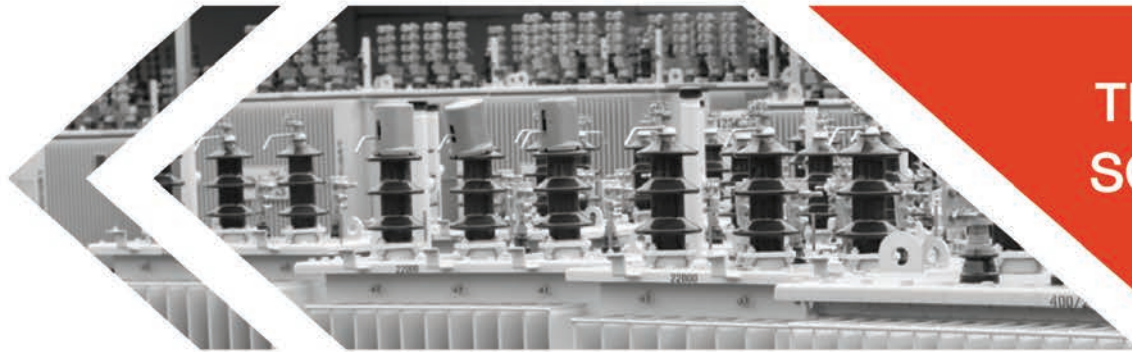




# ANNUAL REPORT



TRANSFORMER  
SOLAR SYSTEM  
SERVICE

2019



บริษัท เอกรัตน์วิศวกรรม จำกัด (มหาชน)  
Ekarat Engineering Public Company Limited



# Ekarat Transformer Solar System Service



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## Summary of Financial Information of Ekarat Engineering Public Company Limited and Subsidiary

		2017	2018	2019
<b>Statement of Profit or Loss and Other Comprehensive Income</b>				
Revenue from operation	(Million Baht)	1,684.45	1,464.30	1,629.93
Total revenue	(Million Baht)	1,732.27	1,492.21	1,649.94
Cost from operation	(Million Baht)	1,354.31	1,193.66	1,218.63
Gross Profit	(Million Baht)	330.14	270.64	411.31
Selling Expenses	(Million Baht)	125.94	119.41	143.79
Administrative Expenses	(Million Baht)	165.45	155.60	169.58
Finance Cost	(Million Baht)	36.55	22.13	21.56
Net Profit	(Million Baht)	44.30	(279.65)	82.88
<b>Statement of Financial Position</b>				
Total Assets	(Million Baht)	2,011.90	1,616.25	1,715.09
Total Liabilities	(Million Baht)	810.95	735.24	740.05
Total Shareholders' Equity	(Million Baht)	1,200.95	881.01	975.04
<b>Shares Capital</b>				
Ordinary Shares	(Million Shares)	1,343.29	1,343.29	1,343.29
Paid-up Share Capital	(Million Baht)	1,074.63	1,074.63	1,074.63
Par Value	(Baht)	0.80	0.80	0.80
Earnings (loss) Per Share	(Baht)	0.033	(0.208)	0.061
Book Value per Share	(Baht)	0.89	0.66	0.73
<b>Financial Ratio</b>				
Gross Profit Margin	(%)	19.60	18.48	25.23
Net Profit Margin	(%)	2.56	(18.74)	5.02
Return on Total Assets	(%)	4.20	(17.95)	6.44
Return on Equity	(%)	3.71	(26.86)	8.93
Total Debt to Equity	(times)	0.68	0.83	0.76





**Message  
from the Chairman**  
**Mr. Vichit Yamboonruang**  
Chairman of the Board

In 2019, The economic overview of the domestic was still in slowdown direction. The investment of private ownership of business that has continually decreased. It was the impact of trade war between the United States and China, including the instability of the political situation in the country. All of these factors have affected to the operation of Ekarat Engineering Public Company Limited about Distribution Transformer, which had the majority of its revenue from the private sector.

The renewable energy business continues to expand due to the increased production capacity from the distribution of electricity into commercial systems. Even though there are pressures due to lack of continuity and uncertainty of government support policies. The Company is likely to expand in international markets and grow business model to service installation / repair solar system, both on the ground (Solar Farm) and roof (Solar Rooftop).

Last year, Ekarat continued to operate according to the business plan for the year 2018-2020 by changing the format and working process to increase the competitiveness. Whether it manages to reduce production costs along with improving the quality of the product. Including planning to support any changes which may affect or relate to the Company's business such as the project to change the aerial electrical system to underground electricity line of the Metropolitan Electricity Authority, Power Sub-Station Expansion Project to increase electricity supply and support the increasing electricity



demand in Bangkok, Nonthaburi and Samut prakan areas, etc. It can be both opportunities and risks, so that the Company must prepare in advance to keep the business growing steadily and sustainably.

Moreover, for the overview of future operations, the demand for power transformers based on the expansion of the electricity infrastructure mainly. Which includes the installed production capacity, the expansion of the power transmission system and the growth of private investment in both industrial and household sectors. For 2020, the trend in domestic demand for electricity will continue to rise steadily as the growth of GDP. There are also the projects to promote the investment of the government in Thailand Power Development Plan (PDP 2018) to provide sufficient electricity for the country to meet the demand and Eastern Economic Corridor Plan (EEC), so it is an important opportunity to increase sales. The Company will maintain and develop its own strengths, both product development and expertise in the production of distribution transformers. As well as fame under the brand of the Company, customers believe in Ekarat that we are No.1 Distribution Transformers in the country for long time. The Company is commit to develop the potential of corporate management in various fields to be the foundation for sustainable development. Whether improving the production process by using new technology to reduce losses and increase product efficiency. Including the development capabilities of personnel continues.

On behalf of the Directors, Management Team and staff of the Company would like to express our sincere gratitude to all stakeholders, shareholders, customers, business partners and financial institutions for always kind support to the Company. We strive and work hard to develop the potential of the Company to move forward and make the sustainable yields. Always be the leader in the transformer business and emphasize on the social responsibility for the most benefit of all stakeholders.

On behalf of the Directors and Management Team  
Ekarat Engineering Public Company Limited



( Mr. Vichit Yamboonruang )  
Chairman of the Board





Ekarat Engineering Public Company Limited (the “Company”) was incorporated on June 24, 1981 with initial registered capital amount 4 Million baht by Noichai boon’s family as a major shareholder. The Company operates manufacturing and distribution (Distribution Transformer) under the trademark “EKARAT” which distributed in both domestic and international markets in South East Asia, South Asia, the Middle East and Australia, gained the trust in design and engineering until the sales always be the number one.

In 1994, the Company transformed into a public company. The Company increased its registered capital 302 Million baht in 1998, then in 2006 the Company was approved to be listed and started trading in the Stock Exchange of Thailand in the energy and utility sector under the name of the securities “ AKR” and increased the registered capital to 790 million baht with a total of common stock 790 million shares with a par value of 1 baht per share. Later in 2012, the Company reduced its registered capital by reducing the par value to par 0.80 baht which caused the registered and paid-up capital of the company to decrease to 632 million baht. Later in 2013, the Company increased the registered capital to 1,074.63 million baht by issuing new ordinary shares 503 million shares par value 0.80 baht which is making the Company with registered capital 1,074.63 million baht and divided into common stock 1,343.29 million shares until now.

In addition, the Company has the initiative to find new businesses which were consistent and able to support the transformer business therefore the importance and need for clean energy sources for electricity generation to be recognized by observing the potential and various factors in Thailand. The solar energy business, which was the solar power generation system producing the clean energy to be renewable and good for our environments. In 2004, the Company invested in establishing Ekarat Solar Company Limited to manufacture and supply solar cell (Solar Module), with manufacturing, assembly and distribution of solar panels at Chachoengsao Province with a capacity of 15 MW per year. Later in 2006, the Company set up a solar cell factory (Amata City) at Amata City Industrial Estate, Rayong Province with a capacity of 25 MW per year. In addition, the company also designs and installs electricity from solar energy and renewable energy and to be consultant on the energy conservation process, including the construction of power plants. In 2015, the company invested in





the establishment of Ekarat Energy Company Limited, which was operated in all energy businesses as a distributor, advising, bidding, investing in the energy business industry including various power plants both inside and outside the country.

In the present, the Company Headquarter is already operational in Bangkok. The transformer factory and the solar panel assembly is located at Chachoengsao Province. The solar cell factory is located in Rayong Province. In addition, there are 10 transformer service centers covering all over Thailand.

### **Policy and organization direction**

The Company is committed to produce the products that are standard and durable, be able to meet the needs of consumers in all aspects by running the business under the good corporate governance. Adhere to the principles of corporate governance with transparency, accountability, ethics and commitment to sustainable business development with the environment and social responsibility with regard to stakeholders both inside and outside the organization. Board of directors have a vision to review the operating strategy of the Company to be consistent with the company's objectives and goals.

#### **Vision**

“To be the leader in the transformer business of the ASEAN”

#### **Missions**

1. Always improve the products and the services to be the best and above the expectations of customers.
2. Conduct the business with good governance.
3. Develop personnel to obtain knowledge, ability, morality and good quality of life.

#### **Operating philosophy**

“Adhering to quality and integrity for customers”

#### **Corporate policy**

1. Produce products and services that meet the standards in order to satisfy customers
2. To maintain the quality of safety, occupational health, environmental and prevention of pollution caused by raw materials in the production process, various activities as well as the products and services of the organization



3. The organization is committed to promote the anti-corruption both from inside and outside the organization.
4. Comply with the laws and regulations which related to the business operation of the organization strictly
5. The employees are also responsible for using the energy and resources efficiently
6. Provide the support in allocating the resources which are needed to improve and solve problems of quality, safety, occupational health, environment and society to be adequate and appropriate.
7. Corporate policy has been disseminated to employees and stakeholders.
8. Review and improve the policies to be consistent with the current situation by taking into account the impact of employees and stakeholders

The Company operates under the values of “Maintaining product quality and being honest with customers” is a leader in distribution transformers. The Company targeting of business since 2018-2020.

#### **The business plan for the 3 years later (2018-2020)**

The economic outlook for 2018-2020 forecasts that the GDP will grow approximately 3.7-4.0% and after the election year 2019, which is pushing for increased investment. the trend of electric power usage, with an increase of 1,000 MW per year (data from the PDP Power Development Plan of Thailand 2018-2037) that makes the demand for distribution transformers averaging 5,000 MW per year while the ASEAN countries with a very high economic growth rate, the company has more opportunities to sell transformers to these countries.

Solar energy is a new alternative energy that never runs out and environmentally friendly. In addition, at present, the solar cell system has a lower price. In the future, the electricity cost tends to be increased and make various operators. There is an idea to save electricity by installing a solar power system on the roof. According to the Thailand Power Development Plan (PDP 2015 – 2037) plan to install a solar power plant with an average of 200 MW per year, including the government is considering the installation of free solar rooftop this year. That is a driving force for the solar market to grow rapidly. It is expected that in this period of 1-3 years, there will be more investment projects for installing solar power systems on the roof. Both in the private sector and government agencies causing the opportunity to sell solar panels, the installation of the solar power generation system on the roof for to add more.



The Company has prepared a business plan for 3 years (2018 – 2020). The three main policies are focus on profits, the progress of the organization and investment. In addition, the 4 main strategies are defined as follows.

### 1. Sales

Focus on increasing revenue and profits with plans to increase the revenues both the transformer and the service about 10% per year and plans to sell solar average about 400 million baht per year.

### 2. Investment

Focus on investment projects with private solar roof and the government power plant project according to the power development plan of Thailand PDP 2018 – 2036.

### 3. Production

Focus on reducing costs and increasing production efficiency by improving the design, production processes and adding machines. The business plan is a plan to reduce costs about 3-5% of the sale cost and increased production by 10% per year.

### 4. Human resources

Focus on the management to work efficiently. Use the principle of staff turnover and use machines to replace employees. Including organizational structure improvements, improving the work system of each unit to ensure consistency and maximum efficiency.

The Company will focus on increasing sales, reducing costs and increasing profits by focusing on the production of transformers to keep pace with customer demand and focus on the solar energy business by increasing market share. This will result in the company achieving the goals.

### Expansion and increase of business competitiveness

The Company plans to expand and increase the competitiveness of the business by

- Increasing the ability of personnel to provide advice on investing in solar power plants including services in various areas to respond to an investor.
- Increasing competitiveness by finding business partners that are technologically advanced continuously developing and training skills for employees. It is an important to maintain the leadership of the company.

In this regard, the Board of Directors' meeting on December 17, 2019 has considered reviewing the business plan and monitoring the Company's performance annually to adjust the operating strategy to suit the changing situation at all the times.



### Changes and developments in 2019

- The Company sold the ordinary shares of Ekarat Energy Company Limited (a subsidiary company) which the Company holds in the amount of 999,970 shares, with a par value of 10.00 baht per share, totaling 9,999,700 baht or 99.99% of the registered capital to a third party in the amount of 490,000 shares or 49.00% of the registered capital with the par value of 10.00 baht per share, in totaling 4,900,000 baht in order to support solar business. After that, the Company remaining shares in Ekarat Energy Co.,Ltd. in the amount of 509,970 shares, totaling 5,099,700 baht or 50.99% percent of the registered capital.
- The Company has invested and improved the production process for 2019
  - The production department procures a new strapping tool that can tighten the iron core and clamp of the wound core transformer because the existing equipment couldn't be used. It can also be used to fasten things in other departments such as the packaging department etc.
  - The production department has changed new wire crimping pliers size 5 mm. and 7 mm. in order to produce better performance because the original device does not have a certification standard.
  - The Quality Control Department has added another Dissolved Gas Analysis Instrument, worth approximately 3 Million Baht, to measure the amount of gas that has broken down and dissolved in transformer oil to support the maintenance service of transformers.
- The awards that the Company received in 2019
  - “Thai Green Label Scheme” a certification of quality and environmentally friendly products by the Thai Environment Institute. On December 18, 2019, the Company was certified transformer green label from an additional 9 items ranging from 315 kVA - 2000 kVA which shows that the Company's products through the evaluation and make sure that the standards of environmental compliance by using clean technology and have little environmental impact.
  - The Company received “vention and Solution of Drug Problems in Workplace Award” from Mr.Raphiphong Buppachat, the Governor of Chachoengsao Province. To be honor and praise the establishment that has good labor management system in Chachoengsao province.
  - The Company received “Clean Food Good Taste Award” in “Food and Safe Water Source Project for the year 2019” from Mr.Chatchai Chaikittiporn, Deputy Mayor, The municipality of Thasaarn Sub district, Chachoengsao province. Which is a guarantee of food and water quality in the cafeteria, clean and safe without various contaminants for the good health of the employees.



### Structure of shareholding for EKARAT ENGINEERING PCL. Group

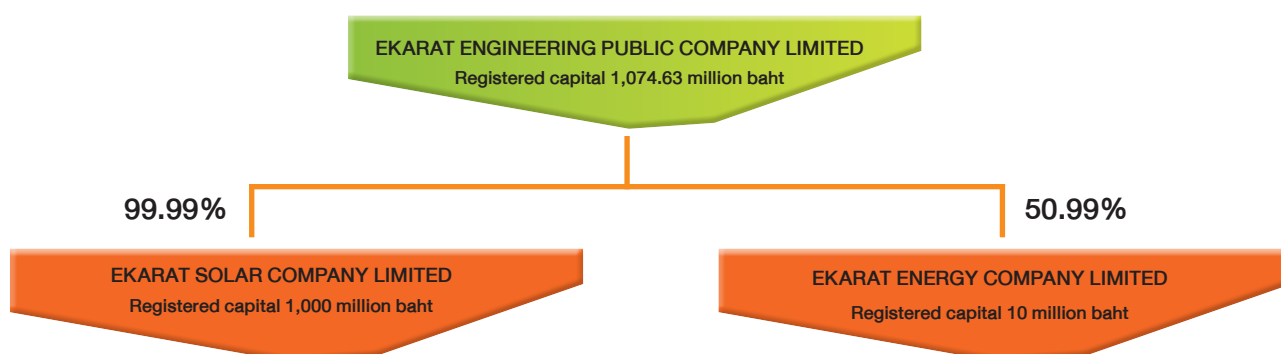
The Company is a manufacturer and distributor of transformers under the “EKARAT” trademark. Later, the Company expanded business from seeing the importance of renewable energy. Especially solar energy, which was not widespread in Thailand. Therefore established a subsidiary to operate solar cell production and distribution business, the details are as follows;

1. Ekarat Solar Co.,Ltd. has a registered capital 1,000 million baht. The Company holds 99.99% of shares. It was established on April 9, 2004 to operate solar cell and solar cell business. By the solar cell factory located at Amata City Industrial Estate, Rayong Province and the solar cell production plant is located at Bangpakong, Chachoengsao Province. The Board of Directors of the Company has 4 members, namely Mr. Wiwat Sangtian, Mr.Danucha Noichaiboon, Mr.Anan Santichewasatian and Mr.Daroonwat Noichaiboon, to manage the business to be in line with the established business plan.

At the present, asset of Ekarat Solar Co.,Ltd. have been sold to the company in order to continue using solar energy business.

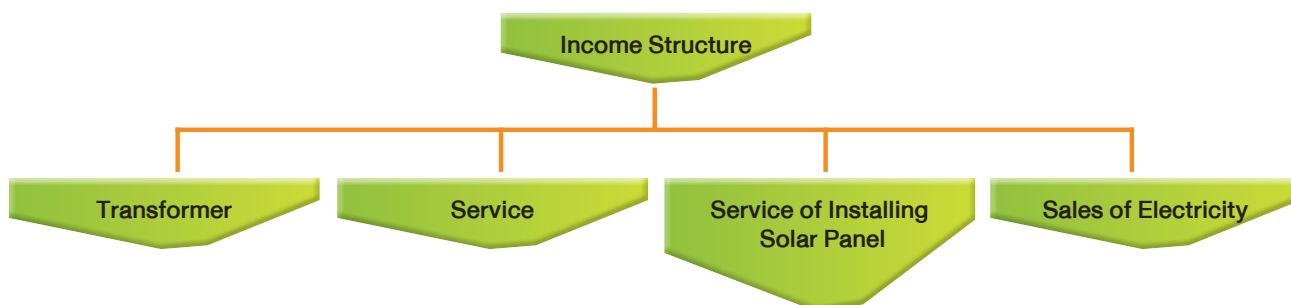
2. EKARAT ENERGY Co.,Ltd. has a registered capital 10 million baht.The Company holds 50.99% of shares.It was established on 22 April 2015 to operate solar energy business. By having 4 executive directors together with the company, namely, Mr.Danucha Noichaiboon, Mrs.Daranee Kantamara, Mr.Anan Santichewasatian and Ms.Urawee Kanokpruk.

As of December 31, 2019, the Company has a diagram of the shareholding structure of the Group as follows:





In 2019, the Company mainly generates income from transformer and services. Its income structure for fiscal years ended December 31, 2017, 2018 and 2019 was as follows:



(Unit : Million Baht)

	2017		2018		2019	
	Revenue	%	Revenue	%	Revenue	%
Revenue from sales of goods	1,400.17	81.07	1,114.08	74.66	1,182.48	71.66
Revenue from services and maintenance	193.61	12.82	197.84	13.26	210.31	12.75
Revenue from service of installing a solar panel	43.25	2.96	107.07	7.18	188.84	11.45
Revenue from sales of electricity current	47.42	1.31	45.31	3.04	48.31	2.93
Other incomes *	47.82	2.00	27.91	1.87	20.00	1.21
Total Revenues	1,732.27	100.00	1,492.21	100.00	1,649.94	100.00

\* Other incomes means other incomes except revenue from sales of goods and services such as Income from sales of scrap, interest, Gain from selling debt, Profit from sales of investments, etc.

### Description of Products and Services

From the structure of the group of companies which consists of Ekarat Engineering Public Company Limited, Ekarat Solar Company Limited and Ekarat Energy Company Limited. The product and service of the Company and subsidiaries can be divided into 3 types of Distribution Transformer, Service and Solar Energy with the detail as follows:

#### 1. Distribution Transformer

The quality product that be proud of the Company which has been popular, trustworthy on the top of customer under the trademark “Ekarat” which is a high quality transformer that

can be compared to various global standards including international standards (IEC), German standards (VDE & DIN), American standards (ANSI) and Japanese standards (JIS). There is also a distinctive feature is the low loss can withstand lightning voltage (Impulse Voltage) and shortcircuit current in maximum when compared to general transformer. Therefore has the least damage rate.

The Company is the first and only manufacturer that dares to protect the damage that will occur. We guarantee the quality of our transformer for 3 years and for all customers that are installed our transformer in Thailand.

The Company can design and manufacture all types of transformers according to international standards or according to customer's need IEC 60076, ANSI C57, VDE 0532 & DIN 4290, JIS, TIS 384-2543 (2000). The Company's transformer has the electric power between 1 kVA to 30,000 kVA, both 1-phase and 3-phase with a maximum voltage not over 36 kV, maximum production capacity of 4,600 units or 2,900 MVA per year.

Our product is Distribution Transformer which is used to convert the voltage from the high voltage supply line of the Metropolitan Electricity Authority (MEA) or the Provincial Electricity Authority (PEA) at the pressure level 33 kV, 22 kV or 11 kV to the voltage supply line low at a voltage of 230 V or 400 V to be sent to small power users such as houses. You can see it on electric pole on both sides of the road. Some business agencies have to obtain high voltage from MEA or PEA directly and install the distribution transformer by themselves to reduce voltage suitable for use. These business units include medium-sized industrial plants, hotels, hospitals, shopping centers, etc. Distribution transformers can be divided into 2 types as follows:

- **Oil Type Distribution Transformer**, using oil to circulate inside for cooling and acting as insulation. Most of oil distribution transformers will be installed outdoors and can be divided into 2 types of oil distribution transformers as follows:

- Open Type with Conservator, is an old type distribution transformer which has been used for a long time. It cooled by oil and have pipes to allow air to pass through. In addition, there is also a silica gel, a clear blue color to help absorb moisture and measure of the insulation value of transformer oil. It must always check the transformer oil every 6-12 months.

- Hermetically Sealed Transformers, this type of oil distribution transformer is a sealed transformer to prevent air entry. Therefore, it has the ability to prevent moisture very well without containing silica gel helps to filter moisture and can maintain the insulation condition of the transformer oil for a long time.

- **Dry Type Cast Resin, generally,** dry type resin distribution transformer is priced 2-3 times higher than oil distribution transformers. The power sizes ranging from 1-2,500 kVA. It cooling by air and use the resin and polyester as a coil coating to provide a good insulating property to prevent heat.

## 2.Service

The service work can be divided into 2 groups, namely the maintenance and repair of the distribution transformer system and the design, installation and maintenance of electrical systems. With details of each work group as follows;

- **The maintenance and repair of the distribution transformer**

Transformer is an important electrical device. Any problems caused by the failure of the transformer cannot supply electricity then will immediately affect the user especially in various industries. The production process must be stopped. Until it may cause a loss in the business system is a high value. Therefore, planning for maintenance of the transformer according to the time period and receiving services from those with direct expertise in addition to prolonging the service life. It also prevents severe damage that may occur. In addition, the Company also provides services covering repairs when problems occur. By focusing on providing services that cover all areas and fast, 24 hours a day. Will provide maintenance and repair services for all types of transformers and all voltage systems by testing and analyzing the quality of oil transformers (DGA), filters and oil transformers check and fix leaks change spare parts, check service, repair and overhaul, as well as fix transformer on site by a team of engineers and technicians with experience in maintenance and repair services for transformers for more than 30 years with equipment and modern testing machines including being able to give advice and improve electrical systems. In addition, during the maintenance and repair of transformers. The Company has provided an alternate distribution transformer from small to large, more than 100 units to support customers. The customers can borrow, use the distribution transformer until the distribution transformer that the customer ordered, finished production, or completed the repair, which will have a period of production or repair not more than 3 months by the time of production or repair of the transformer. The distribution





depends on the size of the distribution transformer. In addition, customers can rent transformers for the Company's distribution system if customers do not want to buy distribution transformers with a year-to-year lease agreement.

- **Design, Installation and Maintenance of electrical systems.**

Design, Installation and Maintenance of electrical systems. There are products and services as follows.

**(1) Maintenance for On Load Tap Changer (parts of the transformer):** The Company's personnel have been trained by the On Load Tap Changer's manufacturer. Therefore, they can give advices on the conditional based maintenance, preventive maintenance, change parts, which can provide distribution transformers for all brands and all electrical systems.

**(2) Maintenance services and industrial electrical motor repair:** The Company provides maintenance and repair services for industrial electrical motors in accordance with ISO 9001: 2000. Customers can request free charges in the first operating the service team will check the solution at the factory including installation, test run and overhaul. In addition, the alternating current (AC) industrial electrical motor which have voltage ranges during 380 volts to 6,600 volts are also provided to repair DC motors (Direct Current: DC) voltage range from 110 volts to 1,200 volts including changing the rotor bar, spraying the shaft, changing the shaft, connecting the lid or hitting the Laser Alignment Renew Commutator and slip-ring with 1 year warranty.

**(3) Electrical system maintenance:** The Company provides electrical system maintenance services to enhance the efficiency of the power supply system with the continuous and consistent importance of the preventive maintenance for the control cabinet due to the dirty electrical equipment such as dust, powder, soot, smoke and other including the cause of the electrical equipment in the power distribution cabinet, also the release of heat until the heat increases at the electrical connection point or the connection point between electrical equipment which caused by the heat accumulated when using. In case of, the metal expands and shrink regularly, damage the electrical equipment, result in the stop supplying electricity for emergency repairs. Therefore, equipment should be maintained with cleaning and check the fastening on electrical equipment firmly at least once a year, which can be maintained in the cycle of annual maintenance or maintenance when encountering hot spots by checking the thermo vision.

**(4) Generator maintenance and repair services:** The Company sells spare parts, alternator engines, generators and standard installation of generator. The Company also has provided a service

to update the generator set and ATS to be an automatic system, parallel generator (Synchronize Generator), control cabinet and various equipment Including repair, maintenance (Preventive Maintenance), service charge list or annual service contract. In addition, the Company is able to provide the repair or overhaul services for generator's customer by skilled technicians and modern equipment.

**(5) Design and installation of industrial electrical systems,** both medium and low voltage systems: For power users who need a comprehensive service from the initial construction to the power supply by designing skills and supervising with professional engineer.

**(6) Design and construction of substation (Substation):** The Company is the design recipient, installation and construction of 69-115 kV power substation for large power users to reduce the cost of electricity about 15-20 percent and will also make the power system efficiency.

**(7) Management system consulting:** The Company provides consulting services, ISO 9000 quality management system, ISO 14000 environmental management system, occupational health and safety management system OHSAS / TIS 18000 System for quality standards, testing laboratories and calibration of ISO / IEC 17025 and activity systems, suggestions, 5S activities, QCC HACCP etc. professional consultants who work together to create systems that are in line with the business requirements and comply with standards.

**(8) Calibration laboratory services:** The Company provides calibration services for electrical measuring instruments and dimensional calibration with a calibration laboratory that has been certified by the ISO / IEC 17025 standard laboratory testing and calibration system from the Office of Industrial Standards, Ministry of Industry. In addition, the Company gets ready for service to respond the customers with the Mobile Service Test which can test the transformer without the electricity. It can be display the test results at the onsite and send information through the internet immediately.

The Company has established service and sales centers in every region which is already have the equipment, transformers distribution reserve and skilled engineers who have experience in controlling each center provide all the time. There are 10 sales and service centers, as follows:



Service Center	Service Area
1. Bangkok Center	3 Provinces : Bangkok Samutprakarn Nontaburi
2. Chachoengsao Center	7 Provinces : Chonburi Chachoengsao Rayong Chanthaburi Prachinburi Sakaeo Trat
3. Ayutthaya Center	12 Provinces : Ayutthaya Pathumthani Angthong Nakhonnayok Saraburi Lopburi Singburi Chainat Uthaithani Nakhonsawan Phetchabol Phichit
4. Nakhonpathom Center	8 Provinces : Nakhonpathom Kanchanaburi Phetchaburi Prachuapkhirikhan Samutsakhon Samutsongkhram Ratchaburi Suphanburi
5. Konkaen Center	9 Provinces : Konkaen Udonthani Kalasin Loei Nakhonpanom Mukdahan Nongkhai Nongbualamphu Sakonnakhon
6. Nakhonratchasima Center	10 Provinces : Nakhonratchasima Chaiyaphum Buriram Roiet Surin Ubonratchatani Srisakat Amnatcharoen Mahasarakham Yasothon
7. Chiangmai Center	13 Provinces : Chiangmai Chiangrai Maehongson Payao Lamphun Lampang Nan Phrae Uttaradit Tak Sukhothai Kamphaengphet Phitsanulok
8. Songkhla Center	7 Provinces : Songkhla Trang Pattani Narathiwat Yala Satun Phattalung
9. Suratthani Center	4 Provinces : Suratthani Chumphon Ranong Nakhonsithummarat
10. Phuket Center	3 Provinces : Phuket Krabi Phangnga

### 3.Solar Farm

In 2010, the Company has established Solar Farm for generating electricity at Srimahapho District, Prachinburi Province, which has power capacity 0.627 Megawatt per year and selling to Provincial Electricity Authority (PEA) and received the adder supporting from PEA at rate 8 Baht per year in 10 years.



Then, in 2016 the Company has expanded the solar power plant project phase 2 at Prachinburi which located at the same location as phase 1 with capacity 0.627 megawatts per year. Total production capacity 1.26 megawatts per year



In 2016, the Company got a job in the solar power generation project on the ground for government agencies and agricultural cooperatives. The Company agrees with the requirements of Bangbuathong agricultural cooperatives and the Company was all project developers from investment, design, procurement and construction of projects or was called EPC with the objective of producing, sending and selling electrical energy to the Metropolitan Electricity Authority. The purchase rate of electricity is not more than 5.66 baht per unit, fixed throughout the contract period of 25 years, located at Laharn Sub-district, Bang Bua Thong District, Nonthaburi Province with a capacity 3.35 megawatts per year.





#### 4. Solar energy business

The Company is a manufacturer and distributor of Solar PV Module. We are a provider of design and installation of solar power systems and other renewable and consulting on energy conservation. The Company's solar panels certified by TIS 1843-2553 or equivalent to the international standard IEC 61215 and TIS 2580 or equivalent to the international standard IEC 61730. Solar cells, which generated the power from 5 watts to 340 watts, are from the Thai Industrial Standards Institute since September 28, 2017.

Solar Energy work can be divided according to the detail of products and services as follows:

- **Solar Cell**

The Company has a full capacity at 24 megawatts per year. In 2018, the Company produced only a small amount of solar cells at the solar cell factory at Amata City Industrial Estate, Rayong Province. That causes accounting expenses of machinery and equipment or impairment of assets. The Company will consider appropriate solutions by taking into account the impact on the Company and stakeholders are important.

- **Solar PV Module**

The Company manufactures and sells crystalline silicon solar modules from the customer orders (Made to Order). The Company can produce solar panels from 5 watts to 340 watts depending on the demand of customer. The Company's solar cell can be effective in converting solar energy into electrical energy which is approximately 18 percent of all solar energy received. Solar cell has 20-25 year lifetime.

#### **Marketing and Competition**

##### Marketing Policy of Product and Service

##### Competition Strategy

#### **1. Distribution Transformer**

The Company focuses on selling high quality distribution transformer. The factors supporting the production of quality transformers are below;

- Selection of quality materials such as silicon steel, coil, transformer oil, insulating paper etc. The materials purchased from domestic such as copper wire, transformer oil, etc. and foreign countries such as silicon steel Coil, cast resin etc.
- Using the modern machinery such as the folding fin, which is used to fold the long steel sheet

into the fins to make the heat sink fins of the transformer wall must have the least connection. In order to prevent leakage of the tank and foil winding, which is a modern technology for producing low voltage coils to provide a balanced and efficient distribution of electricity resistance to the short circuit and maximum power surge which does not damage the coil.

- The Company has received technology from leading companies around the world such as Starkstrom-Geratebau GmbH, Germany, Westing House Co., Ltd., USA and Elco Co., Ltd., Israel, for example, to receive the technology of transformer distribution system such as sealed oil type and dry resin type from Starkstrom-Geratebau GmbH, Germany in the production and process. The Company realized the strengths and weaknesses of each technology in order to be able to use in the country appropriately.

- Executives and personnel have experienced in the distribution transformer system for a long time. They have been trained from leading companies around the world of transformer manufacturing technologies such as Westing House Co.,Ltd., USA, Elco Co.,Ltd., Israel Starkstrom-Geratebau GmbH, Germany, etc.

The production process of the distribution transformer system using modern machines and quality personnel. The Company's products have received a certificate of electrical quality testing in the resistance to short circuits from the KEMA Institute in Netherlands and CESI in Italy. In addition to the Company was the first manufacturers' transformer in the Thailand which has received ISO 9001 and ISO 14001 environmental management system. Being reliable in quality and being accepted from the public and private sectors both inside and outside the country.

## 2. Service

Transformer maintenance, repair services and electrical system maintenance of the Company are very important task because it prevents the severe damage from the accidents. The Company will focus on using 10 service centers nationwide. In providing customer service for inspection, maintenance, repair services and other electrical systems throughout 24 hours. So that, the Company able to take care customers almost every provinces and creating confidence for the customers that will receive professional services by checking, maintenance and repair completely and quickly

## 3. Solar Energy

The Company focuses on the policy to produce quality solar panels with modern technology. The solar panels will be tested each panel prior to distribution to the customer to ensure the quality standards solar panels such as TIS 1843-2010 or equivalent to IEC 61215 and TIS 2580 or equivalent to IEC 61730 from the Thai Industrial Standards Institute.

## Target group

### 1. Distribution transformer

The Oil Type Distribution Transformer will focus on enterprises customers and customers in various industries. The state enterprise customers such as Metropolitan Electricity Authority and Provincial Electricity Authority. The Company will always participate in tenders with both state enterprises which the Company can win the tender regularly. For customers in various industries, the focus will be on high-growth industries, which are important markets that use a large number of distribution transformers, including the automotive industry, petrochemical industry, construction material industry, communication industry, real estate industry, food industry agro-industry, textile industry hotel and tourism industry, etc. The sales to private customers will focus on sales through the following groups of customers:

- Major contractors: The Company makes a good relationship with related persons from engineers, procurement department to the highest level of management continuously to support the technical information and create activities between the management of both sides to closely monitor the work. There are weekly project meetings to summarize the progress until closing the sales.
- Medium to small contractors: The Company makes a good relationship with the top management to support information and to help other. Also the area for sales staff is clearly divided.
- The project owner: The Company provides the information about the project for accessing to the project owner. The Company will present to the project owner about the importance of selecting to use the transformer distribution with high-quality. The importance of long-assurance and realize to the transformer damages when using the transformer distribution with low-quality. The project owner will realize the quality and contractor to select the high quality product.

The target and marketing plan of dry type cast resin transformer distribution, focuses on the target groups as follows:

- High-rise building: The Company collects the entire system data from various departments to present the product into the sales channel and closely follow the results until the sale processes ended.
- The contractor group has to participate in the bidding for the electrical system in modification of the Metropolitan Electricity Authority: Metropolitan Electricity Authority has a policy to change the electrical building systems which it will change the oil distribution transformer into the dry type cast resin transformer distribution. Therefore, the Company follows the news of the tender for electrical system modification of the Metropolitan Electricity Authority and offering prices for the dry-type

distribution transformers to contractors who participate in the bidding by coordinating with contractors who participated in the bidding, both in the design process, bidding, testing and inspection of working.

- The group have problems with the explosion of distribution transformers and replacement purchases: The Company prepares a plan to support the explosion of the distribution system transformer with competitors which will be continued every month consist of responsible accounting for buildings throughout the country and present to the customer that If the distribution transformer explodes. How to contact to alleviate the damage quickly which will lead to the sale of new distribution transformer systems.

- New building group: The Company focuses on providing technical information to designers for set technical data from the beginning of the project and closely follow until the project owner can procure the contractor including follow up throughout the sale processes ended.

The major distribution transformer customers in the country, most of them are private sector that are famous companies and contractors. For the government agencies are Provincial Electricity Authority and Metropolitan Electricity Authority. The Company's customers in 2019 are domestic private customers, Government and state enterprises, international customers equal to 776.09 276.77 and 102.02 Million Baht or 67.20% 23.96 % และ 8.83% respectively.

## 2. Service

Target group of service work are follows:

- The private customers who are already using distribution transformers: The Company has guaranteed the using of distribution transformer for 10 years. When the insurance period expires, most customers still use the service continued. For the maintenance of other brands transformers, the Company uses the advantage from service and sales center which has nationwide service area, to offer the service for maintenance and repair transformers to customers. The Company is able to offer electrical system services together with the sale of distribution transformers, maintenance and repair services for distribution transformers such as MDB (Main Distribution Board), high-pressure electrical contractor work etc.

- Industrial factories that require safety certifications in electrical systems within the factory: Due to government regulations, the factory must have a certificate of safety in the electrical system within the factory. Therefore, it is an opportunity to expand the sales electrical inspection services, energy conservation consulting work for both the control building and the control factory.



- Large industrial factory: The Company has focused on sales, service, maintenance and repair of electrical systems used in large industrial plants.

- The government sector, will participate in the bidding for sub-station construction with government agencies every year. Examples of projects for the construction of substation that the Company has got are Wihandaeng Power Station, Nongyai Power Station and Saiyok Power Station. The Company expects to participate in the bidding for substation construction in the following years.

### 3. Solar energy

The Company have both domestic and international customers which were group of customers who operate solar panel business, solar panel installation services and government agencies that are supported by government policies. Including private agencies, who interested investment into the solar rooftop installation for reducing the electricity costs. Also receive benefits from the BOI promotion, which can deduct 3 years corporate income tax at 50% the investment together with the exemption of import duty on machinery.

#### Price policy

##### 1. Distribution transformer

In determining for the price of the distribution transformer products, the Company determines the price at a level similar to the competitors by relying on product quality, product design and after-sales service as a selling point. Pricing uses the raw material cost basis plus production cost, sales and management cost and the desired profit margin. The desired profit margin depends on many factors such as customer relations, order quantity, the production capacity, etc.

##### 2. Service work

In determining for the service price, the Company determines the price at the appropriate level, which will have a price close to the price of the competitor. The Company focuses on quality and speed of service to maintain good relationships with long-term customers which will make the Company can offer sales services and other products.

##### 3. Solar energy

In determining for the solar panels price, the Company determines the price at the price level that is close to the competitors also using the costing criteria production costs plus other costs and the desired profit margin. However, the solar panel prices will vary according to the price of raw materials is solar cell because it is very important and high value for solar panel's production.



## Distribution channels

### 1. Distribution transformer

Distribution channels for transformers can be divided into 2 markets, namely domestic and international markets.

Domestic markets can be classified into 2 distribution channels are follows.

- **Direct sales**, which will have local sales and service centers all 10 centers as an important sales channel. It can be classified customers in 2 groups is government sector customers: Metropolitan Electricity Authority, Provincial Electricity Authority and other government agencies which will be sold through direct bidding. Private clients sector customers: industrial factories, hotels, hospitals, office buildings or large residences, etc. to sell for customers who are expanding business or owning projects with the demand of electricity in the operation.

- **Sales through intermediaries**, this group of customers are various contractors which is the bidder of the project both from the government and the private sector, then orders from the company again. At present, the proportion of distribution transformers in the domestic distribution system in 2019 is about 73.71% of private customers and 26.29% of the government sector customers. In 2017-2019, the proportion of distribution transformers by customer type can be shown according to the following table.

(Unit: Million baht)

Customer Type/Year	2017		2018		2019	
	Revenue	%	Revenue	%	Revenue	%
The private sector	850.88	69.68	810.80	90.73	776.09	73.71
The government & state enterprise	370.25	30.32	82.82	9.27	276.77	26.29
Total	1,221.13	100.00	893.62	100.00	1,052.86	100.00

International market, the Company has both sales through dealers and direct sales. The international market is considered as a target for future market expansion. Especially, customers in the Southeast Asian and the Middle East which has low consumption per capita statistics along with the consumption of the distribution transformer system still requires import from abroad. In addition, there are many foreign investors who are interesting in expanding the investment base increasingly,



so the trends that are demanded the electricity and the distributed transformers are definitely increased.

However, the venue from selling the electrical distributed transformers in domestic market is 91.17% of the venue from total selling the distributed transformers. The venue from selling the distributed transformers in international markets is 8.83% of the total venues, yet we speculate the venue from the international markets will be increased by focusing on the international markets more than ever because the customers recognize in our distributed transformers. The venue from selling the distributed transformers from 2017-2019 can be divided as table below:

Market	2017		2018		2019	
	Revenue	%	Revenue	%	Revenue	%
Domestic	1,221.13	90.13	893.62	86.30	1,052.86	91.17
International	133.65	9.87	141.82	13.70	102.02	8.83
Total	1,354.78	100.00	1,035.44	100.00	1,154.88	100.00

Table of the value that customers in each country order the company's transformers in 2019

Year	Country	Value (Million Baht)	% of Selling
2019	Laos	54.28	4.70
	Malaysia	23.82	2.06
	Brunei	18.93	1.64
	Myanmar	2.23	0.19
	Australia	1.97	0.17
	Philippines	0.61	0.05
	Cambodia	0.18	0.02



Year	Country	Value (Million Baht)	% of Selling
2018	Laos	76.36	7.37
	Malaysia	31.59	3.05
	Brunei	33.63	3.25
	Hongkong	0.25	0.02
2017	Laos	79.94	8.12
	Malaysia	25.39	2.58
	Brunei	11.83	1.20
	Myanmar	5.40	0.55
	Konggo	4.34	0.44
	Cambodia	2.46	0.25
	Singapore	1.86	0.19
	Hongkong	1.30	0.13
	Philippines	1.12	0.11

## 2. Service

In 2019, the proportion of the Company's services revenue, most of them are private customers. The Company offers sales services and sell distribution transformers at the same time. In addition, the Company has 10 service and sales centers which be the important force in the sale of services because there are many opportunities to meet with customers, includes customers who are technicians provide maintenance for transformers and will also offer sales services simultaneously or in cases when customers have problems with the distribution transformer, they will contact the service center first and will get convenient and faster in providing services. The Company has provided maintenance and repair services for all brands of transformers.

## 3. Solar energy

Currently, the proportion of the installation of the solar power generation system of the Company in 2019 was all private customers. Distribution channels, the Company had a marketing team to meet customers to regularly sell products and to update news for participate in various projects

about the solar power of government agencies and private. That has been supported by government policies such as solar power generation projects or the project of installing solar roof for the benefit of electricity production with their own business.

### Industry Conditions and Competition

#### 1. Transformer

Electricity is a fundamental factor for economic development and the expansion of the demand for electricity will be consistent with the expansion of gross domestic product. It showed that the transformer industry in domestic are likely to continue growth in line with the country's economic conditions.

The international market, the customers of the Company are ASEAN countries such as Laos, Malaysia, Brunei, etc. and South Asian countries such as India, Nepal etc. and countries in Australia continent. It showed that each country has a growth rate of gross domestic product (GDP) is higher, which is consistent with the growth rate of electrical energy demand. When the economy expands and need for more electricity, it is necessary to install more transformers in order to have adequate uses.

#### 2. Service

Transformer maintenance and repair service industry, which is still a steady growth trend as sales of transformers which are increasing that make the service industry tend to grow continuously. As well as the service industry can grow from electrical system services such as safety certification in the electrical system of the factory, maintenance services and electrical systems used in large industrial plants.

#### 3. Solar energy

The shortage of fossil energy that will occur in the future. Environmental and disaster problems from global warming with the solar cell technology that has been developed to be efficient which caused the price to drop. It is a driving force for investors to become more interested in this type of energy production business. Expected that the demand for energy from solar PV for the next 5 years of leading countries such as China, Japan and America will account for 80% of the global demand which will drive the expansion of production. Therefore, solar cells are a business that is likely with a growing trend and new industry with very high value.

The electricity generation from solar energy in Thailand that is high growing too. From the statistics



of the Department of Alternative Energy Development and Efficiency, it showed that the performance of solar energy has increased continuously every year.

## Competition

### 1. Transformer

At present, there are many transformer manufacturers in the market which caused resulting in higher competition than the past, but the Company still has the highest number of distribution transformer sales average from 2017-2019 and it has an average market share of transformer distribution system about 20% which shows that the company is a leader of the distribution transformer industry in Thailand.

For the competition in the international market, the Company has established partnerships with foreign operators in order to expand the production base, expand customer base and exchange various technologies.

### 2. Service

The Company is a leader in the maintenance and repair service's the transformer after sales because the Company have the advantages from being a major producer and there are 10 service centers in the country, spread throughout the region by receive notification 24 hours. That makes the competition in the service business still not severe.

### 3. Solar energy

At present, the solar energy industry in the country is quite high competitive because entrepreneurs are increasingly interested in this industry. However, the Company saw the opportunity to sell solar panels into the foreign markets with relatively high growth rates. Especially, neighbor countries such as Myanmar, Laos and Vietnam etc.

For the solar power plant business of the Company is the distribution of electricity to government agencies such as the Metropolitan Electricity Authority and the Provincial Electricity Authority. Therefore, it is without business competition.

## Procurement of products and services

### 1. Transformer

The Company produces distribution transformers that have power at 1-30,000 kV amperes (kVA) and have a maximum voltage of no more than 36 kV under the trademark "Ekarat". There are steel core assemblies, coils and internal distribution transformer equipment, located at 190 Moo 6, Tha



Sa-An Subdistrict, Bang Pakong District, Chachoengsao Province. The metal body factory is located at 260 Moo 6, Bangpakong-Chachoengsao Road, Tha Sa-an Subdistrict, Bang Pakong District, Chachoengsao Province. The Company has the production capacity and capacity load during 2017-2019 as shown below;

Production capacity	2017	2018	2019
Production capacity (kVA.)*	2,850,000	2,850,000	2,900,000
Volume (kVA.)	2,608,514	2,054,277	1,999,340
Capacity load (%)	91.53	72.08	68.94

\* Production capacity is calculated from 1 full time work (8 hours) and additional 1-2 hours of overtime work per day.

The raw materials used in the production of distribution transformers are Copper wire, Silicon steel, Transformer oil, Steel of tank body, Copper tail plate, Coil Cast Resin and other equipment, there are both purchasing from domestic and overseas with a similar proportion. The raw materials ordered from domestic are Transformer oil, Steel of tank body, Copper wire, Enameled copper wire, etc. The raw materials imported from foreign countries are Silicon, Copper coil, Coil Cast Resin which can show the details of the order value of raw materials that can be classified according to the source of purchase as shown in the table below:

(Unit : MillionBaht)

Source of raw materials	2017		2018		2019	
	Value	%	Value	%	Value	%
Domestic	256.51	48.9	204.00	38.58	454.10	54.96
Foreign	267.86	51.1	324.77	61.42	372.10	45.04
Total	524.37	100.00	528.76	100.00	826.20	100.00

## 2. Service

In terms of service, the Company has prepared more than 100 distribution transformers for customers to borrow or rent and had spare parts for maintenance and repair of distribution transformers to serve customers in the case of their transformers accident or maintenance schedules. The Company had 10 service centers and sales throughout the country to prepare for services to customers. Including,

there are the calibration of electrical measurement and dimension calibration services by testing and calibration laboratories that have received ISO / IEC 17025 standards from the Office of Industrial Standards Ministry of Industry which is ready to serve customers. Our personnel have highly knowledgeable and experienced, they have to pass the training course on all service standards before the actual operation.

### 3. Solar energy

- Solar Cell

The important raw material for the production of solar cell is wafer which don't produced in Thailand. Therefore, the Company have to import wafers from foreign manufacturers to be used to produce solar panels. After that, it was sent to sell in a foreign country. Another part is used to produce solar panels for distribution in domestic

- Solar PV Module

The Company manufactures and sells crystalline silicon solar modules from the customer orders (Made to Order). The Company has selected quality raw materials both in domestic and abroad which has reasonable price for quality solar panel production and had competitive price in the market.

From the production of both solar cells and solar panels, the company had a CO certificates for export to countries in Europe and America.

- Solar Farm

Solar power plants of the Company totally were 2 locations and located at Si MahaPho District, Prachinburi Province and Bang Bua Thong District, Nonthaburi Province. The Company was all project developers from investment, design, procurement and construction. The objective was to produce, send and sell electricity to the Provincial Electricity Authority and the Metropolitan Electricity Authority.

The Company was the manufacturer of some parts project, including solar panels and transformers as well as purchasing the other equipment for the development of the entire project. Therefore, the product warranty form is the direct guarantee from the supplier of each type of equipment directly to the Company. In the event that the solar panel or transformer is damaged, the Company can replace the solar panel or the problem with the transformer immediately because the company is the manufacturer of those devices.

### Environmental impact

The Company operates the business of manufacturing transformers distribution systems and solar panels. In the production process, some steps are required painting, piecework cleaning that occurs



the color spray that occurs from the production process that do not be harmful to workers and neighboring communities. The Company has changed to use raw materials that do not contain toxic chemicals on the environment such as below:

- Using of watercolors to reduce environmental impacts by using water as an ingredient instead of oil paint that requires thinner as a solvent.
- Using of environmentally friendly oil stain remover and using hand washing powder to wash oil stains in maintenance work.
- Using of raw materials that do not contain heavy metals which can be left behind and destroy the environment.

The Company provides training and recommend preventive methods about the operations that may cause accidents including an emergency action plan which have a practicing at least 2 times per year. In addition, the Company has also set up the Committee of Occupational Safety Health and Working Environment which is responsible to prevent various impacts. The Company has been certified with ISO 14001 environmental management system standard which shows the Company had a good environmental management system and international standards.

In addition, the Company has also used various systems to control work and the production quality such as ISO 9001: 2000 system, the health management system and TIS 18001 for safety and reduce the risk of accidents during operations. The Company had operated since 1981 and had no history of disputes or lawsuits from communities nearby the factory or being fined by government agencies related with the environment.

### Outstanding Works

The Company had distribution transformers that has been ordered and preparing to deliver for customers but not yet delivered on December 31, 2019 in totally 799 units, the amount was 219.71 Million Baht.

For Solar energy, the Company had the service of installing a solar panel that have not been delivered to the customer as of December 31, 2019 in totally 4.29 MW, the amount was 249.63 Million Baht.

The Company is aware of the important of risk management of the organization by forming the Risk Management Committee to evaluate the potential risk and assign the strategies to conform to the objectives and goals of the Company. However, the Company had the Risk Committee to prevent the risk, but in 2019 the Company and its subsidiary still had the risk factors as shown below:

### 1. Distribution Transformer Business Risk

#### 1.1 Risk related to relying on specific Distribution Transformer's customer

Most of the Company's revenue came from the sale of Distribution Transformer. In 2017, 2018, and 2019, the Company had the sale revenue from sales of Distribution Transformer to the Metropolitan Electric Authority and the Provincial Electric Authority in the amounted 370.24 Million Baht, 82.82 Million Baht, and 276.76 Million Baht or 23.77%, 6.64%, and 20.06%, respectively, of the transformer revenue and Services revenue. However, considering in the total revenue of every customer sector in 2019 is 1,629.93 Million Baht increased by 165.63 Million Baht compared to year 2018 or increased 11.31 % of the transformer revenue and Services revenue. The proportion of the revenue in government sector in 2018 is 82.82 Million Baht and in 2019 was 276.76 Million Baht increased by 193.94 Million Baht or increased by 234.17%.

Moreover, the revenue from government sector in 2019 increased from partially remaining budgets in 2018 and the budget in 2019. The approach to reduce the risk of dependence on specific distribution transformer's customer by continue to seek new clients for increasing revenue.

#### 1.2 Risk related to the unstable of Distribution Transformer's raw materials price

In 2019, the Company had the major revenue from the sale of Distribution Transformer. In the production of Distribution Transformer used the local raw material and imported material likes Silicon steel, Copper wire, Transformer oil, etc. Therefore, the Company may affect from the unstable of the material price in the global market. For example, the average price of Silicon steel procured in 2019 compared to 2018 decreased by 2.64%, the average price of Copper wire procured in 2019 compared to 2018 decreased by 2.65%, and the average price of Transformer oil procured in 2019 compared to 2018 decreased by 3.17% from the factor aforesaid wasn't affected to the total cost of production of transformers. The Company has improved the development so that the costs are continuously reduced. However, the Company planed and stocked the materials for the production for 3 months.



### 1.3 Risk related to the quality of the Distribution Transformer's raw material

Distribution Transformer is a very important part in the electricity system. If the transformer malfunctions the effect will cause the damage of the industry and resident. Therefore, we need to select the raw material likes Silicon steel, Copper wire, Copper plate, Insulator paper, transformer oil, and transformer tank, in the production of high quality distribution transformer. To avoid the risk from low quality of raw material, the Company has the procedure follow ISO 9001 standard which comprise with design, assign the characteristic of raw materials, monitoring and testing. Determine the properties of raw materials used in the production of transformers with examination, testing, selection of suppliers, raw material inspection to ensure that the raw materials were ordered by the Company, according to the specified properties with standard quality

### 1.4 Risk related to relying on skilled staffs to produce the Distribution Transformer

In 2019, 84.90% of the revenue from sale of Distribution Transformer and Services came from the sale of Distribution Transformer which was rely on the experience staffs to produce and develop the quality of Distribution Transformer to be accepted. Therefore, relying on the skilled staffs in specific field of work is important to producing Distribution Transformer and operation of the Company. Anyway, with the good operation system awarded ISO 9001, ISO standard has the operating manual, training, and operation process. In case of the company recruit a new staff, the standard will help the new comer to understand the process of work which will make a new staff can operate soon. In additional, the company has the training program to develop the staff continuously. The Company also awarded the benefit or has the policy to stimulate the staffs. For example, Provident Fund, Bonuses, Loyalty awards, this will reduce the turn over rate of the staffs.

## 2. Solar Energy Business Risk

Risk related to the government power purchasing policy.

In 2019, the government has a policy and promotion of the production electricity with many solar projects from the previous year, both Solar Roof and Solar Farm as follows:

### 2.1 Risk related Anti-Dumping Law.

Risk related Anti-Dumping Law's the Europe Union and the United States about Solar Cell from China. Chinese entrepreneurs have set up factories to produce cells and solar cells in Thailand more than past, in order to avoid that law and to get the Certificate of Origin. That make higher competition in Solar Cell. The Company had to find ways to reduce the operating cost to be competitive.

## 2.2 Risk from the government's energy purchase.

2.2.1 In January 2015, the Office of Investment Promotion (BOI) announced the benefits for general entrepreneurs who have installed the Solar Rooftop system for internal use. Therefore, which was another channel that the Company can join to work.

## 2.3 Power Development Plan of Thailand (PDP)

From the Power Development Plan since 2018-2037 to increase the use of solar energy for about 10,000 MW (500 MW per year), divided by the government sector ratio of about 400 MW / year. The public sector is about 100 MW / year. That is a great opportunity for the Company to expand the customer base.

## 3. Financial Risk

### 3.1 Risk from interest rate fluctuations

The Company has the risk due to the uncertainty of the interest rate in the market due to the Company has the bank deposit and credit line in a commercial bank. The bank code the interest rate according to the nature and purpose of the amount used as follows:

1. Facilities limit, which the rate of MLR per year.
2. L/C and/or T/R and/or short term loan or L/G, if the loan is Baht currency the rate is MOR per year; and if the loan is foreign currency the rate might be SIBOR or LIBOR from the highest rate which the bank offer or determine by the bank in each time in the day before the beginning of interest terms on each term 2 working days.

Therefore, the Company might have the uncertainty of the interest rate that might change from the situation of the market. The interest rate in 2018 and 2019 for MLR is 6.25% and 6.00% per annum; MOR is 7.12% and 6.87% per annum, respectively which has reduced the said interest rate. Therefore the Company didn't use the financial derivative to protect the said risk.

### 3.2 Foreign exchange rate risk

The Company order the material to produce the Distribution Transformer from overseas likes Silicon steel, Coil Cast Resin. The bid and payment of raw materials will be mainly used in US dollars. However, the exchange rate has been closely monitored while considering other factors associated to reduce the risk of exchange rate fluctuations and increase efficiency in financial management.



#### 4. Economy and Political Risk

From the slightly economic growth caused from the change in political situation and continuously effect through 2019, the economic forecast from economic agencies forecast that, Thailand's GDP has grown up 2.6-2.8% mainly from the government investment in infrastructure and energy. In industrial and export, there is no significant signal of growth in short term from the lack of confident, if the government can accelerate the investment project within the first half of year, the expansion of economic can be achieve the target.

However, Overview of the domestic economic were continuously slow down but there is still a group of renewable energy markets both in the country and neighboring countries that have a lot of demand for transformers and solar panels, especially in 2019 continue to 2020, in which this market is mainly quality competition. It is an important business opportunity to push up sales to compensate for the recession and other industries.

However, in the case of a trade dispute between the United States and China may affect the operation. That causing the amount of products in the country more than the demand and high competition.

#### 5. ASEAN Economic Community Risk

From the joining into AEC, Thailand has joined as an ASEAN Economic Community too. The risk that will arise from products of ASEAN countries entering the Thailand market without tax burden according to Thai entrepreneurs and entrepreneurs in the ASEAN region to be more competitive. Consumers could choose quality products and get more benefits. However, from the past, Thailand's Transformer industry was stronger than the others in ASEAN that be the opportunity to expand the business to overseas. Therefore, Ekarat Engineering Public Company Limited, the leader in transformer business of Thailand might receive the benefit from joining AEC too.









## Company Information

## Company Name

EKARAT ENGINEERING PUBLIC COMPANY LIMITED

## Nature of business

- Production and distribution of distribution transformers (Distribution Transformer) with power from 1 kVA to 30,000 kVA, maximum voltage not exceeding 36 kV
- Electrical maintenance and repair services, design, installation and maintenance of electrical systems and construction of substation
- Manufacture and sell solar cells and solar panels which can produce solar panels from 30 watts to 340 watts, including the design, construction, installation, maintenance of electricity systems from solar cells

## Address

9/291, UM Tower, 28th Floor, Ramkhamhaeng Road,  
Suan Luang Subdistrict, Suan Luang District, Bangkok 10250

## Registration no.

0107537002711

## Website

<http://www.ekarat.co.th>

## Telephone No.

02-719-8777 (Automatic 30 lines)

## Fax No.

02-719-8760-2

## Paid-up Capital

1,343,289,404 shares

Service Center	Location
1. Bangkok Center	1068/1 Soi Sukhumvit 101/1, Bang Chak Subdistrict, Phra Khanong District, Bangkok 10260 Tel. 02-393-0437, 02-746-3840-1, Fax 02-398-2903
2. Chachoengsao Center	260/6 Moo 6, Tha Sa-An Subdistrict, Bang Pakong District, Chachoengsao 24130 Tel. (038)-530-213 Fax (038)-530-214
3. Ayutthaya Center	26/7 Moo 2, Asia Road (Bang Pa-in - Nakhon Sawan), Thanu Sub-district Uthai District, Ayutthaya 13000 Tel. (035)-345-078 Fax (035)-345-020



Service Center	Location
4. Nakhon Pathom Center	612-4 Phetkasem Road, Phra Prathon Subdistrict, Muang District, Nakhonpathom 73000 Tel. (034) -244-045-6 Fax (034) -244-047
5. Khon Kaen Center	324/80 Moo 6, Mittraphap Road, Sila Subdistrict, Muang District Khon Kaen 40000 Tel. (043) -465-276 Fax (043) -364-277
6. Nakhon Ratchasima Center	2175/2 Moo 6, Suebsiri Road, Nai Mueang Subdistrict, Mueang District Nakhon Ratchasima 30000 Tel. (044) -277-279 Fax (044) -277-050
7. Chiang Mai Center	92/9 Moo 4, Tha Sala Subdistrict, Mueang District Chiang Mai 50000 Tel. (053) -128-039 Fax (053) -128-040
8. Songkhla Center	1496 Moo 3 Sanam Bin-Lop Buri Road, Laem Set, Khuan Lang Subdistrict, Hat Yai District, Songkhla 90110 Tel. (074) -250-648 Fax (074) -250-649
9. Surat Thani Center	54/2, Moo 5, Leam Muang Road, Makham Tia Subdistrict Mueang District, Surat Thani 84000 Tel. (077) -295-488 Fax (077) -295-489
10. Phuket Center	101/220 Moo 6, Ratsada Subdistrict, Mueang District, Phuket 83000 Tel. (076) -307-570 Fax (076) -307-571



### Information of the subsidiaries

Company name	EKARAT SOLAR COMPANY LIMITED
Nature of business	Production and assembly of solar cells and solar panels Including tools and equipment in all solar power generation systems Including the design, construction, installation, maintenance of electricity systems from solar cells and other renewable energy And consulting on energy conservation
Proportion of shares	99.99%
Address	9/291, UM Tower, 28th Floor, Ramkhamhaeng Road Suan Luang Subdistrict, Suan Luang District, Bangkok 10250
Phone No.	02-719-8777
Fax No.	02-719-8760
Website	<a href="http://www.ekarat.co.th">http://www.ekarat.co.th</a>

Company name	EKARAT ENERGY COMPANY LIMITED
Nature of business	Operate in all energy business Including investment advisory, engineering and management services, a distributor investing in the energy business industry both inside and outside the country, producing and selling electricity from solar cells
Proportion of shares	50.99%
Address	9/291, UM Tower, 28th Floor, Ramkhamhaeng Road, Suan Luang Subdistrict, Suan Luang District, Bangkok 10250
Phone No.	02-719-8777
Fax No.	02-719-8760
Website	<a href="http://www.ekarat.co.th">http://www.ekarat.co.th</a>

### Reference information

#### Securities Registrar

Company name	THAILAND SECURITIES DEPOSITORY COMPANY LIMITED
Address	93 Ratchadaphisek Road, DinDaeng Subdistrict DinDaeng District, Bangkok 10400



Phone No. 02-009-9000

Fax No. 02-009-9991

**Auditor**

Auditor's name	1. Mr.Atipong Atipongsakul	CPA License No. 3500
	2. Mr.Vichai Ruchitanont	CPA License No. 4054
	3. Mr.Sathien Vongsnan	CPA License No. 3495
	4. Miss Kultida Pasurakul	CPA License No. 5946
	5. Mr.Yuttapong Chuamuangpan	CPA License No. 9445

Company Name ANS Audit Company Limited

Address 100/72, 16th Floor, 100/2 Vongvanij Building B, Rama 9 Road,  
Huaykwang,

Phone No. 02-645-0109

Fax No. 02-645-0110

**Legal counsel**

Lawyer Name Mr.Pinya Champawong

Company name THEPNITI LAW OFFICE COMPANY LIMITED

Address 1845/11 Phaholyothin Road, Ladyao Subdistrict,  
Chatuchak District, Bangkok 10900

Phone No. 02-512-1353, 02-513-5450

Fax No. 02-939-7156

**Company Secretary**

Name-Surname Miss Nuanchan Sirikun

Address to contact EKARAT ENGINEERING PUBLIC COMPANY LIMITED  
9/291, UM Tower, 28th Floor, Ramkhamhaeng Road, Suan Luang  
Subdistrict, Suan Luang District, Bangkok 10250

Phone No. 02-719-8777

Fax No. 02-719-8760



### The Company's Register Capital

The registered and paid-up capital of the company as of 31 December 2019 are as follows:

Registered Capital	1,611,947,284.80	Baht
Paid Capital	1,074,631,523.20	Baht
Divided into ordinary shares	1,343,289,404	Shares
Par value per share	0.80	Baht

### Shareholders Structure

List of top 10 Shareholders as at December 31, 2019

Shareholders' Name	Shares	(%)
1. KV assets Co., Ltd.*	170,000,000	12.656
2. Mr. Kongkrai Kanokpruk	155,242,800	11.557
3. Miss Teeraya Kanokpruk	100,000,000	7.444
4. Mr. Poompat Numpaisarn	60,000,000	4.467
5. Mr. Wanchai Poolsap	41,432,900	3.084
6. Miss Uravee Kanokpruk	31,000,000	2.308
7. Mrs. Paradee Chiamchanya	23,000,000	1.712
8. Mr. Jeerapong Itsarangkul Na Ayuttaya	18,273,600	1.360
9. Mr. Pornchai Tongvanij	14,853,187	1.106
10. Mr. Sunthorn Simawara	14,303,200	1.065
<b>Total</b>	<b>628,105,687</b>	<b>46.759</b>

<sup>1</sup>Data from Thailand Securities Depository Co., Ltd. for the depositor



Remarks : \* List of KV Asset Co., Ltd. Shareholders

Shareholders' Name	Shares	(%)
1. Miss Rompissri Noichai boon	99,275	18.05
2. Mr. Vornpahol Sangtian	41,250	7.50
3. Miss Pimolwan Sangtian	41,250	7.50
4. Miss Wanravee Topongkasame	17,188	3.13
5. Mrs. Daranee Kantamara	27,500	5.00
6. Mr. Danucha Noichai boon	48,125	8.75
7. Mr. Daroonwat Noichai boon	27,500	5.00
8. Miss Chompicha Noichai boon	99,275	18.05
9. Mr. Ruengrat Noichai boon	17,188	3.13
10. Mr. Visitsak Noichai boon	17,187	3.12
11. Miss Peerayachan Noichai boon	97,075	17.65
12. Miss Khanittha Topongkasame	17,187	3.12
<b>Total</b>	<b>550,000</b>	<b>100.00</b>





### Number of Company's Stock holding by the Directors as of December 31, 2019

Name	Position(s)	Shares			
		December 30, 2019		December 30, 2018	
		Amount	(%)	Amount	(%)
Mr. Vichit Yamboonruang	Independent Director Chairman of the Board	1,407,310	0.105	1,407,310	0.105
Mr. Vinai Vittawasgarnvej	Independent Director Chairman of Audit Committee	-	-	-	-
Mr. Aroon Sricharoon	Independent Director Audit Committee	-	-	-	-
Mr. Wara Tongprasin	Independent Director Audit Committee Chairman of Nomination and Remuneration Committee	39	0.000	39	0.000
Mr. Chatri Siripanichkorn	Independent Director Nomination and Remuneration Committee	-	-	-	-
Mr. Wiwat Sangtian	Director	170,000	0.105	170,000	0.013
Miss Urawee Kanokpruk	Director Nomination and Remuneration Committee	31,000,000	2.308	31,000,000	2.308
Mr. Danucha Noichaiboon	Managing Director Nomination and Remuneration Committee Chairman of Risk Management Committee	-	-	-	-
Mr. Anan Santichewasatian	Director Risk Management Committee	-	-	-	-
Mrs. Daranee Kantamara	Director	1,895,453	0.141	1,895,453	0.141
Total		34,472,802	2.566	34,472,802	2.566



### Dividend Payment Policy

The company and the subsidiary have the dividend policy to pay the dividend to the shareholders about 50% of Net profit after corporate income tax and legal reserve each year. Therefore, the company's Board of Directors is able to acts inappropriate with this policy time by time under the condition to use the profit in the best interest for shareholders likes pay back the loan, use for investment or other subject related to the company operation. However, the dividend payment must approve by the Annual General Meeting and approved by the Board of Directors.

The 2019 Annual General Meeting of Shareholders, held on April 30, 2019 has approved suspension of dividend payment for the year 2018 performance. Due to the Company's operating results had unappropriated retained loss of Baht 221.66 million. Therefore, dividends shall not be paid according to section 115 of the Public Limited Companies ACT, B.E.2535 (1992) and the Company's Article of Association No. 56, dividends shall not be paid other than out of profits.



The Company's management structure is composed of the Board of Directors and the management. The Board of Directors has altogether 10 members, i.e. 4 executive directors and 6 non-executive directors. All the members, 5 are independent directors, representing a half of the total Board members.

The Board has appointed four Sub-Committees, namely Audit Committee, Nomination and Remuneration Committee, Risk Management Committee and Board of Management which composed of qualified persons by section 68 of the Public Limited Company Act BE 2535.

### The Board of Directors

The Board of Directors has the ultimate responsibility for the administration of the Company's affairs under the Company's Articles of Association which requires that the Board consists at least 5 directors, and that no less than half of the Directors must reside in Thailand. At the Company's Annual General Meeting of Shareholders, one-third of the Directors are required to resign from their position, and new Directors are to be elected and the Directors who have resigned may be re-elected.

There were 10 Directors in the Board of Directors as at December 31, 2019 as follow:

Name	Position	Appoint Date
1. Mr.Vichit Yamboonruang	Independent Director / Chairman of the Board	February 28, 2011
2. Mr.Vinai Vittawasgarnvej	Independent Director / Chairman of Audit Committee	June 11, 2012
3. Mr.Aroon Sricharoon	Independent Director / Audit Committee	May 13, 2019
4. Mr.Wara Tongprasin	Independent Director / Audit Committee / Chairman of Nomination and Remuneration Committee	June 17, 2009
5. Mr.Chatri Siripanichkorn	Independent Director / Nomination and Remuneration Committee	July 12, 2016
6. Mr.Wiwat Sangtian	Director	June 25, 2014
7. Miss Urawee Kanokpruk	Director / Nomination and Remuneration Committee	February 28, 2011



Name	Position	Appoint Date
8. Mr.Danucha Noichai boon	Director /Chairman of Risk Management Committee Nomination and Remuneration Committee / Managing Director	January 15, 2011
9. Mr.Anan Santichewasatian	Director / Risk Management Committee	January 31, 2007
10. Mrs.Daranee Kantamara	Director	January 15, 2011

Notes - Mr. Pitak Chaicharoen resigned from the position of Independent Director, Audit Committee and Chairman of the Nomination and Remuneration Committee on May 3, 2019.

- The Board of Directors has appointed Mr.Aroon Sricharoon as an Independent Director, Audit Committee and appointed Mr.Wara Tongprasin to be the Chairman of the Nomination and Remuneration Committee to replace Mr. Pitak Chaicharoen, the resigned director.

### Directors authorized to sign in binding the Company

According to the Company's regulations has authorized directors : Either Mr.Danucha Noichai boon or Mr.Anan Santichewasatian or Mrs.Daranee Kantamara, making up two signatories to bind the Company, with the Company seal affixed.

### Scope of power and duties of the Board of Directors

The directors shall sincerely and faithfully perform their duties and carefully act in the best interest of the Company to be in accordance with the objectives, rules and regulations of the Company and the resolution of the shareholders' meeting and the matter legally required the approval of the shareholders' meeting. The conclusion of scope of power and duties of the Board of Directors are as follow:

1. Discharge their duties and supervise the operation of the Company to ensure strict compliance with laws, objectives, articles of association, and resolutions of the Annual General Meeting.
2. To consider specify details and give approval towards vision, business strategies, direction, policy, goals, business plan and budget of the Company as per details arranged by the Management Team. Such topics are to be reviewed annually so that they are appropriate for the circumstance, business potential, and be able to create sustainability to the business.
3. Establish a Corporate Governance and Business Code of Conduct Policy, Responsible to the Society and Environment, Anti-Corruption and strict observance of this policy must be required alongside the Company's articles of association in order to ensure fairness to all stakeholders.



4. Specifying risk management policies and overseeing to ensure effective risk management systems with reviewing and assessing the systems periodically.
5. Institute systems for corporate accounting, financial reporting and auditing, and institute efficient and effective internal control and internal audit systems.
6. Provide a fair and transparent nomination system for individuals to assume Key Executive positions at level Deputy Managing Director or higher and arrange a suitable compensation system for the Executives of the Company.
7. Lead and be the role model of a performing and ethical individual in accordance with the Company's corporate governance policy.
8. Manage and resolve potential conflicts of interests and related transactions by reviewing significant transactions in order to ensure utmost benefit to the shareholders and stakeholders.
9. To consider and approve the acquisition or disposition of assets, investment in new business and any operations to be in accordance with relevant laws, notices and regulations.
10. Regularly evaluate one's own performance and discharge of duties, as well as those of the committee and the management team annually.
11. Ensure accurate, clear, transparent, reliable to disclosure of information according to relevant standards.
12. Arrange for appropriate channels of communication with each group of shareholders. Supervise disclosure of information in order to ensure correctness, coherence, transparency.

Furthermore, the power and authorities above are not including to others transaction that conduct by the company's rule and regulations which need the approval of shareholders' meeting.

#### **Scope of power and duties of Chairman of the Board**

Chairman of the Board has power, duties and responsibility as follow:

1. The Chairman has the role of overseeing policy advocacy and strategic performing manner of the company's management including giving recommendation and support the operating of the company's management but this entitle shall not participate in the daily operation.
2. Preside as chairman of the Board of Directors Meeting and shareholders meeting.
3. Encourage all directors to participate in the meeting as well as monitoring the Board of Directors Meeting and shareholders meeting effectively and successfully.



4. Strengthen the relationship between the Executive and non-Executive Directors and between the Board and Management.

#### Qualifications of Directors

Directors must be qualified and not disqualified under the Companies Act, for example;

- Not more than 5 directors in listed companies in the Stock Exchange of Thailand.
- Never been sentenced by final judgment to imprisonment. Except for an offense committed through negligence or a petty offense.
- Must not be a political official, unless being a director in accordance with the law.
- Not holding any position in the political parties or officials of political parties.
- Never be fired or dismissed because of malpractice.

#### The Board of Director's Meeting

1. The meeting of the Board of Directors shall be scheduled in advance and at least once every three months at the head office or branches or nearby provinces.
2. The director shall attend at least 75% of all the board meetings held during the year.
3. The quorum of not less than two-thirds of all Board members is eligible to vote at the meeting to pass a resolution.
4. Invitation, details of the meeting and supporting documents shall be sent to each director at least 7 days in advance of the meeting date.
5. The Company Secretary is responsible for preparing the minutes of meeting to be submitted to the Board of Directors for approval in the first agenda of the next meeting and shall be certified by Chairman of the Board.

In 2019, the Company held a total of 7th Board of Directors' meetings. Details of meeting attendance by the individual directors are as tabulated below:

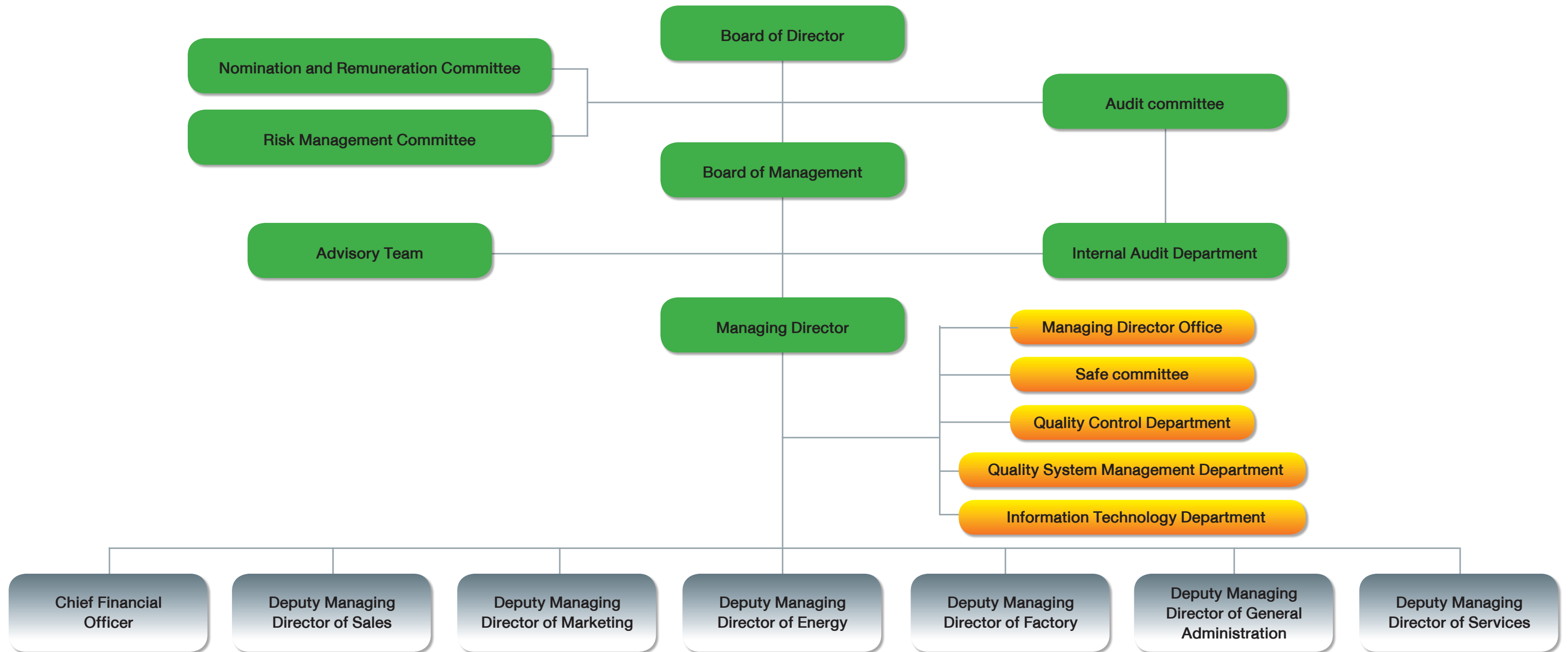


Name	Position	The Board of Director's Meeting	
		Number of Attendance	Number of Meeting
Mr.Vichit Yamboonruang	Chairman of the Board Independent Director	7	7
Mr.Vinai Vittawasgarnvej	Independent Director	7	7
Mr.Aroon Sricharoon	Independent Director	3	7
Mr.Wara Tongprasin	Independent Director	6	7
Mr.Chatri Siripanichkorn	Independent Director	6	7
Mr.Wiwat Sangtian	Director	6	7
Miss Urawee Kanokpruk	Director	7	7
Mr.Danucha Noichaiboon	Director	7	7
Mr.Anan Santichewasatian	Director	7	7
Mrs.Daranee Kantamara	Director	7	7

**Notes** - The Board of Directors has appointed Mr.Aroon Sricharoon as an Independent Director to replace Mr. Pitak Chaicharoen, the resigned director on May 13, 2019. Therefore, he has attended the Board Meeting since June 2019 onwards, totalling 3 times.



## Organization Chart as at December 31, 2019



### The Company's management compose of 5 persons as below:

- |                               |  |
|-------------------------------|--|
| 1. Mr. Danucha Noichai boon   | Managing Director                                  |
| 2. Mr. Anan Santichewasatian  | Chief Finance Officer                              |
| 3. Mrs. Daranee Kantamara     | Deputy Managing Director of General Administration |
| 4. Mr. Vithep Vachirabhahu    | Senior Deputy Managing Director                    |
| 5. Mr. Daroonwat Noichai boon | Deputy Managing Director of Marketing              |

Note : Management is "Executive" as defined by the Securities and Exchange Commission (SEC).

### Scope of power and duties of Managing Director

According to the Company's regulations, The Managing Director has the authority and responsibility regarding the administration as approved by the Board of Directors as follows.

1. Bring forward the policies from the Board of Directors and Responsible for all of the management received.
2. Assign the strategies to meet the goal for operation and policies.
3. Approve the important investment that code in the annual budget which approved from the Board of Directors.
4. Approve the operation plan and the policies in each division, also monitor the operation of the company to conform to the plan and policies.
5. Issue orders, rules, notices, memo for the benefit of the company and the organization tidiness.
6. Approve to appoint, hire, transfer, and dismiss of the employee whose position below the Deputy Managing Director.
7. Assign the third party, by approval of Managing Director, to manage and operate for the Managing Director in the necessary matter and not above authorized financial amount
8. Determine and bring forward the expenditure budget for the approval of the Board of Directors.
9. Conduct the employees to work with ethics, morals, laws, and cultural to the shareholders, customers and employees and related person.
10. Operated in the normal manner of the company, and in case of the important subject, Managing Director must present to the Board of Directors or the Management Board for the approval.

11. Support and develop the organization and employees in term of skill and the cultural of organization.

12. Support and encourage the education and develop new technology to increase the production and develop the business by using the resources in full capability.

13. Act with honest and care for the best of company.

In order that, the authorities give to Managing Director will act under the regulations, law and rules and regulation of the company; In case of any actions which develop the conflict of interest to Chief Executive Officer or any related person (Notification from SEC).

### **The Company Secretary**

The Board of Directors has approved the appointment Miss Nuanchan Sirikul as a Company Secretary since June 26, 2008 until now to comply with the Securities and Exchange Act (No.4) B.E.2551.

### **The duties and responsibility of the Company Secretary**

1. Preparing and keeping the following documents:
  - 1.1 A register of directors
  - 1.2 A notice calling directors' meeting, the minutes of the board of directors and an annual report of the Company
  - 1.3 A notice calling shareholders meeting and the minutes of the shareholders' meeting;
2. Keeping a report on conflict of interests, reported by a director or an executive.
3. Arrange the Board of Directors Meeting and Annual General Meeting of Shareholders.
4. Orientation and advising the new director.
5. Liaise with the regulatory agencies such as the Stock Exchange of Thailand.
6. Disclosure and information reporting to the regulatory agencies and public which comply with the law properly.
7. Operating any act that is abided by the Capital Market Supervisory Board and assigned by the Board of Directors.



## Remuneration of the Board of Directors and the Management Team

The Company had set a policy for remuneration for directors and executives fairly and reasonably. The Nomination and Remuneration Committee will consider and scrutinize as appropriate for each position. In accordance with the financial status of the company and compared with other companies in the same business group. The remuneration was allowance and bonus which has already approved by the shareholder's meeting every year. The details are as follow:

### Remuneration of the Board of Directors and the Committees

#### 1. Allowance

##### 1.1 Monthly Allowance

• Chairman of the Board	Baht	44,000	per month
• Directors	Baht	22,000	per month
• Chairman of the Audit Committee	Baht	20,000	per month
• Audit Committees	Baht	10,000	per month

##### 1.2 Allowance for each meeting

• Chairman of Nomination and Remuneration Committee	Baht	15,000	per meeting
• Nomination and Remuneration Committees	Baht	10,000	per meeting
• Chairman of the Risk Management Committee	Baht	15,000	per meeting
• Risk Management Committees (Director)	Baht	10,000	per meeting
• Risk Management Committees (Non-Director)	Baht	5,000	per meeting

##### 1.3 Bonus

The Company determine the remuneration of the Board of Director as bonus in reasonable rate on the performance of each year at amount not exceeding Baht 6,000,000 at the same rate as the last year.



The details of the directors' remunerations are as follows:

Unit : Thousand Baht

Name	Position	Remuneration		
		2017	2018	2019
Mr.Vichit Yamboonruang	Independent Director / Chairman of the Board	778	818	818
Mr.Vinai Vittawasarnvej	Independent Director / Chairman of Audit Committee	654	694	694
Mr.Pitak Chaicharoen*	Independent Director	564	589	333
Mr.Aroon Sricharoon**	Independent Director / Audit Committee	-	-	240
Mr.Wara Tongprasin	Independent Director / Audit Committee / Chairman of Nomination and Remuneration Committee	534	574	589
Mr.Chatri Siripanichkorn	Independent Director / Nomination and Remuneration Committee	434	464	474
Mr.Wiwat Sangtian	Director	414	454	454
Miss Urawee Kanokpruk	Director / Nomination and Remuneration Committee	434	464	474
Mr.Danucha Noichai boon	Director /Chairman of Risk Management Committee / Nomination and Remuneration Committee / Managing Director	434	479	489
Mr.Anan Santichewasatian	Director / Risk Management Committee	414	464	464
Mrs.Daranee Kantamara	Director	414	454	454
<b>Total</b>		<b>5,074</b>	<b>5,454</b>	<b>5,483</b>

- Notes**
- Mr.Pitak Chaicharoen resigned from the position of Independent Director, Audit Committee and Chairman of the Nomination and Remuneration Committee on May 3, 2019.
  - The Board of Directors has appointed Mr.Aroon Sricharoon as an Independent Director, Audit Committee and appointed Mr.Wara Tongprasin to be the Chairman of the Nomination and Remuneration Committee to replace Mr. Pitak Chaicharoen, the resigned director.



## Remuneration of the Management

Executive compensation policy is based on the Board of Directors and in accordance with the operating results of the Company. The Nomination and Remuneration Committee is responsible for determining the remuneration to reflect the performance along the practices and standards of the same business group. Then proposed the principles and the appropriate amount of remuneration to the Board of Director to consider and approve it.

The Company's management compose of 5 persons comprising Managing Director, Chief Financial Officer, Senior Deputy Managing Director, Deputy Managing Director of General Administration, Deputy Managing Director of Marketing by received remuneration as detailed below:

Unit : Baht

Year	2017	2018	2019
Total Salary	13,518,000	13,698,000	13,698,000
Bonus	1,321,500	-	1,224,000
Provident Fund	194,400	199,800	140,400
<b>Total</b>	<b>15,033,900</b>	<b>13,897,800</b>	<b>15,062,400</b>

## Other Remuneration

For the Board of Directors have only compensation from meeting fees and bonus **without any additional compensation.**

For the Management team, in addition to salary compensation, bonuses and provident funds, there are other compensation such as car, fuel expense, and mobile expense.



## Manpower

As of 31 December 2018, the company has 708 employees detailed as follows:

		Unit :person		
	Department	2017	2018	2019
1.	Managing Director Office	7	6	3
2.	General Management Department	36	38	37
3.	Financial and Accounting Department	32	31	29
4.	Marketing Department	9	9	9
5.	Sale Department	28	31	32
6.	Service Department	122	124	126
7.	Production Department	553	495	469
8.	Internal Audit Department	3	3	3
	<b>Total</b>	<b>781</b>	<b>737</b>	<b>708</b>

## Remuneration of the employee

Remuneration to staff (Excluding the Managing Director and Senior Management) for the year 2017-2019 with details of the award

		Unit : Baht		
	Remuneration	2017	2018	2019
Total Salary		220,898,944	217,089,497	207,809,610
Bonus		18,087,325	-	14,353,864
Provident Fund		6,037,625	5,953,780	5,942,206
	<b>Total</b>	<b>245,023,894</b>	<b>223,043,277</b>	<b>228,105,608</b>

## Other Remuneration

The Company has provided other welfare to employees in addition to salary, overtime and bonus such as giving the uniform to employees annually for orderliness, good image and to alleviate





the burden on the cost of apparel, staff shuttle bus, donating money to help charitable for staff and members of their family.

The Company recognizes about the health of employees, therefore provided annual health check-up by creating a clear operating procedure according to the standards of the Ministry of Labor and registered the provident fund in accordance with the Fund Act at the rate of 3% of the wages. However, the employees have the right to contribute 50% of the Company in the case of termination of membership after working with the Company for not less than 3 years and 100% in the case of working with the Company for at least 5 years.

In addition, as an incentive to employees who are willing to work, sacrifice, dedication and responsibility as well, the Company will grant a special award based on the annual performance evaluation.

#### **Labor protection**

The Company recognizes the importance of safety, occupational health and work environment of employees due to different job characteristics in each department. Therefore have provided the safety, health and environment committee by select from the management and employees in various departments' the Company in order to jointly consider the correct implementation as required by law. Including supply of equipment and monitoring tools for convenient and maximum security to reduce accidents and hazards that may occur to the employees.

#### **Employee Development Policy**

It is the Company's policy to increase the standard of quality and capabilities of its work force through its development and training programs and also to prepare for more competitive environment in the future. The Company has established an organization responsible particularly for employee development and training. Budget is appropriately and sufficiently allocated for development and training in accordance with objectives of each department. Thus, development and training schemes are determined as follows;

1. Internal Training: The Internal training will be carried out by inviting instructors with expertise from external domestic or overseas organizations and institutes, to consecutively provide knowledge to employee in each level every year. Training to improve the skills of the employees by the experts within the Company continuously every year.



2. External Training: The Company will let employees participate in training arranged by external organizations and institutes, regarding technical issues, administration, management, language and occupational safety health and environment to improve the skills of the employees.

3. Oversea Training: To enhance readiness and to provide employees with opportunities to learn new know-how and techniques, the Company will send staffs to attend meetings, seminars or training of international course.

In the year 2019, the Company provided both internal and external training in total training hours of the year 8,772 hours, average staffs of 677 staffs, the average training hours is 12.96 hours per staff.

The Company has established rank and position determination regulation in order to clarify career path and Criteria for performance appraisal increase employee morale in every level. The Company will motivate, encourage and support employee to obtain career competencies and opportunities to grow and progress through career path in correlation with their knowledge, competencies and experiences.

#### **Dispute in year 2019**

-None -

### Good Corporate Governance Policies

The Company recognized the importance of the operation principles. The Company has policies on business ethics and business ethics of the Board of Directors, the Board of Management and staffs according to the good corporate governance system as practice guidelines standard in the Company's Articles of Association. The Company have policy to behave under the best practices for the Director which conducted from Code of Best Practices for Directors of Listed Company that governed by The Stock Exchange of Thailand. The assigned principles must able to do practically. In addition, the Company has adopted the Good Corporate Governance to develop the policies which will increase the ability to the competition, management, and operation for the value added and efficiency of the company which will give the security and confidential to the stakeholders.

In addition, the Company reviewed the policy and CG Code to comply with legal, economic and social change and inform directors, executives and employees to acknowledge and abide as part of the work.

In fiscal 2019, the Company complied with the five categories of corporate governance principles as follows:

#### 1. Rights of Shareholders

The Company recognizes the importance of shareholders and their rights. the Company has implemented policies to protect the basic rights of its shareholders which include the right to purchase, sell or transfer Company shares or receive a share in the Company's profits, receive sufficient and timely Company information, participate in the Annual General Shareholders' Meeting (AGM), give proxy to vote on shareholder's behalf, make inquiries during the AGM, have rights to submit the issues for meeting agenda and be able to nominate the appropriate individuals for consideration to be appointed to the Company's Board of Directors. Shareholders shall also have the right to participate in important decisions such as electing directors of the Company, approving transactions that bear effect on the direction of the business, and making amendments to the Memorandum of Association and the Articles of Association.

#### Annual General Shareholders' Meeting

The Company held the AGM according to the Public Limited Companies Act B.E. 2535 (1992), in accordance with the guidelines of the SET and the Thai Institute of Directors (IOD) and monitored that



the AGM was fully complied with the requirements stated in the Annual General Meeting Checklist (AGM Checklist) based on the assessment of AGM of listed companies by the Thai Investors Association, the Thai Listed Companies Association and the SEC to raise the quality of the Company's AGM as follows:

- **Date, Time and Venue to hold the AGM**

The Company convened one annual general meeting of shareholders within 4 months from the end of fiscal year. In the urgent event that need to propose special agenda which its subject to impact or related to the interests of shareholders or relating to conditions or rules, applicable laws that must be approved by shareholders. The Company will call an Extraordinary General Meeting of Shareholders to be the case.

At the Board of Directors' meeting 2/2019 held on February 26, 2019, a resolution was reached by the Company's Board of Directors to hold the 2018 AGM on April 30, 2019 at Bu-nga Room, Golden Tulip Sovereign Hotel, Rama 9 Road, Huay Kwang, Bangkok and without calling an Extraordinary General Meeting of Shareholders.

- **Meeting invitations in advance**

The Company disclosed the Board of Director's resolutions, AGM dates and agenda by made available through the Stock Exchange of Thailand to shareholders in advance on the date of the Board of Director's meeting. The Thailand Securities Depository Co., Ltd. (TSD) is the Company's securities registrar, will deliver the invitation letter with details of the meeting agenda, importance information, opinion of the Board of Director, Minutes of the previous meeting, Annual Report and documents required for proxy which clearly specify the method used by the Company. The invitation will be send to shareholders in advance more than 21 days before AGM date.

In 2019, the Invitation Letter sent out on April 5, 2019 and published in newspapers continuously for 3 days during on April 17-19, 2019 to inform the shareholders of the meeting in advance and revealed on the Company's website in advance 30 days (since March 29, 2019)

- **Day of the AGM**

Information relevant to the AGM was also included in the information packet sent to shareholders along with the letter of invitation to attend the AGM to enable shareholders to have sufficient information to make sound decisions on the various issues proposed for consideration. Prior

to commencing the 2019 AGM, the Chairman provided attendees with a summary of the Quorum and then Managing Director explained how to use the voting ballot, the voting procedure, the vote collection process and the vote counting process. After each vote count, the Chairman announced the results of voting for each agenda to the shareholders ensuring transparency of each vote counted. On each agenda for consideration, the Board of Directors and management were on hand to provide comprehensive response to queries and/or comments that shareholders might have. In regard to the voting and vote counting process.

In regard to the voting and vote counting process, the Company strictly adhered to the Company's AOA allowing one vote per share held. The resolutions of shareholders' meeting were passed by a simple majority vote of the shareholders attending the meeting and having voting rights. In the event of a tie vote, the Chairman of the meeting shall have a casting vote. In counting votes for the general agenda, only disapprove and abstain from votes were counted and the rest was regarded as approve votes. For the agenda on election of Directors will allow shareholders to vote individually. The meeting was carried out as in the order set in the agenda without addition of any items.

If any director has a stake in or involved in any agenda, will not to attend the meeting and abstain from voting on that agenda .

The 2019 AGM was scheduled at 14.00 hrs. by registering at 12.00 hrs. There were a total of 82 persons attended the meeting participants included 42 shareholders attended the meeting in person and 40 shareholders by proxy, with totaling 559,830,616 shares, accounted for 41.68% of the Company's paid-up capital which more than one-third of the total number of shares sold constituting a quorum in accordance with the regulations of the Company.

- **Disclosure of Resolutions**

Resolutions reached at the AGM were disclosed to the general public via the SET's information channel within the period of the time at the end of the day after the meeting. Details regarding the approved/disapproved resolution and the vote counts (approve/disapprove/abstain/Voided Ballot) had been clearly indicated for each agenda item that was submitted for consideration. The detailed minutes to the AGM containing names of Board members and management attending the meeting along with the resulting resolutions and the vote count on agenda items posed for shareholders' consideration along with major issues posed by shareholders and the response made by



the Company were submitted to the SET within 14 days and the minutes of the AGM had also been posted on Company's website in Thai and English to allow foreign shareholders to access information thoroughly, including video and picture of the meeting.

## 2. Equitable Treatment of Shareholders

The Company's policy is treat all shareholders equally, fairly and in accordance with legal requirements, including measures to prevent the directors, executives and employees from using inside information to benefit himself or his allies in unlawful manners. For example, take advantage of inside information (insider trading), disclose internal information to the person involved with directors or executives. In order to build confidence in investing with the Company.

The Company arranged for the shareholders to propose agenda items for the said meeting and/or nominate qualified persons for director election in advance during December 01 – 30, 2018 and so notified the shareholders through the SET. Moreover, the Company posted information on its website, giving details about the procedure and method of consideration in a clear and transparent manner. For the 2018 Annual General Meeting of Shareholders, none of the shareholders proposed agenda items for such meeting and/or nominated qualified candidates for director election which the Company Secretary has reported to the Board of Directors for acknowledgment.

The Company has facilitated all shareholders by set to be held at an easily accessible venue, primarily for shareholders' convenience. There are registration officers and registration service points for shareholders and proxies attending the meeting appropriately and adequately. Applying technology to AGM, barcode was used in the registration and vote counting processes for time saving. The participating shareholders were treated for lunch, snacks and refreshments. The Company sent invitation letters and meeting documents in English to the foreign shareholders, allowance given to shareholders to appoint a proxy or one of Independent Director who have been specified in the proxy form to attend the meeting and vote on behalf of the shareholders without conditions. In addition, the Company has disclosed the invitation letter and the proxy form along with details and procedures on the Company's website 30 days in advance. Shareholders can ask for more information by phone or other channels such as website, e-mail etc.

### 3. Role of Stakeholders

The Company realizes the importance of all stakeholders. Therefore has set practice guidelines to treat all stakeholders with equity based on the sustainable mutual benefits in enhancing the competitiveness of competitive capability and generating profits to the Company. The Company has conducted its business guided by the conscience of corporate social responsibility (CSR) reflecting international environmental standards minimizing pollution and waste resulting from undertaking business activities. Therefore, the Company's Good Corporate Governance and Ethics Code were drafted and distributed to the Company's directors, executives and employees reflecting the following guidelines:

#### 3.1 Society and the General Public

The Company realized the important of community and environment by assign the practical of working and awarded ISO 9001:2000, ISO 14001, ISO 50001:2011, and others certificates both development and negative impacts on the environment as prove of social responsibility such as participated in the Green Industry Project by committed to develop according to the objectives of the project according to the definition "Environmental friendly transformers". The Company is supportive of activities that are beneficial to the society or communities and cultivate employees to have a sense of responsibility to society, communities and the environment.

#### 3.2 Shareholders

The Company shall operate its business to generate satisfactory return for shareholders and ensure equitable treatment of all shareholders. The company has the policy to acts with honestly and equally to the shareholders accordance with good corporate governance principles. Report the status of the organization regularly and completely according to reality and inform all shareholders equally. Including the opportunity for shareholders to suggestions and complaints through various channels of the Company.

#### 3.3 Employees

Employees are provided with fair and reasonable compensation and welfare. A safe workplace has been maintained to ensure security of employees' life and properties. Importance is given to employees' equal opportunity of knowledge, capability and skill development and



practices that are not involved in human rights violations according to Thai labor standards.

### 3.4 Customers

The Company has the policy to acts with honestly, equally, and responsible to the customers. Customers' confidential information is strictly treated and is not unethically used for personal benefit or for the benefit of any related party. Customers are provided with correct, adequate and up-to-date information about products and services, including monitor the satisfaction of customers for the improvement of products and services. Therefore, the customers can trust and confident to do business with the Company and for a long-term relationship.

### 3.5 Trade Competitors

The Company abides by the fair competition rules, not seeking confidential information of competitors in a dishonest or inappropriate way and not damaging reputation of competitors by way of false allegation. The Company will not infringe the intellectual property rights or any other rights in relation to intellectual property of others.

### 3.6 Business Partners and/or Creditors

The Company strives to build confidence for Business Partners and Creditors that they will be equally and fairly treated based upon business relationship and fair returns to both parties. The Company will also avoid any situation which may cause a conflict of interest. For creditors, the Company has complied with the agreements or conditions agreed by both parties strictly; has been responsible and has not concealed information which will cause damages to the creditors. The Company reports statement of financial position to creditors regularly with accuracy and punctuality. In case of failure to fulfill its obligations in the agreement, the Company will notify the creditors immediately to find solutions including managing finances to build the appropriate structure to the Company' business operations, maintaining the confidence of creditors. Including not accepting or paying any benefits which dishonest with partners or creditors. Along with monitoring and evaluating partners to develop sustainable business operations.

### Intellectual Property practice

The Company recognizes the importance of protecting intellectual property; therefore, policies were set that both the procurement and deployment must not commit to infringement of intellectual property. Moreover, education and caution are implemented on employees to create awareness on such matters, including verification by both internal and external agencies.



#### 4. Information Disclosure and Transparency/

The Company gives priority to the principles of information disclosure and transparency according to the requirements set by the SET, and the SEC. Specific departments are set to oversee the disclosure of the financial and other information related to the Company's operations sufficiently, accurately, completely, timely and transparently in order to communicate with shareholders, investors, analysts and stakeholders from all sectors to ensure even distribution of information through various channels. The Company has set the following guidelines:

##### Disclosure of information through the involved agencies

The Company disclosed the Company's information both financial and other important aspects to regulators, such as financial reporting and news that are essential to the investment of shareholders and investors to the SET, report of the Company's information through Annual Registration Statement (Form 56-1) and Annual Report (Form 56-2) to the SEC, report on financial information, directors and employee information including other information through Set Portal Straight Through.

The Company set up the Investor Relations Department to serving as a center for disclosing important information to investors and financial reporting process such as presentation of operating results, financial statements, information that is reported to the SET, Management Discussion and Analysis(MD&A) which show the status of the operating results and future prospects of the Company. In addition, investor relations are also responsible for promote a good relationship, communicate accurate and reliable information. Including implementing plans to ensure that all stakeholders are treated equally, have access to information and have a channel to communicate with the company through various activities such as meeting, conference calls with executives, answering questions and providing information via phone and/or email and company visits

The Company has established that its directors, executives and persons related thereto are duty-bound to prepare and present to the Company report on changes in their holdings of the securities of the Company within three business days from the date of change. The Company Secretary is tasked to compile report on their changes in securities holdings and put in the agenda for information at the Board Meeting

### Disclosure of information through website

The shareholders, investors or interested people to know the Company's information without delay through the website, [www.ekarat.co.th](http://www.ekarat.co.th) including the Company's background, Board of Directors, product and services, news, operating results, financial statements, shareholder information, shareholders' meetings, minutes of shareholders' meetings, a list of major shareholders, operational statistics, good corporate governance, procurement reports, the Company's AOA, and information reported to SET, etc.

### Complaints and other notifications

The stakeholder can contact, get information, report news or clues both inside and outside organization through the website / telephone / Notification / via e-mail to the Company Secretary and Internal Auditor Department and Investor Relations

Telephone : 02-719-8777 # 384, 369

Website : <http://www.ekarat.co.th>

Email : Company Secretary : [nuancsir@ekarat.co.th](mailto:nuancsir@ekarat.co.th)

Internal Audit Department : [suwannee@ekarat.co.th](mailto:suwannee@ekarat.co.th)

Investor Relations : [wanngam@ekarat.co.th](mailto:wanngam@ekarat.co.th)

The criticism or suggestions will be forwarded to the relevant authorities to carry out improvements. Once completed, the results will be informed to the contact. The PR staff will follow up by calling to inquiry about the customer's satisfaction.

The Management will follow all information on monthly basis for analyze trends of changing and use it as guideline to improve the production process and service and to meet the needs of all stakeholders.

For complaints, the Company provides an opportunity for the general public to complain when found inappropriate behavior of directors, executives and employees or against the business ethics of the company to Internal Audit, Company Secretary and Human Resource Department. The Company will receive all complaints equally attentive transparency and fairness to all parties and will keep confidential and protect the complainant.

In 2019, no significant ethical complaints were found.

## 5. Responsibility of the Board of Directors

The Board of Directors consists of individuals who have the knowledge and experience beneficial to the business operations. The Board of Directors has a duty and responsibility to set the strategic direction of the business operations in accordance with the principles of good corporate governance through the definition of the policy, strategy, goals, vision and mission, and plays a crucial role in supervising and monitoring the implementation of the Management to ensure compliance with the policy and defined strategies. The Board of Directors must act with competence, knowledge, integrity, transparency for the optimum benefits of the Company.

The Board of Directors carries out a review of the policy, vision and strategies of the Company on a yearly basis to accommodate changes in current situations. The Board of Directors has regulated the ethical standards, encouraged the Board of Directors, Management and employees to strictly comply by communicating and disclosing the practice guidelines in the Company's Good Corporate Governance and Ethics Code through the Company's website.

### Board Structure

The board structure is in accordance with the Company's AOA, regulations of the Public Limited Companies Act B.E. 2535 (1992), the Securities and Exchange Act B.E. 2535 (1992) and B.E. 2551 (2008), and related rules and regulations. The Board of Directors appointed subcommittees to study and screen specific matters as detailed in Subcommittees in section 9.2

### Board Composition

Directors are appointed as per the resolution of the AGM as proposed by the Nomination and Remuneration Committee and the Board of Directors, respectively, according to the Company's AOA, the Board of Directors must consist of at least 5 directors who have knowledge and experience about the business of the Company. The Company set a policy for the Board's diversity in genders, skills, professions, and specializations, namely, industrial, engineering, financial, business management, economic, legal, political science and security.

As of December 31, 2019, 5 out of the total 10 Board's member are independent directors, which is in compliance with the corporate governance practices requiring that at least one-third of total number of directors should be independent directors. This helps to ensure that the shareholders' rights and benefits will be taken care of and the Company's benefits fully protected. It also leads to checks and balances in the board structure since 6 of them are non-executive directors and 4 are executive



directors. Under such board composition, the nonexecutive directors are able to render opinion fully and independently in the consideration on all issues at the board meeting.

### Authority and Responsibilities of Directors

The Board of Directors has authority and responsibility to oversee the Company's operations to be strictly in line with the objectives and resolutions of the AGM without violations of the laws, rules, regulations, good corporate governance principles and best practices for directors of companies listed in the SET. The Board of Directors has authority and responsibilities to approve in detail at section 8.1.2.

### Combination and Segregation of Positions

The Chairman of the Board of Directors does not hold a management position but is an Independent Director and is not the same person holding the position of Managing Director. The Chairman of the Board has no relationship with other members of the Management. There is a clear written differentiation between the roles and responsibilities of the Company's Board of Directors and that of the Management.

### Directorship in other companies

The Directors be appointed as directors in other listed companies up to a maximum of 5 and must notify the Board of Directors acknowledged. The Company Secretary will disclose the information in the Form 56-1 and annual report (Form 56-2). The Company prohibits the Director to holding the position of Managing Director, Manager or other position that has similar characteristics in the same business or being a competitor to the Company and subsidiaries. Exceptions would be joined as directors in government and the private organizations which established for public interest.

### Board of Directors Meeting and Subcommittees Meeting

#### • Board of Directors

Board of Directors Meetings are scheduled ahead of the fiscal year at least 3 months per meeting and special meetings called as necessary with a clear agenda item and a follow up round to evaluate performance on a regular basis. Seven days prior to the Board meeting, the Company Secretary will send an invitation letter along with agenda items and supporting documents to each director, thus giving him/her adequate time to study on the information before attending the meeting and must have at least half of the total number of directors, therefore will be a quorum. In 2019, the Board of Directors convened 7 times in total, The Company Secretary made the written records and minutes of all meetings to be presented to the Board of Directors for review



and approval in the next meeting and made the approved minutes available for further inspection by the Company's Board of Directors and other related agencies.

#### • Board of Management

Board of Management Meetings are scheduled at least once a month which has been defined and notified in advance.

The Board of Director had opinion that each management committee should not focus on just the time to attend the meetings. But should include sharing of opinions, advice, experience, and relationships in order to increase the benefits for the business of the Company.

#### • Audit Committee

Audit Committee Meeting are scheduled at least 4 times per year before the Board of Director Meeting which has been defined and notified in advance.

#### • Nomination and Remuneration Committee

Nomination and Remuneration Committee Meeting are scheduled at least once a year before the Board of Director Meeting which has been defined and notified in advance.

#### • Risk Management Committee

Risk Management Committee Meeting are scheduled at least once a year before the Board of Director Meeting which has been defined and notified in advance.

#### Details of meeting attendance of Subcommittees in 2019

Director	Number of Attend / Number of Meeting				
	BOD	BOM	AC	NRC	RMC
Mr. Vichit Yamboonruang	7 / 7				
Mr. Vinai Vittawasgarnvej	7 / 7		6 / 6		
Mr. Pitak Chaicharoen*	4 / 7		3 / 6	1 / 2	
Mr. Aroon Sricharoon*	3 / 7		2 / 6		
Mr. Wara Tongprasin	6 / 7		5 / 6	1 / 2	
Mr. Chatri Siripanichkorn	6 / 7			2 / 2	
Mr. Wiwat Sangtian	6 / 7				
Miss Urawee Kanokpruk	7 / 7			2 / 2	
Mr. Danucha Noichaiboon	7 / 7	35 / 35		2 / 2	1 / 1



Director	Number of Attend / Number of Meeting				
	BOD	BOM	AC	NRC	RMC
Mr. Anan Santichewasatian	7 / 7	34 / 35			1 / 1
Mrs. Daranee Kantamara	7 / 7	35 / 35			

Note : BOD = The Board of Director, BOM = The Board of Management, AC = Audit Committee,

NRC = Nomination and Remuneration Committee, RMC = Risk Management Committee

: Mr. Aroon Sricharoon was appointed as a new Board of Director on May 13, 2019 replacing Mr. Pitak Chaicharoen, the director who resigned on May 3, 2019

#### • Non-Executive Board of Directors

According to the principles of good corporate governance, the Company determined that the meeting of Non-Executive Board of Directors without the management at least once a year. In 2019, there was an aforementioned meeting on December 17, 2019.

#### Performance Evaluation of the Board of Directors

The Company has determined that the performance of the Board should be evaluated at least once a year, divided into 2 different assessments are as follows:

1. Board Evaluation
2. Self Assessment

The Board of Director jointly evaluate their performance and seek rectification and improvement measures. The Company has properly reviewed its Board self-assessment guidelines and criteria to be consistent with those of the Stock Exchange of Thailand comprised three sections:

1. Board structure and qualifications
2. Board meeting
3. Roles, duties and responsibilities of the Board

The Company Secretary send the Board members the self-assessment form to evaluate their performance. The evaluation result is reported to the Company's Board of Directors in the next time.

The Board's self-assessment result for 2019, Overall, all criteria points have good average score, reflecting the Board's performance of duties according to the good corporate governance principles at a well to excellent level.





### Managing Director's Performance Assessment

The Company executed Managing Director's Performance Assessment each year. The Nomination and Remuneration Committee is in charge of the annual performance assessment of the Managing Director. The Committee is to forward the assessment outcome to the Board for endorsement. The Managing Director's performance assessment has two parts which are performance and leadership. The performance appraisal outcome remained confidential and could not be made public.

### Orientation of New Directors

The Company holds an orientation for new Directors by presenting the Company's information, aviation business, shareholding structure, related rules and regulations including privileges of the Directors, to allow the Directors to receive related information beneficial for managing the Company. In addition, the Directors are encouraged to attend training courses organized by the Thai Institute of Directors (IOD) to develop, support and promote the performance of the Board of Directors.

In 2019, Mr.Aroon Sricharoon was appointed as a new Board of Director. The Company Secretary explained all the details above to him. In addition, Mr.Aroon attended the Director Accreditation Program (DAP) Class 165/2019 of the Thai Institute of Directors (IOD). It's course for Director to learning the roles, basic duties and legal liabilities of the directors in order to start the career with confidence by receiving a course certification from SET and SEC.

### Knowledge and Skill Development for Directors and Executives

The Board of Directors and Executives are encouraged to attend training courses, seminars and activities organized by the IOD, the SET, and the SEC in order to continuously enhance their knowledge and exchange experience in various fields related to the roles of Directors and Subcommittees.

The majority of the Directors have been trained in courses organized by the IOD as follow:

- Mr.Aroon Sricharoon, Position : Independent Director / Audit Committee
  - Director Accreditation Program (DAP) 165/2019



### Training of the highest responsibility in finance and accounting (CFO) and the person supervising accounting

Program	CFO	Chief Accountant
Orientation	-	-
Refresh	/	/

As SEC and SET has defined the qualifications of the highest responsibility in finance and accounting (CFO) and the person supervising accounting, that required CFO and supervising accounting who has already taken up this position has to complete six hours of his/her continuing development course in accounting knowledge (refresh course) per year. The company has complied with the above regulations as detailed below:

- **The highest responsibility in finance and accounting (CFO)**

The Company's CFO was Mr. Anan Santichewasatian, Position : Chief Financial Officer. He has been appointed to the position since 2008 until now.

In 2019, He attended the training for continuously develop their knowledge of accounting standards in program "Health check business through financial statements Course" by the Federation of Accounting Professions, in the royal patronage for a period of 6 hours in accordance with the rules by SET.

- **The person supervising accounting**

The person supervising accounting of the Company was Mrs. Somjit Phokabutr, Position : Accounting Manager. She has been appointed to the position since 2015 until now.

In 2019, She attended the training for continuously develop their knowledge of accounting standards, detailed as follow:

- "Cognizant of the Financial Reporting standard No.16 Course" by the Federation of Accounting Professions, in the royal patronage for a period of 6.30 hours.
- "Preparing for the introduction of International Financial Reporting Standards No. 9 and No. 16 were adopted" by the Federation of Accounting Professions, in the royal patronage for a period of 6 hours



## Subcommittees

The Board of Director appointed four sets of Committees to study and scrutinize specific matters as follows:

### 1. The Management Board

As of December 31, 2019, there were 5 members in the Management Board as follow:

- |                  |                  |  |
|------------------|------------------|--|
| 1. Mr. Danucha   | Noichailboon     | Managing Director                                  |
| 2. Mr. Anan      | Santichewasatian | Chief Financial Officer                            |
| 3. Mrs. Daranee  | Kantamara        | Deputy Managing Director of General Administration |
| 4. Mr. Vithep    | Vachirabrahmu    | Senior Deputy Managing Director                    |
| 5. Mr. Daroonwat | Noichailboon     | Deputy Managing Director of Marketing              |

### Scope of power and duties of the Management Board

The Management Board has the authority and responsibility for the management of the Company in regard to normal operations. By co-determining business policies, goals, operational plans, business strategy, budget, management structure to propose to the Board of Directors' meeting and/or the shareholders' meeting for approval before proceeding. Including checking and monitoring the Company's performance according to the policy. The current board of management has the authority as follows:

1. Report and present the business policies, Goals, operation plan, business strategies, and annual budgeting of the Company for the Board of Directors approval.
2. Control and monitor the Company's operation to go along with rules, regulations, business policies, business plan, and business strategies by the resolution of the Board of Directors and/or the resolution of the shareholders' meeting
3. Determine and assign the Human Resource Management policies, IT Technology, expand the businesses, Personal Relations, and regulated the operation to meet the company's goal.
4. Determine and approve to bid in the project or be a contractor for the agencies or the person.
5. Approve the appoint, hire, dismiss, assign fees, compensation, bonus, and workfare for the employee and Management team, except for appoint, hire, transfer, and dismiss Internal



Audit Department Manager and officer which need the approval of the Audit Committee. For the appointment, hire, transfer, and dismiss of Deputy Managing Director and higher positions and the advisors, the Remuneration Committee will be determine and pass the subject to the Board of Directors to approve. The Management Board is authorized to perform the financial transactions:

5.1 If conducted in the business plan or budget which is already approved, the Management Board can use in the line that already approved.

5.2 If not in concern with 5.1 above, the Management Board can approve the financial amount not over Baht 20 million and the amount mentioned is include with the financial transactions, capital expenditure and can approve for the financial obligations (Loan) in any kind of financial tools which not over Baht 20 million and the affiliate, when the transaction is finish, the Management Board need to report the conclusion to the Board of Director.

6. The Management Board has the power to authorize one or more than one person to perform an action for the Management Board which the action is under the control of the Management Board within the period of time and the Management Board can cancel of modify the authority or power.

7. Perform the tasks received from the Board of Directors.

In addition, the approval of the aforementioned items must not cause the Management Board or the authorized person from the Management Board able to approve items that he or someone may have conflicts, or may have other conflicts of interest (according to the Company's Articles of Association and The Securities and Exchange Commission Act) done with the Company or its subsidiaries. Except for approval of transactions that are normal course of business with clear details.

In the case of any actions that have or may have an interest or stake in the management committee or persons who may have conflicts. The Management Committee shall propose that to the Audit Committee and the Board of Directors for approval. The directors and persons who may have conflict of interest shall not be entitled to vote at the meeting of the Board on such matters.

## 2. Audit Committee

As of December 31, 2019, the member of Audit Committee is as follow:



- |             |                 |                                 |
|-------------|-----------------|---------------------------------|
| 1. Mr.Vinai | Vittavasgarnvej | Chairman of the Audit Committee |
| 2. Mr.Aroon | Sricharoon      | Audit Committee                 |
| 3. Mr.Wara  | Tongprasin      | Audit Committee                 |

Secretary of the Audit Committee is the manager of Internal Audit Department, Mrs. Suwannee Sujaritvanitchpong.

Note: On May 3, 2019, Mr. Pitak Chaicharoen resigned from the Audit Committee position, and on May 13, 2019, the Board of Directors resolved to appoint Mr. Aroon Sricharoon to be the Audit Committee in replacement of the resigned above.

Two members of the Audit Committee are knowledgeable and experienced in reviewing reliability of Financial Statements, Mr.Vinai Vittavasgarnvej and Mr.Wara Tongprasin who graduated with a Bachelor's Degree in Accounting as well as work experience related to accounting.

#### Scope of power and duties of the Audit Committee

1. To review the Company's financial statements to ensure they are accurate, complete, and reliable.
2. To review the efficiency and effectiveness of the Company's Internal Controls and Internal Audit procedures by included the bellowing topics.
  - 2.1 Give the consent to appointed, rotated, layoff, and determine to reward the head of Internal Audit.
  - 2.2 Determine the independent of Internal Audit Division, in term of operation, reporting and structure.
3. To review the efficiency and effectiveness of the Company's risk management systems.
4. To review practices to ensure compliance with rules and regulations of the Stock Exchange of Thailand, and other related authorities.
5. Determine and selected to nominate and remunerate the Company auditor and considering the independent of Company auditor which might give the company other services.
6. Meeting with the Company auditor without the management for receive the comment from auditor at least once a year.
7. To review and submit an opinion on Internal Audit plans, practices of the Internal Audit group and coordinate with external auditors and report the performance of Audit Committee to the



Board of Directors at least 4 times a year.

8. To consider disclosure of corporate information so it is reliable and adequate especially in the case of any related transactions or potential conflict of interest.

9. To prepare a report on corporate governance reviewed by the audit committee and signed by the Chairman of the Audit Committee for disclosure in the Company's annual report. The information including with:

- The accuracy, completion, and reliable of Company financial report.
- The adequacy of internal control system.
- To review practices to ensure compliance with rules and regulations of the Stock Exchange of Thailand, and other related authorities.
- The suitability of the external auditor.
- Conflict of interest transactions.
- Opinions or comments received by applying follow the AC's charter.

10. To perform other tasks assigned by the Board of Directors and Audit committee approved.

### The responsibility of the Audit Committee

The Audit Committee has the responsible to the Board of Directors in terms of the duties received from the Board of Directors but the responsibility in the activities, which the company get involve, with other party is the Board of Directors obligation.

### 3. Nomination and Remuneration Committee

As of December 31, 2019, there were 4 members of the Nomination and Remuneration Committee as follow:

- |                |                |   |
|----------------|----------------|---|
| 1. Mr.Wara     | Tongprasin     | Chairman of the Nomination and Remuneration Committee |
| 2. Miss Urawee | Kanokpruk      | Nomination and Remuneration Committee                 |
| 3. Mr.Danucha  | Noichai boon   | Nomination and Remuneration Committee                 |
| 4. Mr.Chattri  | Siripanichkorn | Nomination and Remuneration Committee                 |

Secretary of the Nomination and Remuneration Committee is Mr. Danucha Noichai boon

**Note:** On May 3, 2019, Mr. Pitak Chaicharoen resigned from Chairman of the Nomination and Remuneration Committee position, and on May 13, 2019, the Board of Directors resolved to appoint Mr. Wara Tongprasin to be Chairman of the Nomination and Remuneration in replacement of the resigned above.



### Scope of power and duties of the Nomination and Remuneration Committee

1. Assign the policies, qualification, and procedure for the nomination of the director and management level.
2. Determine the nomination policies for the benefit of the Company.
3. Nominate and select the qualify person follow the related rules and regulations and present to the Board of Directors for the appointment of Director or management level.
4. Control and monitor the suitable size and structure of the Board of Directors and adjust the size and structure to conform to the changing environment.
5. Present to the Board of Directors for the nomination of the directors replacing the resigned directors from the articles of association.
6. Give the proposal and evaluation of the management level.
7. To perform other tasks assigned by the Board of Directors.
8. Broach with the rules of Board of Directors compensation, Executive Board compensation, Others Committee, and the advisor of the Company to approve by the Board of Directors.

For the Managing Director, Deputy Managing Director or above positions, and Internal Audit Department Manager compensation is determined by the Nomination and Remuneration Committee and pass through the Board of Directors to approve.

9. Broach with the rules of Board of Directors annual compensation to approve by the Board of Directors before the shareholders' meeting approval.
10. Determine the employee's bonus to approve by the Board of Directors.
11. Determine the employee's annual adjusted salary to approve by the Board of Directors.
12. Determine the rules and regulations of the company that concern to the benefit of the employee by the order of the Board of Directors.

### 4. Risk Management Committee

As of December 31, 2019, there were 7 members in the Risk Management Committee as follow:

- |               |                  |   |
|---------------|------------------|---|
| 1. Mr.Danucha | Noichai boon     | Chairman of the Risk Management Committee |
| 2. Mr.Anan    | Santichewasatian | Risk Management Committee                 |



3. Mr.Vithep	Vachirabhahu	Risk Management Committee
4. Mr.Daroonwat	Noichaiboon	Risk Management Committee
5. Mr.Paithoon	Indaravisute	Risk Management Committee
6. Mrs.Supaporn	Chansuroj	Risk Management Committee
7. Mr.Somphong	Rob-loak	Risk Management Committee and Secretary

### Scope of power and duties of the Risk Management Committee

1. Evaluate, analyze, and develop the framework of risk management and the method of risk evaluation in the future.
2. Assign the policies of overall risk management of the Company which include any important type of risk likes business risk, competitive, production, procurement, credit risk, liquidity risk, and exchange rate risk.
3. Assign the conform strategies with the Company risk management policies which can be evaluate, monitor, and control the risk
4. Assign the sufficient policies and risk management including with the efficiency of the system and follow the policies.
5. Report the result of approach to the Board of Directors to modify direct to the policies and regulations of risk management and notice to the Audit Committee for the proper audit.

### Nomination and Appointment of Directors and Top Management

#### 1. Nomination of Directors

According to the Company's Articles of Association, the Board of Directors shall consist of not less than 5 directors as decided and not less than half of all directors shall have residence in the Kingdom. The Company's director shall have the qualifications and not be under the prohibition prescribed by the law. At every AGM, one-third of the Directors shall retire from office. If the number is not a multiple of three, then the number nearest to one-third shall retire from office or the Director's positions are vacant from the other causes.

In the appointment of directors, the Nomination and Remuneration Committee has duty and responsibility for selecting and screening qualified persons as prescribed in the Company's Articles of Association and nominating the qualified persons based on the structure, size and





composition of the Board of Directors for independent directors' qualifications shall be set forth in notification of the Capital Market Supervisory Board. By considering the list of suitable persons from:

- (1) The person who is the former director who has expired to propose to the next position.
- (2) The shareholders' nomination (if any);
- (3) The nomination by the Chairman of the Board, Directors, etc;
- (4) The recruitment of the knowledgeable, skillful and experienced persons ideal for the Company.

The Company provides an opportunity for shareholders to participate in the nomination of qualified under the terms and conditions set out in the December 1 - 31, 2018.

The qualifications of the Company's Directors being recruited as follow:

- (1) The qualified according to the company's regulations, have knowledge and understanding of the Company's business, assigns the strategies and policies, and supervises for the effective practice of the strategies,
- (2) The recruited persons would be able to perform the director's duties with prudence, integrity, morals and responsibilities, and make decisions based on fact and logic,
- (3) No restrictions as defined by the other related laws, rules and regulations,
- (4) The independence of each Independent Director,
- (5) The director's ability to make time dedication: considering from the number of companies in which the director is holding a position, for example, so that they have enough time to join the Board Meeting regularly and are able to control and monitor the Company's operations.

The Nomination and Remuneration Committee considers and presents the list of candidates to the Board of Directors in order to propose to the shareholders' meeting for consideration and appointment.

The directors are appointed by the majority vote of the AGM based on the following criteria and methods:

1. One shareholder shall have one vote for each share;
2. Each shareholder shall exercise all the votes he or she has to elect one or several person(s) to be directors but cannot divide the votes for any person to any extent;

3. Persons receiving the most votes, in descending order, are those who are elected directors, to the number of directors who are to be elected. If there is a tie in the last to be elected and this would exceed the said number of directors, lots shall be drawn to meet the required number.

At every AGM, at least one-third or the closest number to one-third of the Directors must retire. The Directors to retire for the year and second year following the Company registration shall be selected by means of the lucky draw. For the later years, the Directors being at term for the longest period shall retire while the duly-retired directors can be re-elected into the position.

In the case that the director's positions are vacant from the other causes apart from the duly retirement when the term ends, the Board of Directors can elect any qualified persons having no restrictions according to the law to be the replacement Directors in the next Board, except that the Director's term remains less than 2 months, then the new replacement Director shall be in the position for as long as the remaining period of that retired one in such term.

The AGM might resolve for any Director to retire before the term ends with the majority vote of at least three-fourths of all shareholders attending the meeting and holding the rights to vote and the combined share amount of not less than half of the share amount held by the shareholders attending the meeting and holding the rights to vote in such meeting.

#### Nomination of independent directors

The Company has criteria for selecting independent directors by considering the minimum qualifications in accordance with the regulations of the Securities and Exchange Commission. Also consider candidates with experience and ability to be able to provide opinions and suggestions that are beneficial to the operations of the company. Including be famous personalities who will enrich the image of the Company must not be beneficiary whether directly or indirectly with the Company, Related Companies, Subsidiaries and major shareholders. Including the freedom to express opinions freely, not under the control of the executive, major shareholders, related persons or close relatives of such persons.

The qualifications of Independent Directors as announced by the Capital Market Supervisory Board are as follows:

1. Must hold no more than 1 percent of the total outstanding voting shares of the Company, subsidiaries, associated companies, major shareholder or controlling person of the Company. Shareholding of the Independent Director includes shares held by persons related to that particular Director.

2. Is not or has never been a part of the management, staff, employee, consultant earning salary or controlling person of the Company, parent company, subsidiaries, associated companies or subsidiaries of the same level, major shareholder or controlling person of the Company unless the position has been terminated for over 2 years.

3. Is not related by blood or through legal bonding which includes father, mother, spouses, siblings, children, spouses of children, to other directors, management, major shareholder, controlling person of the Company or any person being nominated to the director, management or controlling position of the Company or its subsidiary.

4. Does not or never have business relationships with the Company, subsidiaries, associated companies, major shareholder or controlling person of the Company which may distract one's independent judgment. This also includes not having been a shareholder of significance or a controlling person of the entity having business relationship with the Company, parent company, subsidiaries, associated companies, major shareholder or controlling person of the Company unless the person's term has been terminated for at least 2 years.

5. Is not or has never been the auditor of the Company, subsidiaries, associated companies, major shareholder or controlling person of the Company, and is not a shareholder of significance, a controlling person or a partner of an audit firm where the auditor of the Company, parent company, subsidiaries, associated companies, major shareholder or controlling person of the Company is subject to, unless the position has been terminated for at least 2 years.

6. Is not or has never been a professional service provider that includes being a legal advisor or financial advisor receiving remuneration for over THB 2 million per annum from the Company, subsidiaries, associated companies, major shareholder or controlling person of the Company, and is not a shareholder of significance, a controlling person or a partner of a professional service provider of that type unless that position has been terminated for at least 2 years.

7. Is not an appointed director acting as the proxy of the Company's Board of Directors, major shareholder or shareholder as a related person to the major shareholder.

8. Must not operate or own a similar type of business that is a direct competitor to the Company or subsidiaries; is not a major partner in a limited partnership, a Director with management authority, staff, employee, a consultant earning salary or holding more than 1 percent of total voting shares of other companies operating similar type of business and regarded as direct competitor to the Company or subsidiaries.

9. Have no other characteristics that would prevent the provision of independent point of view concerning the Company's operations.

### **Appointment of Top Management**

The appointment of Managing Director, which is the Company's top management position, is made by the Nomination and Remuneration Committee who has authority to define criteria and methods for recruiting the qualified persons with ideal knowledge, abilities and experiences and without the restrictions as defined by the Standard Qualifications for Directors and Officials of State Enterprises Act B.E. 2518 (1975) and the amendment and other related laws to take the position of President. The names of the nominee will be proposed to the Board of Directors for further consideration.

The Board of Directors has set a policy limiting the number of directorships in other companies where Managing Director can hold office as follows:

Managing Director is able to hold no more than 5 positions in other listed companies by inform the Board of Director. The Company Secretary will disclose the information in the Annual Information Form (Form 56-1) and Annual Report (Form 56-2).

The Company prohibits Managing Director to holding the position of Managing Director, Manager or other position that has similar characteristics in the same business or being a competitor to the Company and subsidiaries. Exceptions would be joined as directors in government and the private organizations which established for public interest.

### **Monitoring of Associated Companies**

To supervise the operations of Subsidiaries, the Company as a shareholder has sent representatives to supervise the interests as well as coordinated cooperation between Subsidiaries. The Company's representatives are those who have been approved by the Management and the Executive Board or the Board of Directors to take positions as Directors in two Subsidiaries. The representatives are either members of the Company's Board of Directors or executive management total 4 persons who have knowledge and understanding of the business and can determine policies that are crucial to business operation, provide management guidelines that will benefit to the Company.

In a major policy, the representatives of the Company obtain the policy of the Company before offering an opinion at the meeting of Subsidiaries, such as allocation of profit, dividend or submission of state revenue, the election of replaced Directors who expired from term of office, the increase - decrease capital, termination - merger. The Company's representative must report information within the given time to the Company's Management and the Board of Directors.

In addition, the Company has arranged analysis, monitoring, and report on the performance of Subsidiaries, on a quarterly or yearly basis to allow the management and the Board of Directors to use the information in making decisions and determining direction and guidance to regulate investment Subsidiaries.

### **Policies on Insider Information**

The Company has the policies on insider information, prescribing that no Director, Executive and employee who knows or possesses inside information shall trade securities by resorting to inside information, which is material non-public information, in such a manner that it is likely to have an effect on the price or value of securities, and has known or possessed while holding a position or the line of work responsible for or capable of accessing inside information. Any actions, either for the benefit of oneself or other persons or to pass on such information to others, are prohibited. No Director, Executive and employee, and who has known or possessed inside information, shall trade securities during the period of 1 month prior to and 24 hours post the disclosure of the Company's financial statements.

Including having policies and adhering to ethics and integrity in business operations to customers, business partners and shareholders. There are clear requirements and codes of conduct in case that employees or executives disclose company information or used for their own acts or transactions that may have conflict of interest. It is a serious offense and may be subject to disciplinary action.

The Company has informed the directors and executives regarding the duty of shareholding report in shareholding of AKR shares by the Directors, Executive as well as their spouses and minor children. Any change in such securities holding shall be reported to the SEC in accordance with Section 59 of the Securities and Exchange Act and send a copy of the report to the Company on the same day or slowly on the next working day.

The Company has imposed penalties for not complying with insider information, sent by mail to the staff and management were informed accordingly.

#### Auditor's Fee

- **Audit fee**

The Company and its Subsidiaries paid audit fees to ANS Audit Co., Ltd. for undertaking financial audit work for the past fiscal year in the amount of 1,800,000 Baht.

- **Non-audit fee**

- None -

#### Compliance with Good Corporate Governance in other areas

The Company has continuously improved and uplifted its operation to be in line with the principles of good corporate governance. However, in 2019, there were issues in CGR which could not be covered. Details are as follows:

- Does the Company require a minimum quorum of at least 2/3 for board decisions?

Article 24 of the Company's regulation only prescribes that at the meeting of the Board of Directors, there must be not less than half of the total number of directors present to constitute a quorum but does not specify the minimum quorum to pass resolutions.

- Does the Company use cumulative voting in the election of board members?

The Company cannot use Cumulative Voting as the procedure of voting for the Company's Directors. As Article 21 of the Company's regulation stipulates that one shareholder shall have one vote for each share. Each shareholder shall exercise all the votes he or she has, to select one or several person(s) to be directors but cannot divide the votes for any person to any extent.

- Does the Board have a policy to limit the number of year in the position of Independent Director for not more than 9 years?

The Board of Directors have considered the said policy and found that the Independent Director of the Company is qualified in accordance with the regulations of the Securities and Exchange Commission. He or She able to provide comments and suggestions that benefit to the operations of the Company and has understanding of the Company's business experience as well as the Independent Director of the Company without benefits or interests whether directly or indirectly to the Company, its subsidiaries or shareholders.



The Board of Directors has deemed it appropriate not to limit the number of years the tenure of Independent Directors of the Company not exceeding 9 years, according to the reason mentioned above.



## Corporate Social Responsibility



## Overview Policy

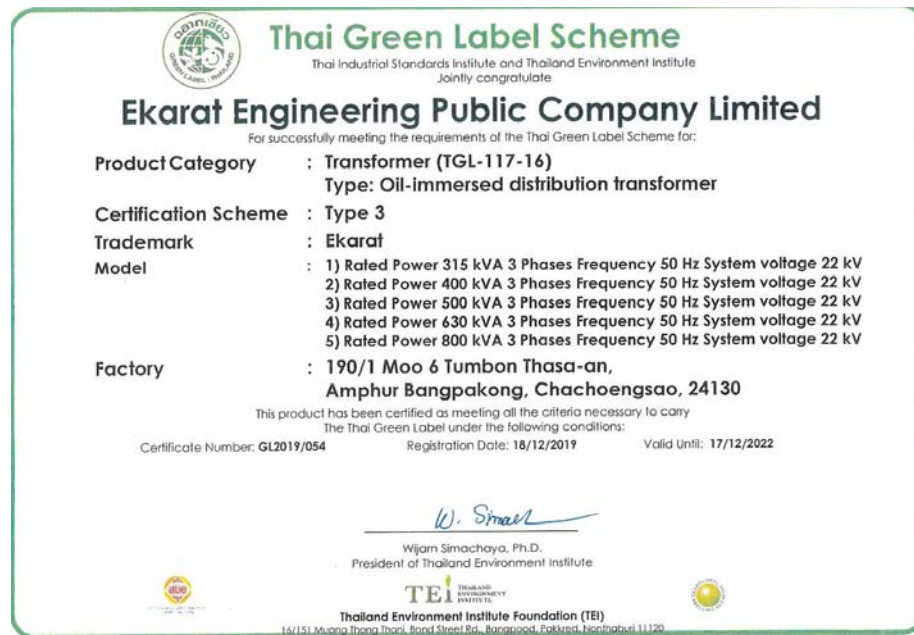
The Company is committed to conducting business with social responsibility, environment and good governance. Under the operating philosophy “Adhering to quality and integrity for customers” important both product quality and quality in corporate management. By striving to develop the potential of personnel in the organization improve the development of quality products, create better quality for society, and create a sustainable return for shareholders. So that the organization can live happily with the community and society. As well as elevating the progress of all stakeholders together, therefore, the Company has established the following corporate policies.

### Corporate policy

1. Produce products and services that meet the standards in order to satisfy customers.
2. To maintain the quality of safety, occupational health, environmental and prevention of pollution caused by raw materials in the production process, various activities as well as the products and services of the organization.
3. The organization is committed to promote the anti-corruption both from inside and outside the organization.
4. Comply with the laws and regulations which related to the business operation of the organization strictly.
5. The employees are also responsible for using the energy and resources efficiently.
6. Provide the support in allocating the resources which are needed to improve and solve problems of quality, safety, occupational health, environment and society to be adequate and appropriate.
7. Corporate policy has been disseminated to employees and stakeholders.
8. Review and improve the policies to be consistent with the current situation by taking into account the impact of employees and stakeholders.

The Company has adopted the corporate Social Responsibility (CSR) to be a part of the operation continuously.

- “Thai Green Label Scheme” a certification of quality and environmentally friendly products by the Thai Environment Institute. On December 18, 2019, the Company was certified transformer green label from an additional 9 items ranging from 315 kVA - 2000 kVA. At present the transformer has approved all 17 items ranging from 50 kVA - 2000 kVA. and in the process of submitting 7 certifications



- The Company received “Chachoengsao Labour Management Award 2019” and “The Prevention and Solution of Drug Problems in Workplace Award” from Mr.Raphiphong Buppachatt, the Governor of Chachoengsao Province. To be honor and praise the establishment that has good labor management system in Chachoengsao province.
- The Company received “Clean Food Good Taste Award” in “Food and Safe Water Source Project for the year 2019” from Mr.Chatchai Chaikittiporn, Deputy Mayor, The municipality of Thasaarn Sub district, Chachoengsao province. Which is a guarantee of food and water quality in the cafeteria, clean and safe without



## CSR in Process

Guidelines for “Social Responsibility” in accordance with the Stock Exchange of Thailand, divided into 8 topics:

### 1. Fair business operation

The Company is committed to conducting business fairly and transparently. Recognizing the overall social responsibility encourage the Board of Directors, executives and all employees of the Company perform duties. Under the ethical principles of the Company’s business which has been announced for employees to acknowledge and as a rule of practice which has been updated to be consistent throughout the present. The details are as follows;

#### 1.1 Fair competition

According to the Company policy is fair competition but full of determination. At the same time, the Company will not use illegal or immoral methods to collect information



that is used for the benefit of the competition. Although it is consenting to exchange information, stealing trade information, trade secrets of competitors either in product, price, production, sale or auction which is not allowed by competitors whether written or verbal.

The Company has set out procedures and measures to prevent involvement in behaviors that hinder competition. While encouraging employees to recognize the importance of compliance with laws.

### 1.2 Promoting social responsibility in the value chain

The Company has established a clear and systematic policy on procurement of social responsibility such as procurement control. The selection of procurement sources as well as monitoring and evaluating suppliers to develop sustainable business operations by adhering to the principle of performing duties with integrity, fairness and maintaining good relationships with partners, coordinate and support each other, safety technology, increasing productivity, reduce environmental problems to step into business stability together.

### 1.3 Respect for property rights

The Company will not violate intellectual property or any other rights related to intellectual property of others. Whether it is copyright, patent, trade secret and any terms of the license agreement or commercial contract. By requiring executives and employees to use products or services that are properly licensed.

### 1.4 Responsible politics

The Company recognizes the importance of transparent business operations. Especially about the activities related to politics in all sectors. Whether it is helping or the benefits that give rise to the power of political control that is not correct. By the Company has informed the employees to acknowledge and strictly observe.

## 2. Anti-corruption

The Company has established a policy on anti-corruption. Under the business operation, using fair business strategy, transparency, adherence, good quality of the product is important and strictly abide by relevant laws. The Company is committed to anti-corruption by prohibiting the



Board of Directors, executives and employees of the Company relating to any corruption. Giving and receiving all forms of direct and indirect such as a bribes reception, donation and political assistance calling or receiving any benefits or assets. That will lead to practice or refrain from performing their own responsibilities. Because the Company to lose benefits unless it is the case of laws, regulations, notifications, regulations, local customs or trade tradition can be done.

The Company has communicated policies and guidelines to employees at all levels. Including all related parties of the company. In the year 2019, the Company conducted the following activities;

- Publication and guidelines via the Company's website and the internet system within the Company which is easily accessible and throughout the organization along with closing the announcement to publicize to employees.
- New staff training to study and understand the content of ethics in business operations, Work regulations, policies and guidelines for anti-corruption. Both executive level and all staff.
- The Company conducted a survey and assessed the risks of corruption that may occur in the organization. In order to acknowledge the potential for corruption in the organization Internal, control assessment including proposing preventive measures. By the Company to bring the survey results to review guidelines, internal control system and work processes that may have gaps in control. Then used to improve the preventive measures and announcements for the implementation of the entire organization, such as rules of compliance trade competition connected transactions, etc.
- The Company has established a policy and guideline for whistle-blowing policy. In order to support and pay attention to all stakeholders, whether they are internal or external personnel. Third parties can report clues in cases of corruption or misconduct in business ethics or related regulations in order to help improve, correct or operate to be more accurate, appropriate, transparent and effective in business operations

The Company gives importance to all stakeholders by listening to comments, suggestions for mutual benefits and provide opportunities for stakeholders to complain in the event that the

stakeholders. Do not receive fairness or can report clues if witnessing behavior that indicates fraud corruption of individuals in the Company. The stakeholders can contact through various channels as follows;

1. By E-mail address: suwannee@ekarat.co.th or nuancsir@ekarat.co.th

2. Letter to the Chairman of Audit Committee / the Board of Directors / Company Secretary by sending to Ekarat Engineering PCL., 9/291 UM Tower, 28th Floor, Ramkhamhaeng Road, Suan Luang Subdistrict, Suan Luang District, Bangkok 10250

The Company will accept your complaints and suggestions to check and contact you shortly. With the company giving priority to confidential information to protect the whistleblower and will consider the complaints fairly. In the past year, the company did not receive any information or clues.

### 3. Respect for human rights

The Company operates on the basis of respect for human rights. No discrimination for reasons of nationality, race, religion, language, age, gender, social status. No human rights abuses. Do not hire child labor. Do not commit or encourage forced labor in all forms. By giving fairness and security to all levels of employees with the opportunity for disabled workers to work with the Company according to the individual's ability.

The Company has complied with the Thai labor law in the care of various benefits which employees should receive. Whether it is a Social Security Fund and Provident Fund by creating a manual on the management of Thai labor standards TLS 8001-2003 on labor protection, labor relations welfare safety, occupational health and working environment. Which the company has implemented and continuously improved with the opportunity for employees to make complaints and improve about matters that are perceived to be violating their rights. In accordance with the process steps set out in the operation regulations, the company has a booth to receive comments, complaints or suggestions. Then, summarize, collect and send to Human Resources Department to check and improve. In the event that there are comments or complaints that cannot be concluded.

They will present to the executive meeting to consider.

#### 4. Fair treatment for labor

- Wage and welfare benefits

The Company has improved the salary structure to be consistent with the competitive conditions of the labor market and in accordance with the law. With the survey of salary rates of other operators in the same area to ensure fairness for employees. The evaluation of the performance of employees at all levels twice a year to use the assessment results to adjust the level and adjust the annual salary. The Company provided Social Security Fund, Provident Fund and various benefits such as having a shuttle bus, sports venues and supporting various sports equipment etc.

- Safety and occupational health

The Company has established the Safety, Occupational Health and Working Environment Policy. The executives and employees at all levels collaborate to implement the policy continuously and efficiently. Also appointed the Safety, Occupational Health and Working Environment Committee which consists of executives and representatives of employees at all levels. In order to ensure the compliance with the ISO 14001 environmental management system standards. The employees participate in the decision on the safety and occupational health, safety policies and plans as follows;

- Provide a safe working environment to prevent danger and reduce risks that may arise from work processes or work environments.
- Requires training for all employees to understand safety regulations to cultivate work consciousness and realize the potential dangers.
- Provide a hygienic bathroom, clean drinking water, Factors for proper and adequate first aid.
- The Company will arrange for pregnant women to work safely. Not harmful to pregnancy without dismissal reduce positions or cut benefits because of pregnancy.

In addition, the Company has a welfare and health promotion activities, such as organizing sports and recreational facilities which will be beneficial to mental health and physical health of employees, random sampling of alcohol and also taking into account the prevention and solution of drug problems in the workplace. By managing according to the standard criteria for prevention and resolution of narcotics problems in the workplace of Chachoengsao Province and received a certificate from Chachoengsao Province on 17 August 2016, effective until 16 August 2019.

In 2019, there were 18 employees with accidents and injuries from work, representing 2.54% of all employees. Which is only a minor injury. However, the company still strives to cultivate safety awareness for employees regularly.

## 5. Responsibility to consumers

The Company adheres to the corporate ethics. “Honest and trustworthy” with the goal of success is to receive the highest trust and satisfaction from our customers. Therefore, directors, executives and employees of the Company must adhere to honesty (duty of loyalty), justice and accuracy in order to obtain the trust for the customers.

- **Safety from products and services**

The Company continuously researches and develops to produce products that are safe and quality to consumers. Under the management system in accordance with the quality, safety and environmental standards such as the selection of environmentally raw materials, no harmful chemicals or heavy metal components and safe for consumers. Also guarantee products and services according to the specified conditions.

### Product warranty

The Company has a policy to guarantee the transformer for 10 years. The customer will receive a warranty card with details which inform the customer about the usage instructions, warranty period, warranty scope and telephone number to contact the service department. In the case of a problem with the transformer which during the first 3 years from the date of purchase. The Company will be responsible for correcting, repairing or replacing the new device for the customer without charge. Depending on the severity of the problem which must be considered in the case according to the conditions of the Company. After the 4th year onwards, the Company will provide maintenance services for the transformer to customers by making an annual service contract. To track and check the operation of the transformer for safety in use and prevention of unexpected events that may occur, such as transformers, explosions, etc. which will cause damage to the business of the customer from power outages or fire. Having a backup power transformer for customers to use while waiting to repair the transformer.

- **Marketing communication with customers**





- The Company has prepared a warranty certificate sent to the customer along with the product. The detailed information on the characteristics of the product is made in the catalog format. Distributed to customers through sales staff service centers nationwide and distributors both domestically and internationally.

- The Company will conduct a survey of customer's satisfaction after servicing the transformer from maintenance service technicians of our service centers on quarterly. In the past year, it was found that customers were very satisfied with the work of service technicians.

- The Company has a process to review customer complaints on the quality and safety of products. Including following up after correcting and finding protection methods.

- Have a policy to maintain the confidentiality of customers by not disclosing their information or using it illegally for the benefit of oneself or related persons.

## 6. Environmental care

The Company is aware of the important of environment. Therefore has a clear policy and goal regarding energy conservation along with reviewing for continuous development every year.

Energy conservation policy is the implementation of the energy management system in every business process with the goal and objective to promote the use of energy for efficiency and maximum benefits. Including compliance with other laws and regulations associated. This is considered the responsibility of executives and staff at all levels to cooperate in complying with the prescribed measures. The Company have communicated and publicized such policies to both internal and external stakeholders in general. The Company has implemented the following energy and environmental conservation policies are as follows;

- Energy conservation by designing energy-saving products develop appropriate and continuous energy management systems. Improve energy efficiency in the production process and the technology used.

- The design of the transformer that has a lower loss than normal, according to the draft of the Green Label, which will reduce losses in the power supply system that occurs during use. Allowing users to reduce electricity costs from losses in transformers that are less.

- Saving resources by reusing and wasting from the production process, such as bringing

wood chips, unused pallets or steel structures to be used as a cabinet or table for placing and providing a recreational corner for employees to sit and read. Using recycled paper to reduce the use of paper for internal work, etc. The Board of Directors had a policy to promote efficient use of resources. By setting off the lights and air conditioning during the lunch break for 1 hour and providing training on environmental knowledge to the employees according to ISO 14001 standard.

- Pollution prevention by controlling and choosing appropriate chemicals, reduce pollution to the environment and harm the production process, control wastewater quality before being released to the public. Including preventing interference with the surrounding communities, both noise and vibration from the following manufacturing processes.

- The use of transformer oil without substance Polychlorinated Biphenyls (PCBs) which are difficult to decompose chemicals and can accumulate in both living organisms and the environment. Causing various symptoms such as chronic bronchial liver cancer Impaired nervous system, etc.

- The use of silica gel that is plated from natural organic substances instead of Crystal Violet plated from Cobalt Chloride, which is a banned substance in the product.

- The use of plastics that do not contain heavy metals.

- The use of water colors to reduce the impact on the environment by using water as an ingredient instead of oil paint that must be used thinner as solvent.

- The use of varnish without heavy metal.

- Using hand washing powder to wash oil stains in maintenance work.

- Use an environmentally friendly oil stain remover.

- Carbon Footprint Project is a life cycle assessment of products from raw materials, production process, transportation, product using and product scrap management after use. By specifying the amount of energy and raw materials used including waste that is released into the environment, process of collecting and evaluating the value of emissions that cause global warming to find ways to improve the environmental impact to a minimum which covers all products transformers and solar panels.

- Change the lighting bulb in the factory to be an energy-saving LED bulb, saving 3,312

kW-h of electricity per month, or reducing electricity costs by approximately 162,950 baht per year and the amount of greenhouse gas that is reduced by 10.30%.

- Installed a 27.44 kW solar power generation system (Grid connected System) on the factory roof, allowing the company to save electricity by 181,093 baht per year and resulting in a 25,332 kgCO<sub>2</sub> reduction per year.

- Reduce the amount of oil used in the forklift by 5% per year. There were cost of forklift oil costs reduced by 5,039.26 baht per month and resulting in reduced greenhouse gas volume too.

## 7. Community or social development

The Company gives importance to working with communities by arranging for representatives to consult with the community and dialogue step by step. To collect information from the community appropriately before implementing various projects in the development of society, organizations, educational institutions and nearby communities. As well as maintaining the traditional desserts, local traditions and instill conscience for employees at all levels to be responsible and participate in various activities for society. In 2019, the Company has implemented the following activities;

- Educational support project by the Company provides opportunities for students from various institutions visited the factory to study and learn the production process of the Company that are transformer and solar panel such as King Mongkut's Institute of Technology Ladkrabang, Lampang Rajabhat University, Lampang Province, etc., including internships in order to increase knowledge and experience from actual work. In addition, the Company also has a project to accept students who want to find work experience. At a rate of not more than 70 people per year





## 8. Innovation and innovation which is derived from operations that are responsible for society, the environment and stakeholders

The Company places great importance on product quality. “EKARAT” transformer is outstanding and has a reputation for high quality and durability. Causing customers to trust and have the highest number of sales throughout. Therefore, the Company must continuously improve and develop products to invent new innovations and technologies which be beneficial to the Company, customers and stakeholders in every part, especially reducing production costs but maintain the same high quality. In order to be able to compete on price with more competitors. Including the review of the production process to be more efficient as well. In 2019, the Company has developed innovations and production processes as follows;

- The Quality Control Department has added another Dissolved Gas Analysis Instrument, worth approximately 3 Million Baht, to measure the amount of gas that has broken down and dissolved in transformer oil to support the maintenance service of transformers.

### Operations and report preparation

The Company has prepared a report according to the framework of the Global Reporting Initiative (GRI), taking into account the stakeholders that are important to the sustainability factor, consisting of employees, customers, partners, shareholders, communities and related government agencies. Linking relationships with social responsibility in both economic, social and environmental aspects including disclosed the report as part of the Annual Report.

### Activities for social and environmental benefits (CSR after process)

The Company has continuously provided projects to reward society and the environment. Including cultivating consciousness for personnel at all levels to be responsible and participate in various activities. In 2019, the Company had activities for society and the environment as follows;

- The Company and employees jointly made merit with Phrabat Nampu Temple, Lopburi Province by donating money, some consumer goods for Luang Por Alongkot Abbot, Phrabat Nampu Temple to help orphans and HIV-infected patients.
- The Company donated scholarships to support teaching and learning activities of Prakobradbamrung School, Bang Pakong District, Chachoengsao Province.





- The Company donated sport equipment to the Office of Labor Protection and Welfare, Chachoengsao Province to be distributed to schools in need.



- The Company arranges staff at the factory making merit and offering food to monks on a monthly



- The Company participated in activities “Ban Rom Pho Thong Chalermprakiet Community Restoration Project on the auspicious occasion of the coronation” with the Chachoengsao Environmental Conservation Association and the organization of the cooperation.



- The Company has donated Solar Cell to generation electricity in Anatapat Pataparam Vipassaram Institute, Mae Hong Son Province in the project “Lighting to the community and Dharma sources”.



- The employees jointly painted and repaired jungle gyms on the playground at Prakobradbamrung School, Chachoengsao Province.





- The employees donated blood to The Red Cross, Chachoengsao Province.



- Making merit to build Luang Pho Phra Buddha Sothorn, “Yu Dee Suk Suk” model with Tha Sak Subdistrict Municipality, Chachoengsao Province.
- The Company participate in making merit by bought the lottery of Thai Red Cross in Red Cross event 2019.
- The Company participated in volunteer activities by providing scholarships, give a fire extinguisher, demonstrating fire-fighting teaching for teachers and students, painted canteen fence, changing electrical wires and the socket-outlet is damaged. Clean up the garbage collection around the school area on the day of the safety officer at work at Wat Sukharam School, Chachoengsao Province.



The Company participated in the “1 Glass 1 Sapling Project” by campaigning to collect unused plastic water glasses at the Sirinat Queen Mangrove Forest Ecosystem Study Center, Pramburi District, Prachuap Khiri Khan.

- Supporting the budget of the Thai boxing match to against drugs in the Annual New Year’s Eve at Wat Tha Sa-an, Chachoengsao Province



In addition, the Director had a policy to survey the opinions of residents in the communities around the factory about the Company’s environmental management system to acknowledge the impact from our operations to communities around the factory which will be used to improve and create satisfaction annually.

For the news and the activities related to CSR of the Company can be followed at

<https://www.ekarat.co.th/actnews/>



## Opinion of the Board of Directors on the Company's Internal Control

The Company places importance on continuous internal control and risk management. The Board of Directors has set up and assigned the Audit Committee to be responsible for reviewing adequacy and appropriateness of internal control and risk management. By discharge of duty in compliance with the applicable laws, notifications, and regulations.

At the Board of Directors' meeting No.1/2020 on 23 January 2020, all the audit committees attended that namely Mr.Vinai Vittawasgarnvej, Mr.Aroon Sricharoon and Mr.Wara Tongprasin. The Board of Directors evaluated the internal control system by asking information from the management department to inspect the documents prepared by the management and answering the evaluation form of the internal control system of the company by themselves in 5 elements, organization and environment, Risk management, the operational control of the management, information and communication system, tracking system. The Board of Directors concluded that the company has adequate internal controls to business operations and no significant deficiencies to the company. The Company's internal control in the previous year can sum up as follows:

### 1. Control within organization

- The Company is well aware of its corporate responsibility for the society as a whole, by ensuring its directors, executives and employees conduct ethical business without seeking personal benefits for themselves or others, avoiding conflict of interest, and refraining from the happening of corruption in their responsible works A proper disciplinary procedure is posed in case of breaching the Company's regulations, disseminated to all executives and employees.
- The Company has defined the roles of the Board of Directors and the Management in Business Etic. The Board of Directors has assigned the Board of Management to undertake business administration on its behalf, to determine policies, the organization structure and targets on business administration.
- The Company has established a selection and nomination process to recruit personnel with required knowledge, skills, expertise and experience, for staff and executive levels. It has a process in place for performance evaluation and salary increment. The other remuneration and benefits are made available as appropriate to employees at all levels without discrimination, Promote the development of employee potential and has also worked out a succession plan.
- The Company has an independent work unit handling internal audit and following up on

other work units' operations in terms of internal control, risk management and compliance with applicable laws. Such internal audit unit shall implement in line with the annual audit plan, and shall report the audit result to both the Board of Management and the Audit Committee for acknowledgment, as well as comments and recommendation for the management's improvement and remedial action accordingly.

- The Audit Committee shall perform duties with independence in the scope of power and duties prescribed in the Audit Committee Charter. It has reviewed financial reports, risk management, internal control and audit systems, proposed appointment of external auditor and auditor remuneration and connected transactions or transactions that may have conflict of interest. Results of such review by the Audit Committee are also proposed to the meeting of the Board of Directors for acknowledgement and consideration on a quarterly basis and published in the Audit Committee's annual report.

## 2. Risk assessment

- The Company had analysis various risk factors in external factors, for example, the competition of transformer market, economic and politics, disaster etc. and internal factor are raw material, production, information technology, the management of inventory etc. Risk Management Committee reviewed risk identification and risk level assessment, and examined risk management to ensure efficiency and suitability with the organization, closely followed up on risk management performance, and reported risk management activities of all departments as the significant agenda items to the meetings of the Audit Committee and the Board of Directors for acknowledgment and consideration.

## 3. Control activities

- The Company has put in place written about policies, corporate rules and operation manual to control operations in financial transactions, procurement, production, quality control, sales of goods and general administration with scope of power, duties, responsibilities and approval amount limit for each level and request for budget spending. The management will communicate them to staff members for further translation into practice. The operation monitoring system is in place with reporting at meetings held at all levels on a weekly, monthly and quarterly. If found an error, will



correct immediately. In addition, the Company ensures the establishment, review and improvement of policy and regulatory manuals to suit the situation.

- The Company has appointed representatives as directors in associated companies to follow up operations of such companies
- Company Secretary has been assigned to keep and regularly update information on the significant shareholder, directors, executives, and connected persons, to facilitate monitoring and review of related transactions or transactions prone to conflict of interest.

#### 4. Information and communication

- The Company has established adequate information and communication system. It has prepared accurate, complete and reliable information within an appropriate period, IT system is in place to support the data storing/searching and the operations and has been updated to meet the changes in the IT world such as prevention, access to the IT systems of the Company wrongfully. In addition, the Public Information Center is set up to control and manage the Company's information to strictly comply with the Official Information Act.

- The Company has an adequate and effective IT system. There are communication channels in and between the departments, allowing timely and quick access of news and information through such means as meetings, emails, intranet, internal broadcast and social media such as Line Group of operating lines, etc., thus ensuring the efficient up-to-date communication within the company and reaching to all employees which is the vital factor in maintaining the unity.

- For external parties, the Company has disclosed and communicated its information comprehensively and equitably to the stakeholders through its communication channel, i.e., [www.ekarat.co.th](http://www.ekarat.co.th) and in case of disclosure according to the criteria of the Stock Exchange of Thailand (SET), such as financial report, annual report of operating results, and minutes of the annual general meeting of shareholders, via the SET's information system and the company's website. Moreover, the company has made available a channel for its stakeholders to report any incident or any act prone to a violation of the laws and rules as well as the code of business ethics, which may cause damage to

the company by post or e-mail to the company secretary or Managing Director. The Company also conducts customer satisfaction surveys to listen to the problems and complaints including the suggestions to improve services for more efficiency.

### 5. Monitoring activities

- The Company has a process to monitor business operations at director, executive, and managerial levels through various meetings, namely Board of Management (weekly), Board of Directors meeting (quarterly), Board Committee meetings to consider to consider and improve to achieve the goals regularly.
- The Company monitors and evaluates its internal controls at all levels and preparing the internal control reports annually Including reviewing and evaluating the effectiveness of the internal audit from the Company's internal audit department according to the set plans.
- The internal auditors will prepare the audit report and suggestion for improvement and presented to Executives for acknowledgement and approval. The Office of the Internal Audit monitors the progress of those implementations through to completion and provides a summary of progress for presentation to Managing Director and Audit Committee to ensure the effective practice as per the recommendations. Also, in the case of suspected transactions or actions that could potentially cause damage to the Company's operating results such as conflicts of interest, fraud, major irregularity or deficiency in the internal control system or a breach of rules, the head of Office of the Internal Audit will report to the Managing Director and the Audit Committee immediately.

### Head of Internal Audit Control

The Board of Management, with the consent of the Audit Committee, has appointed Mrs.Suwannee Sujaritvanitchpong as Manager of Internal Audit Control Department and taking effect on April 18, 2005. She had internal audit work experience and obtained training relating to internal audit work, i.e. a course for Certificate of Internal Auditor of the Institute of Internal Auditors of Thailand and risk management course and has knowledge and understanding of the Company's business activities and operations. She is thus considered qualified and appropriate to perform duties in this position.

Appointment, removal or rotation of Manager of Internal Audit Control Department shall be subject to approval or consent from the Audit Committee.



The Audit Committee of Ekarat Engineering Public Company Limited was appointed by the resolution of the Board of Director on February 18, 2005. The members of the Audit Committee are Mr.Vinai Vittavasarnvej as the Chairman of the Audit Committee, Mr.Wara Tongprasin and Mr.Aroon Sricharoon as the Audit Committee members, and Mrs.Suwannee Sujaritvanichpong – Internal audit Manager, as the secretary of the Audit Committee. Each of the Audit Committee members is not the executive or staff or related person with the Company.

Since January 1 – December 31, 2019, the Audit Committee held 6 meetings. The Audit Committee has invited the management and/or the company's auditors to attend the meeting for discuss or inform the board as the agenda required. The Audit Committee's meeting considered the subjects as stipulated duties as follows:

1. Reviewed, commented, and provided suggestion, the Company's quarterly and annually financial statements before submitting to the Board of Directors for approval.
2. Consider the related transactions between the Company, the subsidiaries and the person who might have the conflict of interests. The Audit Committee did not find any transactions that might indicate the conflict of interests.
3. Presented the Internal audit reports and corrective suggestions to the Board of Directors.
4. Evaluated the Company's and subsidiaries' internal controls, which comprise the organization and environment, risk management, management operation control, information system and communication, and monitoring system. The Audit Committee will present to the board for consideration in the said matters
5. Recommended Office of ANS Audit Company Limited to be the company's auditors for year 2020 including company's auditor remuneration.
6. The Audit Committee considered the Corporate Governance and Risk Management system and agreed that the Corporate Governance and Risk Management system of the Company is efficient.
7. The Audit Committee evaluated the operation of Audit Committee time by time and adjusted the Audit Committee charter to conform to related rules and regulations.

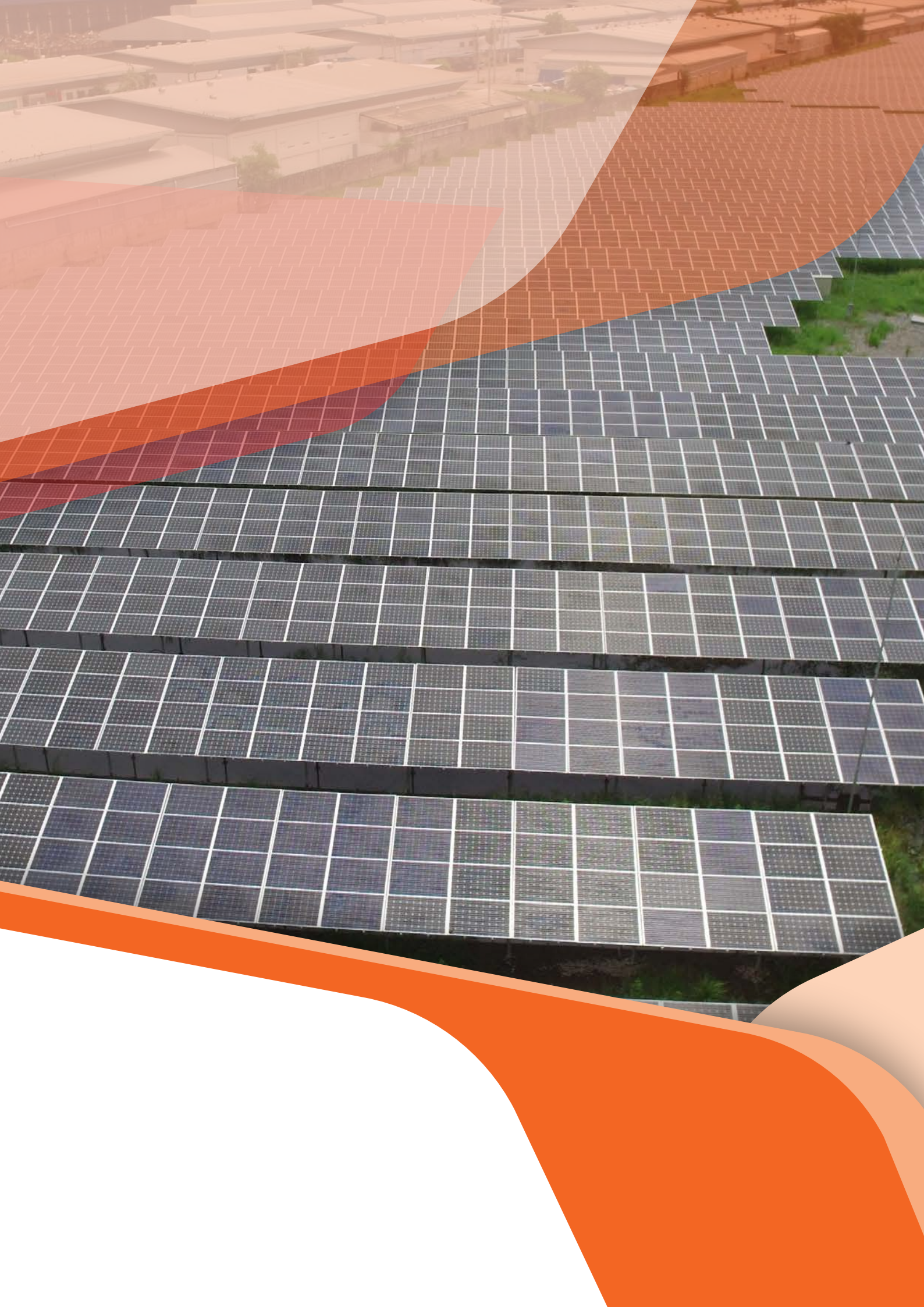
On behalf of the Audit Committee,



(Mr. Vinai Vittavasarnvej)

Chairman of the Audit Committee







## Related Transaction

The Company has specified rule including guidelines clearly on the related transaction with the associated persons, subject to strictly comply with the notification and regulation of the Stock Exchange of Thailand and the Securities and Exchange Commission is principal, summarized as followings.

- Proposing a connected transaction under such the rules to the Board of Directors and/or the shareholders' meeting for the approval. Through the consideration of the Audit Committee for fairness, the pricing is reasonable and take into the best interests of the Company and the interest directors no right to cast vote at the meeting.
- Disclosure of connected transactions with related companies adequately and comply with the regulations of the Securities and Exchange Commission. As well as the accounting standards on information disclosure about related parties or businesses.

The Company has significant transactions with related parties, which are directly and indirectly related through inter-company shareholding or common shareholders and directorships. The related transactions are in compliance with the terms and conditions specified in the agreement between the Company and the concerned parties.

### 1. The relationship of the parties

Name	Country	Nature of relationships	Related by
Ekarat Solar Co., Ltd.	Thailand	Subsidiary	Direct shares holding of 99.99%
Ekarat Energy Co., Ltd.	Thailand	Subsidiary	Direct shares holding of 51%
KV Asset Co., Ltd.	Thailand	Related Company	Mutually director and shareholder
Chula Engineering Co., Ltd.	Thailand	Related Company	Joint shares holding
"SKP Consulting and Engineering Co.,Ltd."	Thailand	Related Company	The company that is close person of the directors being the shareholder and director
Khun Theeraya Kanokpruk	Thailand	Major shareholder	Direct shares holding more than 5%

Balance with related parties as at December 31, 2019 and 2018 are as follows:



## 2. Other receivables – related company

Unit: Baht

	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
Other receivables				
Ekarat Energy Co., Ltd.	-	-	36,000	12,000

## 3. Short-term loans and interest receivables to related parties - net

Transaction of short-term loans and interest receivable to related parties - net as at December 31, 2019 and 2018 are as follows:

Unit: Baht

	Separate financial statements			
	December 31, 2018	Increase	Decrease	December 31, 2019
<b>Short-term loans</b>				
Ekarat Solar Co., Ltd.	10,496,986	-	-	10,496,986
Ekarat Energy Co., Ltd.	-	6,000,000	-	6,000,000
Total	10,496,986	6,000,000	-	16,496,986
<b>Interest receivables</b>				
Ekarat Solar Co., Ltd.	703,585	547,425	(1,235,193)	15,817
Ekarat Energy Co., Ltd.	-	97,521	-	97,521
Total	703,585	644,946	(1,235,193)	113,338
<b>Total short-term loans and interest receivables</b>	11,200,571	6,644,946	(1,235,193)	16,610,324
<b>Less allowance for doubtful accounts</b>	(11,200,571)			(10,512,803)
<b>Short-term loans and interest receivables - net</b>	-			6,097,521





For the years ended December 31, 2019 and 2018, there was movement in the allowance for accrued interest income as follows:

	Unit: Baht	
	Separate financial statements	
	2019	2018
Balance as beginning of year	11,200,571	10,649,480
Increase during the year	547,425	551,091
Decrease during the year	(1,235,193)	-
Balance as the ending of year	10,512,803	11,200,571

#### 4. Trade payables - related party

	Unit: Baht			
	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
Trade payable				
Ekarat Solar Co., Ltd.	-	-	-	227,625

## 5. Significant transactions with related parties

Significant transactions with related parties for the years ended December 31, 2019 and 2018 consisted of:

Unit: Baht					
	Consolidated financial statements		Separate financial statements		Pricing Policy
	2019	2018	2019	2018	
Revanue from sale of good					
Ekarat Solar Co.,Ltd.	-	-	-	1,160,000	Mutually agreed price based on market
Chula Enginerring Co.,Ltd	-	632,000	-	632,000	Mutually agreed price based on market
Rental income					
Ekarat Energy Co.,Ltd	-	-	24,000	24,000	Mutually agreed price based on the contract
Other income					
Ekarat Solar Co.,Ltd.	-	-	-	13,744	Mutually agreed price based on market
Interest income					
Ekarat Solar Co.,Ltd.	-	-	547,425	551,092	Based on the agreed price according to the interestrates of domestic commercial banks.
Ekarat Energy Co.,Ltd.	-	-	97,521	-	Based on the agreed price according to the interestrates of domestic commercial banks.
Purchase income					
Ekarat Solar Co.,Ltd.	-	-	146,537	315,684	Based on the agreed price
Costs of goods sold					
Chula Enginerring Co.,Ltd	-	605,133	-	605,133	Based on the agreed price
Consultan fee					
SKP Consulting and Engineering CO.,Ltd.	5,607,477	8,971,963	5,607,477	8,971,963	Mutually agreed price based on the contract



## 6. Key management remunerations

Key management remunerations for the years ended December 31, 2019 and 2018 consisted of:

	Unit: Baht	
	Consolidated and Separate	
	financial statements	
	2019	2018
Benefit - short-term	24,759,000	16,134,000
Benefit - after retirement	545,160	230,638
Directors' remuneration	5,508,000	5,479,000
Total	30,812,160	21,843,638

## Necessity and reasonableness of related party transaction

For the above of related party transactions, the Company has the propose to bring the highest benefits as per the company's regular business procedure and agreeable prices from the related companies, thus yield benefit of both with no propose transfer benefits to each other or no transactions in particular.

## Policy on Future Connected Transaction

The Audit Committee will oversee the future related party transaction to ensure that transactions are make property with a fair rate of return and approved in accordance with appropriate processes and procedures. Items and values of related party transaction are to be disclosed in compliance to relevant regulatory requirements.



The consolidated financial statements of 2019 comprise of separate financial statements and its subsidiaries, Ekarat Solar Co., Ltd. and Ekarat Energy Co., Ltd.

### Financial Highlights

		2019	2018
<b>Statement of Income</b>			
Total Revenues	(Million THB)	1,629.93	1,464.30
Total Costs	(Million THB)	1,218.63	1,193.66
Selling Expenses	(Million THB)	143.79	119.41
Administration Expenses	(Million THB)	169.58	155.60
Financial cost	(Million THB)	21.56	22.13
Gross Profit	(Million THB)	411.31	270.64
Net (Loss) Profit	(Million THB)	82.88	(279.65)
<b>Statement of Financial Position</b>			
Total Assets	(Million THB)	1,715.10	1,616.25
Total Liabilities	(Million THB)	740.05	735.24
Total Shareholders' Equity	(Million THB)	975.04	881.01
<b>Share capital</b>			
Ordinary Shares	(Shares)	1,343.29	1,343.29
Paid-up share Capital	(Million THB)	1,074.63	1,074.63
Par Value	(THB)	0.80	0.80
Earnings (loss) Per Share	(THB)	0.061	(0.208)
<b>Financial Ratios</b>			
Gross Profit Margin	(%)	25.23	18.48
Net Profit (Loss) Margin	(%)	5.02	(18.74)
Return on Total Assets	(%)	6.44	(17.95)
Return on Equity	(%)	8.93	(26.86)
Total Debt to Equity	(Times)	0.76	0.83



### Performance comparison between fiscal years 2019 and 2018:

Unit : Million Baht	2019	2018	Variance	
			MTHB	%
Total revenue from operation	1,629.93	1,464.30	165.63	11.31
- Revenue from sales of goods	1,182.48	1,114.08	68.40	6.14
- Revenue from services and maintenance	210.31	197.84	12.47	6.30
- Revenue from installation of solar electric generating system	188.84	107.07	81.77	76.37
- Revenue from sales of electricity current	48.31	45.31	3.00	6.62
Total cost from operation	1,218.63	1,193.66	24.97	2.09
- Cost of goods sold	945.78	942.32	3.46	0.37
- Cost of services and maintenance	119.28	116.85	2.43	2.08
- Cost from installation of solar electric generating system	168.70	99.24	69.46	69.99
- Cost of electricity current sales	23.15	23.14	0.01	0.04
- Reversed loss on devaluation of goods	38.31	(12.11)	50.42	416.35
Gross profit	411.31	270.64	140.67	51.98
Other incomes	20.00	27.91	(7.91)	(28.34)
Loss on impairment of fixed assets	10.69	349.09	(338.40)	(96.94)
Selling expenses	143.79	119.41	24.38	20.42
Administrative expenses	169.58	155.60	13.98	8.98
Financial cost	21.56	22.13	(0.57)	(2.58)
Profit (loss) before income tax expenses	85.69	(347.68)	433.37	124.65
Income tax revenue (expenses)	(2.81)	68.03	(70.84)	(104.13)
Profit (loss) for the year	82.88	(279.65)	362.53	129.64
Earnings (loss) per share	0.061	(0.208)	0.269	129.33



## Operation Analysis

### Revenues

The Company had the revenues comprised in 4 activities was Sales of Distribution Transformers, Services and maintenances, Installation of solar electric generating system and Sales of electricity current.

1. The revenue from the sales of goods in year 2019 and 2018 was Baht 1,182.48 million and Baht 1,114.08 million, respectively or increased 6.14%. Because the increased revenue from the distribution of transformers for customers in both the private and government sectors.

2. The revenue from services and maintenances in year 2019 and 2018 was Baht 210.31 million and Baht 197.84 million, respectively or increased 6.30%. Mainly increased from the repair of transformers and general services.

3. The revenue from installation of solar electric generating system in year 2019 and 2018 was Baht 188.84 million and Baht 107.07 million, respectively or increased 76.37% from the installation of solar power generation system for many projects, both for private and government customers.

4. The revenue from sales of electricity current in year 2019 and 2018 was Baht 48.31 million and Baht 45.31 million, respectively or increased 6.62%. As both of the solar power plants are able to generate more electricity.

### Cost of sales

1. The Company had the cost of the sale of goods in year 2019 and 2018 of Baht 945.78 million and Baht 942.32 million, respectively or increased 0.37%, according to the revenue increased. The proportion of cost of the sale of goods to the revenue from the sale of goods in year 2019 and 2018 was 79.98% and 84.58%, respectively, its decreased when compare to year 2018 about 4.6%.

2. The Cost of the sale of services and maintenances in year 2019 and 2018 was Baht 119.28 million and Baht 116.85 million, respectively or increased 2.08%, according to the revenue increase. The proportion of cost of the sale of services and maintenances to the revenue from the sale of services and maintenances in year 2019 and 2018 was 56.72% and 59.06% or decreased 2.34%.

3. The Cost of the sale of installation of solar electric generating system in year 2019 and 2018 was Baht 168.70 million and Baht 99.24 million, respectively or increased 69.99%. Mostly was the cost of government projects that was completed in December. The proportion of cost of the sale of installation



of solar electric generating system to the revenue from the sale of installation of solar electric generating system in 2019 was 89.33% lower than year 2018 which was 92.69% or decreased 3.36%.

4. The Cost of the sales of electricity current in year 2019 and 2018 was Baht 23.15 million and Baht 23.14 million, respectively or increased 0.04%. Mostly was depreciation costs. The proportion of cost of electricity current to the revenue from sales of electricity current in year 2019 and 2018 about 47.92% and 51.07%, respectively or decreased 3.15%.

#### Loss on impairment of fixed assets

The Company had loss on impairment of fixed assets in year 2019 and 2018 was Baht 10.69 million and Baht 349.09 million, decrease 96.94% from year 2018. Allowance for impairment of assets decreased because we have made an allowance for impairment of solar power plants in Rayong on year 2018.

#### Selling Expenses

The Company had the selling expenses in year 2019 and 2018 of Baht 143.79 million and Baht 119.41 million respectively, increase 20.42% from year 2018. The proportion of the selling expenses to total revenues in year 2019 and 2018 was 8.82% and 8.15%, respectively or increased 0.67% in accordance with the increased of operating income.

#### Administration Expenses

The Company had the administration expenses in year 2019 and 2018 of Baht 169.58 million and Baht 155.60 million respectively, increase 8.98% from year 2018 from the adjusting employee benefit estimates from 300 days to 400 days. The proportion of the administration expenses to total revenues in year 2019 and 2018 is 10.40% and 10.63%, respectively or decreased 0.23%.

#### Gross Profit

The Company had the gross profit margin from the sale of goods in year 2019 and 2018 was 20.02% and 15.42%, respectively. The gross profit margin from services and maintenances in year 2019 and 2018 was 43.28% and 40.94%, respectively. The gross profit margin from installation of solar electric generating system in year 2019 and 2018 was 10.67% and 7.31%, respectively. The gross profit margin from the sales of electricity current in year 2019 and 2018 was 52.08% and 48.93%, respectively.

The gross profit margin of all 4 types increased from the previous year because the increas-

ing of revenue from sale of transformer and service and maintenance. Including the installation of electricity generating systems for customers in many projects. In addition, Both of power plants are able to generate electricity for distribution to the Provincial Electricity Authority and the Metropolitan Electricity Authority more. It was also the result of the management of controlling production costs and various expenses.

### Net Profit

The Company has the Net Profit(loss) before the corporate income tax (expenses) in year 2019 and 2018 of Baht 85.69 million and Baht (347.68) million, respectively, increased Baht 433.37 million or 124.65% when compared to year 2018.

The Company had the corporate income tax (expense) in year 2019 and 2018 of Baht (2.81) million and Baht 68.03 million. The Net Profit (loss) in year 2019 and 2018 was Baht 82.88 million and Baht (279.65) million increased Baht 362.53 million or 129.64% compare to year 2018.

### Financial Analysis

#### Summary of financial position

Unit : Million Baht	2019	2018	Variance	
			MTHB	%
Asset				
- Cash and cash equivalents	41.37	51.93	(10.56)	(20.34)
- Trade and other receivables	424.18	276.50	147.68	53.41
- Inventories	429.63	423.81	5.82	1.37
Total current assets	910.45	754.94	155.51	20.60
- Property, plant and equipment	657.57	707.35	(49.78)	(7.04)
- Deferred tax assets	88.76	94.06	(5.30)	(5.63)
Total non-current assets	804.64	861.31	(56.67)	(6.58)
Total assets	1,715.09	1,616.25	98.84	6.12
Liabilities				
- Trade and other payables	192.15	240.52	(48.37)	(20.11)





Unit : Million Baht	2019	2018	Variance	
			MTHB	%
- Accrued expenses	57.72	34.95	22.77	65.15
- Advance received for goods and services	51.88	28.14	23.74	84.36
<b>Total current liabilities</b>	560.02	558.99	1.03	0.18
- Long-term loans from financial institutions	87.96	88.89	(0.93)	(1.05)
- Non-current provisions for employee benefit	78.20	69.40	8.80	12.68
<b>Total non-current liabilities</b>	180.02	176.24	3.78	2.14
<b>Total liabilities</b>	740.05	735.24	4.81	0.65
<b>Shareholders' equity</b>	975.04	881.01	94.03	10.67
<b>Total liabilities and shareholders' equity</b>	1,715.09	1,616.25	98.84	6.12

### Assets

As at December 31, 2019 and 2018, the Company had the total assets of Baht 1,715.09 million and 1,616.25 million, respectively or increased Baht 98.84 million or 6.12%. Most of the assets increased in 2019 were trade receivables and other receivables.

### Trade and Others receivable

As at December 31, 2019 and 2018, the Company had Trade and Others receivable after deducted allowance for doubtful debt of Baht 424.18 million and Baht 276.50 million, respectively or increased Baht 147.68 million or 53.41%. Most trade receivables increased revenue from the installation of solar cell.

The Company had the credit terms for the customer about 30-90 days. The average collection days in year 2019 and 2018 was 78 and 66 days, respectively. It found that the company could collect debt from customers faster from last year.

### Inventories

The Company had the Inventories (Net) after deducted the allowance for devaluation of inventories at December 31, 2019 and 2018 of Baht 429.63 million and Baht 423.81 million, respectively. By



increasing from imported goods in transit because the raw materials need to be prepared for the changing transformers of the Provincial Electricity Authority and the private sector as per the purchase order.

In year 2019, the Inventories comprise of Finished goods deducted the allowance for devaluation of inventories Baht 104.46 million, Work in process Baht 97.62 million, Raw Material Baht 204.67 million, Supplies Baht 6.18 million, and Materials in transit Baht 16.69 million. The inventories turnover ratio in year 2019 and 2018 is 2.86 and 2.54 times.

### Property, plant and equipment

As at December 31, 2019 and 2018, the Company had property, plant and equipment of Baht 657.57 million and Baht 707.35 million, respectively or decreased Baht 49.78 million or 7.04% Most of these were caused by depreciation in the year and impairment of solar power plants, including the purchase of the property.

### Deferred tax assets

As at December 31, 2019 and 2018, the Company had deferred tax assets of Baht 88.76 million and Baht 94.06 million, decreased Baht 5.30 million or 5.63%, mainly due to amortization for impairment of fixed assets at the factory in Rayong Province.

### Liabilities

As at December 31, 2019 and 2018, the Company had the liabilities of Baht 740.05 million and Baht 735.24 million or increased Baht 4.81 million or 0.65%. Mainly due to advance payment for goods and services from installation of solar electric generating system work.

### Trade and Other Payable

As at December 31, 2019 and 2018, the Company recorded trade and other payables of Baht 192.15 million and Baht 240.52 million, respectively or decreased Baht 48.37 million or 20.11%. The rate of payment payable was faster than last year.

The Company received the credit terms from the creditor about 30-60 days. The average repayment days of year 2019 and 2018 are 63 and 79 days, respectively.

### Shareholders' Equity

As at December 31, 2019 and 2018, the Company shareholders' equity was Baht 975.04 million and Baht 881.01 million, respectively or increased Baht 94.03 million or 10.67% because the Company had Net profit from operation in the consolidated financial statements of Baht 82.88 million, resulting in the accumulated loss decreased to Baht 126.33 million.



The Board of Directors of Ekarat Engineering Public Company Limited concerned to the duty and responsibility of the completeness and accuracy of the financial statements. The financial statements of Ekarat Engineering Public Company Limited were prepared in accordance with the rules and regulations of the company and generally accepted accounting standards in Thailand. Appropriate accounting policies were selected and applied consistently and were accompanied by careful judgment. All of the important data is disclosed in Notes to financial statements accurately which audited by Certified Public Accountant and reviewed by the Audit Committee.

The Board of Directors has appointed the Audit Committee, which comprised with the Independent Directors, to review and responsible for the quality of the financial statements and internal audit. The observation of Audit Committee related to these matters is appeared in the Audit Committees' Report which is in this annual report.

The Board of Directors has ensured the accuracy and appropriated disclosure of the Company's financial statements disclosed in the annual report year 2019 and the financial statements were prepared in accordance with the generally accepted accounting standards. The internal audit of the Company was accurate and appropriated.

A handwritten signature in black ink, likely belonging to Mr. Danucha Noichaiboon.

Mr. Danucha Noichaiboon

Managing Director



To the Shareholders and the Board of Directors of Ekarat Engineering Public Company Limited and its Subsidiaries

### Opinion

I have audited the accompanying consolidated and separate financial statements of Ekarat Engineering Public Company Limited and its subsidiaries (the Group) and of Ekarat Engineering Public Company Limited (the Company), which comprise the consolidated and separate statements of financial position as at December 31, 2019, and the related consolidated and separate statements of comprehensive income, consolidated and separate statements of changes in shareholders' equity and consolidated and separate statements of cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In my opinion, the accompanying consolidated and separate financial statements present fairly, in all material respects, the consolidated and separate financial position of the Ekarat Engineering Public Company Limited and its subsidiaries and of Ekarat Engineering Public Company Limited respectively as at December 31, 2019, and consolidated and separate financial performance and consolidated and separate cash flows for the year then ended in accordance with Thai Financial Reporting Standards.

### Basis for Opinion

I conducted my audit in accordance with Thai Standards on Auditing (TSAs). My responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of my report.

I am independent of the Company in accordance with the Federation of Accounting Professions' Code of Ethics for Professional Accountants together with the ethical requirements that are relevant to my audit of the financial statements, and I have fulfilled my other ethical responsibilities in accordance with these requirements. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

### Key Audit Matters

Key audit matters are those matters that, in my professional judgement, were of most significance in my audit of the financial statements of the current period. These matters were



addressed in the context of my audit of the financial statements as a whole, and in forming my opinion thereon, and I do not provide a separate opinion on these matters.

### Allowance for Doubtful Accounts

#### Risk

As discussed in Note to Financial Statements No. 7, as at December 31, 2019, the Group and the Company had net balance of trade receivables of Baht 416.32 million in the consolidated financial statements and Baht 407.82 million in the separate financial statements, respectively. The Group incurred overdue account receivables in the amount of Baht 142.19 million in the consolidated financial statements and Baht 137.00 million in the separate financial statements, respectively. Management provided an allowance for doubtful accounts in order to reflect its recoverable amounts. The allowance for the doubtful accounts requires significant judgment by Management.

#### Auditor's Response

I obtained an understanding of the Group's policy for the allowance for doubtful accounts, and then verified whether the computation method for the allowance of doubtful accounts complies with that policy. I also considered the appropriateness of the allowance of doubtful accounts by considering the aging profile of outstanding debts, and assessed each customer's ability to pay for those long overdue items.

### Allowance for Devaluation of Inventories

#### Risk

As described in Note to Financial Statement No. 8, the Company has allowance for inventories as of December 31, 2019 in the amount of Baht 32.67 million in the consolidated financial statements and Baht 27.51 million in the separate financial statements, respectively. The allowance is estimated from the percentage of each inventory aging which is derived from the historical experience of Management. The appropriateness of the allowance for the devaluation of inventories requires significant judgment by Management.

### Auditor's Response

I gained an understanding of the internal control related to the estimation of the allowance for the devaluation of inventories. I also verified the accuracy of the aging report used for estimating the allowance for the devaluation of inventories. I then determined the appropriateness of the allowance for devaluation by comparing the allowance with the history of inventory movement, enquiring with Management about its long outstanding inventory management and usage, randomly test estimated net realizable value of inventories and observing the year-end physical inventory count for ensuring the physical condition of the inventories.

### Impairment of Property, Plant and Equipment

#### Risk

As discussed in Note to Financial Statements No. 13, the Company has ceased its production of a factory at Rayong. This is an indication of impairment of the property, plant and equipment. The Company has related property, plant and equipment with a net book value as at December 31, 2019 of Baht 123.94 million. The provision for impairment requires significant judgment by Management.

### Auditor's Response

I obtained an understanding of the Company's policy to determine the allowance for impairment of property, plant and equipment. I also considered the appropriateness of the allowance for impairment of the property, plant and equipment by verifying Management's cash flow projection. The verification includes assessment of the work done by the independent appraiser, assessment of the significant assumptions and testing the computation of the amount of estimated impairment.

### Other Matter

The consolidated and separate financial statements for the year ended December 31, 2018 of Ekarat Engineering Public Company Limited and its subsidiaries, and of Ekarat Engineering Public Company Limited, respectively which have been presented herewith for comparative purposes were audited by other auditor whose report dated February 26, 2019, expressed an unqualified opinion.



### Other Information

Management is responsible for the other information. The other information comprises the information included in the annual report, but does not include the financial statements and my auditor's report thereon. The annual report is expected to be made available to me after the date of this auditor's report.

My opinion on the financial statements does not cover the other information and I will not express any form of assurance conclusion thereon.

In connection with my audit of the financial statements, my responsibility is to read the other information identified above when it becomes available and, in doing so, consider whether the other information is materially inconsistent with the financial statements or my knowledge obtained in the audit, or otherwise appears to be materially misstated.

When I read the annual report, if I conclude that there is a material misstatement therein, I am required to communicate the matter to those charged with governance to correct the materially misstatement.

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

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

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

Those charged with governance are responsible for overseeing the Group's and the Company's financial reporting process.

### Auditor's Responsibilities for the Audit of the Financial Statements

My objectives are to obtain reasonable assurance about whether the financial statements as a



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

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

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



- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. I am responsible for the direction, supervision and performance of the group audit. I remain solely responsible for my audit opinion.

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

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

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

Atipong AtipongSakul

Certified Public Accountant Registration Number 3500

ANS Audit Company Limited

Bangkok, February 27, 2020

## EKARAT ENGINEERING PUBLIC COMPANY LIMITED AND STATEMENTS OF FINANCIAL POSITION AS AT DECEMBER 31, 2019

Unit: Baht

Assets	Notes	Consolidated financial statements		Separate financial statements	
		2019	2018	2019	2018
Assets					
Current assets					
Cash and cash equivalents	5	41,372,862	51,933,289	37,660,327	47,490,469
Short-term investments - net	6	34,542	34,542	34,542	34,542
Trade and other current receivables - net	4.2, 7	424,181,025	276,502,385	415,698,560	276,125,650
Short-term loan and interest income from related companies - net	4.3	-	-	6,097,521	-
Inventories - net	8	429,626,950	423,813,658	429,626,950	423,813,654
Deposit and advance payment for goods		12,616,916	759,273	12,616,916	759,273
Other current assets		2,613,436	1,893,347	1,999,462	1,839,998
Total current assets		910,445,731	754,936,494	903,734,278	750,063,586
Non-current assets					
Investments in subsidiary companies - net	9	-	-	1,274,925	2,499,925
General investments - net	10	-	-	-	-
Investment properties - net	11	1,631,755	1,631,755	1,631,755	1,631,755
Assets for rent - net	12	3,235,399	3,919,459	3,235,399	3,919,459
Property, plant and equipment - net	13	657,573,396	707,353,390	653,061,738	702,545,066
Intangible assets - net	14	8,817,118	9,445,499	8,817,118	9,445,499
Restricted deposits with banks	15	19,650,000	18,650,000	19,650,000	18,650,000
Prepaid rent under operating lease - net	16	4,473,569	4,676,938	4,473,569	4,676,938
Deferred tax assets - net	17	88,764,303	94,055,515	88,764,303	94,055,515
Withholding tax		19,617,092	21,372,092	19,616,076	21,355,316
Other non-current assets		882,154	205,574	882,154	205,574
Total non-current assets		804,644,786	861,310,222	801,407,037	858,985,047
Total assets		1,715,090,517	1,616,246,716	1,705,141,315	1,609,048,633



**EKARAT ENGINEERING PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES**  
**STATEMENTS OF FINANCIAL POSITION**  
**AS AT DECEMBER 31, 2019**

Unit: Baht

Liabilities and shareholders' equity	Notes	Consolidated financial statements		Separate financial statements	
		December 31, 2019	December 31, 2018	December 31, 2019	December 31, 2018
Current liabilities					
Short-term loans from financial institutions	18	217,049,555	215,271,490	217,049,555	215,271,490
Trade and other current payables	4.4, 19	192,153,325	240,524,901	190,564,670	240,752,526
Accrued expenses		57,721,528	34,946,775	53,121,383	30,429,630
Advance received for goods and services	20	51,875,926	28,139,133	51,875,926	28,139,133
Current portion of loans from financial institutions	21	27,934,878	21,655,163	27,934,878	21,655,163
Current portion of liabilities under financial lease agreements	22	5,449,076	10,211,032	5,449,076	10,211,032
Other current liabilities		7,839,956	8,245,968	7,295,732	8,189,766
Total current liabilities		560,024,244	558,994,462	553,291,220	554,648,740
Non-current liabilities					
Long-term loans from financial institutions - net	21	87,964,703	88,889,927	87,964,703	88,889,927
Liabilities under financial lease agreements - net	22	7,855,096	12,682,777	7,855,096	12,682,777
Non-current provisions for employee benefit	23	78,203,626	69,397,874	78,203,626	69,397,874
Other non-current liabilities		5,998,419	5,274,076	5,998,419	5,274,076
Total non-current liabilities		180,021,844	176,244,654	180,021,844	176,244,654
Total liabilities		740,046,088	735,239,116	733,313,064	730,893,394



**EKARAT ENGINEERING PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES**  
**STATEMENTS OF FINANCIAL POSITION**  
**AS AT DECEMBER 31, 2019**

Unit: Baht

Liabilities and shareholders' equity	Notes	Consolidated financial statements		Separate financial statements	
		December 31, 2019	December 31, 2018	December 31, 2019	December 31, 2018
Shareholder's equity					
Shares capital					
Authorized					
Common shares 2,014,934,106 shares of Baht 0.80 each (December 31, 2018: Common shares 1,343,289,404 shares)	24	1,611,947,285	1,074,631,523	1,611,947,285	1,074,631,523
Issued and paid-up					
Common shares 1,343,289,404 shares of Baht 0.80 each		1,074,631,523	1,074,631,523	1,074,631,523	1,074,631,523
Surplus on change of proportion interest in subsidiary	9	364,450	-	-	-
Retained earnings (deficit)					
Appropriated					
Legal reserve	25	25,182,581	25,182,581	25,182,581	25,182,581
Unappropriated		(126,331,856)	(218,806,504)	(127,985,853)	(221,658,865)
Other components of equity		-	-	-	-
Total equity of the parent company		973,846,698	881,007,600	971,828,251	878,155,239
Non-controlling interests		1,197,731	-	-	-
Total shareholders' equity		975,044,429	881,007,600	971,828,251	878,155,239
Total liabilities and shareholders' equity		1,715,090,517	1,616,246,716	1,705,141,315	1,609,048,633



**EKARAT ENGINEERING PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES**  
**STATEMENTS OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME**  
**FOR THE YEAR ENDED DECEMBER 31, 2019**

Unit: Baht

		Consolidated financial statements		Separate financial statements	
	Notes	2019	2018	2019	2018
Revenues	4.5, 28				
Revenue from sales of goods		1,182,479,549	1,114,077,459	1,182,008,463	1,113,968,709
Revenue from services and maintenance		210,307,565	197,843,274	210,331,565	197,867,274
Revenue from service of installing a solar panel		188,842,205	107,067,234	173,843,205	107,067,234
Revenue from sales of electricity current		48,305,648	45,307,874	48,305,648	45,307,874
Total revenues		1,629,934,967	1,464,295,841	1,614,488,881	1,464,211,091
Costs					
Cost of goods sold		(945,797,587)	(942,322,960)	(906,513,828)	(942,286,006)
Cost of services and maintenance		(119,284,791)	(116,846,829)	(119,284,791)	(116,846,829)
Cost from service of installing a solar panel		(168,702,941)	(99,238,924)	(155,583,957)	(98,918,309)
Cost of electricity current sold		(23,152,771)	(23,142,970)	(22,856,105)	(22,877,911)
Reversal of (loss on devaluation of goods)		38,309,346	(12,106,045)	(1,182,790)	(10,849,901)
Total costs		(1,218,628,744)	(1,193,657,728)	(1,205,421,471)	(1,191,778,956)
Gross profit		411,306,223	270,638,113	409,067,410	272,432,135
Other income	4.5	20,004,423	27,909,839	20,634,398	28,385,904
Loss on devaluation of assets		(10,688,883)	(349,090,450)	(10,688,883)	(348,619,215)
Selling expenses		(143,792,305)	(119,406,223)	(143,792,305)	(119,406,223)
Administrative expenses	4.5	(169,575,655)	(155,604,297)	(167,105,634)	(155,169,609)
Finance cost		(21,562,423)	(22,126,944)	(21,562,423)	(22,126,944)
Profit (loss) before income tax expenses		85,691,380	(347,679,962)	86,552,563	(344,503,952)
Income tax revenue (expense)	17	(2,808,880)	68,033,049	(2,808,880)	68,033,049
Profit (loss) for the year		82,882,500	(279,646,913)	83,743,683	(276,470,903)



**EKARAT ENGINEERING PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES**  
**STATEMENTS OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME**  
**FOR THE YEAR ENDED DECEMBER 31, 2019**

Unit: Baht

Other comprehensive income (loss) :

Items that will not be reclassified to profit or loss	
Actuarial gain	
Income tax on other comprehensive income relating to items that will not be reclassified	
Other comprehensive income for the year, net of income tax	
Total comprehensive income (loss) for the year	

Notes	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
23	12,411,661	-	12,411,661	-
17	(2,482,332)	-	(2,482,332)	-
	9,929,329	-	9,929,329	-
	92,811,829	(279,646,913)	93,673,012	(276,470,903)



**EKARAT ENGINEERING PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES  
STATEMENTS OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME  
FOR THE YEAR ENDED DECEMBER 31, 2019**

Unit: Baht

	Notes	Consolidated financial statements		Separate financial statements	
		2019	2018	2019	2018
Profit (loss) attributable to					
Equity holders of the parent		82,545,319	(279,646,913)	83,743,683	(276,470,903)
Non-controlling interests		337,181	-	-	-
		82,882,500	(279,646,913)	83,743,683	(276,470,903)
Total comprehensive profit (loss) attributable to					
Equity holders of the parent		92,474,648	(279,646,913)	93,673,012	(276,470,903)
Non-controlling interests		337,181	-	-	-
		92,811,829	(279,646,913)	93,673,012	(276,470,903)
<b>Earnings (loss) per share</b>					
Basic earnings (loss) per share					
Earnings (loss) attributable to equity holders of the parent		0.061	(0.208)	0.062	(0.206)
Number of weighted average share (Shares)		1,343,289,404	1,343,289,404	1,343,289,404	1,343,289,404
Diluted earnings (loss) per share					
Earnings (loss) attributable to equity holders of the parent	27	0.061	(0.208)	0.062	(0.206)
Number of weighted average share (Shares)		1,343,289,404	1,343,289,404	1,343,289,404	1,343,289,404

**EKARAT ENGINEERING PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES**  
STATEMENTS OF CHANGE IN SHAREHOLDERS' EQUITY  
FOR THE YEAR ENDED DECEMBER 31, 2019

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Notes	Unit: Baht							
	Consolidated financial statements							
	Share capital issued and paid-up	Surplus on change of proportion interest in subsidiary	Retained earnings (deficit)	Other component of equity		Total parent shareholders' equity	Non-controlling interest	Total shareholders' equity
				income	Other comprehensive			
				Actual gain	component of equity			
Balance as at January 1, 2018	1,074,631,523	-	25,182,581	101,134,561	-	-	1,200,948,665	-
Change in shareholders' equity for the year :								
Dividend paid	-	-	-	(40,294,152)	-	-	(40,294,152)	(40,294,152)
Comprehensive loss for the year	-	-	-	-	-	-	-	(279,646,913)
Balance as at December 31, 2018	1,074,631,523	-	25,182,581	(218,806,504)	-	-	881,007,600	881,007,600
Balance as at January 1, 2019	1,074,631,523	-	25,182,581	(218,806,504)	-	-	881,007,600	-
Change in shareholders' equity for the year :								
Surplus on change of proportion interest in subsidiary	-	364,450	-	-	-	-	364,450	860,550
Transferred to retained earnings	-	-	-	9,929,329	(9,929,329)	(9,929,329)	-	-
Comprehensive income for the year	-	-	-	82,545,319	9,929,329	9,929,329	92,474,648	92,811,829
Balance as at December 31, 2019	1,074,631,523	364,450	25,182,581	(126,331,856)	-	-	973,846,698	975,044,429



**EKARAT ENGINEERING PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES**  
**STATEMENTS OF CHANGE IN SHAREHOLDERS' EQUITY**  
**FOR THE YEAR ENDED DECEMBER 31, 2019**

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Unit: Baht						
Notes	Separate financial statements					
	Other component of equity					Total shareholders' equity
	Share capital issued and paid-up	Retained earnings (deficit)	Other comprehensive income	Actuarial gain	Total other component of equity	
Balance as at January 1, 2018	1,074,631,523	25,182,581	95,106,190	-	-	1,194,920,294
Change in shareholders' equity for the year :						
Dividend paid	-	-	(40,294,152)	-	-	(40,294,152)
Comprehensive loss for the year	-	-	(276,470,903)	-	-	(276,470,903)
Balance as at December 31, 2018	1,074,631,523	25,182,581	(221,658,865)	-	-	878,155,239
Balance as at January 1, 2019	1,074,631,523	25,182,581	(221,658,865)	-	-	878,155,239
Change in shareholders' equity for the year :						
Transferred to retained earnings	-	-	9,929,329	(9,929,329)	(9,929,329)	-
Comprehensive income for the year	-	-	83,743,683	9,929,329	9,929,329	93,673,012
Balance as at December 31, 2019	1,074,631,523	25,182,581	(127,985,853)	-	-	971,828,251



**EKARAT ENGINEERING PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES**  
**STATEMENTS OF CASH FLOWS**  
**FOR THE YEAR ENDED DECEMBER 31, 2019**

Unit: Baht

Consolidated financial statements		Separate financial statements	
2019	2018	2019	2018

**Cash flows from operating activities :**

Profit (loss) for the year	82,882,500	(279,646,913)	83,743,683	(276,470,903)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities				
Doubtful debt (reversal)	1,143,670	(3,374,186)	941,030	(3,011,739)
Loss on devaluation of inventories (reversal)	(38,309,346)	12,106,040	1,182,790	10,849,901
Loss on impairment of property, plant and equipment	10,795,290	349,090,450	10,795,290	348,619,215
Amortization of intangible assets	634,681	734,392	634,681	734,392
Amortization of prepaid rent under operating lease	203,369	203,369	203,369	203,369
Depreciation	65,579,017	106,433,712	65,282,351	106,168,653
Non-current provisions for employee benefit	26,023,413	6,116,317	26,023,413	6,116,317
Loss from revaluation of short-term investment	-	34,543	-	34,543
Gain from disposals of assets	(685,183)	(1,714,462)	(685,183)	(1,714,462)
Unrealized gain on exchange rate	(288,373)	(712,130)	(773,502)	(982,157)
Loss from impairment of deferred tax assets	-	609,266	-	609,266
Write-off assets to be expenses	-	5,938,128	-	5,938,128
Transferred liabilities to be revenue	(1,252,260)	(8,228,001)	(1,252,260)	(8,522,500)
Interest expense	21,562,423	21,186,382	21,562,423	21,186,382
Interest income	(299,888)	(417,135)	(929,864)	(949,516)
Income tax (revenue) expenses	2,808,880	(68,033,049)	2,808,880	(68,033,049)
Profit from operations before changes in operating assets and liabilities	170,798,193	140,326,723	209,537,101	140,775,840
Operating assets (increase) decrease				
Trade and other current receivables	(149,668,949)	(34,928,101)	(141,188,529)	(32,900,378)
Inventories	26,528,343	75,833,019	(12,963,797)	74,935,517
Deposit and advance payments for goods	(11,857,643)	11,020,341	(11,857,643)	11,020,341
Other current assets	(720,089)	1,178,945	(159,464)	1,231,129
Other non current assets	7,474	75,000	7,474	75,000



**EKARAT ENGINEERING PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES**  
**STATEMENTS OF CASH FLOWS**  
**FOR THE YEAR ENDED DECEMBER 31, 2019**

Unit: Baht

	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
Operating liabilities increase (decrease)				
Trade and other current payables	(42,376,945)	(24,196,546)	(44,193,225)	(24,553,379)
Accrued expenses	24,282,900	(25,404,401)	24,199,900	(25,033,201)
Advance received for goods and services	23,736,793	(2,373,331)	23,736,793	(2,721,331)
Other current liabilities	(406,012)	(1,430,780)	(894,034)	(1,271,374)
Other non-current liabilities	724,343	(214,233)	724,343	(214,233)
Cash received from operating activities	41,048,408	139,886,636	46,948,919	141,343,931
Employee benefit obligations	(4,806,000)	(8,581,750)	(4,806,000)	(8,581,750)
Interest expenses paid	(21,691,819)	(21,044,328)	(21,691,819)	(21,044,328)
Received income tax	12,105,064	5,719,284	12,105,064	5,719,284
Income tax paid	(9,975,604)	(9,247,723)	(10,365,824)	(9,247,581)
Net cash provided by operating activities	16,680,049	106,732,119	22,190,340	108,189,556



**EKARAT ENGINEERING PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES**  
**STATEMENTS OF CASH FLOWS**  
**FOR THE YEAR ENDED DECEMBER 31, 2019**

Unit: Baht

	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
<b>Cash flows from investing activities</b>				
Cash received from sales of investment in subsidiary	1,225,000	-	1,225,000	-
Cash paid for short-term loan to related companies	-	-	(6,000,000)	-
Cash received from sales of assets for rent	2,138,415	2,576,597	2,138,415	2,576,597
Cash received from sale of property, plant and equipment	5,607	398,271	5,607	398,271
Cash paid for acquisition of assets for rent	(1,765,542)	(2,800,200)	(1,765,542)	(2,800,200)
Cash paid for acquisition of property, plant and equipment	(18,663,967)	(25,377,020)	(18,663,967)	(24,828,260)
Cash paid for assets payable	(7,150,903)	(4,222,672)	(7,150,903)	(4,222,672)
Cash paid for acquisition of intangible assets	(6,300)	(37,800)	(6,300)	(37,800)
Increase in restricted deposit with bank	(1,000,000)	(14,000,000)	(1,000,000)	(14,000,000)
Cash received from interest income	327,855	398,812	1,547,849	377,113
Net cash used in investing activities	(24,889,835)	(43,064,012)	(29,669,841)	(42,536,951)
<b>Cash flows from financing activities :</b>				
Increase in short-term loans from financial institutions	2,010,996	5,898,720	2,010,996	5,898,720
Cash received from sales and lease back	-	6,357,831	-	6,357,831
Increase in liabilities under financial lease agreements	663,400	-	663,400	-
Repayment of liabilities under financial lease contracts	(10,253,037)	(13,674,666)	(10,253,037)	(13,674,666)
Proceeds from long-term loans from financial institutions	31,500,000	-	31,500,000	-
Repayment of long-term loans from financial institutions	(26,272,000)	(21,972,000)	(26,272,000)	(21,972,000)
Dividend paid	-	(40,294,152)	-	(40,294,152)
Net cash used in financing activities	(2,350,641)	(63,684,267)	(2,350,641)	(63,684,267)
Net cash and cash equivalents (decrease) increase	(10,560,427)	(16,160)	(9,830,142)	1,968,338
Cash and cash equivalents at the beginning of the year	51,933,289	51,949,449	47,490,469	45,522,131
Cash and cash equivalents at the ending of the year	41,372,862	51,933,289	37,660,327	47,490,469



**EKARAT ENGINEERING PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES**  
**STATEMENTS OF CASH FLOWS**  
**FOR THE YEAR ENDED DECEMBER 31, 2019**

Unit: Baht

**Non- cash transactions :**

	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
Transfer of inventories to property, plant and equipment	5,978,070	3,449,376	5,978,070	3,449,376
Transfer of asset for rent to inventories	10,359	-	10,359	-
Transfer of inventories to asset for rent	-	1,801,925	-	1,801,925
Transfer of non-current assets to property, plant and equipment	-	3,334,868	-	3,334,868
Transfer of property, plant and equipment to intangible assets	-	425,272	-	425,272
Acquisition assets on credit	1,655,928	16,702,965	1,655,928	16,702,965



## EKARAT ENGINEERING PUBLIC COMPANY LIMITED AND ITS SUBSIDIARIES NOTES TO FINANCIAL STATEMENTS FOR THE YEAR ENDED DECEMBER 31, 2019

### 1. General information

Ekarat Engineering Public Company Limited (“the Company”) was registered as a public company under Company Registration Number 0107537002711 on December 9, 1994 and was listed on the Stock Exchange of Thailand on August 7, 2006.

The head office is located at 9/291 UM Tower, 28th Floor, Ramkhamhaeng Road, Suanluang, Suanluang, Bangkok.

**The Company has the following four branches:**

**Factory 1** : 190/1 Moo 6 Hoklee Canal, Bangpakong River, Tambon Thasa-An, Amphur Bangpakong, Chachoengsao Province.

**Factory 2** : 7/242 Moo 6 Tambon Mabyangporn, Amphur Pluakdang, Rayong Province.

**Solar thermal power plant :**

**Factory 1** : 365, 365/1 Moo 3 Tambon Kroksoomboon Amphur Sri-mahapo Prachinburi Province.

**Factory 2** : 78 Moo 9 Tambon Lahore Amphur Bang Bua Thong Nonthaburi Province.

### 2. Basis of preparation of the financial statement

The accompanying financial statements are prepared in accordance with Thai Financial Reporting Standards (“TFRS”) including related interpretations and guidelines promulgated by the Federation of Accounting Professions (“FAP”) and applicable rules and regulations of the Securities and Exchange Commission.

The financial statements are presented in compliance with the stipulations of the Notification of the Department of Business Development dated October 11, 2016, issued under the Accounting Act B.E. 2543.

The accompanying financial statements have been prepared in the Thai language and expressed in Thai Baht. Such financial statements have been prepared for domestic reporting



purposes. For the convenience of the readers not conversant with the Thai language, an English version of the financial statements is provided based on the Thai version of the financial statements.

The preparation of the financial statements in conformity with Thai Financial Reporting Standard requires management to make judgments, estimates and assumptions that affect the application of policies and reported amounts of assets, liabilities, income and expenses. The estimates and associated assumptions are based on historical experience and various other factors that are believed to be reasonable under the circumstances, the results of which form the basis of making the judgments about carrying amounts of assets and liabilities that are not readily apparent from other sources. Subsequent actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised, if the revision affects only that period, and in the period of the revision and future periods, if the revision affects both current and future periods.

The financial statements have been prepared on a historical cost basis except where otherwise disclosed in the accounting policies.

### Basis of consolidation

- a) The consolidated financial statements related to the Company and its subsidiaries (“the Group”) are as follows:

Name	Nature of business	Incorporation	% of shareholding	
			2019	2018
Ekarat Solar Co., Ltd.	Distributor of solar cell and solar panel	Thailand	99.99	99.99
Ekarat Energy Co., Ltd.	Operate on solar electric power	Thailand	51.00	99.99

On March 31, 2019, the Company decreased its shareholding in the subsidiary, Ekarat Energy Co., Ltd., from 99.99 % to 51 %

- b) Subsidiary is an entity controlled by the Company. Control exists when the Company has the power, directly or indirectly, through other subsidiaries, to govern the financial and operating policies of an entity so as to obtain benefits from its activities.
- c) Subsidiaries are fully consolidated as from the date on which the Company obtains control, and continue to be consolidated until the date when such control ceases.
- d) The financial statements of the subsidiaries are prepared using the same significant accounting policies as the Company.
- e) Material balances and transactions between the Company and its subsidiaries have been eliminated from the consolidated financial statements.
- f) Non-controlling interests represent the portion of profit or loss and net assets of the subsidiaries that are not held by the Company and are presented separately in the consolidated profit or loss and within equity in the consolidated statement of financial position.

The separate financial statements present investments in subsidiaries according to the Cost Method.

### **New financial reporting standards**

Financial reporting standards that became effective in the current accounting year and those that will become effective in the future.

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

During the year 2019, the Company and its subsidiaries have adopted the revised (revised 2018) and new financial reporting standards and interpretations which are effective for fiscal years beginning on or after 1 January 2019. These financial reporting standards were aimed at alignment with the corresponding International Financial Reporting Standards with most of the changes directed towards clarifying accounting treatment and providing accounting guidance for users of the standards. The adoption of these financial reporting standards does not have any significant impact on the Company's and its subsidiaries' financial statements. However, the new standard involves changes to key principles, which are summarized below:





### TFRS 15 Revenue from Contracts with Customers

TFRS 15 supersedes the following accounting standards together with related Interpretations.

TAS 11 (revised 2017)	Construction contracts
TAS 18 (revised 2017)	Revenue
TSIC 31 (revised 2017)	Revenue-Barter Transactions Involving Advertising Services
TFRIC 13 (revised 2017)	Customer Loyalty Programmed
TFRIC 15 (revised 2017)	Agreements for the Construction of Real Estate
TFRIC 18 (revised 2017)	Transfers of Assets from Customers

Entities are to applying TFRS15 to all contracts with customers unless those contracts fall within the scope of other standards. The standard establishes a five-step model to account for revenue arising from contracts with customers, with revenue being recognized at an amount that reflects the consideration to which an entity expects to be entitled in exchange for transferring goods or services to a customer. The standard requires entities to exercise judgement, taking into consideration all of the relevant facts and circumstances when applying each step of the model.

### (b) Financial reporting standards related to the set of financial instruments that will become effective for fiscal years beginning on or after 1 January 2020

The Federation of Accounting Professions issued a number of new financial reporting standards and interpretations, which are effective for fiscal years beginning on or after January 1, 2020. These new standards involve changes to key principles, which are summarized below:

#### Financial reporting standards related to financial instruments.

The set of TFRSs related to financial instruments consists of five accounting standards and interpretations, as follows:

Financial reporting standards:

TFRS 7	Financial Instruments: Disclosures
TFRS 9	Financial Instruments

Accounting standard:

TAS 32	Financial Instruments: Presentation
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Financial Reporting Standard Interpretations:

TFRIC 16	Hedges of a Net Investment in a Foreign Operation
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#### TFRIC 19 Extinguishing Financial Liabilities with Equity Instruments

These TFRSs related to financial instruments make stipulations relating to the classification of financial instruments and their measurement at fair value or amortized cost (taking into account the type of instrument, the characteristics of the contractual cash flows and the Company's business model), calculation of impairment using the expected credit loss method, and hedge accounting. These include stipulations regarding the presentation and disclosure of financial instruments. When the TFRSs related to financial instruments are effective, some accounting standards, interpretations and guidance which are currently effective will be cancelled.

The management of the Company and its subsidiaries is currently evaluating the impact of these standards to the financial statements in the year when they are adopted.

#### **TFRS 16 Leases**

TFRS 16 supersedes TAS 17 Leases together with related Interpretations. The standard sets out the principles for the recognition, measurement, presentation and disclosure of leases, and requires a lessee to recognize assets and liabilities for all leases with a term of more than 12 months, unless the underlying asset is low value.

Accounting by lessors under TFRS 16 is substantially unchanged from TAS 17. Lessors will continue to classify leases as either operating or finance leases using similar principles to those used under TAS 17.

The management of the Company and its subsidiaries are currently evaluating the impact of this standard on the financial statements in the year when it is adopted.

### **3. Significant accounting policies and accounting judgments and estimates.**

#### **3.1 Significant accounting policies**

##### **Revenue recognition**

- Sales are recognized upon the transfer of ownership to the customers with the amount that reflects the consideration of which the Company expected to be entitled in exchange for sales. Sales are shown net of sales taxes and discounts.
- Revenue from service and maintenance is recognized upon service completion and in accordance with the service contract.
- Revenue from installation of solar electric generating systems are recognized when



performance obligation satisfied over the period of the contract using the method to measure progress towards complete satisfaction of that performance obligation by referencing to the completion of a physical proportion of the contract work performed as assessed by the project engineers.

The recognised revenue which is not yet due according to the contracts has been presented under the caption of “Contract asset” in the statement of financial position. The amounts recognized are reclassified to trade receivables when the Group’s right to consideration is unconditional such as upon completion of services and acceptance by the customer.

The amounts which the Group has received or is due from customers with the obligation to transfer services to customers is presented under the caption of “Contract liability” in the statement of financial position. Contract liabilities are classified as “Advance received for goods and services” and will be recognised as revenue when the obligation satisfied under the term of contract.

- The Group recognizes revenue from sales of electricity when electricity is distributed to customers. Sales are recognized based on units of sale delivered at the applicable tariff rates.

The Group has received a subsidy from government for the purchase of the electricity, in accordance with project support for a small-scale solar electricity generator, at the rate of Baht 8 per kilowatt per hour in compliance with the announcement of the Provincial Power Authority and the Resolution of the Board of Energy Policy, dated March 9, 2009. The subsidy period is 10 years from the electricity trading date. The Company started trading electricity on April 2010. Such subsidy was recognized as income when the electricity is distributed to the Provincial Power Authority.

- Rental income is recognized based on the term of the lease.
- Interest income is recognized on an accrual basis based on the effective interest rate.
- Other income are recognized on an accrual basis.

#### Expense recognition

- Costs of installation of solar electric generating systems are recognized when performance obligation satisfied over the period of the contract using the method to measure progress towards complete satisfaction of that performance obligation by referencing to the completion of a physical proportion of the contract work performed as assessed by the project engineers.



The estimated total cost is determined by the Group's project engineers or its responsible person which is subject to change. Expected loss on each project is provided and charged as an expense in the period when the estimated total costs of the project exceed its total contracted income.

The actual cost of services incurred but not yet recognized as cost of services in profit or loss is referred to as "Work in process" under current assets in the statement of financial position, while contracts of which calculated costs of construction exceed incurred costs of construction are shown as "Accrued expense" under current liabilities in the statement of financial position. Work in process includes the cost of raw materials, direct labor and other expenses incurred for each project. Such work in progress is valued at the lower of cost or net realizable value.

- Payments made under operating leases are recognized in profit or loss according to the straight line method over the term of the lease. Contingent rentals are charged to profit or loss for the accounting period in which they are incurred.
- Financial cost consists of interest expenses or other expenses of a similar nature charged, are charged to profit or loss in the year such expenses are incurred except where they are partly recorded as cost of assets due to the effect of long period of time used to acquire construction or produce such assets prior to direct utilization or for sale. Interest which is part of installment amounts under finance lease contracts is charged to profit or loss by the effective rate method.
- Other expenses is recognized on an accrual basis

#### Cash and cash equivalents

Cash and cash equivalents include cash, bank deposits in the forms of savings and current accounts, and fixed accounts that do not exceed three months and are not subject to withdrawal restrictions.

#### Trade and other receivables

Trade and other receivable are stated at their invoice value less allowance for doubtful accounts. The allowance for doubtful accounts is assessed primarily on analysis of payment histories and future expectations of customer payments. Bad debts are written off when incurred.



### Inventories

Inventories are recorded at cost adjusted by allowance for inventories that are slow-moving or obsolete (if any) or net realizable value, whichever is the lower. Cost is computed as follows:

Raw materials and supplies are valued at cost by using the First-in, First-out method.

Finished goods and work in process are valued at cost by using the specific identification method.

Net realizable value is the estimated selling price in the ordinary course of business less the expenses necessary to make the sale.

### Investments

Short-term investments as securities for trading in marketable equity instruments are shown at fair value. The differences between carrying amount and fair value are shown as unrealized profit and loss in the statement of income for the year.

In the separate financial statements, the investments in subsidiary companies are recorded according to the cost method less accumulated allowance for impairment and recorded the recognition of the change of the investments value in profit or loss when the investments have been disposed or impaired.

General investments are non-marketable equity instruments, shown at cost net off by allowance for accumulated impairment (if any) and change in value of general investments is recognized in profit or loss when they are sold or impaired.

### Investments properties

Investment properties have been recorded the initial value at cost. Afterward, the Group recorded the investment properties, which is land at cost less allowance for accumulated impairment (if any).

The Group recognized the difference between the net amount received from disposal and the carrying amount of the asset in profit or loss in the period the investment properties were removed from the account.

### Assets for rent

Assets for rent are inventories for rent or loans to customers that have been recorded at the initial value at cost. Afterward, the Group recorded assets for rent at cost less accumulated depreciation and allowance for accumulated impairment (if any). Depreciations are calculated by the straight-line method over the useful life for five years.



### Property, plant and equipment

Property, plant and equipment are recorded at the initial value at cost. Afterward, the Group recorded the property, plant and equipment at cost less accumulated depreciation and allowance for accumulated impairment (if any) and depreciation is calculated by the straight-line method over the following estimated useful lives:

	Estimated useful lives (years)
Office buildings and construction	10-40
Machinery, tools and equipment	5-18
Furniture and office equipment	3-5
Vehicles	5

The Group did not carry depreciation for land, land improvements and assets under construction. In the case of impairment of assets, the Group will calculate the depreciation of the assets using the carrying amount after deducting allowance for loss on impairment (if any) over the remaining useful life of the asset.

Property, plant and equipment shall be eliminated from accounts on disposal or where no future economic benefits are expected from its usage or disposal. Profit or losses arising on disposal is recognized in profit or loss when the said asset is eliminated from accounts.

### Intangible asset

Intangible assets are shown at cost less by accumulated, amortized expenses and allowance for impairment (if any) of that asset. The Group amortizes intangible assets with certain useful lives systematically throughout the useful life of such asset and will review the period and method for amortization of intangible assets with certainty in useful life at least at the end of every year. Amortized expenses will be recognized in profit or loss based on period during which economic benefits are expected from the assets.

### Impairment of assets

The Company and subsidiaries have considered the impairment of assets-property, plant and equipment, investments and intangible assets and other non-current assets whenever events or changes indicate that the carrying amount of an assets exceeds recoverable amount (net selling



price of the asset under normal course of operations or its utilization value whichever is higher) by considering the impairment for each asset item or each asset unit or each asset unit or each asset unit generating cash flow, whichever is practical.

In case the carrying amount of an asset exceeds its net realizable value, the Company and subsidiaries will recognise an impairment loss in the statements of the comprehensive income for the period or decrease appraisal surplus if those assets have been revaluated and recorded as appraisal surplus include in shareholders' equity. The Company and subsidiaries will reverse the impairment loss whenever there is an indication that there is no longer impairment or reduction in impairment as "other income" or "appraisal surplus", whichever is practical.

#### Trade and other payables

Trade and other payables are stated at cost.

#### Interest bearing liabilities

Interest bearing liabilities are shown at cost and state the expense related to the incurrence of debt as the expense for the year.

#### Employee benefits

##### *Short-term employee benefit*

The Group recognizes salaries, wages, bonuses, and contributions to social security fund and its provident fund as expenses on accrual basis.

##### *Post-employment benefits*

The Group has severance pay obligations to employees upon their retirement under labor law. The defined benefits plan is defined as a post-employment benefit plan.

The obligation under the defined benefits plan is determined by a professionally qualified independent actuary based on actuarial techniques, using the projected unit credit method on a regular basis. The projected unit credit method is the allocation of benefits for the current period and previous period that must be paid to employee who provide services to the Group to various periods according to the calculation formula of the benefits of the project and will allocate benefits by straight-line method throughout the service life of the employee until retirement.

Current service cost, past service costs and gains and losses on settlement including gains and losses



from reducing project size and project benefit payment when reducing project size will be recognized in the income statement in the period which the transaction occurs.

Actuarial gains and losses arising from post-employment benefits are recognized immediately in profit or loss.

The defined benefit obligations are measured at the present value of estimated future cash flows using a discount rate that is similar to the interest rate on government bond.

#### Estimation of liabilities

Provisions are recognised when the Company and its subsidiaries have a present obligation as a result of a past event, it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

#### Long-term lease

The recording of long-term lease contracts of the Group (finance leases and hire purchase contracts) is both an asset and a liability made in the statement of financial position at the same amount equivalent to fair value of the leased asset as at the commencing date of the agreement or the present value of the minimum amount payable under the agreement, whichever is the lower. The discount rate to be used in calculating such present value is the interest rate specified in the lease agreement. The interest rate paid by the Group at the date of commencement of the contract is the interest rate used for loans that have terms and the guarantees is similar to the lease contract. The directly related initial cost is included in the cost of the asset and the paid lease fee will be appropriated partly as financial expense and other to reduce the principle. The financial expense will be apportioned to various periods throughout the term of agreement so that the interest rate compared to the remaining amount of debt at each period is constant. Depreciation policy for lease assets conforms to depreciable assets owned by the Group.

#### Sale and lease back

Depending on sale and lease back results in financial leasing contracts, the return from selling assets at higher than book value will be recognized as deferred income in the statement of financial position and successively amortized into profit or loss in the duration of the leasing contract.

Depending on sale and lease back results in operating leases, the Group will recognize gains or losses in the statement of comprehensive income immediately if sales prices are equivalent to fair values.





If the sales price is lower than the fair value, the Group will recognize losses in profit or loss immediately unless the Group is recovered loss from rent payment in the future at lower than market price. In this case, the Group will record the loss from sale as differed item in the statement of financial position and successively amortize into profit or loss according to the ratio of the rent paying each time in the period that the Group expect to use the asset. If the sales price is higher than the fair value, the Group will recognize the gain as deferred income in the statement of financial position and successively amortize into profit or loss according to the period expected to use the asset.

### Foreign currencies

Foreign currency transactions are translated into Baht at the rates prevailing on the occurrence dates. Monetary assets and liabilities denominated in foreign currency outstanding at the period ended are translated into Thai Baht at the foreign exchange rate prevailing at that date. Exchange gains or losses from translations are included as income or expenses in the income statement for the year.

Non-monetary assets and liabilities, which are derived from accounting items denominated in foreign currencies, are recorded by initial cost basis converted into Baht using exchange rates at the occur rent date.

### Income tax

Income tax expenses for the year comprise current and deferred tax. Current and deferred taxes are recognised in profit or loss except to the extent that they relate to items recognised directly in shareholders' equity or in other comprehensive income.

#### *Current tax*

The Group recognizes current tax at the amount expected to be paid to the taxation authorities, calculated based on taxable profits in accordance with the Revenue Code.

#### *Deferred tax*

The Group recognizes deferred tax on temporary differences between the tax bases of assets and liabilities and their carrying amounts at the end of each reporting period, using tax rates enacted at the end of the reporting period.



At each reporting date, the Group reviews and reduces the carrying amount of deferred tax assets to the extent that it is no longer probable that sufficient taxable profit will be available to allow all or part of the deferred tax asset to be utilized.

#### Related party transactions

Related parties comprise enterprises and individuals that control, or are controlled by, the Company, whether directly or indirectly, or which are under common control with the Group and the Company.

They also include associated companies and individuals which directly or indirectly own a voting interest in the Company that gives them significant influence over the Company, key management personnel, directors and officers with authority in the planning and direction of the Group and the Company's operations.

#### Fair value measurement

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between buyer and seller (market participants) at the measurement date. The Group applies a quoted market price in an active market to measure its assets and liabilities that are required to be measured at fair value by relevant financial reporting standards. Except where there is no active market of an identical asset or liability or when a quoted market price is not available, the Group measure fair value using valuation techniques that are appropriate in the circumstances and maximizes the use of relevant observable inputs related to assets and liabilities that are required to be measured at fair value.

All assets and liabilities for which fair value is measured or disclosed in the financial statements are categorized within the fair value hierarchy into three levels based on categories of input to be used in fair value measurement as follows:

- |         |  |
|---------|--|
| Level 1 | Use of quoted market prices in an observable active market for such assets or liabilities.     |
| Level 2 | Use of other observable inputs for such assets or liabilities, whether directly or indirectly. |
| Level 3 | Use of unobservable inputs such as estimates of future cash flows.                             |

At the end of each reporting period, the Group determines whether transfers have occurred between levels within the fair value hierarchy for assets and liabilities held at the end of the reporting



period that are measured at fair value on a recurring basis.

#### **Basis earnings (loss) per share**

Basis earnings (loss) per share are calculated by dividing profit (loss) for the year of the Parent Company (excluding other comprehensive income) by the weighted average number of already issued and fully paid shares during the accounting year.

#### **Segment information**

The sectoral business operation is disclosed under the separate business sectors of the Group. The business segment is the business sector that sources products or provides services which have different risk and return from the risks and return of the products or services provided by other business sectors.

#### **Financial Assets and liabilities**

Financial assets and liabilities carried on the statement of financial position include bank deposits, trade receivables and payables, other receivables and payables, loan receivables and payables, and receivables and payables under financial lease contracts. The important accounting policies and measurement of these items are disclosed in the respective accounting policies for related items.

### **3.2 Significant accounting judgments and estimates**

The preparation of financial statements in conformity with financial reporting standards at times requires management to make subjective judgements and estimates regarding matters that are inherently uncertain. These judgements and estimates affect reported amounts and disclosures; and actual results could differ from these estimates. Significant judgements and estimates are as follows:

#### **Revenue from contracts with customers**

##### *Identification of performance obligations*

In identifying performance obligations, the management is required to use judgement regarding whether each promise to deliver goods or services is considered distinct, taking into consideration terms and conditions of the arrangement. In other words, if a good or service is separately identifiable from other promises in the contract and if the customer can benefit from it, it is accounted for separately.

##### *Determination of timing of revenue recognition*

In determining the timing of revenue recognition, the management is required to use judgement regarding whether performance obligations are satisfied over time or at a point in time,



taking into consideration terms and conditions of the arrangement. The Group recognises revenue over time in the following circumstances:

- The customer simultaneously receives and consumes the benefits provided by the entity's performance as the entity performs
- The entity's performance creates or enhances an asset that the customer controls as the asset is created or enhanced; or
- The entity's performance does not create an asset with an alternative use to the entity and the entity has an enforceable right to payment for performance completed to date

Where the above criteria are not met, revenue is recognised at a point in time. Where revenue is recognised at a point in time, the management is required to determine when the performance obligation under the contract is satisfied.

In calculating the revenue recognised over time, the management is required to use judgement regarding measuring progress towards complete satisfaction of a performance obligation, measuring based on information provided by the Group's project managers and certificates of works from its customers.

#### Allowance for doubtful accounts

In determining an allowance for doubtful accounts, the management needs to make judgment and estimates based upon, among other things, past collection history, aging profile of outstanding debts and the prevailing economic condition.

#### Allowance for devaluation of inventories

In determining a reduce cost of inventories to net realisable value, the management makes judgment and estimates net realisable value of inventories based on the amount the inventories are expected to realise. These estimates take into consideration fluctuations of price or cost directly relating to events occurring after the end of the period. Also, the management makes judgement and estimates expected loss from stock obsolescence based upon aging profile of inventories and the prevailing economic condition.

#### Impairment of investment in subsidiary

The Company treats investment in its subsidiary as impaired when there has been a significant or prolonged decline in the fair value below its cost or where other objective evidence of impairment exists. The determination of what is "significant" or "prolonged" requires judgment of the management.



### Property, plant and equipment and depreciation

In determining depreciation of property, plant and equipment, the management is required to make estimates of the useful lives and residual values of the property, plant and equipment and to review estimate useful lives and residual values when there are any changes.

In addition, the management is required to review property, plant and equipment for impairment on a periodic basis and record impairment losses when it is determined that their recoverable amount is lower than the carrying amount.

This requires judgment regarding forecast of future revenues and expenses relating to the assets subject to the review.

### Deferred tax assets

Deferred tax assets are recognized in respect of temporary differences only to the extent that it is probable that taxable profit will be available against which these differences can be utilized. Significant management judgment is required to determine the amount of deferred tax assets that can be recognized, based upon the likely timing and level of estimate future profits.

### Leases

In determining whether a lease is to be classified as an operating lease or finance lease, the management is required to use judgment regarding whether significant risk and rewards of ownership of the leased asset has been transferred, taking into consideration terms and conditions of the arrangement.

### Post-employment benefits under defined benefit plans

The obligation under the defined benefit plan is determined based on actuarial techniques. Such determination is made based on various assumptions, including discount rate, future salary increase rate, mortality rate and staff turnover rate.



#### 4. Transactions with related parties

The Company has significant transactions with related parties, which are directly and indirectly related through inter-company shareholding or common shareholders and directorships. The related transactions are in compliance with the terms and conditions specified in the agreement between the Company and the concerned parties.

##### 4.1 The relationship of the parties

Name	Country	Nature of relationships	Related by
Ekarat Solar Co., Ltd.	Thailand	Subsidiary	Direct shares holding of 99.99%
Ekarat Energy Co., Ltd.	Thailand	Subsidiary	Direct shares holding of 51%
KV Asset Co., Ltd.	Thailand	Related Company	Mutually director and shareholder
Chula Engineering Co., Ltd.	Thailand	Related Company	Joint shares holding
"SKP Consulting and Engineering Co.,Ltd."	Thailand	Related Company	The company that is close person of the directors being the shareholder and director
Khun Theeraya Kanokpruk	Thailand	Major shareholder	Direct shares holding more than 5%

Balance with related parties as at December 31, 2019 and 2018 are as follows:

##### 4.2 Other receivables – related company

	Unit: Baht			
	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
Other receivables				
Ekarat Energy Co., Ltd.	-	-	36,000	12,000

##### 4.3 Short-term loans and interest receivables to related parties - net

Transaction of short-term loans and interest receivable to related parties - net as at December 31, 2019 and 2018 are as follows:



Unit: Baht

	Separate financial statements			
	December 31, 2018	Increase	Decrease	December 31, 2019
<b>Short-term loans</b>				
Ekarat Solar Co., Ltd.	10,496,986	-	-	10,496,986
Ekarat Energy Co., Ltd.	-	6,000,000	-	6,000,000
Total	10,496,986	6,000,000	-	16,496,986
<b>Interest receivables</b>				
Ekarat Solar Co., Ltd.	703,585	547,425	(1,235,193)	15,817
Ekarat Energy Co., Ltd.	-	97,521	-	97,521
Total	703,585	644,946	(1,235,193)	113,338
<b>Total short-term loans and interest receivables</b>	11,200,571	6,644,946	(1,235,193)	16,610,324
Less allowance for doubtful accounts	(11,200,571)			(10,512,803)
<b>Short-term loans and interest receivables - net</b>	-			6,097,521

For the years ended December 31, 2019 and 2018, there was movement in the allowance for accrued interest income as follows:

	Unit: Baht	
	Separate financial statements	
	2019	2018
Balance as beginning of year	11,200,571	10,649,480
Increase during the year	547,425	551,091
Decrease during the year	(1,235,193)	-
Balance as the ending of year	10,512,803	11,200,571



#### 4.4 Trade payables – related party

		Unit: Baht	
		Consolidated financial statements	Separate financial statements
		2019	2018
		2019	2018
Trade payable			
Ekarat Solar Co., Ltd.		-	227,625

#### 4.5 Significant transactions with related parties

Significant transactions with related parties for the years ended December 31, 2019 and 2018 consisted of:

		Unit: Baht			
		Consolidated financial statements	Separate financial statements		
		2019	2018	2019	2018
Revenue from sale of goods					
Ekarat solar Co.,Ltd	-	-	-	1,160,000	Mutually agreed price based on market
Chula Engineering Co.,Ltd	-	632,000	-	632,000	Mutually agreed price based on market
Rental income					
Ekarat Energy Co.,Ltd	-	-	24,000	24,000	Mutually agreed price based on the contract
Other income					
Ekarat solar Co.,Ltd	-	-	-	13,744	Mutually agreed price based on market
Interest income					
Ekarat solar Co.,Ltd	-	-	547,425	551,092	Mutually agreed price according on the interest rates of domestic commercail banks.
Ekarat Energy Co.,Ltd	-	-	97,521	-	Mutually agreed price according on the interest rates of domestic commercail banks.
Purchche of goods					
Ekarat solar Co.,Ltd	-	-	146,537	315,684	Based on the agreed price
Costs of goods sold					
Chula Engineering Co.,Ltd	-	605,133	-	605,133	Based on the agreed price
Consultant fee					
SKP Cousulting and Engineering Co.,Ltd.	5,607,477	8,971,963	5,607,963	8,971,693	Mutually agreed price based on the contract



#### 4.6 Key management remunerations

Key management remunerations for the years ended December 31, 2019 and 2018 consisted of:

	Unit: Baht	
	Consolidated and Separate financial statements	
	2019	2018
Benefit - short-term	24,759,000	16,134,000
Benefit - after retirement	545,160	230,638
Directors' remuneration	5,508,000	5,479,000
Total	30,812,160	21,843,638

#### 5. Cash and cash equivalents

Cash and cash equivalents as at December 31, 2019 and 2018 are as follows:

	Unit: Baht			
	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
Cash on hand	746,433	730,000	730,000	730,000
Current accounts	12,602,714	9,176,369	12,602,714	9,158,917
Savings deposit	22,776,824	39,214,609	19,080,722	34,789,241
Cheque due for deposit	5,246,891	2,812,311	5,246,891	2,812,311
Total cash and cash equivalents	41,372,862	51,933,289	37,660,327	47,490,469

#### 6. Short-term investment - net

Short-term investment - net as at December 31, 2019 and 2018 are as follows:

	Unit: Baht	
	Consolidated and Separate financial statements	
	2019	2018
Investment in equity instrument on marketable securities	1,128,315	1,128,315
Loss from change in fair value	(1,093,773)	(1,093,773)
Total short-term investment - net	34,542	34,542

As at December 31, 2019 and 2018, the fair value of equity instrument on marketable securities, arranged in Tier 1, calculation by the last offer price.



## 7. Trade and other current receivables – net

Trade and other current receivables - net as at December 31, 2019 and 2018 are as follows:

	Unit: Baht			
	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
<b>Trade receivables</b>				
- Trade receivables - other parties	399,579,323	256,122,304	393,887,391	250,445,243
Contract assets	22,552,053	14,022,179	14,548,453	14,022,179
Post-dated cheque	13,100,063	15,950,592	13,100,063	15,950,592
Total trade receivables	435,231,439	286,095,075	421,535,907	280,418,014
<b>Less allowance for doubtful debts</b>	(18,912,780)	(17,769,110)	(13,720,848)	(12,092,049)
Total trade receivables - net	416,318,659	268,325,965	407,815,059	268,325,965
<b>Other current receivables</b>				
- Other receivables - related party	-	-	36,000	12,000
- Other receivables - other parties	4,766,931	4,975,847	4,766,931	4,296,085
Prepaid expenses	4,864,279	5,102,784	4,864,279	5,102,784
Others	2,583,082	2,575,340	2,415,666	2,407,696
Total other current receivables	12,214,292	12,653,971	12,082,876	11,818,565
<b>Less allowance for doubtful debts</b>	(4,351,926)	(4,477,551)	(4,199,375)	(4,018,880)
Total other current receivables - net	7,862,366	8,176,420	7,883,501	7,799,685
<b>Total trade and other current receivables - net</b>	<b>424,181,025</b>	<b>276,502,385</b>	<b>415,698,560</b>	<b>276,125,650</b>



As at December 31, 2019 and 2018, the Company's trade receivables can be analyzed as follows:

	Unit: Baht			
	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
<b>Trade receivables - other parties</b>				
Not yet due	257,390,780	155,749,826	256,890,780	155,749,826
Over due				
Less than 3 months	103,082,762	75,653,579	103,082,762	75,653,579
From 3 months to 6 months	10,916,413	4,064,644	10,916,413	4,064,644
From 6 months to 12 months	6,274,171	3,259,902	6,274,171	3,259,902
More than 12 months	21,915,197	17,394,353	16,723,265	11,717,292
<b>Total</b>	<b>399,579,323</b>	<b>256,122,304</b>	<b>393,887,391</b>	<b>250,445,243</b>
<b>Contract assets</b>				
Not yet due	18,930,184	12,850,236	10,926,584	12,850,236
Over due				
Less than 3 months	1,518,405	503,527	1,518,405	503,527
From 3 months to 6 months	1,246,163	87,603	1,246,163	87,603
From 6 months to 12 months	597,191	234,544	597,191	234,544
More than 12 months	260,110	346,269	260,110	346,269
<b>Total</b>	<b>22,552,053</b>	<b>14,022,179</b>	<b>14,548,453</b>	<b>14,022,179</b>
<b>Post-dated cheque</b>				
Not yet due	13,100,063	15,950,592	13,100,063	15,950,592
<b>Total</b>	<b>435,231,439</b>	<b>286,095,075</b>	<b>421,535,907</b>	<b>280,418,014</b>
<b>Less allowance for doubtful debts</b>	<b>(18,912,780)</b>	<b>(17,769,110)</b>	<b>(13,720,848)</b>	<b>(12,092,049)</b>
<b>Total trade receivables</b>	<b>416,318,659</b>	<b>268,325,965</b>	<b>407,815,059</b>	<b>268,325,965</b>

The normal credit terms for a customer of the Group are approximately 30 - 90 days and the average age of the post-dated cheque is 30 - 90 days.

For the year ended December 31, 2019, there was movement in the allowance for doubtful debts of trade receivables and contract assets as follows:

	Unit: Baht	
	Consolidated financial statements	Separate financial statements
As at January 1,	17,769,110	12,092,049
Increase during the year	2,304,451	2,304,451
Less bad debt recovery	(1,160,781)	(675,652)
As at December 31,	18,912,780	13,720,848

As at December 31, 2018, the Company had trade receivables in the amounts of Baht 14.41 million, discounted to bank, Note 18.

#### 8. Inventories – net

Inventories - net as at December 31, 2019 and 2018 are as follows:

	Unit: Baht			
	Consolidated financial statements		Separate financial statements	
	2562	2561	2562	2561
Raw materials	204,667,997	217,642,785	201,234,114	212,378,704
Raw materials - in transit	16,692,294	7,908,844	16,692,294	7,908,844
Work in process	97,622,137	83,724,842	97,622,137	83,724,842
Finished goods	137,132,892	172,526,418	135,443,677	134,227,325
Supplies	6,183,346	8,795,968	6,145,847	7,706,406
Total	462,298,666	490,598,857	457,138,069	445,946,121
Less allowance for decline in value of goods	(32,671,716)	(66,785,199)	(27,511,119)	(22,132,467)
Total inventories - net	429,626,950	423,813,658	429,626,950	423,813,654



For the year ended December 31, 2019, the Group movement of allowance for decline in value of goods (cost of goods exceeding net realizable value and allowance for deteriorated and obsolete goods) was as follows:

	Unit: Baht	
	Consolidated financial statements	Separate financial statements
As at January 1, 2019	66,785,199	22,132,467
<b>Add</b> Loss net realizable of inventories	14,820,276	14,820,276
Transferred from assets	4,195,863	4,195,863
<b>Less</b> Disposal of the deteriorate inventories	(53,129,622)	(13,637,487)
As at December 31, 2019	32,671,716	27,511,119

## 9. Investments in subsidiary companies - net

Investments in subsidiary companies - net as at December 31, 2019 and 2018 are as follows:

	Percentage of Shareholding (%)		Paid-up share Capital (Million Baht)		Unit: Million Baht					
	2562	2561	2562	2561	Cost method		Allowance for impairment		Net	
	2562	2561	2562	2561	2562	2561	2562	2561	2562	2561
Ekarat Solar Co., Ltd.	99.99	99.99	1,000	1,000	999.99	999.99	(999.99)	(999.99)	-	-
Ekarat Energy Co., Ltd.	51.00	99.99	2.50	2.50	1.27	2.50	-	-	1.27	2.50
Total					1,001.26	1,002.49	(999.99)	(999.99)	1.27	2.50

On March 28, 2019, the Company sold its 49% stake in a subsidiary, Ekarat Energy Co.,Ltd., to a third party for total amount of Baht 1.23 million. As a result, its shareholding in such subsidiary changed from 99.99% to 51%. The change in its investment proportion, valued at Baht 0.36 million, is presented under shareholders' equity.

## 10. General investments – net

General investments - net as at December 31, 2019 and 2018 are as follows:

	Percentage of Shareholding (%)		Paid-up share Capital (Million Baht)		Unit: Million Baht					
					Consolidated and Separate financial statements					
	2019	2018	2019	2018	Cost method		Allowance for impairment		Net	
G.E.C. Engineering Co.,Ltd.	1.19	1.19	230	230	2.73	2.73	(2.73)	(2.73)	-	-
Saha Karn Engineering Co.,Ltd.	0.04	0.04	403	403	0.16	0.16	(0.16)	(0.16)	-	-
					2.89	2.89	(2.89)	(2.89)	-	-

## 11. Investment properties – net

Investment properties - net as at December 31, 2019 and 2018 are as follows:

ประเภทรายการ	Unit: Baht	
	Consolidated and Separate financial statements	
	2019	2018
Cost	12,973,886	12,973,886
Less allowance for impairment	(11,342,131)	(11,342,131)
Net	1,631,755	1,631,755

As at December 31, 2019 and 2018, the Company jointly registered with a related company for the ownership of land, valued of Baht 12.42 million, with an area of 136 rai 1 ngan and 67 square wah. (Total cost is Baht 17.92 million).



According to the “Market Approach,” the investment property has Level 3 fair value.

## 12. Assets for rent – net

For the years ended December 31, 2019, the movement of assets for rent - net are as follows:

	Unit: Baht				
	Consolidated and Separate financial statements				
	Repurchased transformer	Transformer reserved at service center	Transformer for borrow-rent	Solar panel for rent	Total
<b>Cost</b>					
Balance as at January 31, 2018	25,141,954	1,826,226	9,289,987	-	36,258,167
Acquisition	3,046,899	-	-	4,944	3,051,843
Transfer In (Transfer out)	(3,830,892)	546,984	(2,964,510)	102,412	(6,146,006)
Disposal	(4,823,650)	-	(28,037)	-	(4,851,687)
Balance as at December 31, 2019	19,534,311	2,373,210	6,297,440	107,356	28,312,317
<b>Accumulated depreciation</b>					
Balance as at January 31, 2018	(16,296,628)	(1,809,665)	(8,339,408)	-	(26,445,701)
Depreciation for the year	(890,849)	(44,063)	(203,972)	-	(1,138,884)
(Transfer in) Transfer out	(1,458,054)	(508,914)	2,900,568	-	933,600
Disposal	2,863,436	-	16,281	-	2,879,717
Balance as at December 31, 2019	(15,782,095)	(2,362,642)	(5,626,531)	-	(23,771,268)
<b>Accumulated allowance for impairment</b>					
Balance as at January 31, 2018	(5,893,007)	-	-	-	(5,893,007)
(Increase) decreases during the year	4,680,698	-	-	(93,341)	4,587,357
Balance as at December 31, 2019	(1,212,309)	-	-	(93,341)	(1,305,650)
<b>Net book value</b>					
As at December 31, 2019	2,539,907	10,568	670,909	14,015	3,235,399
As at December 31, 2018	2,952,319	16,561	950,579	-	3,919,459
<b>Depreciations in the statements of profit or loss for the years</b>					
Ended December 31, 2019					1,138,459
Ended December 31, 2018					994,839



### 13. Property, plant and equipment – net

For the years ended December 31, 2019, the movements of property, plant and equipment - net are as follows:

Unit: Baht							
Consolidated financial statements							
	Land and land improvement	Building and construction	Machinery, tools and equipment	Furniture and office equipment	Vehicles	Work under construction	Total
<b>Cost</b>							
Balance as at January 1, 2019	104,034,296	936,083,819	1,536,863,877	76,276,686	77,854,603	5,898,557	2,737,011,838
Acquisition	-	874,000	9,501,085	2,085,509	918,800	5,881,620	19,261,014
Transfer	-	3,605,251	2,107,596	54,412	-	1,755,976	7,523,235
Disposal	-	(99,000)	(928,985)	(429,967)	-	-	(1,457,952)
Balance as at December 31, 2019	104,034,296	940,464,070	1,547,543,573	77,986,640	78,773,403	13,536,153	2,762,338,135
<b>Accumulated depreciation</b>							
Balance as at January 1, 2019	-	(436,054,407)	(863,112,454)	(66,345,123)	(55,307,497)	-	(1,420,819,481)
Depreciation for the year	-	(21,184,473)	(29,826,338)	(3,853,431)	(9,701,886)	-	(64,566,128)
Transfer	-	-	-	-	-	-	-
Disposal	-	98,998	905,699	420,768	-	-	1,425,465
Balance as at December 31, 2019	-	(457,139,882)	(892,033,093)	(69,777,786)	(65,009,383)	-	(1,483,960,144)
<b>Accumulated allowance for impairment:</b>							
Balance as at December 31, 2018	-	(114,590,750)	(494,189,791)	(58,426)	-	-	(608,838,967)
Increase during the year	-	(9,827,456)	(990,610)	-	-	(1,147,562)	(11,965,628)
Balance as at December 31, 2019	-	(124,418,206)	(495,180,401)	(58,426)	-	(1,147,562)	(620,804,595)
<b>Net book value</b>							
As at December 31, 2019	104,034,296	358,905,982	160,330,079	8,150,428	13,764,020	12,388,591	657,573,396
As at December 31, 2018	104,034,296	385,438,662	179,561,632	9,873,137	22,547,106	5,898,557	707,353,390
<b>Depreciations in the statements of profit or loss for the years</b>							
Ended December 31, 2019							64,566,128
Ended December 31, 2018							105,438,872





Unit: Baht

	Separate financial statements						
	Land and land improvement	Building and construction	Machinery tools and equipment	Furniture and office equipment	Vehicles	Work under construction	Total
<b>Cost</b>							
Balance as at January 1, 2019	112,075,491	767,784,135	1,076,971,073	67,266,329	78,190,603	6,066,593	2,108,354,224
Acquisition	-	874,000	9,501,085	2,085,509	918,800	5,881,620	19,261,014
Transfer	-	3,605,251	2,107,596	54,412	-	1,755,976	7,523,235
Disposal	-	(99,000)	(928,985)	(429,967)	-	-	(1,457,952)
Balance as at December 31, 2019	112,075,491	772,164,386	1,087,650,769	68,976,283	79,109,403	13,704,189	2,133,680,521
<b>Accumulated depreciation</b>							
Balance as at January 1, 2019	-	(340,975,091)	(561,579,327)	(56,944,069)	(55,675,445)	-	(1,015,173,932)
Depreciation for the year	-	(20,887,806)	(29,826,338)	(3,853,431)	(9,701,886)	-	(64,269,461)
Transfer	-	-	-	-	-	-	-
Disposal	-	98,998	905,699	420,768	-	-	1,425,465
Balance as at December 31, 2019	-	(361,763,899)	(590,499,966)	(60,376,732)	(65,377,331)	-	(1,078,017,928)
<b>Accumulated allowance for impairment:</b>							
Balance as at January 1, 2019	-	(91,519,858)	(299,063,564)	(51,804)	-	-	(390,635,226)
Increase during the year	-	(9,827,456)	(990,610)	-	-	(1,147,562)	(11,965,628)
Balance as at December 31, 2019	-	(101,347,314)	(300,054,174)	(51,804)	-	(1,147,562)	(402,600,854)
<b>Net book value</b>							
As at December 31, 2019	112,075,491	309,053,173	197,096,629	8,547,747	13,732,072	12,556,627	653,061,739
As at December 31, 2018	112,075,491	335,289,186	216,328,182	10,270,456	22,515,158	6,066,593	702,545,066
<b>Depreciations in the statements of profit or loss for the year</b>							
Ended December 31, 2019							64,269,461
Ended December 31, 2018							105,438,872

As at December 31, 2018, the management of the Group has assessed the net realizable value of assets in the production and distribution section of solar cells panels by independent appraisers approved by the Securities and Exchange Commission of Thailand (SEC). The results showed that the expected return value of the assets (calculated by cost method) is lower than the book value of



assets according to the consolidated and separate financial statements in the amount of Baht 347.61 million. Therefore the management considered to record the allowance for impairment of assets in the consolidated and separate statement of income for the year 2018 in whole amount. As at December 31, 2019, the Company has net book value of these unused assets of Baht 123.94 million.

As at December 31, 2019 and 2018, asset under Project Solar Farm at booked values of Baht 141.07 million and Baht 148.75 million, respectively are assets which the Company has right to participate in the project by selling electricity current from a government agency for a 25 year term. Such project is situated on land that is owned by multiple parties, as discussed in Note to Financial Statements No. 31.4.

As at December 31, 2019 and 2018, the assets, costing Baht 550.87 million and Baht 526.67 million respectively, were fully depreciated but most of them are still in use.

As at December 31, 2019 and 2018, the Group mortgaged land with construct with the carrying amounts of Baht 189.41 million and Baht 197.15 million respectively, as well as buildings and machinery with the carrying amounts of Baht 64.09 million and Baht 72.28 million respectively, as collateral against credit facilities and obligations with commercial banks as mentioned in Notes 18, 21 and 31.1.

As at December 31, 2019 and 2018, the Group has machines and vehicles with carrying amount of Baht 14.87 million and Baht 23.78 million respectively, are under the financial lease contracts according Notes 22.

As at December 31, 2019 and 2018, the Group unused assets with booked values of Baht 132.73 million and Baht 138.21 million respectively.

#### 14. Intangible assets – net

For the year ended December 31, 2019, movements of intangible assets - net are as follows:

	Unit: Baht		
	Consolidated and Separate financial statements		
	Computer software	Right to distribute electricity	Total
<b>Cost</b>			
Balance as at January 1, 2019	27,786,079	9,450,272	37,236,351
Increase during the year	6,300	-	6,300
Balance as at December 31, 2019	27,792,379	9,450,272	37,242,651
<b>Accumulated amortization</b>			
Balance as at January 1, 2019	(24,637,235)	(726,523)	(25,363,758)
Amortisation for the year	(255,257)	(379,424)	(634,681)
Balance as at December 31, 2019	(24,892,492)	(1,105,947)	(25,998,439)
<b>Accumulated allowance for impairment:</b>			
Balance as at January 1, 2019	(2,427,094)	-	(2,427,094)
Increase (decreases) during the year	-	-	-
Balance as at December 31, 2019	(2,427,094)	-	(2,427,094)
<b>Net book value</b>			
As at December 31, 2019	472,793	8,344,325	8,817,118
As at December 31, 2018	721,750	8,723,749	9,445,499
<b>Amortisation in the statements of profit or loss for the year</b>			
Ended December 31, 2019			634,681
Ended December 31, 2028			734,392

As at December 31, 2019 and 2018, the right to distribute electricity to the project owners represent intangible assets, valued at Baht 8.34 million and Baht 8.72 million respectively. This is in accordance to the compensation payment under the Underground-Based Solar Farm Agreement, as discussed in Note 31.4.

As at December 31, 2019 and 2018, the intangible assets, costing amount of Baht 19.29 million and Baht 19.24 million respectively, were fully depreciated but still in use.



### 15. Restricted deposits with bank

As at December 31, 2019 and 2018, restricted bank deposits are used to guarantee credit and obligations with commercial banks as mentioned in Notes 18, 21 and 31.1.

### 16. Prepaid rent under operation lease - net

For the years ended December 31, 2019, movement of prepaid rent under operation lease - net is as follows:

	Unit: Baht	
	Consolidated and Separate financial statements	
	2019	2018
Balance as at January 1,	4,676,938	4,880,307
Amortization	(203,369)	(203,369)
Balance as at December 31,	4,473,569	4,676,938

On August 22, 2016, the Company entered into an agreement as a party to support Project Solar Farm with a government agency entitled to sell electricity and as project owner. The Company operated the project on land of the project owner for a period of 25 years, commencing on January 1, 2017 and ending on December 31, 2041. The Company is obligated to pay usage expenses under the agreement totaling Baht 23.79 million for five periods of five years each, according to the usage rates indicated in the agreement and as mentioned in Note to Financial Statements No. 31.4.

Minimum future payments for land usage are as follows:

	Unit: Baht	
	Consolidated and Separate financial statements	
	December 31, 2019	December 31, 2018
Within 1 year	883,610	883,610
Over 1 year and less than 5 years	3,636,395	3,602,410
Over 5 years	16,618,665	17,306,860
Total	21,138,670	21,792,880

## 17. Deferred tax assets – net

Deferred tax assets - net as at December 31, 2019 and 2018 are as follows:

	Unit: Baht	
	Consolidated and Separate financial statements	
	2019	2018
Deferred tax assets	90,600,468	95,969,814
Deferred tax liabilities	(1,836,165)	(1,914,299)
Net	88,764,303	94,055,645

Movement of deferred tax assets and liabilities incurred during the year ended December 31, 2019 are as follows:

	Unit: Baht			
	Consolidated and Separate financial statements			
	Movement increase (decrease)			
	January 1, 2019	Statement of profit or loss	Other comprehensive income	December 31, 2019
<b>Deferred tax assets :</b>				
Allowance for devaluation of inventories	4,426,493	1,075,731	-	5,502,224
"Allowance for impairment of fixed assets and related depreciation"	76,131,830	(6,764,437)	-	69,367,393
Employee benefit obligations	13,879,572	4,243,485	(2,482,332)	15,640,725
Tax loss carry forward	1,478,263	(1,478,263)	-	-
Estimated demolition	53,656	36,470	-	90,126
Total	95,969,814	(2,887,014)	(2,482,332)	90,600,468
<b>Deferred tax liability :</b>				
Depreciation from life expectancy change	(2,236,461)	134,312	-	(2,102,149)
Depreciation	322,162	(56,178)	-	265,984
Total	(1,914,299)	78,134	-	(1,836,165)
Net	94,055,515	(2,808,880)	(2,482,332)	88,764,303



Unit: Baht				
Consolidated and Separate financial statements				
Movement increase (decrease)				
	January 1, 2018	Statement of profit or loss	Other comprehensive income	December 31, 2018
<b>Deferred tax assets :</b>				
Allowance for devaluation of inventories	5,130,009	(703,516)	-	4,426,493
"Allowance for impairment of fixed assets and related depreciation"	7,090,633	69,041,197	-	76,131,830
Employee benefit obligations	14,372,661	(493,089)	-	13,879,572
Tax loss carry forward	2,087,529	-	(609,266)	1,478,263
Estimated demolition	-	53,656	-	53,656
Total	28,680,832	67,898,248	(609,266)	95,969,814
<b>Deferred tax liability :</b>				
Depreciation from life expectancy change	(2,370,774)	134,313	-	(2,236,461)
Depreciation	321,674	488	-	322,162
Total	(2,049,100)	134,801	-	(1,914,299)
Net	26,631,732	68,033,049	(609,266)	94,055,515

Income tax for the years ended December 31, 2019 and 2018 are as follows:

Unit: Baht		
Consolidated and Separate financial statements		
	2019	2018
<b>Current tax expense</b>		
Current periods	-	-
<b>Deferred tax expense</b>		
Movement in temporary differences	2,808,880	(68,033,049)
Total income tax (revenue) expense	2,808,880	(68,033,049)



## Reconciliation of effective tax rate

	Unit: Baht			
	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
Profit (loss) before income tax expenses	85,691,380	(347,679,962)	86,552,563	(344,503,952)
Income tax rate	20%	20%	20%	20%
Current income tax (revenue) expense as tax rate	17,138,276	(69,535,992)	17,310,513	(68,900,790)
Effectives of:				
Benefit of non-taxable				
for promoted operation (BOI)	(14,549,500)	(8,885,953)	(14,549,501)	(8,885,953)
Net loss in current year,				
not recognized as deferred tax	8,805	10,119,593	-	9,993,160
Income tax from related transactions	196,887	358,015	-	-
Non-deductible expenses by the Revenue Code	2,908,634	2,426,968	2,829,819	2,276,214
Non-taxable income/deductible expense	(2,894,222)	(2,515,680)	(2,781,951)	(2,515,680)
Income tax (revenue) expense	2,808,880	(68,033,049)	2,808,880	(68,033,049)
The average effective tax rate	3%	20%	3%	20%

## Income tax reduction

According to Revenue Code Amendment Act No. 42 B.E. 2559, dated March 3, 2016, the corporate income tax rate will continue at 20% on net profit for the accounting periods beginning on January 1, 2016.

### 18. Short-term loans from financial institutions

Short-term loans from financial institutions as at December 31, 2019 and 2018 are as follows:

	Unit : Baht			
	Consolidated and Separate financial statements			
	2019	2018	2019	2018
Bank overdrafts	-	MOR-0.60%	-	MOR-0.60%
Promissory notes	64,082,000	MLR-0.5%	139,460,000	MLR-0.5%
Trust receipts payable	152,967,555	MLR-0.5%	61,399,325	MLR-0.5%
Factoring payable	-	MOR-0.75%	14,412,165	MOR-0.75%
Total	217,049,555		215,271,490	

As at December 31, 2019 and 2018, the Company has overdrafts and short-term loans from two local banks in the amounts of Baht 1,000.64 million. These loans are guaranteed by a transfer

of the right to receivables under the Factoring Agreement in Note to Financial Statements No. 7, bank deposits in Note to Financial Statements No.15 and land with constructions and machineries in Note to Financial Statements No.13.

## 19. Trade and other current payables

Trade and other current payables as at December 31, 2019 and 2018 are as follows:

	Unit: Baht			
	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
<b>Trade payables</b>				
Related party	-	-	-	227,625
Other parties	171,881,355	221,570,716	170,439,024	221,570,716
Total trade payable	171,881,355	221,570,716	170,439,024	221,798,341
<b>Other current payables</b>				
Other parties	17,587,423	10,750,710	17,441,099	10,750,710
Assets payables	1,694,737	7,189,712	1,694,737	7,189,712
Others	989,810	1,013,763	989,810	1,013,763
Total other current payables	20,271,970	18,954,185	20,125,646	18,954,185
Total trade and other current payables	192,153,325	240,524,901	190,564,670	240,752,526

## 20. Advance received for goods and services

Advance received for goods and services liabilities as at December 31, 2019 and 2018 Consisted of:

	Unit: Baht			
	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
Deposit received in advance	425,300	571,800	425,300	571,800
Advance received for goods				
Advance received from services	14,918,426	16,634,391	14,918,426	16,634,391
and maintenance contracts	15,905,742	9,858,190	15,905,742	9,858,190
Contract liabilities	20,626,458	1,074,752	20,626,458	1,074,752
Total	51,875,926	28,139,133	51,875,926	28,139,133





As at December 31, 2019 and 2018, contract liabilities is as follows:

	Unit: Baht			
	Consolidated financial statements		Separate financial statements	
	2019	2018	2019	2018
<b>Contract assets</b>				
Value of contract	169,135,492	113,392,666	150,435,492	109,196,666
Revenue recognised on percentage of completion basis	158,755,074 (149,609,150)	83,572,985 (83,206,585)	143,795,074 (142,129,150)	83,572,985 (83,206,585)
<b>Less</b> Value of progress billings (Installment)	9,145,924	366,400	1,665,924	366,400
<b>Contract liabilities</b>				
Value of contract	90,114,859	39,294,000	90,114,859	39,294,000
Value of progress billings	50,674,589	24,569,000	50,674,589	24,569,000
<b>Less</b> Revenue recognised on percentage of completion basis	(30,048,131)		(30,048,131)	(23,494,248)
<b>Contract liabilities</b>	20,626,458	1,074,752	20,626,458	1,074,752

## 21. Long-term loans from financial institution - net

Long-term loans from financial institution - net as at December 31, 2019 and 2018 are as follows:

	Unit: Baht	
	Consolidated and Separate financial statements	
	2019	2018
Long-term loans from financial institutions	116,946,000	111,718,000
<b>Less</b> deferred front end fee	(1,046,419)	(1,172,910)
Total	115,899,581	110,545,090
<b>Less</b> current portion of long-term loans	(27,934,878)	(21,655,163)
<b>Long-term loans from financial institutions - net</b>	87,964,703	88,889,927

The movements in the long-term loans from financial institutions for the years ended December 31, 2019 are as follows:

	Unit: Baht
	Consolidated and Separate financial statements
As at January 1, 2019	111,718,000
Add borrowings during the year	31,500,000
Less repayment during the year	(26,272,000)
As at December 31, 2019	116,946,000

As at December 31, 2019 and 2018, long-term loans from financial institutions are as follows:

Unit: (Million Baht)				((%)/ annum)		Repayment of principal and interest rate
Credit Line		Outstanding balance		Interest rate		
2019	2018	2019	2018	2019	2018	
120.00	120.00	77.25	92.97	MLR-1.50%	MLR-1.50%	- Loan for the purpose of investing in a government authorized ground-based solar farm project. The repayment is a total of 84 instalments at the rate of Baht 1.31 million per instalment and must be settled by November 2024. - Interest is paid monthly from the date of first withdrawal.
25.00	25.00	12.50	18.75	MLR-1.50%	MLR-1.50%	- Loan for the purpose of reimbursement of land. The repayment is a total of 48 instalments at the rate of Baht 0.521 million per instalment and must be settled by December 2021. - Interest is paid monthly from the date of first withdrawal.
19.50	-	15.60	-	3.50%	-	- Loan for the purpose of investment and operation. The repayment is a total of 60 instalments at the rate of Baht 0.325 million per instalment and must be settled by December 2023. - Interest is paid monthly from the date of first withdrawal.
12.00	-	11.60	-	3.50%	-	- Loan for the purpose of investment and operation. The repayment is a total of 60 instalments at the rate of Baht 0.2 million per instalment and must be settled by October 2024. - Interest is paid monthly from the date of first withdrawal.
176.50	145.00	116.95	111.72			



## Collaterals

As at December 31, 2019 and 2018, the Company has land and certain machines, as mentioned in Note to Financial Statements No. 13, and bank deposits, as mentioned in Note to Financial Statements No. 15, as collateral.

The Company has taken an insurance policy for machines and equipment for the highest amount acceptable to insurance company. The benefit derivable from such policy is to be given to the lending financial institution. Moreover, the Company must comply with material loan provisions, for example, maintain a debt to equity ratio and debt repayment capacity ratio as stated in the contracts until the completion of the repayment.

### 22. Liabilities under financial lease agreements - net

Liabilities under financial lease agreements - net as at December 31, 2019 and 2018 consisted of:

	Unit: Baht	
	Consolidated and Separate financial statements	
	2019	2018
<b>Due not later than one year</b>		
Minimum payments	5,852,144	10,928,618
Deferred interest	(403,068)	(717,586)
Liabilities under financial lease - net	5,449,076	10,211,032
<b>Due later than one year but not later than five years</b>		
Minimum payments	8,128,475	13,187,401
Deferred interest	(273,379)	(504,624)
Liabilities under financial lease - net	7,855,096	12,682,777
Net book value of vehicles and machineries under finance leases agreements	14,872,627	23,776,514

As at December 31, 2019 and 2018, the Company has 42 financial lease agreements with several financial institutions. Term of payment is Baht 0.62 million per instalment. The Company has a sale and lease back machine agreement with a financial institution with the term of payment at Baht 0.19 million per month for 3 years. The vehicle's ownership still vest with the lessor until the Company decides to buy it.

### 23. Non-current provisions for employee benefits

Movement of the present value of non-current provisions for employee benefits in the statements of profit or loss and other comprehensive income for the years ended December 31, 2019 and 2018 are as follows:

	Unit: Baht	
	Consolidated and Separate financial statements	
	Post - employment benefit plan	
	2019	2018
Non-current provisions for employee benefit as at beginning of years	69,397,874	71,863,307
Included in profit or loss:		
Current service cost	3,885,072	4,007,496
Interest cost	2,649,149	2,108,821
Past service cost *	19,489,192	-
Included in other comprehensive income:		
Actuarial gain arising from		
Financial assumptions changes	(14,568,180)	-
Experience adjustments	2,156,519	-
Benefit paid during the years	(4,806,000)	(8,581,750)
Non-current provisions for employee benefit as at ending of years	78,203,626	69,397,874

Expenses are recognized in the statement of comprehensive income for the year ended December 31, 2019 and 2018, as follows:

	Unit: Baht	
	Consolidated and Separate financial statements	
	2019	2018
Included in profit or loss:		
Cost of sales	18,650,204	4,007,496
Administrative expenses	7,373,209	2,108,821
Total	26,023,413	6,116,317
Included in other comprehensive income:		
Actuarial gain arising from Financial assumptions changes	12,411,661	-

Principal actuarial assumptions as at December 31, 2019 and 2018 (represented by the weighted-average) consisted of:

	(Percentage (%)/annum)	
	Consolidated and Separate financial statements	
	December 31, 2019	December 31, 2018
Discount rate	3.16%	2.67%
Future salary increase rate	6.19%	7.39%
Mortality rate	100% of Thai Mortality Ordinary Tables of 2017	100% of Thai Mortality Ordinary Tables of 2008
Turnover rate	-	18,168,499
Under 20 years old	21%	37%
20 - 29 years old	21%	20%
30 - 39 years old	13%	11%
40 - 59 years old	5%	4%
Above 60 years old	0%	0%
Retired	60 year	60 year

Changes in the actuarial assumption will affect to the employee benefit obligation for the year ended December 31, 2019 and 2018 as follows:

	Unit: Baht			
	Consolidated and Separate financial statements			
	2019		2018	
	Increase	Decrease	Increase	Decrease
Discount rate (0.50% movement)	(3,113,966)	3,330,970	(3,476,219)	3,744,811
Future salary increases rate (0.50% movement )	3,515,632	(3,314,941)	4,191,578	(3,915,559)
Employee turnover (1.00% movement)	(7,380,937)	8,427,918	(8,680,699)	10,129,968

\* On April 5, 2019, the Labor Protection Act (No.7) B.E.2562 was announced in the Royal Gazette. This stipulates additional legal severance pay rates for employees who have worked for an uninterrupted period of twenty years or more, with such employees entitled to receive not less than 400 days' compensation at the latest wage rate. The law is effective from May 5, 2019. This change is considered an amendment to post-employment benefits. The Company recorded the effect of this change in 2019.



The Group has a defined benefits plan, in accordance with severance payment provisions under labor law, for eligible retired employees according to their work service periods at various rates.

The actuarial assumption of discount rate is estimated from weighted average of yield rate of government bonds that reflects the estimated timing of benefit payments.

The actuarial assumption of mortality rate for reasonable estimation of probability of retirement in the future is estimated from the mortality table from the Office of Insurance Commission.

The actuarial assumption of resignation rate is estimated based on an historical data base on employee age ranges.

#### **24. Share capital**

On April 30, 2019, Ordinary Shareholders' Meeting No 1/2019 approved the increase in registered capital from the existing Baht 1,074,631,523 to Baht 1,611,947,285, a Baht 537,315,762 increase, by issuing 671,644,702 new ordinary shares at the par value of Baht 0.80 to accommodate the exercise price of a warrant. The Company registered the share capital increase with the Ministry of Commerce on May 14, 2019.

#### **25. Legal reserve**

Pursuant to the Public Company Limited Act, the Company is required to appropriate as a legal reserve at least 5% of annual net profit less the total accumulated deficit brought forward (if any) until the reserve reaches an amount of at least 10% of the authorized share capital.

#### **26. Dividend**

According to the Ordinary Shareholders' Meeting of year 2018, held April 30, 2018, the shareholders passed a resolution to pay dividends to shareholders from the operating results of 2017 at the rate of Baht 0.03 per share for 1,343.29 million shares, totaling Baht 40.29 million. The Company recorded Baht 2.54 million in its legal reserve. On May 28, 2018, the dividends were paid to shareholders.

#### **27. Warrant**

On April 30, 2019, Ordinary Shareholders' Meeting No. 1/2019 approved to issue the warrant to purchase the Company's Ordinary Shares No.1 (AKR-W1) allocated to existing shareholders in proportion to the existing shareholders (Rights Offer) of not more than 671,644,702 units with free

value at the ratio of two ordinary shares one unit, at the exercise price of Baht 1.00 per share. Such warrant will be valid for two years from their issuance date.

On May 31, 2019, the Company issued the warrant to purchase the Company's Ordinary Shares No.1 (AKR-W1) allocated to existing shareholders in proportion to the existing shareholders (Rights Offer) of not more than 671,644,702 units with free value at the ratio of two ordinary shares to one unit.

As at December 31, 2019, such warrant was not been exercised.

The exercise price of the warrants (AKR-W1) are higher than the average market price of the Company's ordinary shares for the year ended December 31, 2019. Therefore, the Company has not assumed conversion of the warrants in the calculation of diluted earnings per share in the consolidated and separate financial statements for the year ended December 31, 2019.

## 28. Operating segment

The operating segment information in the consolidated financial statement for the years ended December 31, 2019 and 2018 is as follows:

	Unit: Million Baht							
	Goods production and distribution		Services		Electricity		Consolidated financial statements	
	2019	2018	2019	2018	2019	2018	2019	2018
Revenues from sales and services	1,182.49	1,114.08	399.15	304.91	48.31	45.31	1,629.95	1,464.30
Cost of sale and service	(907.58)	(954.43)	(287.99)	(216.08)	(23.15)	(23.15)	(1,218.72)	(1,193.66)
Gross profit	274.91	159.65	111.16	88.83	25.16	22.16	411.23	270.64
Selling and administrative expenses							(313.38)	(275.01)
Profit (loss) from operation							97.85	(4.37)
Other income							20.00	27.91
Loss on impairment of assets							(10.69)	(349.09)
Finance costs							(21.47)	(22.13)
Income tax revenue (expenses)							(2.81)	68.03
Profit (loss) for the years							82.88	(279.65)



For the years ended December 31, 2019, the Group had revenues from major customers, representing approximately 15.91 of total revenues from operations.

Details of the sectorial business assets as at December 31, 2019 and 2018, are as follows:

Unit: Million Baht

	Goods production and distribution						Consolidated	
	Electricity		Sell transformers		Sell solar cell		financial statements	
	2019	2018	2019	2018	2019	2018	2019	2018
Fixed assets	209.08	252.96	306.53	321.96	141.96	132.43	657.57	707.35
Other assets							1,057.52	908.90
Total assets							1,715.09	1,616.25

## 29. Financial Instruments

### Financial risk management policy

The Group bears risk due to interest rate fluctuations and from non-performance of contractual obligations by contractual parties. The Group will consider using the appropriate financial instruments when it considers necessary to manage such risks. However, the Group does not have a policy to hold or issue any financial instruments for speculation or for trading.

### Risk on credit provision

The Group bears risk on credit provision relating to trade receivables. However, the Group has set a policy to undertake business activities only with reliable traders with good financial status in order to reduce the risk of financial loss. The Group does not have high concentrations of credit risk since the company's customer are diverse and a large customer base. The maximum exposure to credit risk is limited to the carrying amounts of receivables as stated in the statements of financial position.

### Risk liquidity

The Group monitors its liquidity risk and maintains a level of cash and cash equivalents deemed adequate by management to finance the Group's operations and to mitigate the effects of fluctuations in cash flows.

### Risk on interest rates

The Group bears significant risk over interest rates on financial instruments, which includes loans from financial institutions. Therefore, it is subject to risk in relation to floating interest rates which may fluctuate in future possibly affecting the operating results and cash flows.



As at December 31, 2019 and 2018, significant financial instruments have the following details:  
(with respect to interest rates, they are already shown in related notes to the financial statements).

Unit: Million Baht

	Consolidated financial statements					
	December 31, 2019					
	Fixed interest rate			Floating Interest rate	Non Interest bearing	Total
	Within 1 year	more than 1 year to 5 years	more than 5 years			
Financial assets						
Cash and cash equipments	-	-	-	23	18	41
Trade and orther receivables-net	-	-	-	-	424	424
Restricted deposits with bank	-	-	-	20	-	20
Total	-	-	-	43	442	485
Financial liabilities						
Short-term loans from financial institutions	-	-	-	217	-	217
Trade and other current payables	-	-	-	-	192	192
Liabilities under financial lease agreements-net	5	8	-	-	-	13
Long-term loans from financial institutions-net	-	-	-	116	-	116
Total	5	8	-	333	192	538

Unit: Million Baht

Consolidated financial statements						
December 31, 2019						
	Fixed interest rate			Floating Interest rate	Non Interest bearing	Total
	Within 1 year	more than 1 year to 5 years	more than 5 years			
Financial assets						
Cash and cash equivalents	-	-	-	39	13	52
Trade and other receivables-net	-	-	-	-	277	277
Restricted deposits with bank	-	-	-	19	-	19
Total	-	-	-	58	290	348
Financial liabilities						
Short-term loans from financial institutions	-	-	-	215	-	215
Trade and other current payables	-	-	-	-	240	240
Liabilities under financial lease agreements-net	10	13	-	-	-	23
Long-term loans from financial institutions-net	-	-	-	111	-	111
Total	10	13	-	326	240	589



### Risk on exchange rates

The Group's exposure to foreign currency risk arises mainly from trading transactions that are denominated in foreign currencies.

As at December 31, 2019 and 2018, the Group entered into forward exchange contracts to not entered into risk hedge are summarized as follows:

	Consolidated financial statements			
	Trade receivables		Trust receipts/Trade payables	
	2019	2018	2019	2018
US Dollar	37,650	378,270	1,615,257	2,006,620
Euro	141,975	141,975	320,869	432,684
Krona	-	-	-	544,400
CH Franc	-	-	-	1,893
SGD Dollar	264,000	92,000	-	51,750
Ringgit	672,939	315,950	-	-

	Separate financial statements			
	Trade receivables		Trust receipts/Trade payables	
	2019	2018	2019	2018
US Dollar	35,650	376,270	1,615,257	2,006,620
Euro	141,975	-	320,869	432,684
Krona	-	-	-	544,400
CH Franc	-	-	-	1,893
SGD Dollar	264,000	92,000	-	51,750
Ringgit	672,939	315,950	-	-

### Fair values

The financial assets and liabilities have book values which are comparable to market prices as these financial instruments will be due in the short time and bears interest rate comparable to market. As a result these financial assets and liabilities have reflected their fair values.



### 30. Expenses by nature

The Company has significant expenses by nature for the years ended December 31, 2019 and 2018 are as follows:

	Unit: Baht			
	Consolidated financial statement		Separate financial statements	
	2019	2018	2019	2018
Changes in finished goods and work in progress ZincreaseX decrease	20,783,945	18,460,432	(15,825,930)	16,767,079
Raw material and supplies used	838,388,347	745,578,235	838,388,347	744,893,471
Loss from decline in value of inventories	285,287	12,106,044	1,182,790	10,849,901
Loss on impairment of fixed assets	10,688,883	348,623,699	10,688,883	348,623,699
Employee expense	274,212,094	251,143,257	273,282,094	251,143,257
Directors' remuneration	25,304,160	16,364,638	25,304,160	16,364,638
Depreciation and amortization	66,339,692	106,903,045	66,043,026	106,903,045
Consulting in management	10,857,477	14,891,963	10,857,477	14,891,963
Commission and consulting in management	68,006,696	43,307,133	67,806,696	43,307,133

### 31. Provident fund

The Company and their employees have jointly established a provident fund in accordance with the Provident Fund Act B.E. 2530. The Company and their employees contributed to the fund monthly at the rates depending on the working life of the employees. A local financial institution is managing the provident fund and will be paid to the employees upon termination in accordance with the fund rules. For the years ended December 31, 2019 and 2018, in the consolidated and separate financial statements, the Company contributions amounted to approximately Baht 5.84 million and Baht 5.76 million respectively.

## 32. Commitment and contingent liabilities

32.1. As at December 31, 2019 and 2018, the Group has the following credit facilities with financial institutions:

Unit: Million Baht						
Consolidated financial statement						
2019			2018			
Credit facilities	Utilized	Available	Credit facilities	Utilized	Available	Interest rate
Letters of guarantee	170.89		166.54			1.25% - 1.75%
Promissory note	64.08		139.46			MLR-0.5%
Letter of credit, trust receipt and packing credit	800.64	367.64	800.64	81.59	413.05	MLR-0.5%
Bank overdraft	-		-			MOR
Local factoring	200.00	200.00	200.00	-	200.00	MOR-0.75%
Long-term loans	176.50	-	145.00	145.00	-	MLR-1.50%

Commitment and contingent liabilities are guaranteed by deposits at financial institutions in Note to Financial Statements No. 15, and by mortgage of land with constructions of the Company in Note to Financial Statements No. 13.

32.2. As at December 31, 2019 and 2018, the Company has commitments on hire of contractor, asset rental and other service agreements in the amounts of Baht 10.14 million and Baht 20.05 million, respectively.

32.3. The Company and its subsidiary have commitments under two construction and installation contracts which the Company and its subsidiary have entered into, in the amount of Baht 100.55 million. As at December 31, 2019, the Company and its subsidiary have outstanding commitments under such contacts of Baht 30.20 million

32.4. On August 22, 2016, the Company entered into a contract to support the ground-based solar farm electricity generation project installation for government and agricultural cooperatives, 2015, a 25 year project period, and had an obligation to pay for such projects until their completion as follows:



Unit: Baht		
Consolidated and Separate financial statements		
	2019	2018
Land usage fee	21,138,670	22,022,280
Minimum income guarantee to the project owner	14,300,500	14,300,500
Electricity sale rights	Percentage of sales before expenses each month	

### 33. Investment promotion privileges

As at December 31, 2019 and 2018, by the Board of Investment, under the Investment Promotion Act B.E. 2520, granted the Company the following promotional privileges:

33.1. The Company is promoted to generate electricity from solar cells, a Type 7.1 Activity: Utilities and Basic Services No.1105(1)/2010, dated February 5, 2010, and effective on December 14, 2009, and No. 1297(1)/2013, dated March 7, 2013, and effective on October 3, 2012.

33.2. The Company is promoted to engage in generation of electricity from solar cells, a Type 7.1.1.2 Activity: Utilities and Basic Services No. 60-0018-1-00-1-0, dated January 11, 2017, and effective on November 7, 2016. The Company enjoys the following rights and privileges:

- Exemption of payment of corporate income tax on net profit derived from promoted activity for the period of 8 years from the date of income earnings. In the case where a loss has been incurred during the period of receiving exemption of corporate income tax, the promoted Company is granted permission to deduct such annual loss from net profits accrued after the expiration of the period of exemption of corporate income tax for a period of not more than 5 years from the expiry of such period.
- Exemption on dividends derived from the promoted activity granted an exemption of corporate income throughout the period of the promoted company receives the exemption of corporate income tax.
- Fifty percent reduction of the normal corporate income tax rate on the profits from the promoted activity for a period of 5 years after the expiry of the corporate income tax exemption period.
- Double deduction from taxable income of transportation, electricity and water costs for the period of 10 years after the expiry of the exemption period.
- Allowance to deduct on 25 percent of the project's infrastructure installation or construction cost in addition to the normal depreciation.



33.3. The Company is promoted to engage in the manufacture of transformers and solar cells type 5.1.3, electrical appliances type 5.4.8 and parts and equipments which use solar energy No. 60-0803-1-04-1-0 dated July 21, 2017, an effective on May 15, 2017. The Company enjoys the following rights and privileges:

- Immigration of skilled foreign experts and their spouses and dependents into the Kingdom of Thailand.
- Import duty exemption for machinery, as approved by the BOI.
- Exemption of payment of corporate income tax on net profits derived from the promoted business, not exceeding 50 percent of the investment value, to improve production efficiency, excluding land and working capital, for a 3-year period from the date of receiving income after receiving the BOI Certificate.
- Exemption from corporate income tax on dividends derived from the promoted activity throughout the promoted period.
- Exemption of import duties for imported products to be reexported for a period of one year from the date of first import.

The Company has income and expenses for the years ended December 31, 2019 and 2018, from the promoted activity as follows:

	Unit: Baht		
	Separate financial statements		
	For the year ended December 31, 2019		
	Promoted	Non-promoted	Total
Revenue from sales and services	1,197,538,019	416,950,862	1,614,488,881
Other income	12,277,374	8,357,024	20,634,398
Total revenue	1,209,815,393	425,307,886	1,635,123,279
Cost of sales	(895,806,001)	(308,432,680)	(1,204,238,681)
Loss on devaluation of goods (reverse)	76,098	(1,258,888)	(1,182,790)
Selling and administrative expenses	(251,644,932)	(59,253,007)	(310,897,939)
Loss on impairment of fixed assets	(2,415,098)	(8,273,785)	(10,688,883)
Finance costs	(15,941,380)	(5,621,043)	(21,562,423)
Total expenses	(1,165,731,313)	(382,839,403)	(1,548,570,716)
Loss before income tax	44,084,080	42,468,483	86,552,563



	Unit: Baht		
	Separate financial statements		
	For the year ended December 31, 2018		
	Promoted	Non-promoted	Total
Revenue from sales and services	1,079,710,124	384,500,967	1,464,211,091
Other income	20,887,459	7,498,445	28,385,904
Total revenue	1,100,597,583	391,999,412	1,492,596,995
Cost of sales	(836,404,498)	(344,524,557)	(1,180,929,055)
Loss on devaluation of goods (reverse)	(5,182,251)	(5,667,650)	(10,849,901)
Selling and administrative expenses	(207,805,882)	(66,769,950)	(274,575,832)
Loss on impairment of fixed assets	(1,010,158)	(347,609,057)	(348,619,215)
Finance costs	(16,231,565)	(5,895,379)	(22,126,944)
Total expenses	(1,066,634,354)	(770,466,593)	(1,837,100,947)
Loss before income tax	33,963,229	(378,467,181)	(344,503,952)

### 34. Reclassification of accounts

Certain accounts in the 2018 financial statements have been reclassified to conform to the presentation in the year 2019 as follows:

	Unit: Baht					
	2018					
	Consolidated financial statements			Separate financial statements		
	Before reclassification	Reclassification	After reclassification	Before reclassification	Reclassification	After reclassification
Statements of financial position						
Trade and other current receivables - net	277,261,658	(759,273)	276,502,385	276,884,923	(759,273)	276,125,650
Deposit and advance payment for goods	-	759,273	759,273	-	759,273	759,273

### 35. Approval of interim financial statements

These interim financial statements have been approved by the Company's board of directors on February 27, 2020.



## Board of Directors



### 1. Mr.Vichit Yamboonruang

Independent Director / Chairman of the Board

### 2. Mr.Vinai Vittawasgarnvej

Independent Director / Chairman of Audit Committee

### 3. Mr.Aroon Sricharoon

Independent Director / Audit Committee

### 4. Mr.Wara Tongprasin

Independent Director / Chairman of Nomination and Remuneration Committee / Audit Committee

### 5. Miss Urawee Kanokpruk

Director / Nomination and Remuneration Committee

## Board of Directors



- |                                    |  |
|------------------------------------|--|
| <b>6. Mr.Chatri Siripanichkorn</b> | Independent Director / Nomination and Remuneration Committee   |
| <b>7. Mr.Wiwat Sangtian</b>        | Director   |
| <b>8. Mr.Danucha Noichailboon</b>  | Director / Chairman of Risk Management Committee / Nomination and Remuneration Committee / Managing Director |
| <b>9. Mr.Anan Santichewasatian</b> | Director / Risk Management   |
| <b>10. Mrs.Daranee Kantamara</b>   | Director   |

## Board of Directors & Board of Management

**Mr.Vichit Yamboonrueng**

**Independent Director / Chairman of the Board**

**Age** : 78 years

### Education / Training

- Bachelor of Economics, Commerce and Accountancy, Chulalongkorn University
- M.A.(Economics) Columbia University New York, USA.
- Ph.D. Public&International Affairs, University of Pittsburgh, Pennsylvania, USA.

### Training Program Organized by Thai Institute of Directors Association (IOD)

- Director Certification Program (DCP) / 2004
- Director Accreditation Program (DAP) / 2004
- Audit Committee Program (ACP) / 2004
- Role of the Chairman Program (RCP) / 2004
- Charter Director Class (CDC) / 2007
- Boards that Make a Difference (BMD) / 2017

### Working Experience in the last 5 years

#### Listed company on Stock Exchange of Thailand

- 2018-present Independent Director / Chairman of Audit Committee  
BMP Energy PCL.
- 2012-present Independent Director / Chairman of Audit Committee  
Sherwood Chemicals PCL.
- 2012-present Chairman of the Board of Director  
Wiik & Hoeglund PCL.
- 2012-present Independent Director / Chairman of Audit Committee  
Jasmine International PCL.

### Companies or other entities

- 2018-present Chairman of the Board  
V C K Solutions Co., Ltd.

**Percentage of Shareholding** : 1,407,310 shares or 0.105%

**Percentage of Shareholding by Spouse and Minor Child** : Mrs.Preyawan Yamboonrueng (Spouse)  
149,922 Shares or 0.011%

**Relationship between executives** : None



Mr.Vinai Vittavasgarnvej

Independent Director / Chairman of Audit Committee

Age : 69 years

#### Education / Training

- Bachelor of Commerce and Accountancy, Thammasat University
- Master of Political Science, Thammasat University
- Thailand National Defence College (2004)
- Capital Market Academy (2011)

#### Training Program Organized by Thai Institute of Directors Association (IOD)

- Director Certification Program (DCP) 77/2006
- Audit Committee Program (ACP) 40/2012

#### Working Experience in the last 5 years

#### Listed company on Stock Exchange of Thailand

- 2019 - present Independent Director / Audit Committee / Corporate Governance Committee Charoen Pokphand Foods PCL.
- 2014 - present Independent Director / Chairman of Audit Committee Srisawad Power 1979 PCL.
- 2012 - present Independent Director / Chairman of the Board of Director Sahamitr Pressure Container PCL.
- 2016 - 2019 Independent Director / Audit Committee Syn Mun Kong Insurance PCL.
- 2011 - 2015 Independent Director / Chairman of the Board of Director Bangkok Dec-Con PCL.

#### Companies or other entities

- Present Chairman of the Board JSSR Group Co., Ltd.

Percentage of Shareholding : None

Percentage of Shareholding by Spouse and Minor Child : None

Relationship between executives : None



Mr.Aroon Sricharoon

Independent Director / Audit Committee

Age : 73 years

#### Education / Training

- Bachelor of Political Science / Communication Arts, Sukhothai Thammathirat Open University
- Advanced Certificate Course in Public Economics Management for Executives, King Prajadhipok's Institute
- Top Executive Program in Urban Development Management, Class 2

#### Training Program Organized by Thai Institute of Directors Association (IOD)

- Director Accreditation Program (DAP) 165/2019

#### Working Experience in the last 5 years

#### Listed company on Stock Exchange of Thailand

-None-

#### Companies or other entities

- 2003 - present      The President  
Alpha Siamese Co., Ltd.
- 1991 - present      Managing Director  
Sahapatanakanpim Co., Ltd.
- 2015 - 2016      Chairman of Advisors  
Flea Market Management Committee, Bangkok
- 2014 - 2015      Chairman of Advisors  
Flea Market Director Department, Bangkok

Percentage of Shareholding : None

Percentage of Shareholding by Spouse and Minor Child : None

Relationship between executives : None



Mr. Wara Tongprasin

Independent Director / Audit Committee /

Chairman of Nomination and Remuneration Committee

Age : 48 years

#### Education / Training

- Bachelor of Business Administration (Accounting),  
Ramkhamhaeng University
- Tax Auditor and CPA

#### Training Program Organized by Thai Institute of Directors Association (IOD)

- Director Accreditation Program (DAP) 80/2009
- Advanced Audit Committee Program (AACP) 20/2015
- Risk Management Program for Corporate Leaders (RCL) 14/2018

#### Working Experience in the last 5 years

#### Listed company on Stock Exchange of Thailand

- 2014 - present Independent Director / Audit Committee  
Airports of Thailand PCL.

#### Companies or other entities

- 2012 – present Managing Director  
The Asset Audit Co., Ltd.
- 2013 - 2019 Director  
Wara Holding Co., Ltd.
- 2013 - 2018 Director  
First Audit Co., Ltd.

Percentage of Shareholding : 39 Shares or 0.000%

Percentage of Shareholding by Spouse and Minor Child : None

Relationship between executives : None





Mr.Chatree Siripanichakorn

Independent Director /

Nomination and Remuneration Committee

Age : 72 years

#### Education / Training

- Bachelor of Commerce and Accountancy, Thammasat University
- Bachelor of Laws , Thammasat University
- Barrister 29, The Thai Bar Under The Royal Patronage

#### Training Program Organized by Thai Institute of Directors Association (IOD)

- Director Accreditation Program (DAP) 2013

#### Working Experience in the last 5 years

#### Listed company on Stock Exchange of Thailand

- 2013 - present Chairman of Audit Committee  
RAJA FERRY PORT PCL.

#### Companies or other entities

- Present Independent Director / Audit Committee  
All Inspire Development PCL.

Percentage of Shareholding : None

Percentage of Shareholding by Spouse and Minor Child : None

Relationship between executives : None





Miss Urawee Kanokpruk

Director / Nomination and Remuneration Committee

Age : 42 years

#### Education / Training

- Bachelor of Engineering, Chulalongkorn University
- Master of Engineering, University of Florida, U.S.A.

#### Training Program Organized by Thai Institute of Directors Association (IOD)

- Director Accreditation Program (DAP) 90/2011

#### Working Experience in the last 5 years

#### Listed company on Stock Exchange of Thailand

-None-

#### Companies or other entities

- 2019 - present Director  
Ekarat Energy Co., Ltd.
- 2013 - present Director  
Business Values Promotion Center Co., Ltd.
- 2012 - present Director  
Saendee Drinking Water Co., Ltd.
- 2012 - present Project Management Manager  
Chula Engineering Co., Ltd.
- 2015 - 2019 Director  
Thai Super Esco Co., Ltd.
- 2012 - 2019 Director  
Hippolicious Co., Ltd.
- 2008 - 2015 Researcher  
Chula Unisearch, Chulalongkorn University
- 2007 - 2015 Researcher  
NIDA-Center for Business Innovation (NIDA-CBI)
- 2006 - 2015 Planning expert  
Management Strategy Center

Percentage of Shareholding : 31,000,000 Shares or 2.308%

Percentage of Shareholding by Spouse and Minor Child : None

Relationship between executives : None







Mr. Wiwat Sangtian

Director

Age : 70 years

Education / Training

- Bachelor of Civil Engineering, Chulalongkorn University
- Master of Civil Engineering, Carnegie-Mellon University, U.S.A.
- Ph.D. Civil Engineering, Carnegie-Mellon University, U.S.A.

Training Program Organized by Thai Institute of Directors Association (IOD)

- Director Accreditation Program (DAP) 39/2005

Working Experience in the last 5 years

Listed company on Stock Exchange of Thailand

- None -

Companies or other entities

- 2004 - present Managing Director  
Ekarat Solar Co., Ltd

Percentage of Shareholding : 170,000 Shares or 0.013%

Percentage of Shareholding by Spouse and Minor Child : None

Relationship between executives : None



Mr.Danucha Noichaiboon

Managing Director /

Chairman of Risk Management Committee /

Nomination and remuneration Committee /

Age : 63 years



#### Education / Training

- Bachelor of Business Administration, Ramkhamhaeng University
- Master of Business Administration, Ramkhamhaeng University
- Diploma, National Defence College, The Joint State - Private Sector Course Class 17 Thailand National Defence College

#### Training Program Organized by Thai Institute of Directors Association (IOD)

- Director Accreditation Program (DAP) 90/2011

#### Working Experience in the last 5 years

#### Listed company on Stock Exchange of Thailand

- None -

#### Companies or other entities

- |                  |   |
|------------------|---|
| • 2015 - present | Director<br>Ekarat Energy Co., Ltd.               |
| • 2005 - present | Director<br>KV Asset Co., Ltd.                    |
| • 2004 - present | Director<br>Ekarat Solar Co., Ltd.                |
| • 1995 - present | Director<br>Ekarat Land and Development Co., Ltd. |
| • 1987 - present | Director<br>Ekarat Power Electronic Co., Ltd.     |

Percentage of Shareholding : None

Percentage of Shareholding by Spouse and Minor Child : None

Relationship between executives : Younger Brother's Mrs.Daranee Kantamara and  
Older Brother's Mr.Daroonwat Noichaiboon



Mr. Anan Santichewasatian

Director / Risk Management Committee /

Chief Financial Officer

Age : 65 years

#### Education / Training

- Bachelor of Business Administration (Accountancy), College of Technology and Vocational Education
- Master of Business Administration (Management), Kasetsart University
- Diploma, National Defence College, The Joint State - Private Sector Course 2004 Thailand National Defence College

#### Training Program Organized by Thai Institute of Directors Association (IOD)

- Audit Committee Program (ACP) 18/2007
- Director Accreditation Program (DAP) 62/2007
- Director Certification Program (DCP) 90/2007
- Advanced Audit Committee Program (AACP) 24/2016
- Risk Management Program for Corporate Leaders (RCL) 11/2018

#### Working Experience in the last 5 years

#### Listed company on Stock Exchange of Thailand

- None -

#### Companies or other entities

- 2015-present Director  
Ekarat Energy Co., Ltd.
- 2012-present Independent Director / Audit Committee  
Bangkok Mass Transit System PCL.
- 2007-present Director  
Ekarat Solar Co., Ltd.

Percentage of Shareholding : None

Percentage of Shareholding by Spouse and Minor Child : None

Relationship between executives : None



Mrs.Daranee Kantamara

Director /

Deputy of Managing Director in General Management

Age : 66 years

Education / Training

- Bachelor of Business Administration, Ramkhamhaeng University

Training Program Organized by Thai Institute of Directors Association (IOD)

- Director Accreditation Program (DAP) 90/2011

Working Experience in the last 5 years

Listed company on Stock Exchange of Thailand

- None -

Companies or other entities

- 2004 - present Director  
Ekarat Energy Co., Ltd.
- Present Director  
KV Asset Co., Ltd.

Percentage of Shareholding : 1,895,453 Shares or 0.141%

Percentage of Shareholding by Spouse and Minor Child : None

Relationship between executives : Sister of Mr.Danucha Noichai boon and  
Mr.Daroonwat Noichai boon





Mr.Vitthep Vachirabrahm

Senior Deputy Managing Director

Age : 63 years

Education / Training

- Bachelor of Business Administration, Roosevelt University, USA
- MBA Marketing, California International, USA

Working Experience in the last 5 years

Listed company on Stock Exchange of Thailand

- None -

Companies or other entities

- 1987 - present Director  
Ekarat Power Electronic Co., Ltd.

Percentage of Shareholding : None

Percentage of Shareholding by Spouse and Minor Child : None

Relationship between executives : None



**Mr.Daroonwat Noichaiboon**

**Deputy of Managing Director in Marketing**

**Age** : 61 years

**Education / Training**

- Bachelor of Business Administration, Ramkhamhaeng University
- Master of Business Administration, Ramkhamhaeng University
- Security Psychology Program, Institute of Security Psychology
- Diploma, National Defence College, The Joint State - Private Sector Course 2010, Thailand National Defence College
- Advanced Security Management Program (ASMP) class 8

**Working Experience in the last 5 years**

**Listed company on Stock Exchange of Thailand**

- None -

**Companies or other entities**

- 2004 - present Director  
Ekarat Solar Co., Ltd.

**Percentage of Shareholding** : 3,366,652 Shares or 0.251%

**Percentage of Shareholding by Spouse and Minor Child** : None

**Relationship between executives** : Brother of Mrs.Daranee Kantamara and Mr.Danucha Noichaiboon





Miss Nuanchan Sirikul

Company Secretary

Age : 66 years

Education / Training

- Bachelor of Business Administration, Bangkok University

Training Program Organized by Thai Institute of Directors Association (IOD)

- Company Secretary Program (CSP 27/2008)
- Effective Minute Taking (EMT 11/2008)

Working Experience in the last 5 years

Listed company on Stock Exchange of Thailand

- None -

Companies or other entities

- None -

Percentage of Shareholding : 4,617 shares or 0.0003%

Percentage of Shareholding by Spouse and Minor Child : None

Relationship between executives : None



**Ekarat Engineering Public Company Limited**

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