





ABSOLUTE ASSEMBLY CO.,LTD

The Largest Commercial EV factory in ASIA
Capacity up to 9,000 units per year

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In cases this Annual Report (Form 56-1 One Report) references information disclosed on the Company's website the disclosed information shall be deemed to be part of Form 56-1 One Report. The Board of Directors certifies the correctness and completeness of such disclosed information which is the same as information disclosed in Form 56-1 One Report.

Vision

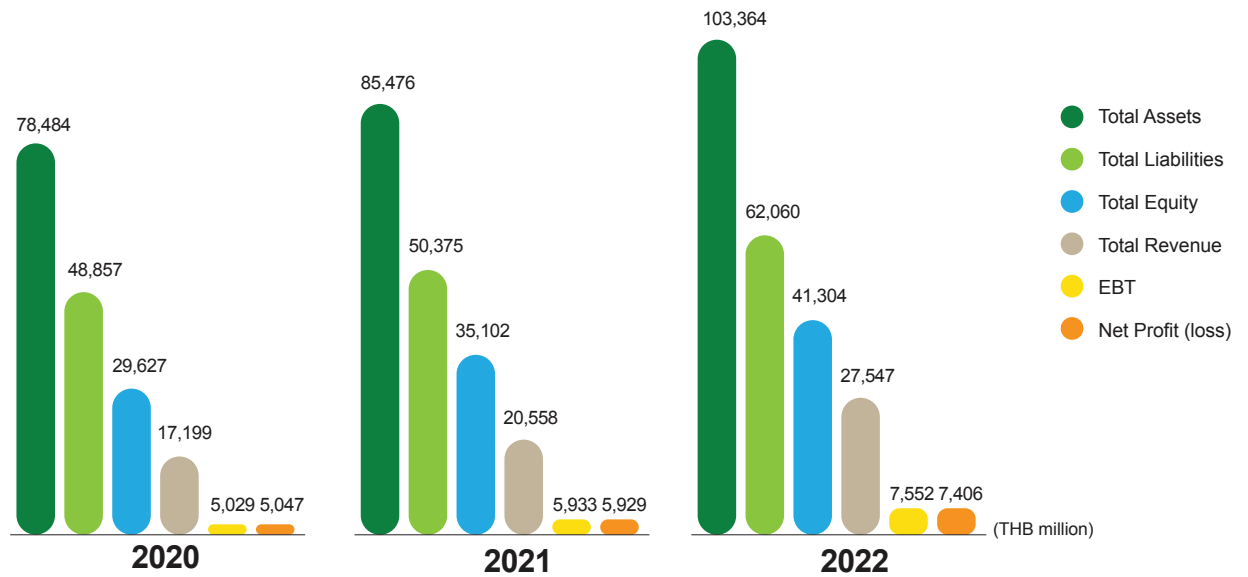
A leader in **Alternative Energy** business

using modern, up-to-date and environmentally friendly technology for the benefit and fairness to consumers, shareholders, partners, and employees.

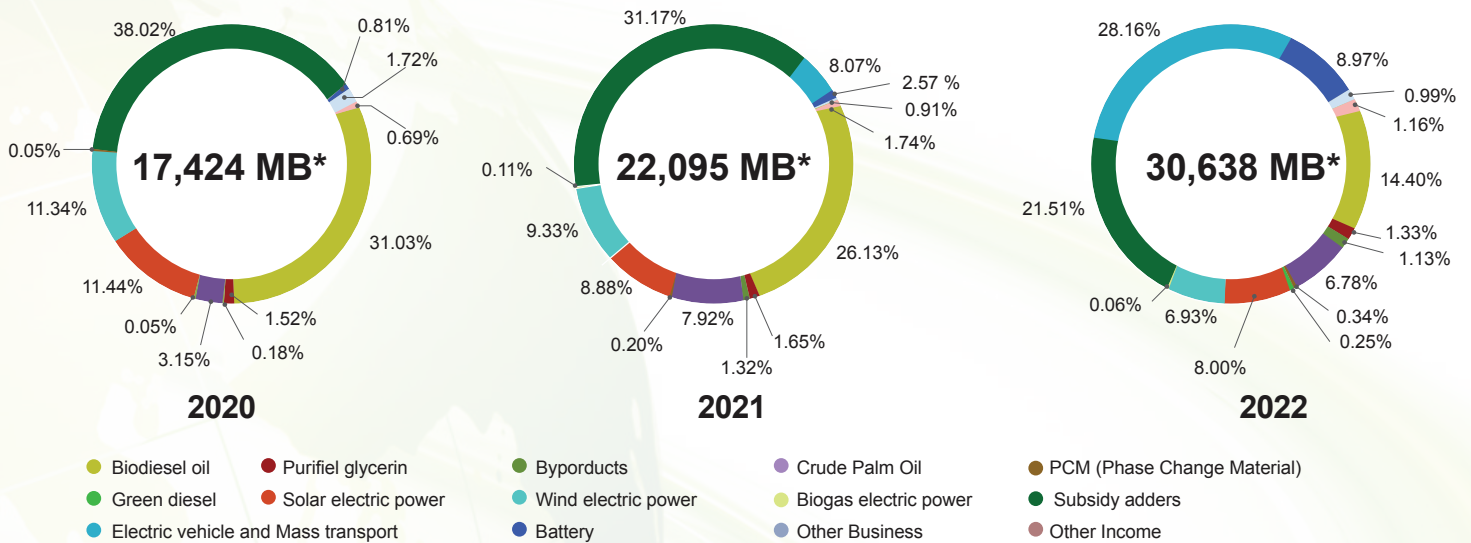
Mission

1. Promote the utilization of modern technology to increase production efficiency
2. Promote the utilization of energy crops and natural energy to reduce environmental pollution
3. Support the Government policy for energy security of country
4. Operate on the basis of fairness, trustfulness with partners and all shareholders
5. Foundation human resources to grow steadily and sustainably

Financial Highlights



Revenue proportional



Significant Financial Ratios

		2020	2021	2022
Net Profit Margin	%	29.35	28.84	26.89
Return on Equity Ratio	%	20.34	20.23	21.29
Return On Assets Ratio	%	8.97	8.93	9.49
Debt to Equity Ratio	time	1.65	1.44	1.50
Liquidity ratio	time	0.54	0.92	0.85

Message from Chairman and Chief Executive Officer



Mr. Somchainuk Engtrakul
Chairman of the Board of Directors



Mr. Somphote Ahunai
Chief Executive Officer

Dear Shareholders and all stakeholders,

The year 2022 was the third year on record that Thailand and the rest of the world continued to face the challenges and effects of the COVID-19 pandemic. Nevertheless, the situation has improved due to widespread vaccinations across the nation, which has resulted in the relaxation of lockdown measures. The Company has monitored the situation relentlessly, and laid out plans to mitigate risks and look for opportunities. The Company is also aware of possible impacts on our businesses, and has adjusted business plans and policies to ensure business operation operate with efficiency with cooperation with all our stakeholders. As a result, in the year ended 2022, the Company has a total revenue of 27,546.81 million baht and a profit of 7,406.47 million baht, up by 33.99% YoY and 24.91% YoY respectively. The Company has won various awards and recognition from both national and global organizations. To emphasize the Company's longevity, the Company has become a member of The Sustainability Yearbook 2022 by S&P Global. Additionally, the Company has achieved the sustainability assessment results of MSCI ESG Ratings at the A level, and was selected to appear on Thailand's Sustainability Investment (THSI) list for the 5th consecutive year. These reflect the confidence that resulted in the operation and the Company's success, which uses green power technology to improve and develop our existing products and move towards an EV ecosystem. Moreover, the Company has integrated the sustainable development goals as part of the corporate strategic planning, reinforcing the Company's viability in the long term.

This year, the Company's operation in its battery and electric vehicles subsidiaries showed a clear picture of the upwards trajectory of this industry, which is reflected upon in our revenues and earnings significantly. A majority of the earnings came from the production of lithium-ion battery and energy storage systems by Amita technologies (Thailand), owned by EA, has begun operations. This enabled Absolute Assembly to operate continuously. The Company has delivered more electric buses this year compared to last year, showing its readiness in meeting the growing demand of electric vehicles. The Company has expanded its electric charging stations, both normal charging stations and its fast charge to accommodate commercial vehicle demand. The Company has laid out plans to expand its lithium-ion battery facility to 4 GWh in order to meet demands of the electric vehicle industry

For Electric Vehicle Businesses such as electric buses, electric ferries “MINE Smart Ferry” and electric tractor, in the month of October 2022, the Company has debuted its electric mini truck “MINE MT 30” to have a complete product offering for every segment. The Company has taken the opportunity to advance development of Thai railways, and cooperated with CRRC Dalian, a major developer of railways in China, in order to research and development an electric locomotive powered by battery. The Company was also given the opportunity to cooperate with the Ministry of Transport, the State Railway of Thailand (SRT) and King Mongkut’s Institute of Technology Ladkrabang. Following the EV On Train policy, we have tested trial runs of our electric locomotive known as MINE locomotive, and trailed the shunting of carriages at Krung Thep Aphiwat Central Terminal Station. Utilizing the Company’s Ultra-Fast-Charge Technology, there has been more development on the charging system for MINE Locomotive, with a size of 3 MWh. It takes one hour to charge only. All these developments contribute to an EV Ecosystem which is continuously growing, especially technology related to green energy and energy storage systems. Furthermore, the Ultra-Fast-Charge technology with its efficient and fast charging times, adds value to products made by Thai people. The Company has always believed strongly in the research and development of modern technology to create new innovations that are a result of Thai craftsmanship, and helps upgrade the quality of life and protects the environment. This is a tool which will help create a difference between the Company and its competitors, as well as increases competitiveness of the Company as a leader in green energy. This results in a stable and long-lasting company, which is a positive factor in creating a supply chain for the electric vehicle industry of Thailand, and has an important role in developing Thai economy and society. The Company’s products and policies all contribute towards catapulting Thailand to becoming the ASEAN BEV HUB, the leader of EV production in the region.

The Company has policies to upgrade public transport, to make it more convenient, make it more modern, and reduce the amount of air pollution contributed by public transport. These efforts will show the success of the electric vehicle industry, which is becoming a new S-Curve industry in Thailand. Furthermore, investment and research into energy storage systems to be used at power plants will promote the use of renewable energy, and all these factors will help push Thailand towards becoming a low carbon society.

In the year 2022, the Company is extremely proud that it has signed the purchase-sale agreement of carbon credits as a result of its electric bus operation business with the Swiss Federation. Thailand and the Swiss Federation are the first partners in buying carbon credits between countries. Following Article 6.2 of the Paris Agreement, which has resulted in an estimated 500,000 tons of carbon credits exchanged between 2023-2030.

Throughout the year 2022, the successes that have occurred is a testament to the commitments of the Company, in using green technology for the better of Thai society by a company built by Thais. I would like to thank all those who have contributed to the success and pride of the Company, including the Board of Directors, Executives, Employees, Customers, Suppliers, Business Partners, Shareholders, Financial Institutions, Government Agencies, and Community Enterprises, as well as all stakeholders.

Sincerely Yours



Mr. Somchainuk Engtrakul
Chairman of the Board of Directors



Mr. Somphote Ahunai
Chief Executive Officer

Awards & Achievements



Best Innovative Company Award 2022

Innovation AMITA Lithium-Ion Battery

By : The Stock Exchange of Thailand (SET) and Money & Banking Magazine



Outstanding CEO Award 2022

By : The Stock Exchange of Thailand (SET) and Money & Banking Magazine



Outstanding Company Performance Award 2022

for listed company with more than 100 billion market capitalization

By : The Stock Exchange of Thailand (SET) and Money & Banking Magazine



The Sustainability Yearbook Member 2022

By : S&P Global

Sustainability Yearbook
Member 2022

S&P Global

Product Innovation Awards 2022

Innovation and Technology, AMITA Lithium-Ion Battery

By : BUSINESS+ Magazine and College of Management, Mahidol University



Sustainability Disclosure for 3rd Consecutive year

By : Thaipat Institute



MSCI ESG Ratings : A

By : MSCI

Thailand Sustainability Investment (THSI) for the 5th Consecutive year

By : The Stock Exchange of Thailand





CSR-DIW Continuous Award 2022

-EA Solar Lampang Co.,Ltd.
-EA Solar Nakornsawan Co.,Ltd.
By : Department of Industrial Works, Industry Ministry

Excellent CG Rating (5 star) for the 5th consecutive year

By : Thai Institute of Directors (IOD)
and The Stock Exchange of Thailand (SET)



Bloomberg Gender Equality Index (GEI) for the 2nd consecutive year

By : Bloomberg

Honorable Mention, Human Rights Awards 2022 for the 3rd consecutive year

By : Rights and Liberties Protection Department, Ministry of Justice



Eco Factory plus Social Value: Eco Factory +SV

Level Silver Awards : EA Bio Innovation Co.,Ltd.
By : Department of Industrial Works, Ministry of Industry

Green Industrial level 4 (Green Culture)

-EA Solar Lampang Co.,Ltd.
-EA Solar Nakornsawan Co.,Ltd.
-EA Solar Phisanulok Co.,Ltd.
By : Department of Industrial Works, Ministry of Industry



Green Industrial Level 3 (Green system)

EA Solar Co.,Ltd.
By : Department of Industrial Works, Industry Ministry

Section 1 : Business Operations and Performance

1. Structure and Business Operations of EA

1.1 Policy and Business Overview

1.1.1 Vision, Mission, Goal and Strategy of the Company and Subsidiaries

Vision

A leader in alternative energy business using modern, up-to-date and environmentally friendly technology for the benefit and fairness to consumers, shareholders, partners, and employees.

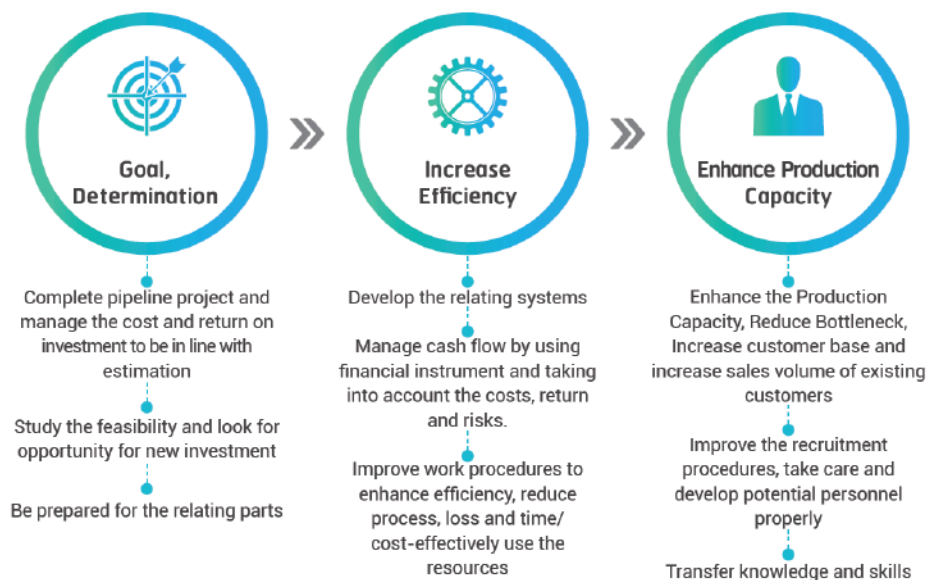
Mission

1. Promote the utilization of modern technology to increase production efficiency
2. Promote the utilization of energy crops and natural energy to reduce environmental pollution
3. Support the Government policy for energy security of country
4. Operate on the basis of fairness, trustfulness with partners and all shareholders
5. Foundation human resources to grow steadily and sustainably

Values



Goal / Strategy



History

Energy Absolute Public Company Limited (“the Company” or “EA”) was first incorporated on 6 March 2006 in original name Suntech Palm Oil Company Limited, with registered capital of THB 50 million. In 2008, the Company was converted into a public company limited and renamed as Energy Absolute Public Company Limited. The registered capital was increased from THB 50 to 250 million. In 2009, registered capital increased to THB 360 million. After that, in 2012, the registered capital decreased to THB 305 million by share amount reduction from deducting of the unpaid shares, then increase the capital to THB 373 million by issuing new ordinary share of 680 million shares with a par value of THB 0.10 per share in order to initial public offering with the number of IPO 560 million shares at a IPO price of THB 5.50 per share and offer to the existing shareholders in proportion to their shareholding amount to 120 million shares at a price of THB 1.50 per share during 21-23 January 2013. As a result, the Company’s registered and paid-up capital was increased to THB 373 million.

In 2013, the Company registered 3,730 million shares, at the par value of Baht 0.10 per share, total value of Baht 373 million to the “Market for Alternative Investment (mai) and since 6 January 2017 onwards, the Company submitted a request to the Stock Exchange of Thailand to approve the trading of EA’s securities in the Stock Exchange of Thailand (SET) (from mai to SET). The ordinary shares were allocated in the Resources category, Energy and Utilities section. The abbreviation for securities trading remained “EA” as before since 6 January 2017 onwards.

In this connection, on 9 February 2022, the Company’s registered capital was increased by THB 29 million, from THB 373 million to THB 402 million in accommodation of the convertible debentures.

1.1.2 Development and Significant Changes during the past 3 years

Development and Significant Changes of the Company and Subsidiaries which divided according to the nature of business as follows:

2020

Biodiesel Business

- Developed B100 production according to “the notification of the nature and quality of biodiesel type of fatty acid methyl esters 2019” to increase the production capacity from 650,000 Liter per day to 800,000 Liter per day as well as investment in production process of biodiesel from byproducts (Palm Fatty Acid Distillate) to reduce production cost and increase the competitiveness.
- The Company operates new product research and development under the biodiesel business to innovate the product using crude palm oil (CPO) as a substrate which has been patented already by EA Bio Innovation Co., Ltd. to operate manufacturing and distributing such products, consisting of
 - (1) Green Diesel (GD) or Bio Hydrogenated Diesel (BHD) products as a mixture of diesel fuel to help increase performance and cleanliness of engines and
 - (2) PCM (Phase Change Material) to be used in temperature control, such as construction materials components, fabric fibers and others, etc. to help in absorbing, storing, controlling and releasing heat to maintain temperature. PCM is popular and in high demand in weather variability countries.

The Green Diesel and PCM plant located at Rayong province which now successfully completed machinery installation and commissioning testing. The 1st phase commercial operation has been started mainly for PCM products and it will

start later on. In the meantime, the Company research and develop continuously to expand the market opportunity to use PCM in other industries to further expand added value.

Renewable Power Plant Business

- Solar Power Plant (Project 1, 2, 3) maintained the certification for reducing the amount of greenhouse gases for the fourth year in a row by TGO. The amount of greenhouse gases reduced during January 2019 to December 2019 is 344,922 tons of carbon dioxide equivalent (tCO₂e).
- Wind Power Plant (Hadjkanghan Project 1-3) maintained the certification for reducing the amount of greenhouse gases for the third year in a row by TGO. The amount of greenhouse gases reduced during January 2019 to December 2019 is 164,873 tons of carbon dioxide equivalents (tCO₂e).
- Wind Power Plant (Hanuman Project 1, 5, 8, 9, 10) received a certificate for reducing the amount of greenhouse gases for the first year by TGO. The amount of greenhouse gases reduced during February 2019 to December 2019 is 263,871 tons of carbon dioxide equivalent (tCO₂e).
- Solar Power Plant and Wind Power Plant are in the certification process during January 2020 to December 2020 the Company has been submitted the reduced amount of greenhouse gases 758,292 tons of carbon dioxide equivalent (tCO₂e).
- The investment of the Group
 - ERH invested in Subyai Wind Farm(1) Co., Ltd. ("SWF"). The purpose is to increase the competitiveness in Manufacturing and distributing electricity from wind power.
 - ERH invested in TF Tech Holding Co., Ltd. ("TFTH"). The purpose is to produce electricity generated from floating and rooftop solar power.

Other Businesses

- The Company established new subsidiaries (direct and indirect) as follows:
 - EA Palm Network Co., Ltd. ("EPN"). The purpose is to produce and distribute crude palm oil.
 - EA Waste Management Co., Ltd. ("EWM"). The purpose is to Invest in assets of the Company Group relates to waste management including produces and distributes electricity generated from waste.
 - Absolute Assembly Co., Ltd. ("AAB"). The purpose is to produces and distributes of electric vehicles including Assembly and Services for electric vehicles.
- The investment of the Group
 - EPN invested in Larp Pak Dee Palm Co., Ltd. ("LPD"). The purpose is to expand and increase the competitiveness in manufacturing and distributing crude palm oil with the total investment after capital increasing value is of 150 million baht representing 75 percent of issued and paid-up share capital of LPD.
 - EPN invested in Combine Energy Tech Co., Ltd. ("CET"). The purpose is to expand and increase the competitiveness in Shore Tank business including plan to build the Green Diesel and Bio-PCM plant with the total investment value of 285.51 million baht representing 70 percent of issued and paid-up share capital of CET.
 - EPN invested in Combine Kanjanadit Palm Oil Co., Ltd. ("KJD"). The purpose is to expand and increase the competitiveness in manufacturing and distributing crude palm oil with the total investment value is of 37.53 million baht representing 75 percent of issued and paid-up share capital of KJD.

- EMH acquired ordinary shares in Nex Point PLC. (“NEX”). The investments aimed to jointly develop the manufacturing, assembly, and distribution as well as sales and after-sales service for passenger buses, commercial vehicles, and passenger cars. The company group will take a major role in manufacturing and developing of batteries and relevant technologies to be applied in electric buses and electric vehicles. The total investment value is of 1,474 million baht representing 40.01 percent of issued and paid-up share capital of NEX.
- EST invested in Chaophraya River Line Co., Ltd. (“CRL”). The purpose is to expand the electric ferry business and provide travel services along the Chao Phraya River. The total investment value is of 55.70 million baht representing 99.99 percent of issued and paid-up share capital of CRL.
- Addition investments in a joint venture (Shenzhen Ateess Power Technology Co., Ltd.) from other joint venture party. As a result, the investment proportion increased from 36.67 percent to 38.58 percent.
- The Company introduced the first Electric Charging Station for electric ferry at the minimum power of 4,000 kW by installing 14 chargers of 300 kW DC Fast Charge which can be fully charged only 15-20 minutes according to the qualification of electric vehicle and battery capacity. This is to support all types and models of electric passenger ferries. The first electric charging station located at Pu Chao Saming Phrai side on the bank of Chao Phraya River, Bhumibol 2 Bridge, Phra Pradaeng district, Samut Prakan province. However, for the charging stations in other areas still keep installation continuously to support electric passenger ferries along the Chao Phraya River.
- DC Fast Charger 150 kW is ready to service for electric car which installed in outdoor areas such as petrol station, department stores, 7-Eleven and 24hours locations that can accommodate full capacity of electric car users.
- Amita Technologies (Thailand) Co., Ltd. (“Amita-TH”), a subsidiary company operating the lithium-ion battery plant project in Thailand, has signed MOU with Chulalongkorn University to jointly research the recycling of lithium-ion batteries. Amita-TH will apply the study results from this program within a period of 3 years. This is the extension of investment in the battery industry of the Company comprehensively from battery cell manufacturing to use in the electric vehicle industry and utility industry as well as recycling lithium-ion batteries at the end-of-life. The success of this project will make Thailand the first country in ASEAN to be the investment hub in the energy storage systems industry and electric vehicles that can compete with other countries in the global market.
- The Company agreed to collaborate with the Ministry of Higher Education, Science, Research and Innovation (MHESI) by signing an MOU with the National Science and Technology Development Agency (NSTDA) in a collaboration project for research and development of raw materials to increase the efficiency of the high-capacity energy storage systems or high efficiency and safety battery in a period of 5 years (2020 - 2025) including the high efficiency and safety battery management system. This gives significance to be more dependence on using domestic resources and production to reduce imports from abroad and to be environmentally friendly including supporting and strengthening the sustainable industrial development in the country.
- As of 31 December 2020, the installation of 410 stations has been completed. It can be categorized into DC Charger for 266 chargers and AC Charger for 592 chargers to support all types and models of electric vehicles including Thai electric vehicles designed and manufactured by the EA Group such as Electric cars, Electric passenger buses, and electric passenger ferries. The charging technology is developed to be charged with high charging rate (4C-Rate) within 15-20 minutes. Customers can reserve and accommodate power via mobile application “EA Anywhere”. The Company is investing in installation charging stations with major partners and also opening collaboration with other partners according to the Company's business plan continuously.

- The Company Group started launching electric ferry under “MINE SMART FERRY” which is 100% manufactured and operated by Thailand. On 22 December 2020, the Company had the opening ceremony for the trial launch of an electric ferry on the Chao Phraya River and enable full-service in 2021. MINE SMART FERRY received the 2020 National Innovation Award from the National Innovation Agency (NIA) and on 30 July 2020, it was registered as the country's first electric ferry for mass transit from the Marine Department to provide travel services along the Chao Phraya River from Phra Nangklao Bridge Pier to Sathorn Pier, over the 20 kilometers route. This water transportation will connect with public land transportation as well. Also, it is part of promoting options to the public for traveling by electric water transportation with convenience and safety, environmentally-friendly, without generating air pollution, PM 2.5 and noise pollution.
- The AAB plant is located in Chachoengsao province, close to electric vehicle plant, and is under construction. It will have a production capacity of 3,000 units per year and it can produce various types of vehicles such as buses and trucks. AAB imports some parts from abroad to assemble but the important parts are designed and manufactured domestically with the automated manufacturing process as well as having a drive test facility.

2021

Biodiesel Business

- Bio Diesel Plant has improved energy efficiency by using waste energy from production process to heat incoming raw materials. Furthermore we have used waste from distillation (distillated residue) to burn as fuel. This has contributed to cut down production cost and increase competitiveness. The initiative has awarded Thailand Energy Award 2021 and Asean Energy Awards 2021.
- After the company has manufactured and sold PCM and Green Diesel (BHD) into the market we have increased company competitiveness through international sustainable certification and Carbon Credit Certification such as ISCC(International Sustainability and Carbon Certification), RSPO(Roundtable on Sustainable Palm Oil) and Carbon Footprint of products. These certifications would help us to access and sell for export markets.

Renewable Power Plant Business

- Solar Power Plant of the subsidiaries at Nakhonsawan, Lampang and Phitsanulok provinces maintained the certification for reducing the amount of greenhouse gases by the Thailand Greenhouse Gas Management Organization (“TGO”) the amount of greenhouse gases reduced during January 2020 to December 2020 is 341,115 tons of carbon dioxide equivalent (tCO₂e).
- Wind Power Plant of the subsidiaries of Hadkanghan Projects at Songkhla and Nakhon Si Thammarat provinces and Wind Power Plant of Hanuman projects at Chaiyaphum province maintained the certification for reducing the amount of greenhouse gases by the Thailand Greenhouse Gas Management Organization (“TGO”) the amount of greenhouse gases reduced during January 2020 to December 2020 is 417,177 tons of carbon dioxide equivalent (tCO₂e).
- The Company established new subsidiaries (indirect) as follows:
 - Wind Kalasin 1 Co., Ltd. (“WKS1”). The purpose is to research and develop wind power plants.
 - Wind Kalasin 2 Co., Ltd. (“WKS2”). The purpose is to research and develop wind power plants.
 - Wind Khonkaen 1 Co., Ltd. (“WKK1”). The purpose is to research and develop wind power plants.
 - Wind Amnatcharoen 1 Co., Ltd. (“WAMR1”). The purpose is to research and develop wind power plants.

- Wind Ubon Ratchathani 1 Co., Ltd. (“WUBON1”). The purpose is to research and develop wind power plants.
- Wind Mahasarakham 1 Co., Ltd. (“WMHK1”). The purpose is to research and develop wind power plants.

Electric Vehicle and Energy Storage System

Battery development, manufacturing and distribution business

- Amita Technology (Thailand) Co., Ltd. launched the lithium-ion battery manufacturing plant phase 1 which commenced its commercial production with a production capacity of 1 gigawatt hours per year on December 12, 2021. Its products are certified by the IEC Safety Standard and UN Recommendations (UNR) on transport of hazardous goods and can thus be exported for distribution abroad.

Electric charging station service business (For electric vehicle)

- For Electric Ferry : Two electric charging stations of the Group for electric ferries has been completed and the electric ferry service has been launched. The first station for 300 kW is located along the Chao Phraya River, in front of Salaree Temple, Muang Nonthaburi district, Nonthaburi province where 5 chargers have been installed. The other station for 300 kW is located at Public Warehouse 1, Public Warehouse Organization, Ministry of Commerce, Thonburi district, Bangkok where 10 chargers have been installed.
- For public land transport : The Group has made investment in the construction of electric charging stations for electric buses to accommodate 8 electric bus routes. The construction was completed in 2021 as planned with installation of 34 chargers of 300 kW at 5 stations (Wongwian Phra Pradaeng, Ekkachai, Kanchanapisek-Prannok, Bangplee, and Rangsit-Bangpoen).
- For passenger electric cars : At year-end 2021, chargers had been installed at a total of 431 electric charging stations for all types of electric vehicles, comprising of 379 DC chargers and 583 AC chargers.

Electric Vehicle Business

- The Company established Absolute Assembly Co., Ltd. (AAB) to manufacture electric buses and commercial electric vehicles of all types with a production capacity of 3,000 units per year to accommodate various types of electric vehicles designed and produced locally. In 2021, over 100 electric buses were assembled and delivered for actual use on more than 10 routes.
- In 2021, the Company delivered over 20 units of MINE Smart Ferry and provided ferry travel service on the route from Phra Nangklao Bridge Pier to Sathorn Pier in response to the demand for pollution-free and eco-friendly marine travel on the Chao Phraya River to mitigate pollution problems.
- MINE Smart Ferry is connected with Bangkok Sky Train via City Line (Green Line), Metro Line (Blue Line) and Urban Line (Purple Line) as a link between marine transport and public land transport. This provides the general public with marine travel alternative for convenient and safe travel using pollution-free and eco-friendly electric vehicle.

Other Businesses

- Mine Mobility Research Co., Ltd. (“MMR”) developed battery system for commercial vehicles and was certified to UNR100 electric vehicle safety standards
- The Company established new subsidiaries (direct and indirect) as follows:
 - EA Mobility Rental Co., Ltd. (“EMR”). The purpose is to provide vehicle rental service.

- Battery Electric Vehicle and Electronic Products Testing Center Co., Ltd. (“BEV”). The purpose is to research, develop, test, and certify quality of battery.
- The investment of the Group
 - EA Waste Management Co., Ltd. invested in a joint business with Ranong Clean 2021 Co., Ltd. (“RNC”). The investment aimed to provide service of waste management.
 - Amita Technologies Inc. (“AMITA-Taiwan”) invested in CSBC Power Technology Co., Ltd. (“CSBC”), the company incorporated under the law of the Republic of China (Taiwan) which operated the business in distributing marine equipment and vehicles.

2022

- On 28 January 2022, the Extraordinary General Meeting of Shareholders No. 1/2022 has passed the resolution for issuance and offering of Convertible Debentures in the amount of approximately EUR 900 Million, or Baht 33 Billion, to expand the Company's operations in the battery sector, electric vehicle and charging station. It is also used as working capital by companies that manufacture batteries and electric vehicles, and to support for new projects that will help the Company's growth, research and development of the Company's technology, as well as the group of companies' working capital.
- The Company increased in registered capital from the existing registered capital of THB 373,000,000 to new registered capital of THB 402,000,000 to accommodate the convertible debentures and registered with the Department of Business Development, Ministry of Commerce on 9 February 2022.

Biodiesel Business

- Green Diesel and PCM business obtained Silver Award of 2022 Eco Factory + SV as an industry that drives the economy through innovation and technology. Promote safety and responsibility to the community to create a low carbon society and raise the level to increase competitiveness, create jobs, create careers, and increase income for the people according to the Bio-economy development policy, Circular economy, Green economy (Bio Circular Green Economy: BCG Model) which in line with the national strategy.
- Successful in research development to bring alternative feed stocks to be used in the production of Hydrotreated Vegetable Oil (HVO), such as Palm Fatty Acid (PFAD), Used Cooking Oil, Animal Fat (Tallow), etc. The Company uses these sustainable raw materials to produce low-carbon HVO fuel products that are distributed oversea.
- The Company has signed a research cooperation agreement with the Program Management Unit for Competitiveness (PMUC) to research and develop modern environmentally friendly technologies and innovations which focus on Oleochemicals produced from "Palm Oil" which is an economic plant according to the Bio Circular Green Economy: BCG Model.
- EA Palm Network Co., Ltd. (“EPN”), a subsidiary of the Company, invested in Agro Clean Co., Ltd. The total investment value of Baht 2 million, representing 49.99 percent of the issued and paid-up ordinary shares. Agro Clean Co., Ltd. engages in the business of export of agricultural products.

Renewable Power Plant Business

- Solar Power Plant of the subsidiaries at Nakhonsawan, Lampang and Phitsanulok provinces maintained the certification for reducing the amount of greenhouse gases by the Thailand Greenhouse Gas Management Organization (“TGO”) the amount of greenhouse gases reduced during January 2021 to December 2021 is 346,005 tons of carbon dioxide equivalent (tCO₂e).
- Wind Power Plant of the subsidiaries of Hadkanghan Projects at Songkhla and Nakhon Si Thammarat provinces and Wind Power Plant of Hanuman projects at Chaiyaphum province maintained the certification for reducing the amount of greenhouse gases by the Thailand Greenhouse Gas Management Organization (“TGO”) the amount of greenhouse gases reduced during January 2021 to December 2021 is 448,146 tons of carbon dioxide equivalent (tCO₂e).
- The Company established new subsidiaries (indirect) as follows:
 - Wind Khonkaen 2 Co., Ltd. (“WKK2”). The purpose is to research and develop wind power plants.
 - Wind Mahasarakham 2 Co., Ltd. (“WMHK2”). The purpose is to research and develop wind power plants.
 - Wind Mahasarakham 3 Co., Ltd. (“WMHK3”). The purpose is to research and develop wind power plants.
 - Ettulosba Energy 1 Co., Ltd. (“ETB1”). The purpose is to research and develop renewable power plants.
 - Ettulosba Energy 2 Co., Ltd. (“ETB2”). The purpose is to research and develop renewable power plants.
 - Ettulosba Energy 3 Co., Ltd. (“ETB3”). The purpose is to research and develop renewable power plants.
 - Ettulosba Energy 4 Co., Ltd. (“ETB4”). The purpose is to research and develop renewable power plants.
 - Ettulosba Energy 5 Co., Ltd. (“ETB5”). The purpose is to research and develop renewable power plants.

Electric Vehicle and Energy Storage System

Battery development, manufacturing and distribution business

- Amita Technology (Thailand) Co., Ltd. expanded its electrolyte production plant that would be able to accommodate battery production capacity of 10 gigawatt hour per year. The Company has planned to expand its lithium-ion battery production capacity to 4 gigawatt hour per year by 2023 and extend the supply chain of its battery business to a greater extent.

Electric charging station service business (For electric vehicle)

- For Electric Ferry : The addition of 1 electric charging stations of the Group for electric ferries has been completed. The station for 300 kW is located along the Chao Phraya River, Phra Nang Klao Bridge, Muang Nonthaburi district, Nonthaburi province where 10 chargers have been installed. Moreover, the Group has increased 5 chargers for 300 kW in front of Salaree Temple, Muang Nonthaburi district, Nonthaburi province.
- For public land transport: The Group invested in construction of large-sized electric charging stations for electric public land vehicles, i.e. electric bus transport on 79 routes, construction of which was completed in 2022 as planned. The total of 86 chargers each with 360 kW capacity were installed at 7 stations (Phuttha Monthon Sai 2, Minburi, Ramkhamhaeng 74, Talingchan, Tha It, Ramkhamhaeng 2 and Salaya) and 45 chargers each with 300 kW capacity at 5 stations (Phuttha Monthon Sai 2, Samae Dam, Ramkhamhaeng 74, Bung Kum and Kheha Thonburi), totaling 131 chargers installed. Besides investment to serve public electric buses, the Group invested in installation of electric charging stations in Chulalongkorn University to serve the university shuttle buses, comprising 2 chargers each with 300 kW capacity and 2 DC chargers each with 40 kW, totaling 4 chargers.

- For electric tractors: The Group invested in construction of electric charging stations for electric tractors, construction of which was underway as planned in 2022. The total of 20 chargers with 360 kW capacity were installed at 2 stations (Bo Din and BlueTech City). Full completion was targeted by January 2023.
- For passenger electric cars: At year-end 2022, 8 DC chargers had been installed at a total of 7 electric charging stations for all types of electric vehicles.

Electric Vehicle Business

- The Company has introduced its locomotive innovation, i.e. “MINE Locomotive,” to Thailand under collaboration with CRRC Dalian, a large China-based railway locomotive manufacturer, and with support from the Ministry of Transport by the State Railway of Thailand (SRT) and King Mongkut’s Institute of Technology Ladkrabang in driving the EV on Train policy to bring Thailand toward the low carbon society at a more rapid pace and for the country’s energy and transport security.
- EV Mini Truck of MT30 model under the MINE Mobility brand was officially launched on October 18, 2022. It is the first and sole model of trucks with production line in Thailand and of 100% Thai nationality. Its key features are ultra-fast charging to 30-80% within only 15 minutes enabling the truck to run for a distance of around 202 kilometers per one-time charge. Delivery to customers was expected within the first quarter of 2023.
- EA Mobility Holding Co., Ltd. (“EMH”), a subsidiary of the Company and Computer Forms (Malaysia) Berhad (“CFM”) will collaborate to sign the contract of Head of Agreement or HOA. The purpose of this agreement is to establish the Joint Venture to invest in the electric vehicle business and the Ecosystem of electric vehicles completely in Malaysia and for developing Malaysia to become a zero carbon emission society to improve the quality of life for Malaysians.
- The investment of the Group
 - The Company acquired the ordinary shares of EA Mobility Rental Co., Ltd. from EA Mobility Holding Co., Ltd., a direct subsidiary of the Company, with the total investment value of 0.06 million baht representing 99.99 percent of the issued and paid-up ordinary share capital of the EA Mobility Rental Co., Ltd. As a result, EA Mobility Rental Co., Ltd. has become the Company’s direct subsidiary, registered a new name as EA Futura Co., Ltd., with the Department of Business Development.
 - E Transport Holding Co., Ltd. (“ETH”), a subsidiary of the Company, acquired ordinary shares of Smart Bus Co., Ltd. from its former shareholder. Smart Bus Co., Ltd. engages in the business of public transit bus service. The total investment value of Baht 3,279 million, representing 99.99 percent of the issued and paid-up ordinary shares.
 - EA Mobility Holding Co., Ltd. (“EMH”), a subsidiary of the Company, acquired newly issued ordinary shares of Beyond Securities PCL through a private placement. The total investment value of Baht 6,997 million, representing 23.63 percent of the issued and paid-up ordinary shares. Beyond Securities PCL engages in the business of securities brokerage, investment consulting, and investing in other businesses.
 - EA Mobility Holding Co., Ltd. (“EMH”), a subsidiary of the Company, disposed its entire shareholding in EV Now Co., Ltd. to NEX Point PCL at the amount of Baht 28 million. As a result, EV Now is no longer the Company’s subsidiary.
 - E Transport Holding Co., Ltd. (“ETH”), a subsidiary of the Company, to transfer all of ETH’s business under the process of the Entire Business Transfer (EBT) including investments in (1) Chaophraya River Line Co., Ltd. (2) E Smart Transport Co., Ltd. and (3) Smart Bus Co., Ltd. and its subsidiaries, to Thai Smile Bus Co., Ltd., an indirect associate of Beyond Securities PCL.

- The Company established new subsidiaries (indirect) as follows:
 - E Transport Holding Co., Ltd. (“ETH”). The purpose is to Invest in public transport bus business.

Other Businesses

Research and Development Business

- Mine Mobility Research Co., Ltd. (“MMR”) developed the second generation of the MINE Smart Ferry, with optimized vessel dimension and parameters, to strengthen the services and fulfill the operation requirements of the MINE Smart Ferry fleet operator. The new fleet consists of 17 ferries which is planned to launch to public service commence from Q1-Q2 of 2023.
- 1-ton pickup truck was designed and developed with standard certification pursuant to the law of Department of Land Transport and international EV safety laws.
- Battery locomotive and power car was designed and developed according to the standards of the State Railway of Thailand (SRT) and having undergone the SRT’s static test and dynamic test.

Batteries, Electric Vehicles and Electronic Products Testing Center

- The Company received accreditation for testing laboratories according to the ISO/IEC 17025-2018 from Thai Industrial Standards Institute on January 24, 2023 which would enhance confidence in the results of its laboratory testing of products. It has planned to provide testing service to customers in general in 2023.

Household, Industrial & Other Wastes Disposal

- The Company established new subsidiaries (indirect) as follows:
 - EA Waste Management Phuket Co., Ltd. (“EWMP”). The purpose is to providing service of waste management and manufacturing and distributing electricity from waste.

1.1.3 Fundraising

As of December 31, 2022, the details of spending of the money obtained from each of debt securities are as follows:

Bill of Exchange (Enforced under Thai laws)

The funds derived from the issuance of all Baht Bill of Exchange, EA23210A, EA23206A, EA23314A and EA23330A were utilized according to the objectives stated in the debt securities and offering documents.

Domestic Debentures, unsubordinated and unsecured debentures in registered name form with debenture holder representative (Enforced under Thai laws)

The funds derived from the issuance of all Baht debentures, EA297A, EA298A, EA248A, EA237A, EA257A, EA259A, EA299A, EA279A and EA329A were utilized according to the objectives stated in the debt securities and offering documents

Domestic Debentures, unsubordinated and secured debentures in register name form without debenture holder representative (Enforced under Thai laws)

The fund derived from the issuance of Baht debenture, i.e., EA260A was utilized according to the objectives stated in the debt securities and offering documents

1.1.4 General Information

Details of General Information as specified under section 5. General and Other Important Information.

1.2 Nature of Business

1.2.1 Revenue Structure

The Company and its subsidiaries derive its main sources of revenue from the Biodiesel Business, such as biodiesel, purified glycerin, crude palm oil, PCM (phase change material), green diesel and its byproducts, revenue from the Renewable Power Plant Business, such as solar electric power, wind electric power, biogas electric power and subsidy for adders, revenue from the Electric Vehicle and Mass Transport Business, such as manufacturing and distribution electric vehicle business and mass transportation service, revenue from the Battery development, manufacturing and distribution business, such as lithium-ion battery manufacturing and distribution and revenue from Other Businesses. The details are as follows:

- Revenue Structure of Business

Type of Revenue Operated by /*		2020		2021		2022	
		THB (thousand)	%	THB (thousand)	%	THB (thousand)	%
Biodiesel Business							
1. Biodiesel oil	EA	5,407,482.89	31.44	5,772,996.73	28.08	4,410,415.38	16.01
2. Purified glycerin	EA	265,538.59	1.54	364,422.29	1.77	406,986.08	1.48
3. Crude Palm Oil	LPD, KJD	548,989.29	3.19	1,750,624.96	8.52	2,077,458.88	7.54
4. PCM (Phase Change Material)	EBI	8,535.22	0.05	44,999.18	0.22	104,213.75	0.38
5. Green Diesel	EBI	-	-	-	-	75,612.09	0.27
6. Byproducts	EA	31,740.81	0.18	292,716.05	1.42	347,585.34	1.26
		6,262,286.80	36.40	8,225,759.21	40.01	7,422,271.52	26.94
Renewable Power Plant Business							
7. Solar electric power	ESLO, ESN, ESL, ESP	1,993,051.09	11.59	1,961,433.06	9.54	2,449,862.81	8.89
8. Wind electric power	EWHK3, PND, BJRD, NYKD, NWP, BCD	1,975,594.00	11.49	2,060,733.97	10.02	2,123,754.90	7.71
9. Biogas electric power	KJD	8,621.74	0.05	23,755.18	0.12	17,058.98	0.06
10. Subsidy for adders		6,624,362.40	38.52	6,887,462.57	33.50	6,590,983.60	23.93
		10,601,629.23	61.65	10,933,384.78	53.18	11,181,660.29	40.59

Type of Revenue		2020		2021		2022	
		THB (thousand)	%	THB (thousand)	%	THB (thousand)	%
Electric Vehicle and Mass Transport Business							
11. Revenue from Electric Vehicle and mass transport	AAB, MMR, EV Now, EST, CRL, SMB	-	-	1,782,547.87	8.67	8,626,720.60	31.32
		-	-	1,782,547.87	8.67	8,626,720.60	31.32
Battery development, manufacturing and distribution business							
12. Revenue from lithium-Ion battery manufacturing and distribution	AMITA -TH, AMITA-TW, MMC	140,947.81	0.82	568,746.02	2.77	2,748,970.17	9.98
		140,947.81	0.82	568,746.02	2.77	2,748,970.17	9.98
Other Businesses							
13. Revenue from other services	ESM, EMN	299,532.29	1.74	200,536.57	0.98	304,257.59	1.10
		299,532.29	1.74	200,536.57	0.98	304,257.59	1.10
14. Other income		119,585.30	0.70	384,286.48	1.87	354,285.61	1.29
		119,585.30	0.70	384,286.48	1.87	354,285.61	1.29
Total revenue including inter-segment revenues		17,423,981.43	101.31	22,095,260.93	107.48	30,638,165.78	111.22
15. Less: Inter-Segment revenue		(224,839.02)	(1.31)	(1,537,164.29)	(7.48)	(3,091,350.88)	(11.22)
Total revenue		17,199,142.41	100.00	20,558,096.64	100.00	27,546,814.90	100.00
Share of gain (loss) from investments in associates and a joint venture		(61,049.73)		13,545.82		217,643.12	
*For the year 2020 and 2021 the company has classified revenue each of product to be in line with the current year.							

Remarks: /*

EA Solar Co., Ltd. (ESLO)

EA Solar Nakornsawan Co., Ltd. (ESN)

EA Solar Lampang Co., Ltd. (ESL)

EA Solar Phitsanulok Co., Ltd. (ESP)

EA Bio Innovation Co., Ltd. (EBI)

Absolute Assembly Co., Ltd. (AAB)

Mine Mobility Corporation Co., Ltd. (MMC)

Mine Mobility Research Co., Ltd. (MMR)

Energy Mahanakhon Co., Ltd. (EMN)

EA Wind Hadkanghan 3 Co., Ltd. (EWHK3)

Pongnok Development Co., Ltd. (PND)

Benjarat Development Co., Ltd. (BJRD)

Nayangklak Development Co., Ltd. (NYKD)

Nayangklak Wind Power Co., Ltd. (NWP)

Energy Solution Management Co., Ltd. (ESM)

Chaophraya River Line Co., Ltd. (CRL)

EV Now Co., Ltd. (EV Now)

E Smart Transport Co., Ltd. (EST)

Banchuan Development Co., Ltd. (BCD)

Larp Pakdee Palm Co., Ltd. (LPD)

Kanjanadit Palm Oil Co., Ltd. (KJD)

Amita Technology (Thailand) Co., Ltd. (Amita-TH)

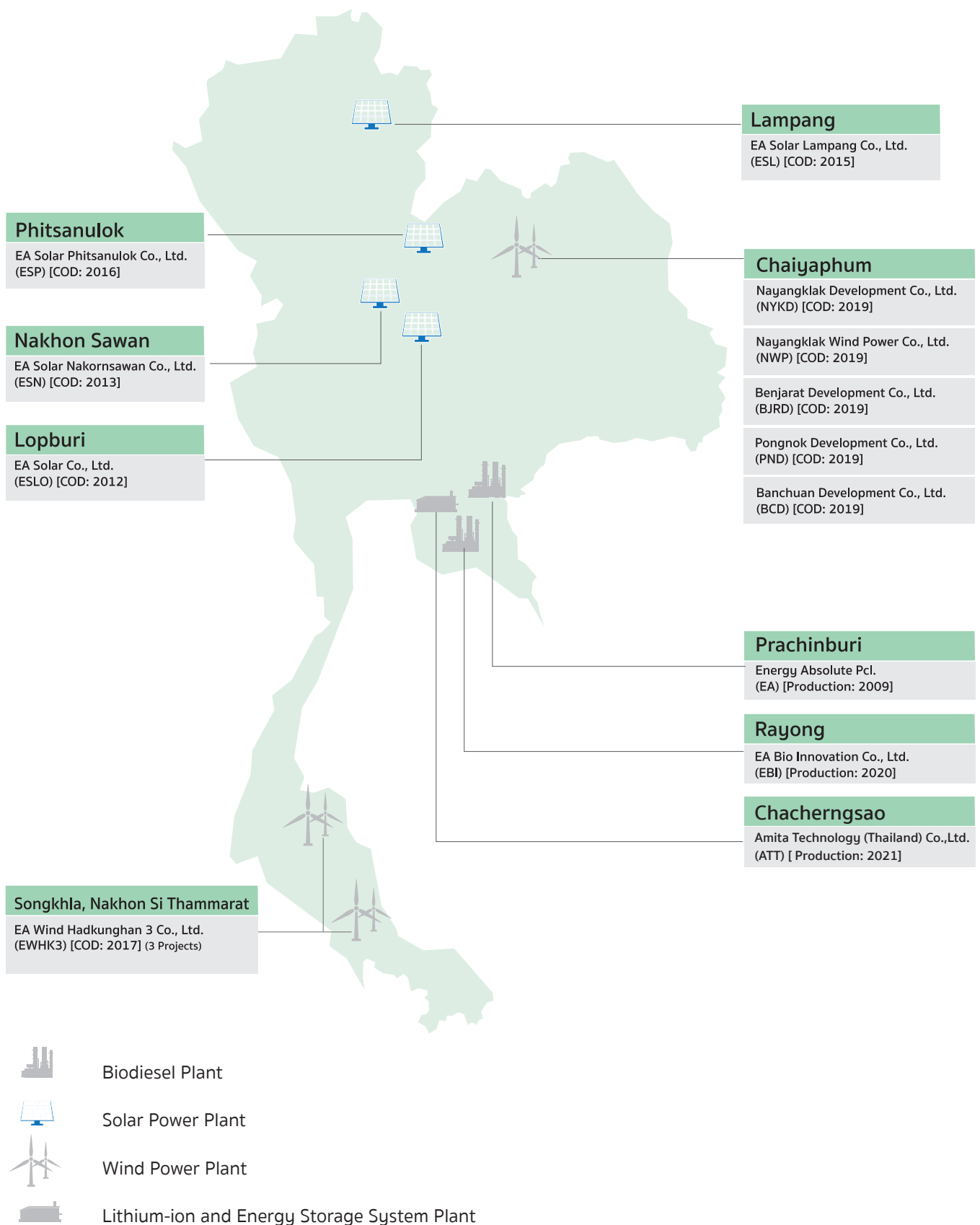
Amita Technologies Inc. (Amita-TW)

Smart Bus Co., Ltd. (SMB)

- Revenue from domestic vs overseas

Type of revenue	2020		2021		2022	
	THB (thousand)	%	THB (thousand)	%	THB (thousand)	%
Revenue from domestic	17,120,952.40	99.55	20,443,546.54	99.44	27,156,567.61	98.58
Revenue from overseas						
- Within CLMV	-	-	-	-		
- Other countries	78,190.01	0.45	114,550.10	0.56	390,247.29	1.42
	17,199,142.41	100.00	20,558,096.64	100.00	27,546,814.90	100.00

The Company Group's Plants Location



Energy Absolute

Energy for the FUTURE





1.2.2 Products and Services

Biodiesel Business

The Company operates a business of producing and distributing of biodiesel (“B100”), pure glycerin and by-products and has been grant license of Oil Trader under Section 7 of the Fuel Trade Act B.E. 2543 from the Ministry of Energy (Oil Trader under Section 7 as aforesaid means oil trader with a trading volume of each type of fuel or trading volume of all type equal or more than 100,000 metric tons or about 120 million liters per year). Besides the above, the Company further research and develop the raw palm to create value to based product and obtained a new product as Phase Change Material (PCM) produced by the Company’s subsidiary, i.e. EA Bio Innovation Co., Ltd. Many countries that approach saving energy and utilizing for the most efficiency energy are currently interested in PCM. Therefore, PCM is the products which will create the high demand of market and will enhance the stabilization the raw palm prices and palm farmers.

Nature of Products

Biodiesel (B100)

Biodiesel (B100) is a natural diesel alternative fuel, produced from vegetable oils and animal fats. Most of biodiesel is produced from palm products, such as Crude Palm Oil (CPO), Refined Bleached Deodorized Palm Oil (RBD) and Stearine and be taken into the Trans Esterification process (Transesterification Process) to react with an alcohol (Ethanol or Methanol) and base as the catalysts, such as sodium hydroxide (NaOH) in order to form the Ester which is catalyst by type of alcohol used for reaction. This biodiesel ester’s properties are almost the same as diesel fuel. As such, biodiesel performs well in engine. If biodiesel is consumed purely, it will be called B100. However, if biodiesel is blended with the high speed diesel, it will be called according to the blending proportion, such as, B7 is high-speed diesel fuel that contains 7% biodiesel (B100) by volume or B10 is high-speed diesel fuel that contains 10% biodiesel (B100) by volume.

Green Diesel / Hydrogenated Vegetable Oil (HVO)

Green Diesel / Hydrogenated Vegetable Oil (HVO) could be produced from palm oil or waste materials such as; used cooking oil and tallow. EA Bio Innovation has converted these raw materials to Green Diesel by Hydrogenation process. Green Diesel has very similar properties as diesel from petroleum base so blending ration could be varied greatly to meet the market requirement. Furthermore Green Diesel has superior Cetane number then blending into petroleum base diesel could improve the performance of blended diesel.

Purified glycerin

Purified glycerin is a transparent, colorless, scentless, sweet-tasting liquid, and well-soluble in alcohol and water but not in fats. Since glycerin has various chemical properties, it can be used as a substrate to synthesize with other chemical substances. It is widely used in food, medicine, cosmetics, and soap industries. Purified glycerin is made by refining raw glycerin from biodiesel production process through the glycerin refining process. Purified glycerin is one of the Company's products which has demand both in domestic and foreign for using as an ingredient in many types of products such as cosmetics, medicine and consumer daily products such as toothpaste. The production capacity for glycerin is at 80 tons per day.

Byproducts

In addition to the above-mentioned products, there are byproducts generated from the production process of biodiesel which include raw glycerin which is the orange liquid soluble in alcohol and water, free fatty acid (FFA) - the fat dark color liquid used as a mixture in feed meals industry and others. The byproducts result from the palm oil extraction includes Palm Fatty Acid Distillate: PFAD which become solid at the room temperature, similar to a candle.

Phase Change Material: PCM

PCM are substances that absorb and release thermal energy during the process of melting and freezing. When a PCM freezes, it releases a large amount of energy in the form of latent heat at a relatively constant temperature. Conversely, when such material melts, it absorbs a large amount of heat from the environment. PCMs recharge as ambient temperatures fluctuate, making them ideal for a variety of everyday applications that require temperature control such as wall, House, Clothes, Parcel. In addition, PCM benefits in term of energy saving. For the industries, PCM was used in the buildings and construction, transportation, cooling industry, clothes and others in order to maintain temperatures. Furthermore, some PCM has bio base which friendly to environment, using PCM for heat storage option are particularly attractive because they offer high-density energy storage.

Promotional privileges and benefits

The Company has been granted promotion privileges from the Board of Investment (BOI) according to the Investment Promotion Act, as follows:

Type of the business being promoted	Promotion Card No.	Capacity per year being promoted
1. Pure glycerin production (99.5%)	1657(2)/2551 2037(2)/2554/ ¹	17,077 tons/year 19,200 tons/year
2. Biodiesel production	2182(9)/2551	292 million liters/year
3. Refined Bleached Deodorized Palm Oil production (RBD)	1889(2)/2554	178,200 tons/year
4. Production of fuel from agricultural produce and production of eco-friendly chemicals or polymers or products derived from continuous forming process of polymers that are environmentally friendly (Phase Change Material (PCM))	63-0529-1-18-1-0	39,420 tons/year

Remarks: ¹ having the same privileges as production of purified glycerin as per promotion card no. 1657(2)/2551

Furthermore, the Company is certified for Quality Management Systems ISO 9001: 2015, Roundtable on Sustainable Palm Oil: RSPO, Kosher standard, Environmental Management Systems ISO 14001: 2015, Occupational Health and Safety Management Systems (OHSAS) ISO 45001:2018, and the Green Industry Level 3 (GI3) Systematic Environmental Management. The Company strives to improve management into a systematic approach, to conform to the requirement and law, to create a good working environment where employees performing work with safety which will reflect the endeavor of the Company on social responsibility, environmental responsibility that covering inside and out of the organization, creating a positive image for the organization.

Marketing and Competition

Marketing policy

1. Product Strategy

The quality of B100 biodiesel meets quality standards as announced by the Department of Energy Business, the Ministry of Energy. The Company concentrates on continual development production technology including the research and development (R&D) in order to seek for new material with lower price for production of quality biodiesel. All these comprise to the creation of competitive performance and adding value to the products in long run as well as product development that create added value to the products.

The Company examined raw materials by collecting samples from all production tanks for the quality control where any materials which is not in line with the standard will reprocess. All products stored in the ready-made product tanks must pass quality control. The Company also created labs to perform quality testing by random selecting products to ensure product quality.

2. Price Strategy

The product prices are stipulated as follows:

(1) Biodiesel (B100)

The price of B100 biodiesel is based on the price announced by the Energy Policy and Planning Office (announced price) on weekly basis, and is also depended on the demand and supply of the particular period of time where the Company has no control over the selling price. However, the Company set the selling price of biodiesel at the rate higher than the announced price, deducted with the discount which is varied depending on a particular period of time. The Company will offer the bidding price which is lower than the announced price to huge customers whose sale contract made with the Company shall come into expiration soon, in order to support customer's decision for contract renewal. However, any selling prices cannot be made at a lower rate than the announced price without approval from the Executive Committee's meeting.

(2) Purified glycerin

The selling price of purified glycerin is based on the ICIS pricing which is a standard price for chemical supplies and energy in the world market. The Company has set the policy of purified glycerin selling price at the rate not lower than ICIS price, deducted by the discount as stipulated by the Company. However, any selling prices cannot be made at a lower rate than the announced price without the approval from Executive Committee meeting.

(3) By Products

Byproduct from production, the Company has set the sales policy of byproducts to meet the reasonable market price and quality.

3. Sales channel strategy (Place)

The Company sells biodiesel fuel directly to the large oil distributor by directly coordinated and communicated through Sales and Marketing department. One of the marketing tactics is to offer more discount to the major customers to increase sale volume while lessening the cost of production per unit (economies of scale). For purified glycerin selling, the Company distributed to domestic and oversea customers which using glycerin as a raw material or customer which produce and distribute chemical supplies or consumer goods etc. In addition, the purified glycerin is distributed to oversee market to reduce risk from dependent on local market.

4. Marketing and publicity strategy (Promotion)

The Company operates marketing and publicity strategy by maintaining production quality that meets the standard, building a good relationship with customers to retain existing customer base, including continuing the operation development, and obtaining industrial certification to build confidence in the Company's business. Meanwhile, the Company also expands the customer base regularly.

In regard to service, the Company and customers plan together about the details of transport and deliver i.e. product quantity and time to ensure that our service is performed to meet customers' requirements and meet the effectiveness of production and procurement plan.

Target groups

Target groups of the Company are as follows:

(1) Biodiesel (B100)

The whole biodiesel is distributed within the country where the majority of customers are fuel traders as defined in Section 7 (local major oil traders) and the oil trader as defined in Section 10 mainly, the biodiesel trading contract is made with the major customers where each contract duration is valid for 3 months, maximum not exceeding 3 years. Over 99 percent of the biodiesel sale is distributed to the large oil traders in Thailand.

(2) Green Diesel / Hydrogenated Vegetable Oil (HVO)

Target groups of Green Diesel would be EU countries by selling through Global major oil companies and Bio fuel traders in EU.

(3) Purified glycerin

Purified glycerin can be divided into various grades based on the purity level. The Company can produce glycerin at the purity level of 99.50 - 99.85 percent (the purity level of more than 99.50 percent is categorized to Pharmaceutical Grade). The Company provided purified glycerin to group of customers both in domestic and oversea countries. However, in 2021, local customers represented 100% of revenue due to high demand while production capacity of pure glycerin dropped as raw material supply was affected by the COVID-19 pandemic.

(4) Byproducts

Target groups of the Company are the producers and distributors of chemical supplies both in domestic and overseas.

(5) Phase Change Material (PCM)

Target groups of the Company are the producer of construction materials and fiber producer both in domestic and overseas.

Biodiesel Industry Competition

For the year 2022, the Department of Energy Business, Ministry of Energy has announced the list of biodiesel producer type of fatty acid methyl esters which approved for sales or possession for sales from the Ministry of Energy, the total capacity equal to 10,260,184 liter per day, namely as the details below:

No.	Company	Capacity (liter/day)	location
1	AI Energy Public Company Limited	722,222	55/2 Moo 8 Sethakrit1road, Klongmadua, Krathumban District, Samutsakorn 74110
2	BBGI Biodiesel Company Limited	1,000,000	28 Moo 9 Bang Krasan, Bangprain, Pranakorn Sri Ayutthaya 13160
3	Global Green Chemicals Public Company Limited	693,642	199/1 Moo 2 Khaosok, Nongyai District, Chonburi 20190
		1,234,320	8 soi G12 Pakornsongkorraj road, Maptapud, Rayong District, Rayong 21150
4	New Biodiesel Company Limited	1,300,000	23 Moo 6 Sawiat, Tha Chang, Surat Thani 84150
5	PPP Green Complex Company Limited	630,000	321 Moo5 Phetkasem, Kang Raek, Bang Saphan District, Prachuap Khiri khan, 77170
6	Patum Vegetable Oil Company Limited	1,800,000	29/3 Moo 6 Phathumthani- Lad Lum Kaew, Kubangluang District, Lad Lum Kaew, Phathumthani 12140
7	Verasuwan Company Limited	200,000	53/6 Moo 5 Sethakij road, Natee, Samut Sakhon District, Samut Sakhon74000
8	Global Bio Power Company Limited	300,000	8/1 Moo 11 Nongbua, Ban Khai, Rayong 21120
9	Trang Oil Palm Company Limited	150,000	168 Moo 1 Trang-Sikao Road, Namuangphet, Sikao District, Trang 92000
10	Bio Synergy Company Limited	30,000	150 Moo 13 Khok Kruat, Nakhon Ratchasima District, Nakhon Ratchasima 30280
11	Energy Absolute Public Company Limited	650,000	507 Moo 9 Kabin Buri- Nakhon Ratchasima road, Nong Ki, Kabin Buri District, Prachinburi 25110
12	Suksomboon Energy Company Limited	450,000	110 Moo 4 Hang Sung, Nong Yai District, Chonburi 20190
13	Circular Energy Company Limited	600,000	100/17 Moo 19 Navanakorn 24 Rd., Khlong Nueng Pathum Thani 12120
14	Thanachok Oil Light Company Limited	300,000	78/9 Moo 8 Khlong Maduea, Krathum Baen District, Samut Sakhon 74100
15	Matter Oil Synergy Company Limited	200,000	217 Moo 15 Ta-sae District Chumphorn 86140
Total		10,260,184	As of 4 January 2023

Source: the Department of Energy Business, Ministry of Energy (<http://www.doeb.go.th/info/data/dataoil/Methyl-ester.pdf>)

Product Procurement

In order to the procurement of raw materials for the producing B100, the Company realizes the efficiency in the production process to strengthen the efficiency of procurement in accordance with the market conditions. The information from the production unit is informed for the appropriate decisions for cost competitive over the long term.

- **Crude palm oil (CPO), stearin and refined bleached deodorized palm oil (RBD)**

The crude palm oil, stearin and RBD are the main raw materials used in the production of biodiesel. These materials are supplied to the Company directly from suppliers namely, vegetable oil factory or crude palm oil factory or purified glycerin distributor from different regions i.e. south, east, central in order to prevent the risk of insufficient supplies. At present, the local producers of crude palm oil comprised of more than 100 palm pressing factories which the Company carefully selects more than 30 suppliers for the procurement procedure and have never experienced any significant issues. Furthermore, the Company carries on the development of the production process to enlarge the scope of available raw materials to be used as a feedstock to biodiesel production. For instance, palm fatty acid distillate (PFAD) and free fatty acid (FFA) are used as a raw material in the production of biodiesel in order to reduce risk of insufficient supplies as a result of price fluctuation.

Nevertheless, the procurement criteria as prescribed above are based on reservation quantity as regulated in Section 7 as well as advanced sales plan, risk of the cost of raw materials, the situation in the market and price announcement from the Energy Policy and Planning Office.

- **Methanol**

Methanol is a substantial input in the transesterification process of which the Company procures from local suppliers.

- **Catalyst**

The catalyst is a substance used in biodiesel production which consists of Sodium Methylate to catalyze the reaction in transesterification. The catalyst is supplied by local producers and distributors.

- **Activated Carbon**

Activated Carbon is used to depolarization of glycerin which supplied by local chemical supplies distributors.

- **Refined Palm Oil**

Refined Palm Oil is the main raw material used to produce Phase Change Material (PCM) which the company procures from local suppliers both in south region and east region.



Renewable Energy Business Group

The Company expands its business to produce and distribute solar and wind electric power generated from renewable energy according to the government policy that promotes the production of electricity from renewable energy for reducing the dependence on import of energy and to stabilize the energy security. At the present, the Company operates 12 projects as detailed below:

- 1) Solar Power Plant 4 Projects with total production capacity of 278 megawatts.
- 2) Wind Power Plant 8 Projects with total production capacity of 386 megawatts.

Product characteristics

The Company produces and distributes electric power generated from renewable energy from the sunlight and wind to distribute to the Provincial Electricity Authority (PEA) and the Electricity Generating Authority of Thailand (EGAT).

Solar Power Plant

The Company produces and distributes solar electric power. There are 4 projects commercial operated with total production capacity of 278 megawatts. Details are as follows:

Projects	Production Capacity	Status
EA Solar Farm Phatthana Nikhom District / Lopburi Province	8 megawatts	Started commercial operation (COD) on 17 October 2012
Project 1 Takhli district /Nakhon Sawan Province	90 megawatts	Started commercial operation (COD) on 23 December 2013
Project 2 Mueang Lampang District / Lampang Province	90 megawatts	Started commercial operation (COD) on 17 February 2015
Project 3 Phrom Phiram District / Phitsanulok Province	90 megawatts	Started commercial operation (COD) on 1 April 2016
Total production capacity	278 megawatts	

(1) Solar Power Plant, total production capacity 8 megawatts / Lopburi Province

- The power plant is under the management of EA Solar Company Limited, a direct subsidiary company classified as a Very Small Power Producer (VSPP). The Project is located at No. 188, 188/2, Moo 3, Khok Tum - Pa Sak River Road (Highway No. 3333) Km.21, Phatthana Nikhom sub-district, Phatthana Nikhom District, Lopburi in the area approximately 315 Rais.

- A power purchase agreement (PPA) with the Provincial Electricity Authority (“PEA”) for 5 years. Each default renewal is valid for 5 years and effective until the agreement will be terminated.
- The EA Solar was granted Adder privilege for VSPP of renewable energy in the rate of Baht 8 per kilowatt per hour for 10 years from the COD as announced by the PEA. The Adder privilege for VSPP is as per resolution of the National Energy Policy Council dated 9 March 2009.

(2) Solar Power Plant, total production capacity 90 megawatts/ Nakhon Sawan Province

- The power plant is under the management of EA Solar Nakhonsawan Company Limited, a direct subsidiary company classified as a Small Power Producer (SPP). The project is located at No. 99/9, 99/10, Moo 5, Huawai Sub-District, Takhli district, Nakhon Sawan District, Nakhon Sawan, on the area of approximately 1,810 Rais.
- A power purchase agreement (PPA) between EA Solar Nakhonsawan Company Limited and the Electricity Generating Authority of Thailand (EGAT) for 5 years. Each default renewal is valid for 5 years under a condition that the party who wishes to renew the agreement must inform in writing to another party at least 30 days before the expiration date of the agreement.
- Granted Adder privilege for SPP of renewable energy in the rate of Baht 6.50 per kilowatt per hour for 10 years from the COD.

(3) Solar Power Plant, total production capacity 90 megawatts/ Lampang Province

- The power plant is under the management of EA Solar Lampang Company Limited, a direct subsidiary company classified as a Small Power Producer (SPP). The project is located at No. 333, Moo 1, Ban-uam Sub-district, Ban-Pao District, Mueang Lampang District, Lampang including an area in Nonglom Sub-district, Hang Chat District, Lampang in the area of approximately 2,477 Rais.
- A power purchase agreement (PPA) between EA Solar Lampang Company Limited and the Electricity Generating Authority of Thailand (EGAT) for 5 years. Each default renewal is valid for 5 years under a condition that the party who wishes to renew the agreement must inform in writing to another party at least 30 days before the expiration date of the agreement.
- Granted Adder privilege for SPP of renewable energy in the rate of Baht 6.50 per kilowatt per hour for 10 years from the COD.

(4) Solar Power Plant, total production capacity 90 megawatts/ Phitsanulok Province

- The power plant is under the management of EA Solar Phitsanulok Company Limited, a direct subsidiary company classified as a Small Power Producer (SPP). The project is located at No. 88, Moo 11, Matong Sub-district, Phrom Phiram District, Phitsanulok, in the area of approximately 2,230 Rais.
- A power purchase agreement (PPA) between EA Solar Phitsanulok Company Limited and the Electricity Generating Authority of Thailand (EGAT) for 5 years. Each default renewal is valid for 5 years under a condition that the party who wishes to renew the agreement must inform in writing to another party at least 30 days before the expiration date of the agreement
- Granted Adder privilege for SPP of renewable energy in the rate of Baht 6.50 per kilowatt per hour for 10 years from the COD.

Promotional privileges and benefits

The Company has been granted promotion privileges from the Board of Investment (BOI) according to the Investment Promotion Act, as follows: Investment Promotion Section 7.1 Solar Energy, total 4 projects as follows:

Type of the business being promoted	Promotion Card No.	Date of approval
EA Solar Farm / Lopburi Province	2467 (1)/2554	17 November 2011
Project 1 / Nakhon Sawan Province	1251 (1)/2556	20 May 2013
Project 2 / Lampang Province	2076(1)/อ./2557	3 September 2014
Project 3 / Phitsanulok Province	58-2034-0-00-2-0	10 July 2015

Wind Power Plant

The Company produces and distributes wind electric power. There are 8 projects commercial operated with total production capacity of 386 megawatts. Details are as follows:

(1) Hadkanghan 1-3 : total 3 projects with the total production capacity of 126 megawatts.

Projects	Production Capacity	Status
Hadkanghan 1 Ranod District / Songkhla Province	36 megawatts	Started commercial operation (COD) on 3 March 2017
Hadkanghan 2 Huasai District /Nakhon Si Thammarat Province	45 megawatts	Started commercial operation (COD) on 10 June 2017
Hadkanghan 3 Pak Panang District /Nakhon Si Thammarat Province	45 megawatts	Started commercial operation (COD) on 23 June 2017
Total production capacity	126 megawatts	

- The power plant 3 projects are under the management of EA Wind Hadkanghan 3 Company Limited, classified as a Small Power Producer (SPP). The project is located at Huasai District, Pak Panang District, Nakhon Si Thammarat to Ranod District, Songkhla.
- A power purchase agreement (PPA) between EA Wind Hadkanghan 3 Company Limited and the Electricity Generating Authority of Thailand (EGAT) for 5 years. Each default renewal is valid for 5 years under a condition that the party who wishes to renew the agreement must inform in writing to another party at least 30 days before the expiration date of the agreement.
- The EA Wind Hadkanghan 3 was granted Adder privilege in the rate of Baht 3.50 per kilowatt per hour for 10 years from the COD.

(2) Hanuman 1,5,8,9,10 : total 5 projects with the total production capacity of 260 megawatts.

Projects	Production Capacity	Status
Hanuman 1 Subyai District/ Chaiyaphum Province	45 megawatts	Started commercial operation (COD) on 25 January 2019
Hanuman 5 Thep Sathit District/ Chaiyaphum Province	48 megawatts	Started commercial operation (COD) on 22 March 2019
Hanuman 8 Subyai District/ Chaiyaphum Province	45 megawatts	Started commercial operation (COD) on 25 January 2019
Hanuman 9 Thep Sathit District/ Chaiyaphum Province	42 megawatts	Started commercial operation (COD) on 30 March 2019
Hanuman 10 Bamnet Narong District/ Chaiyaphum Province	80 megawatts	Started commercial operation (COD) on 13 April 2019
Total production capacity	260 megawatts	

- The power plants are under the management of 5 indirect subsidiary companies, classified as a Small Power Producer (SPP). The project is located Thep Sathit district, Subyai district and Bamnet Narong district, Chaiyaphum.
- A power purchase agreement (PPA) between 5 indirect subsidiary companies and the Electricity Generating Authority of Thailand (EGAT) for 5 years. Each default renewal is valid for 5 years under a condition that the party who wishes to renew the agreement must inform in writing to another party at least 30 days before the expiration date of the agreement.
- Granted Adder privilege for SPP of renewable energy in the rate of Baht 3.50 per kilowatt per hour for 10 years from the COD.

Promotional privileges and benefits

The Company has been granted promotion privileges from the Board of Investment (BOI) according to the Investment Promotion Act, Investment Promotion Section 7.1 Wind Energy and granted tax benefits from the Board of Investment (BOI) for 8 years corporate income tax on net profit exemption and 50% reduction of corporate income tax on net profit desired from the promoted activity for 5 years, total 8 projects as follows:

Type of the business being promoted	Promotion Card No.	Date of approval
Hadkanghan 1 Ranod District / Songkhla Province	1702(1)/2558	12 February 2015
Hadkanghan 2 Huasai District /Nakhon Si Thammarat Province	1701(1)/2558	12 February 2015
Hadkanghan 3 Pak Panang District /Nakhon Si Thammarat Province	1703(1)/2558	12 February 2015
Hanuman 1 Subyai District/ Chaiyaphum Province	60-0055-0-13-2-0	12 February 2015
Hanuman 5 Thep Sathit District/ Chaiyaphum Province	60-0051-0-13-2-0	12 February 2015

Type of the business being promoted	Promotion Card No.	Date of approval
Hanuman 8 Subyai District/ Chaiyaphum Province	60-0052-0-13-2-0	12 February 2015
Hanuman 9 Thep Sathit District/ Chaiyaphum Province	60-0053-0-13-2-0	12 February 2015
Hanuman 10 Bamnet Narong District/ Chaiyaphum Province	60-0054-0-13-2-0	12 February 2015

Marketing and Competition

Trends and growth of alternative energy business (renewable energy) in the future

The Thailand Power Development Plan 2018-2037 (PDP2018) was endorsed by the National Energy Policy Council (NEPC) and acknowledged by the Cabinet, in accordance with the government policy which focusing on 3 parts as follows

1. Energy Security

The security of power supply, transmission system and distribution system in response to the demand of electricity to support economic and social development plan including consider the power plant in order to sustain energy security.

2. Economy

It is vital to consider the optimized energy costs and promote low cost production while not causing obstacles to economic and social development including the readiness preparation for electrical system in order to the competition in electricity production to increase the efficiency of Electricity production in overall.

3. Ecology

To reduce the impacts on the environment by supporting the production of electric power generated from renewable energy and increasing the efficiency of electrical system both electricity production and electric energy consumption by developing smart Grid.

The Government is taking steps to increase renewable energy to correspondence with the outstanding renewable energy and support electricity consumption behavior including Disruptive Technology and in line with the conference of the parties (COP21) which consists of biomass, biogas, solar energy, Hydro Floating Solar Hybrid Power plant and other renewable energies. The purpose of purchasing power of renewable energy is to maintain the pricing fluctuation and comply with the government policy which targeting the production capacity as of 2037 amount to 16,243 megawatts. As summarized below:

The energy renewable projects during 2018 to 2037

(According to the Thailand Power Development Plan 2018-2037 (PDP2018 Revision 1))

Biomass Power Plant (Biomass)	2,780 megawatts
Biogas Power Plant (Biogas)	400 megawatts
Solar Energy (Solar PV)	8,740 megawatts
Hydro Floating Solar Hybrid Power plant	2,725 megawatts
Wind Energy (Wind)	1,485 megawatts
Industrial Waste	44 megawatts
Mini Hydro Power Plant EGAT	69 megawatts
Total at year 2037	16,243 megawatts

Source: the National Policy Council Energy department, Ministry of Energy

Marketing Policy

The Company has no direct competitors in term of marketing due to all the productions are distributed to the state authorities which are the Electricity Generating Authority of Thailand (EGAT) and Provincial Electricity Authority (PEA), based on the sale contracts (PPA). The Company has a strong determination to become a leading producer of alternative energy by using cutting-edge technology, choosing quality equipment from reliable manufacturers to ensure the smooth and stable performance of the power plants. In addition, the Company and the Company Group take into account the influence of teamwork which is an essential part of workflow. Through operation of the Company group, we employ personnel with experience and skills especially, civil work, to design and maintain the solar power plants.

Target customers / Distribution

The target customers for solar and wind power plants is electricity agencies from the government sector which includes the Provincial Electricity Authority (PEA) for 8 megawatts solar power plant in Lopburi and Electricity Generating Authority of Thailand (EGAT) for solar power plants in Nakhon Sawan, Lampang and Phitsanulok, each project has 90 megawatt capacity and total wind power plants as prescribed in the power purchase agreement which the Company and the Company Group made with the said government agencies in order to support the government policy about increasing the production capacity of electricity from renewable energy, to reduce importing energy in the long-term.



Electric Vehicle and Energy Storage System

1. Battery development, manufacturing and distribution business

To enhance competitiveness in the renewable energy business and to comply with the business operation policy of the Company's Group, the Company acquired ordinary shares of Amita Technologies Inc. (AMITA-Taiwan), a company incorporated under the law of Taiwan, the Republic of China (ROC) and listed on the Emerging Stock Market of the Stock Exchange of Taiwan to operate lithium-ion polymer battery development and manufacturing business. In addition, the Company has established a subsidiary, i.e. Amita Technology (Thailand) Co., Ltd. to develop, manufacture, and distribute lithium-ion batteries. At present, the plant has already started phase 1 production (1 GWh per year) in late 2021. Thereafter, the production capacity will be gradually increased in the next phase to meet the market demand. At the beginning, the Company distributed to electric vehicle business within the group, such as E-Bus, E-Ferry and Battery Locomotive. The Company has built multi-faceted knowledge base covering research and development of products through collaboration with public and private sectors both domestically and overseas and development of its personnel's manufacturing expertise so that they would be able to accommodate production lines in advanced industries toward the targets set forth.

Nature of Products

Characteristics of lithium-ion battery is an energy storage unit that has high electric power storage capacity and is rechargeable upon the battery energy running out as it contains chemicals that allow for reversible reaction with recharging capability by such a device as "charger." Generally, the battery properties depend on the substances used as the battery electrode components. The Company has redesigned the new type of battery to possess distinctive properties with higher energy storage capacity, lighter weight, longer useful life and better response to demand for fast charging. The Company's lithium-ion battery contains no environmentally hazardous components like liquid, acid or lead. With strong commitment and determination, it has developed and produced lithium-ion batteries for diverse applications domestically as follows:

(1) Electric Vehicle

These electric passenger cars, electric trucks, electric ferries and Battery Locomotive, can help lessen pollution from internal combustion engines, reduce use of fuel oil, and prevent emission of exhaust gases into the air. Using electric power for automobiles can be regarded as an alternative energy to efficiently replace fuel energy. Especially amid the increasing concerns about global warming, use of lithium-ion batteries can be a good choice of power for electric vehicle and benefit to the environment.

(2) Energy Storage System (ESS)

Since renewable energy becomes part of electric power industry with an image of clean technology, it has increasingly been used for electricity generation. However, renewable energy has some limitations concerning system stability as most of them come from solar and wind power, hence inability to generate and distribute electricity at a consistent pace. As such, energy

storage system has increasingly played a significant part in power generation system, paving way for advancement toward the age of energy for the future.

Energy storage system (ESS) refers to a system and equipment which can change electric power or electricity to power in other forms so that electricity can be stored for use when needed, and will change the stored energy to electric power again when electricity is needed. ESS is very essential to the electric system in the future as it can help stabilize the electricity generating system and maintain consistent electricity quality. In addition, it helps support the change of electrical load to the appropriate period of time. For example, when electricity generated exceeds the existing electrical load, instead of throwing it away, the excess energy can be stored in the ESS for the period of lower electricity generation. This will enable smooth energy management in overall.

Strengths of energy storage system (ESS) are as shown below:

- Enhance stability of renewable energy for consistent electricity generation even when there is disruption in renewable energy power generation such as in case of thick clouds blocking sunlight (solar radiation density) or no wind blow (wind speed), etc.
- Serve as a backup energy source to store electric power from the generation system and for use in place of solar power which cannot be generated during night time.
- Stabilize the electric system to cope with fluctuations in the electric system by using power from batteries to maintain stability of the electric pressure and frequency of the system.
- Manage congestion of electric power network by having power from batteries to supplement the system instead of transmitting electricity from afar in case such areas need high volume of electricity for a certain period of time. The ESS uses lithium-ion batteries as they are suitable for installation, storage, and fast transmission of electricity, and worthwhile compared with their useful life. In addition, they can easily be moved for installation elsewhere (*subject to regulatory authority's permission*).

Each lithium-ion battery has the following components:

- (1) **Negative electrode:** Main components are graphite-coated copper plates.
- (2) **Positive electrode:** Main components are lithium nickel manganese cobalt-coated aluminum plates.
- (3) **Electrolyte solution:** It is solution which has lithium as the main component. Electrolyte solution will exchange lithium's ion and electrons between negative and positive electrodes.
- (4) **Semipermeable membrane:** Polypropylene (PP) separates negative and positive electrodes.

Types of Products

(1) Lithium-ion battery cells

Lithium-ion battery cell is the smallest product unit. The Parallel connection attains the higher Nominal Capacity while the connecting several cells in Series adds its voltage (Nominal Voltage) and will be called module. And if the battery modules are stacked together to form a larger size, it will be called a battery pack used with electric cars, electric ferry, or Energy Storage System (ESS). Each battery cell mainly contains cathode (positive electrode) and anode (negative electrode) and electrolyte solution as lithium is the element which allows electron to come from atom easiest among all elements. Therefore, lithium-ion can store high volume of energy.

(2) Lithium-ion battery modules

Lithium-ion batteries can change electric power capacity according to the application requirements. As capacity of each type of machine requires different capacity, the Company designs arrangement of lithium-ion battery cells to be in modules of various sizes so as to be convenient for diverse applications, whether they are for electric cars, electric trucks, electric boats, or energy storage system, etc.

Product quality and safety

The Company has obtained certification of industry quality management system, namely ISO9001:2015 standard and also IATF16949:2016 standard, which is the only international standard for automotive quality management system by International Automotive Task Force, in October 2016. This standard covers automotive quality management from customers to trade partners throughout the supply chain. This can ensure that the Company is able to deliver its products that meet the customers' requirements and the provisions of the laws and regulations related to product safety. Amita Technology (Thailand) Co., Ltd. is the first company in Thailand that has received standard certification in respect of both product research and development and production of lithium-ion battery. The Company's products of all types have been recognized for meeting such international standards as IEC62660-2:2018, IEC62660-3:2016 and UN38.3 in terms of both efficiency and safety, which are the major required standards of batteries for various types of electric vehicles.

Promotional privileges and benefits

Amita Technology (Thailand) Co., Ltd. has been granted promotion privileges from the Board of Investment (BOI) according to the Investment Promotion Act, Investment Promotion Section 5.2.6.1 High Density Battery, Promotion Card No. 62-1184-1-18-1-0. The Board has been approved on 22 October 2019 and granted tax benefits from the Board of Investment (BOI) for 8 years corporate income tax on net profit exemption and 50% reduction of corporate income tax on net profit desired from the promoted activity for 5 years and has capacity per year being promoted approximately 1,832,914 pieces (12,830,400 cells)

Mine Mobility Corporation Co., Ltd. has been granted promotion privileges from the Board of Investment (BOI) according to the Investment Promotion Act, Investment Promotion Section 4.8.3.1 Battery production for electric vehicles. Card No. 63-0536-1-00-1-0. The Board has been approved on 25 April 2022 and granted tax benefits from the Board of Investment (BOI) for 5 years corporate income tax on net profit exemption and has capacity per year being promoted approximately 15,000 pieces.

Marketing and Competition

Business growth trend and outlook of Battery

Lithium battery is currently a popular topic amid public interest of smart electronic equipment and the energy storage system (ESS) which has lithium-ion batteries as main components and used in various types. The National Metal and Materials Technology Center has classified lithium-ion batteries according to negative and positive electrodes and applications into 6 types as below:

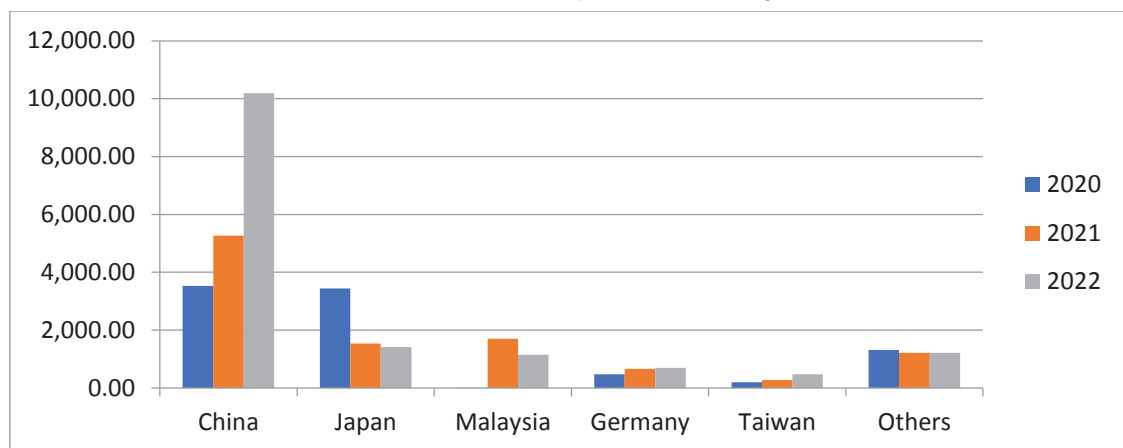
Table: Types of lithium-ion batteries classified by negative and positive electrodes and applications

Type no.	Positive electrode	Negative Electrode	Applications
1	Lithium Cobalt Oxide (LiCoO_2 , LCO)	Graphite	Mobile phones, tablets, laptops, digital cameras
2	Lithium Manganese Oxide (LiMn_2O_4 , LMO)	Graphite	Power tools, medical equipment, power transmission system in electric vehicles
3	Lithium Nickel Manganese Cobalt Oxide ($\text{Li}(\text{Ni}, \text{Mn}, \text{Co})\text{O}_2$, NMC, NCM)	Graphite	Electric bikes, medical equipment, power transmission system in electric vehicles (normally hybrid cars), backup power system
4	Lithium Nickel Cobalt Aluminum Oxide ($\text{Li}(\text{Ni}, \text{Co}, \text{Al})\text{O}_2$, NCA)	Graphite	Medical equipment, power transmission system in electric vehicles (found in Tesla Model S), backup power system
5	Lithium Iron Phosphate (LiFePO_4 , LFP)	Graphite	Power transmission system in electric vehicles or replacement of start-lighting-ignition battery), system which requires high current and durability
6	Graphite or LMO	Lithium Titanate ($\text{Li}_4\text{Ti}_5\text{O}_{12}$, LTO)	Backup power system, power transmission system in electric vehicles (Mitsubishi i-MiEV, Honda Fit EV)

Source: MTECH Article on Get to Know Batteries, Part 4 Material Technology Magazine Volume
(https://www2.mtec.or.th/th/e-magazine/magazine_detail.asp?Run_no=dlkebwve)

Currently, Thailand has still imported lithium-ion batteries in a large volume. Any future increase in investment in lithium-ion battery manufacturing will help cut down import and import costs. In addition, it is an opportunity for manufacturers of equipment in which lithium-ion batteries are used as components, such as wireless charging devices and charging stations for electric cars, etc. It will also contribute to the expansion of domestic industry supply chain from production of raw materials to recycling of a variety of precious metal, etc.

Bar Chart: Thailand's import of lithium-ion battery (850760) during 2020-2022 (Unit: Million Baht)

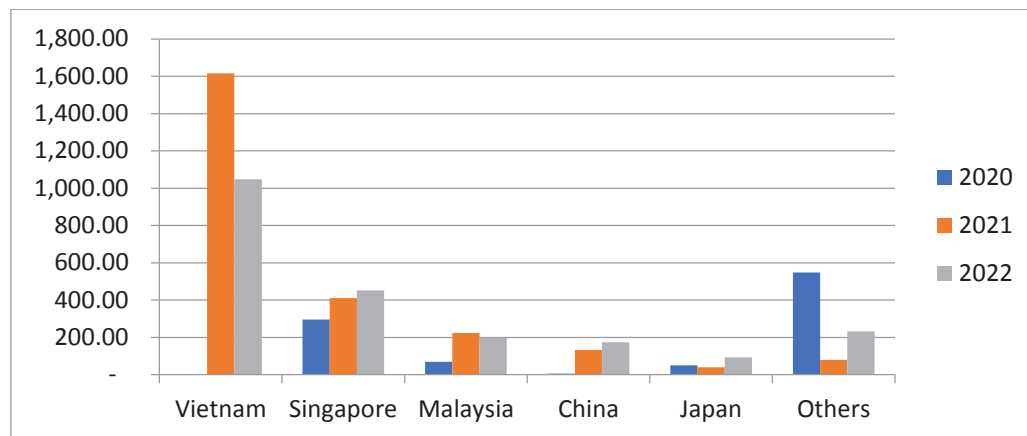


Source: Information and Communication Technology Center, Office of Permanent Secretary, Ministry of Commerce, with collaboration from Customs Department: tradereport.moc.go.th

From the above chart, in 2022 (Jan-Dec), Thailand's import of lithium-ion batteries was in the total value of approximately 15,130.54 million Baht, a growth of 42% from that in 2021 and 69% from that in 2020. This has reflected the rising trend of

import of lithium-ion batteries for domestic use, and hence the consistently upward trend of demand for this type of batteries. In this regard, upon Thailand entering into the ASEAN-China Free Trade Agreement (ACFTA), Thailand has been granted customs duty exemption of the formerly specified rate of 20% for products on the sensitive list (SL) in the category of secondary battery imported from China. Thailand's lithium-ion battery import from China in 2022 thus surged from the foregoing year to 4,930.84 million Baht, representing a year-on-year increase of 94% and a larger market share to 67.38% in 2022.

Bar Chart: Thailand's export of lithium-ion battery (850760) during 2020-2022 (Unit: Million Baht)



2020	0.91	295.08	68.24	5.53	50.22	548.07
2021	1,615.31	410.14	223.44	132.94	39.86	79.33
2022	1,046.72	451.88	197.76	174.09	92.84	232.31

Source: Information and Communication Technology Center, Office of Permanent Secretary, Ministry of Commerce, with collaboration from Customs Department; tradereport.moc.go.th

According to the above chart exhibiting Thailand's export of lithium-ion batteries during 2020-2022 (Jan-Dec), Thai export of lithium-ion batteries in 2022 was in the total value of 2,195.61 million Baht, a year-on-year decline of 12.2% which reflected a slight contraction of export compared to the previous year. In this regard, the year 2022 witnessed Thai export of the product to Vietnam at no. 1 ranking with the total value of 1,046.72 million Baht, representing 47.67% of Thailand's total export of lithium-ion batteries in the year.

Marketing policy

1. Marketing Strategy (Product)

The Company has focused on continuous research and development of production technology to ensure the designed lithium-ion battery has high quality and efficiency, store higher quantity of energy, and spend less charging time. The Company's research and development team has enabled improvement of quality of lithium-ion battery cells at all times, as well as production formula, manufacturing process, and quality control in every step of the manufacturing process.

Also, the Group has invested in construction of electrolyte mixture plant as an important component of lithium-ion batteries. Therefore, it is able to improve electrolyte formula appropriately and continuously. For such downstream products as module batteries, the Company has set up module battery assembly units to provide application convenience for each group of customers who prefer batteries with diverse capacities, whether they are electric cars, electric trucks, electric boats or electric storage batteries for electricity generation and distribution system. Currently, the Company has conducted marketing and

technical research on new battery module design focusing on flexibility to allow modifications in response to customers' diverse applications.

2. Pricing Strategy (Price)

The Company has formulated product distribution policy based on the market price and set competitive prices in alignment with the technology and capacity of its products which are the selling point, and control of production costs in all aspects involving procurement of quality raw materials from various sources, construction of large plants, and automation of manufacturing process. This will help control and allow for efficiency and reduction of product unit costs in the manufacturing process, and enhance competitiveness in both domestic and overseas markets.

3. Distribution channel strategy (Place)

The Company has distributed battery packs through direct distribution channels to electric automobile manufacturers such as electric cars, electric trucks, electric buses or even electric boats both at home and overseas. Its Group's sales teams are direct contact for sales activities. Manufacturing of the products of both module and pack types are in the sizes as required by customers (made to order). In term of energy storage system (ESS), the sale team has directly engaged with the industrial group for use as backup energy source in case of emergency to prevent power system inconsistency. Design and installation have been carried out jointly with the solar panel distributors to ensure even more stable solar power distribution and reduce use of system power during peak period, hence decrease in electricity expense for industrial customers.

4. Procurement of raw materials

The Company is aware of raw material procurement risk. It has put in place a policy to procure raw materials from more than three well-known and reliable suppliers both domestically and overseas to secure its procurement of each type of raw materials. Data on demand for use of batteries is consistently compiled and delivery is planned with trade partners to ensure no shortage of raw materials to serve its production of batteries looking ahead.



2. Electric charging station service business (For electric vehicle)

The Company has expanded its business to large-scale electric vehicle charging stations to a greater extent to serve electric vehicles under “EA Anywhere” brand, operated by Energy Mahanakhon Company Limited, its subsidiary. Its objective is to promote use of clean energy in the automobile industry to reduce greenhouse gas emission and also use of renewable energy which is environmentally friendly in place of fuel energy in the country’s transport system. This also responds to the development of infrastructure in preparation for electric automobile innovation or next generation automotive industry.

Nature of Products

“Electric charging station” is the station that provides charging service for electric vehicle which include PHEV (plug-in hybrid electric vehicle) and BEV (battery electric vehicle). The electric charging station is based on conductive charging technology. The electric vehicle is connected to the charger by cable (or charging cable) which is widely used nowadays. The charging is available for direct current and alternating current. The alternating current can be charged up to 44 kWh, depending on the onboard charger of each automotive model. The direct current charger can charge up to 150 kWh for passenger car and DC chargers for passenger buses, trucks and passenger ferry can be charged a maximum of 300 kWh.

Besides, the group Company has developed the charger with modern technology, variety of styles according to the electrical power to support the battery size of all types of vehicles. So that it can be used with all electric cars, including the electric vehicles designed and manufactured by the group Company, such as electric cars, electric buses, and electric passenger ferry, which can be charge at the highest speed (4C-Rate) whereas the charging time depends on the type of vehicle.

The size of the battery divided into 5 models as follows:



- **Ultra-Fast Charge :**

- DC 360 kW and DC 300 kW, the fastest charger that can serve large battery electric vehicles such as electric ferries, electric buses.
- DC 150 kW chargers can serve mid battery electric vehicles (BEV) only, for example, electric buses and electric vehicles.



- **Super-Fast Charge :**

DC 40 kW chargers can serve for Electric Vehicles car only.



- **Normal Charge :**

AC Normal chargers can serve electric vehicles car both Plug-in Hybrid (PHEV) and Battery Electric Vehicle (BEV)

Promotional privileges and benefits

Energy Mahanakorn Co., Ltd. has been granted promotion privileges from the Board of Investment (BOI) according to the Investment Promotion Act, Investment Promotion Section 7.35 Electric Vehicle Charging Stations, Promotion Card No. 63-0401-1-00-1-0. The Board has been approved on 2 April 2020 and granted tax benefits from the Board of Investment (BOI) not more than 100% of investment for 5 years and has capacity being promoted at 5,600 chargers.

Marketing and Competition

Service providers are facing wide-ranging challenges in the investment in electric charging station expansion compared with other businesses in the renewable energy sector. In 2022 in particular, service providers from both public and private sectors introduced their partners and actively penetrated electric charging station business while accelerating infrastructure and ecosystem development to accommodate the robust growth of electric vehicle market. Particularly, foreign automobile

companies expanded electric charging stations in their service center and showroom premises, aiming to push up continuous growth of electric vehicle market in Thailand. This has resulted in a larger number of electric charging stations for users.

However, although the Company is the market leader in electric charging station industry with the largest number of fast and normal chargers across the country, the Company still needs to improve efficiency of the chargers, charging stations and physical conditions of the locations to ensure the ability to accommodate larger diversity of electric vehicles and to edge up its competitiveness. The Company plans to expand electric charging stations for electric buses as well as electric trucks and electric tractors and to support the increasing number of personal electric vehicles. For 2022, the Company plans to continuously expand large-scale electric charging stations to serve electric trucks and electric buses on primary and secondary routes.

Product Procurement:

To select location for installation of electric charging stations, the Group takes into consideration the feasibility of such locations where users would access, e.g., areas with a large number of service users or travelers by car, or rest stops in Bangkok and the vicinity as well as in regional areas along the routes to destinations. At present, the investment is targeted at installation in the areas which allow for 24-hour service and can accommodate entry-exit of electric vehicles at all times such as gas stations, hotels, and rest spots along main routes. In its next plan, the Group will focus on installation of DC chargers or fast chargers in the areas which allow for 24-hour service and installation of large electric charging stations on main transportation and logistics routes to support use of electric vehicles in inter-regional transport business and economic routes such as the EEC, etc.

For electric charging station, users can walk-in to use the service right away through “EA Anywhere” application, available for download via Apple Store for iOS and Play Store for android devices. Currently, electric charging stations are available across the country. The Company also plans to invest continuously in the installation of electric charging stations in collaboration with major partners and to welcome other new partners which have the locations and whose businesses align with the Company’s business plan.



3. Electric Vehicle Business

The prevailing global warming situation has caused rising global temperature while the PM 2.5 problem from incomplete combustion in diesel engine results in toxic emissions from vehicle exhaust, i.e., Particulate matter and black soot, etc.

Commercial vehicles used in Thailand which are rather old and create black soot particles are a major source of carbon emissions and PM 2.5. Recognizing the significance of such problem, the Company has expanded its business to commercial electric vehicles, starting with construction of the assembly plant of large commercial electric vehicles in Ban Pho district, Chachoengsao province which covers an area of about 55,000 square meters. The Company's electric vehicle business is environmentally friendly and enables the Company to utilize electric vehicles in its operation with lower fuel cost than using combustion-engine vehicles. It also supports the National Energy Plan to drive Thailand towards clean energy and to reduce carbon emission to achieve net zero carbon emission within 2065-2070.

Nature of Products

(1) Electric Commercial Vehicle

- **Heavy Electric Vehicle**

The Group completed construction an assembly plant for electric commercial vehicle which is 100% electric buses and electric truck using high quality lithium-ion batteries produced by the Group. The electric commercial vehicle assembly plant started commercial operation in 2021 has assembled and delivered over one thousand electric buses.

For electric bus manufactured by the Company has driven efficiency and contain no internal combustion engine which would cause air and noise pollution. It can drive continuously on all types of roads, traffic and weather condition. Its reliability is no less than that of internal combustion engine vehicles. It is installed with 250-350 kWh high quality lithium-ion battery produced by the Company, and this helps uplift eco-friendliness and sustainability of the road trip.

- **Light Electric Vehicle**

The Company conducted research and development of commercial electric vehicles and launched the 1-ton electric truck of Thai nationality "MINE MT30" under the concept: Driving Toward Net Zero by MINE MT30. This has been in line with the Company's vision aiming at clean and eco-friendly energy and applying technology and innovation to develop business toward the net zero goal and drive Thailand toward the low carbon society. MINE MT30 is a high-quality electric truck developed under the respect the environment strategy and operated under the 5E strategy below:

- Environment: The product addresses environmental issues and will take part in bringing the business toward the net zero goal.
- Energy Saving: The EV truck uses clean energy enabling the business to achieve its goal and respond to customer demand of all lifestyles.
- Electric EV truck: 100% Thai nationality.
- Ease: It is easy for maintenance by leading service centers.

- Experience: The practical functioning of the electric truck will bring new experience that suit all businesses and lifestyles.

The MINE MT30 has 1-ton loading capacity with a special large loading space and plain floor allowing for 3-side opening, hence convenient for stuff loading and unloading. It can easily be used with forklifts and uses 30 kWh lithium-ion batteries that have undergone UN R100 safety testing standard and IP67 waterproof standard and can be charged under the ultra-fast charge technology to the extent of 30-80% within only 15 minutes enabling the truck to run for a distance of around 202 kilometers per one-time charge (according to NEDC standard).

(2) Electric Ferry

MINE SMART FERRY has been designed by the Group teams and produced 100% by Thai labor under the Corporate Social Innovation (CSI) concept with its potential and innovation availability. MINE SMART FERRY is a 24-meter catamaran boat with marine-grade aluminum alloy structure and 250-passenger capacity. Its maximum speed is up to 16 knots. With the use of 700-800 kWh lithium-ion battery produced by the Group and equipped with ultra-fast charge technology of EA Anywhere, the battery can be charged to 85% in only 15 minutes. The electric boat can travel by as high as 80 kilometers per one charge. In 2022, the Company developed a new electric ferry fleet, with 20-meter long and 6-meter wide and 150-passenger-capacity boat using 540 kWh lithium-ion battery equipped with ultra-fast charge technology. The electric ferry service will be provided along the Chao Phraya River to increase the number of electric ferries to adequately meet demand of customers looking forward.

MINE SMART FERRY has turned around public transport along the Chao Phraya River by modernizing and making it more Eco-friendly and causing neither water pollution nor PM 2.5. MINE SMART FERRY has been registered as the first Thai electric ferry which has passed the examination, safety test and sailing standard of the Marine Department. It is a Thai innovation and won the National Innovation Awards 2020 for Economy from the National Innovation Agency.

(3) Battery Locomotive and Powercar

The Company had research and development on Battery Locomotive and Powercar base on State Railway of Thailand standard. Battery Locomotive will be tested and actual use instead of Diesel Electric Locomotive as company mission “Mission No Emission”. Battery Locomotive was designed under 20 ton-axle specification that can be use in any service included Shunting service at Krung Thep Aphiwat Central Terminal Station, Cargo delivery service between Laemchabang port and ICD Ladkrabang and Passenger delivery service in city route or inter city route. Battery Locomotive maximum speed is 120 kilometer per hour and maximum load is 2500 ton as State Railway of Thailand requirement. Battery Locomotive contains 821 kWh Battery and another 3.2 MWh Battery on Powercar. This battery can be fully charged by our developed station within 1 hour. Total service distance is 200-480 kilometer upon loading and usage condition. Battery Locomotive is actual run testing with State Railway of Thailand. Finally Battery Locomotive can help operator not only reduce emission but also saving more than 40% of energy use.

Promotional privileges and benefits

Mine Mobility Research Co., Ltd. has been granted promotion privileges from the Board of Investment (BOI) according to the Investment Promotion Act Section 7.11 which granted tax benefits from the Board of Investment (BOI) not more than 100% of investment for 8 years as follows:

Type of the business being promoted	Promotion Card No.
1. Research & development business: Research & development of battery structure and system for electric vehicles	62-0451-1-00-2-0
2. Research & development business: Research & development of battery structure and system for electric ferries	63-0407-1-00-2-0
3. Research & development business: Research & development of battery structure and system for rail vehicles	65-0132-1-00-2-0

Mine Mobility Corporation Co., Ltd. has been granted promotion privileges from the Board of Investment (BOI) according to the Investment Promotion Act Section 4.18 Manufacture of Electric Vehicle with Battery and Parts and granted tax benefits from the Board of Investment (BOI) not more than 100% of investment for 5 years as follows:

Promotion Card No.	Date of approval	Capacity per year being promoted
63-0536-1-00-1-0	13 May 2020	10,000 Units
64-0067-1-00-1-0	20 January 2021	15,000 Units

Absolute Assembly Co., Ltd. has been granted promotion privileges from the Board of Investment (BOI) according to the Investment Promotion Act, Investment Promotion Section 4.27 Manufacture of Battery Electric Bus and Truck, Promotion Card No. 64-0758-1-00-1-0. The Board has been approved on 29 July 2021 and granted tax benefits from the Board of Investment (BOI) not more than 100% of investment for 3 years and has capacity per year being promoted approximately 3,000 units.

Market and Competition

Currently, Government had started the subsidize program for Electric Vehicle by tax policies that makes price of EV lower and close to an internal combustion engine car. So, the customer who understand the benefit of lower energy cost and emission less tend to shift to an EV. Especially, when there's more coverage of charging station and more understanding about charging behavior. The introduction of many players also stimulates an EV market to expand rapidly.

By the way, there's still no official commercial launch of 1-ton Electric Pickup truck in the market. Thus, this stills a good chance for MINE MT30 in Thailand's market.

In Railway business, Ministry of Transportation and State Railway of Thailand announce Environmental friendly policy to reduce any emission occurrence. Currently Locomotive in Thailand is Diesel Electric Locomotive. Base on this situation the Company vision is to develop Battery Locomotive which is good benefit for Thailand. Follow Government to reduce emission and PM2.5. Moreover Battery Locomotive can save energy more than 40%. Battery Locomotive can be operated

in current Thailand railway which has more than 4,000 kilometer by less infrastructure investment compare with other electric railway vehicle and maximize double-track railway infrastructure.

Marketing Policy

Electric vehicle business in Thailand has bright growth prospects. Currently, the Group has in place electric bus assembly units that focus specifically on commercial vehicle market. In addition, the Company's electric bus possesses strengths being superior to combustion-engine vehicles in general as regards lower energy cost and lower repair and maintenance cost. It also has advantage over its competitors on the back of its business operation which covers the business ecosystem on a full-fledged basis from production of electric vehicles, batteries and electric charging stations to after-sale services, as well as having strong business partners.

Target Groups

The Company targets commercial customers that use electric buses, electric boats and electric pickup truck in the business operations including those in the public sector with intention to use electric buses and electric boats. The Company views that competition in Thai commercial electric vehicle market is rather low and there are not so many players in this market. In addition, import of electric commercial vehicle from overseas incurs high costs. Therefore, the Company aims to level up domestic public transportation system for more modernity, convenience and sustainable reduction of pollution as well as to take part in driving Thailand toward a low carbon society.

Products and Services Procurement

The Company established Absolute Assembly Co., Ltd. (AAB) to operate manufacturing of all electric buses and electric vehicles for commercial purpose with a production capacity of 9,000 units per year. AAB can also accommodate production of other types of electric vehicles such as coach, truck or other industrial vehicles. Parts are imported from overseas for use in conjunction with major parts designed and produced locally using automated manufacturing process. The Company also has lithium-ion battery plant, which is the key to electric vehicle manufacturing, operated by its subsidiary company, Amita Technology (Thailand) Co., Ltd., with a production capacity of 1 gigawatt hour per year. Its business operation covers the end-to-end system, from manufacturing, assembly, distribution to after-sale services.



Other business

1. Battery Electric Vehicle and Electronic Products Testing Center

The Company has established a battery testing center for electric vehicles and electronic products to test the efficiency and safety and for international standard battery certification. It is also aimed at promoting use of electric vehicles according to the 30@30 policy of the government, which encourages comprehensive production in the electric vehicle industry throughout the production chain with the target to have zero-carbon emission auto vehicles in a 30% proportion by 2030 (based on the data from the Energy Policy and Planning Office). Generally, battery is one of the hazardous products which require safety test on many aspects and certification before distribution. The testing standards vary by usage as well as user country. The Company's testing center aims to become an international testing hub for electric vehicle manufacturers in ASEAN and worldwide. It also plans to include testing for diverse sizes and usage of battery. The Company currently has high-technology machinery which enables testing in accordance with international standards and expects to commence the battery testing operation by 2023.

Nature of Products

"Battery Electric Vehicle and Electronic Products Testing Center" provides battery efficiency and safety testing service, and international standard certification service for both cell module and pack test. Its services are divided into two types as follows:

1. **Scientific test** which is categorized by properties of the testing substance including physical, chemical and electrical properties, and other tests such as short circuit, charging and releasing capacity, battery life, vibration, compaction, crash and fire resistance tests, etc.
2. **International standard test (Certification)** which is classified by applicable international standard, e.g., UN R100, TIS 2217-2548, etc. Each test item is indicated according to the main objectives of the relevant standard as certification for the battery efficiency and safety before distribution for use of the product.

Promotional privileges and benefits

Battery Electric Vehicle and Electronic Products Testing Center Co., Ltd. has been granted promotion privileges from the Board of Investment (BOI) according to the Investment Promotion Act, Investment Promotion Section 7.14 Scientific Laboratories Promotion Card No. 64-1069-1-00-2-0. The Board has been approved on 30 August 2021 and granted tax benefits from the Board of Investment (BOI) not more than 100% of investment for 8 years.

Market and Competition

For battery safety standard in Thailand, the Thai Industrial Standards Institute (TISI) issued the Draft TISI 2217-2548 as safety standard for battery cells and secondary battery containing electrolyte alkaline or other non-acid electrolyte for portable use. It also prescribes certification symbol on battery for sale and use in Thailand. The Company has procured the tools

and equipment for such domestic standard certification and planned to expand the scope of testing capacity to cover other international testing standards in the future. At present, the Company's battery, electric vehicle and electronic products testing center has received accreditation for testing laboratories according to the ISO/IEC 17025-2018 from Thai Industrial Standards Institute on January 24, 2023 which would enhance confidence in the results of its laboratory testing of products.

2. Research and Development

The company established subsidiaries to conduct research and development of products related to palm oil, lithium-ion batteries, and electric vehicles, involving electric cars, electric ferries and battery locomotive. This serves as an extension of development to launch new innovative products, improve the potential and quality of existing products, and boost the competitiveness of the group on a long-term sustainable basis.

Nature of research and development

Green Technology Research Company Limited:

Established to develop and conduct research works on innovation to pursue development and add value to Thai agricultural products. The Company's products or services involve the manufacturing processes from palm-related raw materials for higher value added. The manufacturing processes innovated can be registered for patents. The target customers are companies in its Group. Such as Green Diesel projects and Phase Change Material (PCM) which is the new research and development under Biodiesel business for value adding of crude palm oil using as substrate consisting of

- (1.) Green Diesel (GD) products: for blending with diesel fuel to enhance the efficient and engine performance.
- (2.) Phase Change Material (PCM) is a substance which releases/absorbs sufficient energy at phase transition to provide useful heat/cooling. The PCM is used in many commercial applications where stable temperature is required such as being a component of building materials or fabric fibers. The demanding of PCM is increased in the countries with inclement weather.

Mine Mobility Research Company Limited:

Develop and invent research in electric vehicles, such as electric cars, electric passenger ferry, and Battery Locomotive and battery system in order to expand the technology of electric vehicles to respond to the needs of the customer under the concept of "MISSION NO EMISSION". The "Zero Pollution Mission" is aimed and focused on vehicles without pollution and being the environmental friendly, economical, and safe. This is also easy to maintain in the long-term so that Thais can use electric cars and electric passenger ferry with high quality and to transform Thailand into an innovative city without pollution in the future. According to the "Zero Pollution" intention, we have been developing the research center for electric cars under the name "MINE Mobility" in line with Electric Vehicle (EV) Solution, with a focus on pollution-free innovation, with its subsidiary, Mine Mobility Corporation Co., Ltd., as a manufacturer, distributor, and manufacturer of electric vehicles and electric vehicle parts. In recent years, the company designed, developed and manufactured the electric passenger ferry using an 800 kWh lithium-ion battery, which can support maximum speed charging from the DC Fast Charge charger with a total power of more than 3 megawatts as an energy source to drive electric motors under the name "MINE SMART FERRY". By 2022 the Company developed Battery Locomotive using 821 kWh lithium-ion battery and Powercar using 3.2 MWh lithium-ion battery and Develop Charging station for Battery Locomotive which can support fully charge within 1 hour.

1.2.3 Operating assets

1. Operating assets for the Company and its subsidiaries

Operating assets for the Company and its subsidiaries are property, plant and equipment as of 31 December 2022 as follows:

Table of operating assets as at 31 December 2022

Type of asset	Owner	Pledged as collateral	NBV as of 31 December 2022 (Million Baht)	Type of asset
1. Land comprise of			2,125.57	
1.1 Land with the total area of 30-1-80 rai, located at 507 Moo 9 Soi 7, Kabinburi Industrial Zone, Kabin Buri-Nakhon Ratchasima Road, Nong Ki Subdistrict, Kabin Buri District, Prachinburi Province	The Company	No pledge		<ul style="list-style-type: none"> Location of biodiesel plant and purified glycerin and warehouse
1.2 Land for the solar power plant project with the total area of 315-3-20 rai, located in Phatthana Nikhom District, Lopburi Province	EA Solar Co., Ltd.	No pledge		<ul style="list-style-type: none"> Location of 8MW solar power plant
1.3 Land for the solar power plant project, with total area of 1,894-1-76 rai, located at located in Nakhon Sawan Province	The Company	No pledge		<ul style="list-style-type: none"> Location of 90MW solar power plant
1.4 Land for the solar power plant project, with the total area of 2,477-3-60.09 rai, located in Lampang Province	The Company	No pledge		<ul style="list-style-type: none"> Location of 90MW solar power plant
1.5 Land for the solar power plant project, with the total area of 2,279-0-45 rai, located in Phitsanulok Province	The Company	No pledge		<ul style="list-style-type: none"> Location of 90MW solar power plant
1.6 Land for the wind power plant project, with the total area of 62-3-46 rai, located in Chaiyaphum Province	The Company	No pledge		<ul style="list-style-type: none"> Location of wind power plant
1.7 Land for the wind power plant project, with the total area of 127-2-73 rai, located in Songkhla Province	The Company and EA Wind Hadkanghan 3 Co., Ltd.	No pledge		<ul style="list-style-type: none"> Location of wind power plant
1.8 Land for the wind plant project, with the total area of 853-0-68.8 rai, located in Nakhon Si Thammarat Province	The Company and EA Wind Hadkanghan 3 Co., Ltd.	No pledge		<ul style="list-style-type: none"> Location of wind power plant
1.9 Land with the total area of 1,810-2-16 rai, located in Map Ta Phut Industrial Estate, Rayong Province	EA Bio Innovation Co., Ltd.	Pledged as collateral		<ul style="list-style-type: none"> Location of PCM plant and warehouse

Type of asset	Owner	Pledged as collateral	NBV as of 31 December 2022 (Million Baht)	Type of asset
1.10 Land located in Ban Pho, Chachoengsao Province, with the total area of 73-0-37 rai	Mine Mobility Corporation Co., Ltd	Pledged as collateral		• Location of electric vehicle assembly and battery plant
1.11 Land with the total area of 147-3-117 rai, located in Kanchanadit, Surat Thani Province	Kanjanadit Palm Oil Co., Ltd.	No pledge		• Location of CPO and Biogas plant
1.12 Land with the total area of 140-0-0.1 rai, located in Plai, Krabi Province	Larp Pakdee Palm Co., Ltd.	Pledged as collateral		• Location of CPO plant

Type of asset	Company name	Pledged as collateral	NBV as of 31 December 2022 (Million Baht)	Type of asset
2. Buildings and building improvement	The Company	- No -	51.80	used in operations and rental
	EA Solar Co., Ltd.	- No -	6.06	used in operations
	EA Solar Nakornsawan Co., Ltd.	- No -	99.53	used in operations
	EA Solar Lampang Co., Ltd.	- No -	97.85	used in operations
	EA Solar Phitsanulok Co., Ltd.	- No -	118.93	used in operations
	EA Wind Hadkanghan 3 Co., Ltd.	- No -	84.77	used in operations
	Banchuan Development Co., Ltd.	- No -	68.36	used in operations
	EA Bio Innovation Co., Ltd.	Pledged as collateral limit total amount THB 962 million	200.35	used in operations
	Mine Mobility Corporation Co., Ltd.	Pledged as collateral limit total amount THB 1,200 million	233.97	used in operations and rental
	Kanjanadit Palm Oil Co., Ltd.	- No -	84.83	used in operations
	Larp Pakdee Palm Co., Ltd.	Pledged as collateral limit total amount THB 310.85 million	92.34	used in operations
	Absolute Assembly Co., Ltd.	- No -	1,089.41	used in operations
	Amita Technologies Inc. and its subsidiaries	- No -	3,518.96	used in operations
	Group of company	- No -	194.85	used in operations
3. Machine	The Company	- No -	63.94	used in operations
	Energy Solution Management Co., Ltd.	- No -	4.12	used in operations and rental
	Energy Mahanakhon Co., Ltd.	- No -	373.95	used in operations
	Amita Technologies Inc. and its subsidiaries	- No -	3,147.20	used in operations

Type of asset	Company name	Pledged as collateral	NBV as of 31 December 2022 (Million Baht)	Type of asset
	Green Technology Research Co., Ltd.	- No -	40.98	used in operations
	Mine Mobility Research Co., Ltd.	- No -	81.48	used in operations
	EA Bio Innovation Co., Ltd.	Pledged as collateral limit total amount THB 962 million	882.87	used in operations
	Mine Mobility Corporation Co., Ltd.	Pledged as collateral limit total amount THB 1,200 million	268.29	used in operations
	Kanjanadit Palm Oil Co., Ltd.	- No -	84.83	used in operations
	Larp Pakdee Palm Co., Ltd.	- No -	183.54	used in operations
	Absolute Assembly Co., Ltd.	- No -	796.12	used in operations
	Group of company	- No -	92.36	used in operations
4. Power plant, substation, transmission line and parts	EA Solar Nakornsawan Co., Ltd.	Pledged as collateral limit total amount THB 6,732 million	4,754.15	used in operations
	EA Solar Lampang Co., Ltd.	Pledged as collateral limit total amount THB 6,509 million	4,786.01	used in operations
	EA Solar Phitsanulok Co., Ltd.	Pledged as collateral limit total amount THB 7,024 million	2,989.99	used in operations
	EA Wind Hadkanghan 3 Co., Ltd.	Pledged as collateral limit total amount THB 5,363 million	8,631.41	used in operations
	EA Solar Co., Ltd.	- No -	407.19	used in operations
	Banchuan Development Co., Ltd.	- No -	5,347.53	used in operations
	Benjarat Development Co., Ltd.	- No -	2,582.37	used in operations
	Pongnok Development Co., Ltd.	- No -	2,997.48	used in operations
	Nayangklak Development Co., Ltd.	- No -	2,830.96	used in operations
	Nayangklak Wind Power Co., Ltd.	- No -	2,820.99	used in operations
5. Office equipment, furniture and motor vehicles	Group of company	- No -	167.54	used in operations

2. Intangible Assets

The intangible assets of the Company and its subsidiaries as of 31 December 2022 as the below;

Unit: THB Million

Type of Intangible Assets	List of Intangible Assets	Book Value as of 31 Dec 2022
Right to power purchase agreement	Group of company	25.13
Right to use transmission line and substation	EA Solar Co., Ltd.	8.79
	EA Solar Nakornsawan Co., Ltd.	124.29
	EA Solar Lampang Co., Ltd.	128.93
	EA Solar Phitsanulok Co., Ltd.	197.96
	EA Wind Hadkanghan 3 Co., Ltd.	269.80
	Benjarat Development Co., Ltd.	114.02
	Nayangklak Wind Power Co., Ltd.	120.61
	Nayangklak Development Co., Ltd.	191.92
	Pongnok Development Co., Ltd.	93.35
	Banchuan Development Co., Ltd.	236.12
Computer software	Group of company	66.29
Trademark	Group of company	216.29
Patents	Group of company	636.90
Intangible assets under development	Group of company	197.95
Total		2,628.35

1.3 Shareholding Structure of EA Group

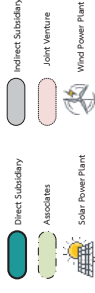
1.3.1 Shareholding Structure of EA Group

Energy Absolute Public Company Limited, Thailand's leading company for green energy and green energy development, began in 2006 under the name of Sun Tech Palm Oil Co., Ltd. The Company began operating in the bio-diesel business in 2008, and since 2011 expanded into solar and wind energy. The Company currently operates 4 major businesses, which can be attributed to

- (1) **Biodiesel Business** – To produce and distribute Biodiesel (B100), Green Diesel, Purified Glycerin, Byproducts and Phase Change Material (PCM).
- (2) **Renewable Power Plant Business** – To generate electricity from solar power plants and wind power plants and distributed to the Electricity Generating Authority of Thailand (EGAT) and the Provincial Electricity Authority (PEA).
- (3) **Electric Vehicle and Energy Storage System** – Continuation of the Company's development in the Lithium-ion battery and energy storage system corresponds with the EA Anywhere policy, which aims to use green energy to power the automotive industry. This includes promoting green energy in electric vehicles such as commercial electric vehicles, electric ferries, electric cars, and electric locomotives and power car.
- (4) **Other business** – To expand its business operations to Battery Electric Vehicle and Electronic Products Testing Center for performance and safety testing and for international standard certification of batteries, including research and development of products relate to palm oil, lithium-ion batteries, electric vehicles and household, Industrial and other wastes disposal business.

The operations of the companies in the group are divided as follows:

As of 31 December 2022



Energy Absolute Public Company Limited

Information of companies which the Company holds shares more than 10 percent of total paid up capital

As of December 31, 2022, The Company had 63 subsidiaries (comprising 23 Direct Subsidiaries and 40 Indirect Subsidiaries) 5 associated companies and 2 Joint Ventures. Details are as follows:

Company Name		Abbrev.	Registered Capital (THB)	Number of Shares sold (share)	Shareholding ratio* (Direct / Indirect) (Percent)	Office Location
Biodiesel Business						
Subsidiaries (Direct)						
1.	EA Bio Innovation Co., Ltd.	EBI	400,100,000	40,010,000	99.99	No. 89 AIA Capital Center Building, 16th Floor, Din Dang Sub-District, Din Dang District, Bangkok 10400
2.	EA Palm Network Co., Ltd.	EPN	1,200,000,000	120,000,000	99.99	Tel : +66 2248 2488-92, +66 2002 3667-9 Fax : +66 2248 2493
Subsidiaries (Indirect)						
3.	Combine Energy Tech Co., Ltd.	CET	181,000,000	1,810,000	70.00	No. 89 AIA Capital Center Building, 16th Floor, Din Dang Sub-District, Din Dang District, Bangkok 10400 Tel : +66 2248 2488-92, +66 2002 3667-9 Fax : +66 2248 2493
4.	Larp Pakdee Palm Co., Ltd.	LPD	310,000,000	3,100,000	74.99	No. 456 Moo 3 Khao Khen Sub-district, Plai Phraya District, Krabi Province 81160 Tel : 075 656 598, Fax : 075 6569 597
5.	Kanjanadit Palm Oil Co., Ltd.	KJD	195,000,000	1,950,000	75.00	No. 179/1 Tha U Thae Sub-district, Kanchanadit District, Suratthani Province 84160 Tel : 077 953 012, Fax : 077 953 012

Company Name		Abbrev.	Registered Capital (THB)	Number of Shares sold (share)	Shareholding ratio* (Direct / Indirect) (Percent)	Office Location
Renewable Power Plant Business						
Subsidiaries (Direct)						
6.	Surachai (1997) Co., Ltd.	SU97	190,500,000	190,500	99.90	No. 89 AIA Capital Center Building, 16th Floor, Din Dang Sub-District, Din Dang District, Bangkok 10400 Tel : +66 2248 2488-92, +66 2002 3667-9 Fax : +66 2248 2493
7.	EA Renewable Holding Co., Ltd.	ERH	7,429,200,000	742,920,000	99.99	
8.	EA Solar Nakornsawan Co., Ltd.	ESN	5,590,000,000	559,000,000	99.99	
9.	Thepsathit Wind Farm Co., Ltd.	TWF	180,000,000	1,800,000	99.99	
10.	Wind Nayangklak Co., Ltd.	WNYK	1,879,500,000	187,950,000	99.99	
11.	Wind Progressive Co., Ltd.	WPGS	1,879,500,000	187,950,000	99.99	
12.	Wind Tossaphum Co., Ltd.	WTSP	1,670,000,000	167,000,000	99.99	
Subsidiaries (Indirect)						
13.	EA Solar Co., Ltd.	ESLO	550,000,000	5,500,000	Direct: 49.00 Indirect: 51.00	No. 89 AIA Capital Center Building, 16th Floor, Din Dang Sub-District, Din Dang District, Bangkok 10400 Tel : +66 2248 2488-92, +66 2002 3667-9 Fax : +66 2248 2493
14.	Surachai (1997) Solar Co., Ltd.	SUSO	179,500,000	179,500	99.99	
15.	EA Solar Lampang Co., Ltd.	ESL	2,125,000,000	212,500,000	99.99	
16.	EA Solar Phitsanulok Co., Ltd.	ESP	2,125,000,000	212,500,000	99.99	
17.	EA Wind Hadklanghan 2 Co., Ltd.	EWHK 2	180,000,000	18,000,000	99.99	
18.	EA Wind Hadklanghan 3 Co., Ltd.	EWHK 3	3,120,000,000	312,000,000	99.99	
19.	Nayangklak Development Co., Ltd.	NYKD	939,000,000	93,900,000	99.99	
20.	Nayangklak Wind Power Co., Ltd.	NWP	939,000,000	93,900,000	99.99	
21.	Benjarat Development Co., Ltd.	BJRD	876,000,000	87,600,000	99.99	
22.	Pongnok Development Co., Ltd.	PND	1,002,000,000	100,200,000	99.99	
23.	Banchuan Development Co., Ltd.	BCD	1,669,000,000	166,900,000	99.99	
24.	Subyai Wind Farm(1) Co., Ltd.	SWF	180,000,000	1,800,000	99.99	
25.	Wind Khonkaen 1 Co., Ltd.	WKK1	180,000,000	18,000,000	99.99	
26.	Wind Khonkaen 2 Co., Ltd.	WKK2	180,000,000	18,000,000	99.99	
27.	Wind Kalasin 1 Co., Ltd.	WKS1	180,000,000	18,000,000	99.99	

Company Name		Abbrev.	Registered Capital (THB)	Number of Shares sold (share)	Shareholding ratio* (Direct / Indirect) (Percent)	Office Location
28.	Wind Kalasin 2 Co., Ltd.	WKS2	180,000,000	18,000,000	99.99	No. 89 AIA Capital Center Building, 16th Floor, Din Dang Sub-District, Din Dang District, Bangkok 10400
29.	Wind Mahasarakham 1 Co., Ltd.	WMHK1	180,000,000	18,000,000	99.99	Tel : +66 2248 2488-92, +66 2002 3667-9 Fax : +66 2248 2493
30.	Wind Mahasarakham 2 Co., Ltd.	WMHK2	180,000,000	18,000,000	99.99	
31.	Wind Mahasarakham 3 Co., Ltd.	WMHK3	180,000,000	18,000,000	99.99	
32.	Wind Ubol Ratchathani 1 Co., Ltd.	WUBON1	180,000,000	18,000,000	99.99	
33.	Wind Amnatcharoen 1 Co., Ltd.	WAMR1	180,000,000	18,000,000	99.99	
34.	EA Station Co., Ltd.	EAST	180,000,000	18,000,000	99.99	
35.	Ettulosba Energy 1 Co., Ltd.	ETB1	180,000,000	18,000,000	99.99	
36.	Ettulosba Energy 2 Co., Ltd.	ETB2	180,000,000	18,000,000	99.99	
37.	Ettulosba Energy 3 Co., Ltd.	ETB3	180,000,000	18,000,000	99.99	
38.	Ettulosba Energy 4 Co., Ltd.	ETB4	180,000,000	18,000,000	99.99	
39.	Ettulosba Energy 5 Co., Ltd.	ETB5	180,000,000	18,000,000	99.99	
Electric Vehicle and Energy Storage System						
Subsidiaries (Direct)						
40.	EA Futura Co., Ltd.	EAF	180,000,000	18,000,000	99.99	No. 89 AIA Capital Center Building, 16th Floor, Din Dang Sub-District, Din Dang District, Bangkok 10400
41.	EA Mobility Holding Co., Ltd.	EMH	7,963,470,000	796,347,000	99.99	Tel : +66 2248 2488-92, +66 2002 3667-9 Fax : +66 2248 2493
42.	Energy Mahanakhon Co., Ltd.	EMN	200,000,000	20,000,000	Direct : 50.00 Indirect: 2.11	
43.	Amita Technologies Inc.	Amita Taiwan	3,500,000,000 / ¹	277,249,406	Direct : 62.53 Indirect : 8.67	No. 6, Chazhuan Road, Gueishan, Taoyuan County 33349, Taiwan Tel : +886-3-2631212 #133 Fax : +886-3-3-3200638 Website : www.amitatech.com

Remark: /¹ Taiwan Dollar /² Singapore Dollar /³ United States Dollar

* The Company holds shares through direct and indirect subsidiaries. Details of Group's Shareholding Structure also appear in page 57

Company Name		Abbrev.	Registered Capital (THB)	Number of Shares sold (share)	Shareholding ratio* (Direct / Indirect) (Percent)	Office Location
Subsidiaries (Indirect)						
44.	Mine Mobility Corporation Co., Ltd.	MMC	665,000,000	66,500,000	99.99	No. 89 AIA Capital Center Building, 16th Floor, Din Dang Sub-District, Din Dang District, Bangkok 10400
45.	Absolute Assembly Co., Ltd.	AAB	1,500,000,000	150,000,000	54.99	
46.	Paypop Co., Ltd.	POP	1,250,100,000	125,010,000	99.99	Tel : +66 2248 2488-92, +66 2002 3667-9 Fax : +66 2248 2493
47.	E Transport Holding Co., Ltd.	ETH	280,000,000	28,000,000	99.99	
48.	Amita Technology (Thailand) Co., Ltd.	Amita-TH	3,500,000,000	350,000,000	99.99	
49.	AMITA NEW TECHNOLOGY PTE. LTD.	Amita-SG	110,301,031 ³	110,301,031	100	No.1 Robinson Road #17-00 AIA Tower Singapore (048542)
Other Businesses						
Subsidiaries (Direct)						
50.	Smart Waste Management Co., Ltd.	SWM	50,000,000	5,000,000	99.99	No. 89 AIA Capital Center Building, 16th Floor, Din Dang Sub-District, Din Dang District, Bangkok 10400
51.	EA Waste Management Co., Ltd.	EWM	950,100,000	95,010,000	99.99	
52.	Energy Solution Management Co., Ltd.	ESM	530,000,000	5,300,000	99.99	Tel : +66 2248 2488-92, +66 2002 3667-9 Fax : +66 2248 2493
53.	Battery Electric Vehicle and Electronic Products Testing Center Co., Ltd.	BEV	175,000,000	17,500,000	Direct : 50.00 Indirect: 47.99	
54.	Emma Corporation Co., Ltd.	EMMA	100,000	1,000	50.00	
55.	Green Technology Research Co., Ltd.	GTR	112,000,000	11,200,000	99.99	
56.	Mine Mobility Research Co., Ltd.	MMR	440,000,000	44,000,000	99.99	
57.	Energy Beyond Research Co., Ltd.	EBR	180,000,000	18,000,000	99.99	
58.	EA CON DAO (SG) PTE. LTD.	EA Con Dao	10,000 ²	10,000	95.00	No. 8 MARINA BOULEVARD #05-02 MARINA BAY FINANCIAL CENTRE SINGAPORE (018981)
59.	EA BVI Holding Limited	BVI Holding	500,000 ³	50,000	100	Tortola Pier Park, Building 1 Second Floor, Wickhams Cay I, Road Town, Tortola, British Virgin Islands

Remark: ¹ Taiwan Dollar ² Singapore Dollar ³ United States Dollar

* The Company holds shares through direct and indirect subsidiaries. Details of Group's Shareholding Structure also appear in page 57

	Company Name	Abbrev.	Registered Capital (THB)	Number of Shares sold (share)	Shareholding ratio* (Direct / Indirect) (Percent)	Office Location
Subsidiaries (Indirect)						
60.	Sun Field Investments Co., Ltd.	Sun Field	10,000,000 / ³	10,000,000	100	No. 89 AIA Capital Center Building, 16th Floor, Din Dang Sub-District, Din Dang District, Bangkok 10400
61.	EA Waste Management Phuket Co., Ltd.	EWMP	500,000,000	50,000,000	90.00	
62.	EA (BVI) 1 Limited	BVI 1	8,230,000 / ³	823,000	100	
63.	EA (BVI) 2 Limited	BVI 2	30,000 / ³	3,000	100	Tel : +66 2248 2488-92, +66 2002 3667-9 Fax : +66 2248 2493
Associates						
64.	Wan Meng Automatic Precision Co., Ltd.	Wan Meng	100,000,000 / ¹	4,135,400	36.04	58-1,Alley 289, Lane 68, Ming Fu Rd. Sec. 3, Yangmay, Taoyuan, Taiwan
65.	NEX Point Public Company Limited	NEX	1,897,833,514	1,674,452,510	40.01	No. 999/999 Moo 4, Bangchalong Sub-district, Bang Phli District, Samulprakra Province Tel : +66 2026 3599 Fax : +66 2116 4878
66.	TF Tech Holding Co., Ltd.	TFTH	200,000,000	2,000,000	40.00	No. 1010 Shinawatra Tower 3, 12 th Floor, Vibhavadi Rangsit Road, Chatuchak Sub-district, Chatuchak District, Bangkok 10900 Tel : +66 2513 8989 Fax : +66 2513 9060
67.	Agro Clean Co., Ltd.	AGC	5,000,000	500,000	49.99	No. 125 The Punn Building, 8 th Floor, Khlong Lamchiak Street, Nawamin Sub-district, Bueng Kum District, Bangkok 10230 Tel : 0 2943 9600 Fax : 0 2943 9611
68.	Beyond Securities PLC.	BYD	27,511,712,220	4,226,240,647	23.63	No. 46/7 Rungrorjthanakul building.11-12 th Floor Ratchadapisek Street, Huaikwang Sub-district, Huaikwang District 10310 Tel : 0 2820 0100

Remark: /¹ Taiwan Dollar /² Singapore Dollar /³ United States Dollar

* The Company holds shares through direct and indirect subsidiaries. Details of Group's Shareholding Structure also appear in page 57

Joint Venture		Company Name	Abbrev.	Registered Capital (THB)	Number of Shares sold (share)	Shareholding ratio* (Direct / Indirect) (Percent)	Office Location
69.		Shenzhen Atess Power Technology Co., Ltd.	Atess Power	3,600,000 USD	The Company's investment amount is 1,387,500 USD	38.58	Room 203, 2 nd Floor, Building 5 Jiayu Industry Park, No. 28 Guangming, Xibianling, Shangwu Village, Shiyan Street, Baoan District, Shenzhen China
70.		Ranong Clean 2021 Co., Ltd.	RCN	100,000,000	1,000,000	50.00	No. 87/142 Tha Mueang Road, Khao Niwet Sub- district, Mueang Ranong District, Ranong Province. Tel. : 089 814 8019

Remark: ¹ Taiwan Dollar ² Singapore Dollar ³ United States Dollar

* The Company holds shares through direct and indirect subsidiaries. Details of Group's Shareholding Structure also appear in page 57

1.3.2 Parties with Conflict of Interest

- None -

1.3.3 Shareholders

The first 10 major shareholders as at December 30, 2022

Name of Shareholders	As at December 30, 2022	
	Number of shares	Shareholding Percentage
1. Group of "Ahunai"	1,618,154,230	43.3822
1.1 Mr. Somphote Ahunai	0	0.0000
1.2 Sotus & Faith#1 ^{2/}	100,000,000	2.6810
1.3 Sotus & Faith#1 ^{2/} (held under Custodian - UBS AG SINGAPORE BRANCH)	420,206,386	11.2656
1.4 Sotus & Faith#1 ^{2/} (held under Custodian - MORGAN STANLEY)	50,000,000	1.3405
1.5 Sotus & Faith#2 ^{2/} (held under Custodian - UBS AG SINGAPORE BRANCH)	3,372,000	0.0904
1.6 SPBL Holding Co.,Ltd. ^{3/}	936,230,000	25.1000
1.7 Mrs. Blanca Shulan Huang	24,983,607	0.6698
1.8 Mr. Aek Ahunai	12,000	0.0003
1.9 Mr. Somboon Ahunai	6,992,951	0.1875
1.10 Ms. Supaporn Ahunai	23,997,049	0.6434
1.11 Mr. Julin Ahunai	16,800,000	0.4504
1.12 Mrs. Wilai Ahunai	4,800,000	0.1287
1.13 Mr. Pholsith Ahunai	14,687,237	0.3938
1.14 Mr. Peeraphol Ahunai	16,073,000	0.4309
2. UBS AG SINGAPORE BRANCH^{4/} (excluded shares held under 1.3, 1.5 and 5.2)	478,086,593	12.8173
3. Thai NVDR Co., Ltd.^{5/}	354,798,551	9.5120
4. Group of "Chiannilkulchai"	166,977,992	4.4766
4.1 Mrs. Mukda Boonsieng	151,645,143	4.0656
4.2 Mr. Wutthilerd Chiannilkulchai	15,332,849	0.4111
5. Group of "Sapthaweeikul"	140,875,009	3.7768
5.1 Mr. Amorn Sapthaweeikul	72,968,316	1.9563
5.2 Mr. Amorn Sapthaweeikul (held under Custodian - UBS AG SINGAPORE BRANCH)	17,000,000	0.4558
5.3 Mr. Amorn Sapthaweeikul (held under Custodian - LGT BANK (SINGAPORE) LTD)	10,000,000	0.2681
5.4 Ms. Wassa Rimchala	25,823,087	0.6923
5.5 Mr. Anat Sapthaweeikul	15,083,606	0.4044

Name of Shareholders	As at December 30, 2022	
	Number of shares	Shareholding Percentage
6. Mr. Luchai Pukan-Anan	103,622,800	2.7781
7. Group of “Noparumpa”	69,450,000	1.8619
7.1 Ms. Ploysongsang Noparumpa	64,069,700	1.7177
7.2 Mr. Teerapon Noparumpa	107,900	0.0029
7.3 Mr. Tim Noparumpa	5,272,400	0.1414
8. SOUTH EAST ASIA UK (TYPE C) NOMINEES LIMITED ^{6/}	63,322,571	1.6977
9. STATE STREET EUROPE LIMITED ^{6/}	51,231,885	1.3735
10. Mr. Somkiat Thanatcharoenkul	36,221,900	0.9711

Remarks :1/ There is no cross-shareholding between the Company and its major shareholders.

2/ Sotus and Faith #1 Limited and Sotus & Faith#2 Limited (“Sotus”); the trust that was established by Mr.Somphote Ahunai (Ultimate Beneficial Owner)

3/ The company limited registered under the Law of Thailand, 99.99% shares held by Mr.Somphote Ahunai.

4/ The company is registered under the Law of Switzerland and invests in the SET without disclosing that its investment is neither for itself nor for others. EA is not authorized to request for the aforementioned disclosure.

5/ NVDR is a subsidiary wholly owned by the SET. The NVDR is a security automatically listed by the SET. By investing in NVDRs, the investors receive the same financial benefits, as those who invest directly in the Company’s ordinary shares. The only difference between investing in the NVDR and the Company’s ordinary shares is that NVDR holders do not have the rights to vote.

6/ The company is registered under the Law of Great Britain and invests in the SET without disclosing that its investment is neither for itself nor for others. EA is not authorized to request for the aforementioned disclosure.

The Management

There is no significant change in the management of the Company and the Company Group. In other word, since the establishment of the Company until present, Mr. Somphote Ahunai still holds the positions in the Company as follows:

- | | |
|--|--|
| 1) An authorized signatory director | 3) Chairman of the Executive Committee |
| 2) Vice Chairman of the Board of Directors | 4) Chief Executive Officer |

Shareholders’ Agreement which might affect the offering of securities or the management function of the Company

-None-

1.4 Registered Capital and Paid-up Capital

Energy Absolute Public Company Limited (EA) is a listed company on the Stock Exchange of Thailand with a total registered capital of THB 373,000,000 as at December 31, 2021, fully paid up and divided into a total of 3,730,000,000 ordinary shares with a par value of THB 0.10 per share.

In addition, the Company registered the company's registered capital from the existing registered capital of THB 373,000,000 to new registered capital of THB 402,000,000 with the Department of Business Development, Ministry of Commerce on February 9, 2022.

1.5 Issuance of Other Securities

1.5.1 Convertible Securities

- None -

1.5.2 Debt Securities

Debentures

As at December 31, 2022, the Company had the outstanding debenture and bill of exchange value Baht 20,050 million as details below:

1. Debentures No. 1/2019 unsubordinated and unsecured debentures in registered name form with debenture holder representative.

Symbol	Issuance Date	Maturity Date	Amount (THB million)	Annual coupon rate (%) (payment frequency)	Company Credit Rating / Issue Rating
Tranche 2 (EA297A)	July 11, 2019	July 11, 2029	2,000	3.61 (Semi-annually)	A / A ⁺

2. Debentures No. 2/2019 unsubordinated and unsecured debentures in registered name form with debenture holder representative.

Symbol	Issuance Date	Maturity Date	Amount (THB million)	Annual coupon rate (%) (payment frequency)	Company Credit Rating / Issue Rating
Tranche 2 (EA248A)	15 August 2019	15 August 2024	1,500	3.11 (Semi-annually)	A / A ⁺
Tranche 3 (EA298A)	15 August 2019	15 August 2029	2,000	3.58 (Semi-annually)	A / A ⁺

3. Debentures No. 3/2019 unsubordinated and unsecured debentures in registered name form without debenture holder representative.

Symbol	Issuance Date	Maturity Date	Amount (THB million)	Annual coupon rate (%) (payment frequency)	Company Credit Rating / Issue Rating
EA260A	October 16, 2019	October 16, 2026	3,000	2.744 (Semi-annually)	A / A ⁺

4. Debentures No. 1/2020 unsubordinated and unsecured debentures in registered name form with debenture holder representative.

Symbol	Issuance Date	Maturity Date	Amount (THB million)	Annual coupon rate (%) (payment frequency)	Company Credit Rating / Issue Rating
Tranche 2 (EA237A)	July 10, 2020	July 10, 2023	1,000	2.94 (Semi-annually)	A / A ⁺
Tranche 3 (EA257A)	July 10, 2020	July 10, 2025	700	3.30 (Semi-annually)	A / A ⁺

5. Debentures No. 1/2022 unsubordinated and unsecured debentures in registered name form with debenture holder representative.

Symbol	Issuance Date	Maturity Date	Amount (THB million)	Annual coupon rate (%) (payment frequency)	Company Credit Rating / Issue Rating
Tranche 1 (EA259A)	8 September 2565	8 September 2025	1,250	2.99 (Semi-annually)	A / A ⁺
Tranche 2 (EA279A)	8 September 2565	8 September 2027	750	3.51 (Semi-annually)	A / A ⁺
Tranche 3 (EA299A)	8 September 2565	8 September 2029	1,400	3.97 (Semi-annually)	A / A ⁺
Tranche 4 (EA329A)	8 September 2565	8 September 2032	1,700	4.19 (Semi-annually)	A / A ⁺

6. Bill of Exchange (B/E)

Symbol	Issuance Date	Maturity Date	Amount (THB million)	Annual coupon rate (%) (payment frequency)	Company Credit Rating / Issue Rating
EA23210A	10 August 2022	10 February 2023	750	1.40	A / Non rated
EA23110A	12 October 2022	10 January 2023	1,000	1.45	A / Non rated
EA23206A	2 November 2022	6 February 2023	750	1.65	A / Non rated
EA23130A	2 November 2022	30 January 2023	1,000	1.65	A / Non rated
EA23314A	13 December 2022	14 March 2023	1,000	1.80	A / Non rated
EA23330A	26 December 2022	30 March 2023	250	1.80	A / Non rated

1.6 Dividend Policy

Dividend Policy of the Company

The Company has a policy to pay the annual dividends to shareholders at minimum of 30 percent of net profit after deduction of all income tax and reserves as specified in the articles of association and by the laws. Payment of dividends is subject to the cash flow, investment plans, conditions and requirements of company's contracts including legal limitations and other appropriateness in the future. The Board of Directors may consider paying the annual dividends with approval from the Annual General Meeting of Shareholders (AGM), except interim dividend payment which the Board of Directors has the authority to approve before reporting the interim dividend to the shareholders at the next shareholders' meeting.

Dividend Payment (THB/share) for the year 2019 to year 2021

Dividend Payment (THB/share)	year 2019	year 2020	year 2021
Net Profit per share (THB : share)	1.05	0.90	0.72
Dividend rate per share (THB : ordinary share)	0.30	0.30	0.30
Dividend Payout Ratio per Net Profit (%)	28.63	33.32	41.89

Remark : Separate Financial Statements

Subsidiaries' Dividend Policy

The dividend payment of subsidiaries is according to the articles of association and as specified by laws. Regarding to the subsidiaries established for conducting solar power plant business, the consideration must base on conditions of the loan contract and debt service coverage ratio (DSCR).



Risk Management

2. Risk Management

2.1 Risk Management Policy and Plan

Energy Absolute Public Company Limited (“the Company”) recognizes the importance of risk management as part of good corporate governance and a significant foundation to bring the Company toward the expected achievements of its objectives. Proper risk identification and management will support good decision making and enable the Company to perceive opportunities and be aware of any possible impacts on its operation.

The Company has put in place organization risk management covering risk identification, risk assessment, determination of risk management plan, as well as monitoring and management of key risks in overall to ensure efficiency and effectiveness of its risk management. The Risk Management Committee has prepared risk management handbook so that the Risk Management Working Group will understand the risk assessment guidelines and perform risk monitoring, status report, and consistent review of the adequacy and efficiency of risk management measures to allow for the Company’s timely and appropriate risk management.

The Risk Management Working Group shall report the risk status to the Risk Management Committee on a regular basis. In case of an incident that has material impact on the Company’s operation, the Risk Management Working Group shall immediately report such incident to top executives and Chairman of the Risk Management Committee. Meanwhile, risk management culture shall also be fostered constantly among the management and the employees.

2.2 Risk Factors

The Company recognizes and gives importance to management of risks in all perspectives under changing circumstances from both internal and external factors which may affect its business operation. This aims to build confidence among its stakeholders, and enable smooth and continuous operation as planned, and with highest efficiency according to the objective of being a leader in alternative energy business by using the modern technology and environmentally friendly for the best benefit of consumers, shareholders, partners, and fairness to employees. Major risks in the year in subject which may affect business operation of the Company and its group of companies can be divided into 7 areas as follows:

1. Strategic Risk

Risk from dependence on key executives

The Company’s energy business operation has been developed and grown under the management of major shareholders and key executives, namely Mr.Somphote Ahunai, Mr.Amorn Saphaweekul, and Mr.Wutthilerd Chiannilkulchai, who are authorized directors to sign on behalf of the Company, executive directors, and top executives. The three executives above are competent with in-depth knowledge, expertise, and experience in terms of both daily business operation and execution of projects according to the Company’s new business expansion plan towards energy industry.

However, realizing on the risk of dependence on the key executives, the Company’s management structure has been adjusted to be more systematic and professional by prioritizing and decentralizing certain parts of daily management tasks to various business units as well as allocating duties and responsibilities of the key executives explicitly to other executives and employees of each business unit. The Company has properly set the internal control, information storage and database

systems. Regular sharing and exchange of necessary and relevant news and information between executives and employees is also promoted. In addition, the Nomination Committee has given consent to the succession planning policy to strengthen and get the Group well-prepared. Also, the Executive Trainee Program has been launched to attract personnel with high potential to join the Group to succeed key personnel in major projects as new generation executives, which will help to drive the Group's business expansion both domestic and overseas.

Moreover, the Board of Directors has approved the establishment of Employee Trust to seek and provide additional long-term benefits to talented employees to motivate and retain them to work for the Group. This project is also aimed to inspire new hires for the Group in the future.

Risk from competition in the industries

Biodiesel manufacturing and distribution industry

Biodiesel manufacturing and distribution industry competition tends to intensify due to expansion of production capacity of existing manufacturers and market entry of newcomers. As such, the Company has to bear higher competition risk in the domestic market, such as offering discount on biodiesel prices announced by the government, etc. However, with awareness of the rising trend of competition, the Company has improved and developed its manufacturing process to cut cost per unit while maintaining product quality to be in line with the standards to ensure that the Company still has competitive advantage over its competitors, especially amid high competition situation, in parallel to product development to add value and differentiate its products from those of competitors until leads to achievement of the phase change material (PCM) and Green diesel development.

Green diesel and phase change material industry

Currently, European countries are trying to independence from petroleum fuels and strongly promoting the use of alternative energy, which has positively affected the green diesel industry in terms of increasing demand. Many manufacturers have plans to expand their production capacity to cover whole demand. However, green diesel product is produced from waste and residue raw materials which may shortage in the future. Therefore, we have researched and developed the technology for using wider types of alternative raw materials in the future. The green diesel product or HVO is now being traded through many major oil trading companies for keeping chance to capture several markets. Global environment situation and green policy is accelerating demand of Phase Change Material product ("PCM"). PCM industry has few competitors as PCM is a new product which needs technology support or specific knowledge to apply to special end products, so the company has developed academic research related to the product and deliver knowledge with technology to customers for expanding the market.

Renewable energy manufacturing and distribution industry

The Company recognized the importance of solar panel efficiency so the Company has changed all solar panels at the Solar Power Plant Project in Takhli district, Nakhon Sawan province, and more than half of solar panels at the Solar Power Plant Project in Mueang Lampang district, Lampang province, leading to more than 10% increase in efficiency compared to that of former solar panels. In addition, Thailand has been facing PM 2.5 problem which causes solar panels to get dirty quickly and prevents full light absorption. Therefore, the Company has applied cleaning robot for solar panels which ensures full light

absorption and increases productivity compared to the traditional cleaning method used in Thailand. As a result, the Company is able to steadily maintain its revenue from solar power generation business.

The Company's renewable power generation and distribution business has currently been granted tariff adder on renewable energy for a period of 10 years, starting from the commercial operation date (COD). The tariff adder for the solar power plant will gradually expire from 2022 until 2026, while that for the wind power plant will expire from 2027 until 2029, hence decrease in revenues from these projects in the future. The Company is thus conducting study and seeking investment opportunity for new power generation and distribution projects in order to earn more income in the future.

Electric Vehicle Manufacturing Industry:

With the government's focus on the National Strategy on Eco-friendly Development and Growth (data from the Office of the National Economics and Social Development Council) particularly when Thailand is facing PM 2.5 problem, demand for electric vehicles has been on the rise. Despite its popularity in many foreign countries, electronic vehicle technology is rather new to Thailand. Manufacturers need to be well-prepared in several technological aspects, e.g., body, battery, electric charger, etc. However, following the National Electric Vehicle Policy Committee ("EV Board") launch 30@30 Policy to driven the Low Carbon Society by becoming the global production base of electric vehicles and important parts or the center of the region (EV Hub) aiming to produce ZEV (Zero Emission Vehicle) at least 30 % of total vehicle production in 2030. In 2022, the new registration for BEV in Thailand totaled 20,817 units compared with the new registration in 2021 totaled 5,889 units. Nonetheless, the Group constructed an assembly plant for electric buses which are 100% driven by electricity with a production capacity of 9,000 units per year. The electric bus assembly plant has started its commercial operation and has so far assembled and delivered more than one thousand electric buses. The Group is thus considered well positioned for electric vehicle industry. Moreover, the Group has constructed a factory to manufacture battery, which is a key component of electric vehicle, and has already started commercial operation. The Group also has strengths over its competitors as its business covers the entire ecosystem, from manufacturing of electric vehicles, batteries, electric charging stations to after-sale services as well as strong business partnership.

(1) Electric Commercial Vehicle

With subsidize policies from government, bring EV market to expand and at the same time it brings more competition. Furthermore, FTA China-ASEAN still creates impacts to Thai's manufacturer due to no import duty in case of complete EV car import from China so it drives to high tension competition and drastically speeds of change. To enhance competitiveness of a company, continuously focus on research and development required along with enhancement of competitive strength such as Ultra-fast charge capability that creates differentiation.

The Group completed construction an assembly plant for electric commercial vehicle which are 100% driven by electricity with a production capacity of 9,000 units per year and supports to serve the purpose of other vehicles such as coach, truck and vehicles used in other businesses. The Company group is a new operator in the bus assembly business. In order to prevent knowledge base and construction risks, the Company invests in the plant in collaboration with the alliances which are plant design expert and world's leading bus assembly operator to ensure optimum efficiency of the plant and assembly line in accordance with the international standards.

(2) Electric Ferry

Competition in the electric ferry industry is not so high. The business operation is under supervision of a government agency, i.e., Marine Department. The entrepreneur is required to strictly comply with the rules and regulations concerning its operation, hence difficult for new market entrants. Moreover, the prevailing contagion has necessitated people to live the New Normal way of life. This has hit public transport business as some people are still concerned about travelling to crowded areas. However, for the Company group's electric ferry, preventive measures are maintained including social distancing, passenger screening, provision of alcohol gel at service points in the ferry, seating arrangement with one empty seat in between each passenger, and installation of air sterilizers in the ferry to strengthen the passengers' confidence in the service.

(3) Battery Locomotive and Powercar

Generally, an electric locomotive/train draws power from the third rail, which requires massive investments to build. EA's Mine Locomotive, which is powered by a battery, is able to operate on Thai railways immediately. Currently, railways in Thailand are owned and operated by the State Railway of Thailand (SRT) and any new changes and improvements require their approval before implementation.

Energy storage or lithium-ion battery industry

It is the industry where competition is based on technology aimed at developing the batteries for longer useful life at lower cost and with high electricity storage capacity that can respond to extracting electric power for use in a short period of time and in diverse industries with high safety. High competition is evident in ongoing development for new models of better quality. The Company has collaborated with public and private sectors both domestic and international to get ready for new technologies in energy storage battery industry. Although the COVID-19 crisis impact on technicians from supplier to enter into the country but the Company still have teams with qualifications and potential relates to technology to operate continuously.

Electric Vehicle Charging Station industry

In 2022, several service providers from both public and private sectors introduced their partners and actively joined electric charging station market. Development of infrastructure and ecosystem has been accelerated to accommodate growth of electric vehicle market. Foreign automobile companies, in particular, have expanded to have electric charging stations in the premises of their service centers and showrooms, aiming to push up continuous growth of electric vehicle market in Thailand, hence more options for users of electric charging stations. Moreover, the Company has made a joint venture investment with manufacturers of charging equipment to control technology of the equipment and costs of equipment manufacturing and installation to ensure lower costs than its competitors, as well as speeded up investment and installation of the equipment at charging stations in operation across the country, with focus on Bangkok and Greater Bangkok to dominate prime locations ahead of its competitors. Moreover, the Company has entered into cooperation agreements with electric car manufacturers to offer electric charging service for electric car buyers in order to build connections and exchange important technologies and technical information as a way to foster relationship. In addition, the Company also cooperates with bus operators for electric bus by developing public charging stations together with planning route and charging system to increase the efficiency of public bus operations and service to the general public which helps to expand the service smoothly and difficult for other competitors to access.

Risk from implementation of new business projects

As new investment projects require advanced technology and high investment amount, and in which the Group has not so much experience, the project implementation must be carried out with prudence in investment planning to align with the business framework of the Company and its Group in both short and long terms, and with action plans worked out in the same direction. Details can be summarized as below:

- Create business Ecosystem in which various business sections are inter-related and support one another to drive integrated business success. For instance, the Company aims to grow clean energy business so it has invested in solar and wind power plants, energy storage business (batteries), and charging station for electric vehicles and electric vehicle business.
- Establish an investment structure that is appropriate for nature of business and business structure of each project. The Company has a policy to focus on investment at a significant level to allow for control of major parts of the operation (not less than 50% unless in case otherwise as deemed reasonable) and collaborate with strong allies in the country and those overseas. Collaboration may be in the form of joint venture with business partners or self-investment but partnering with allies, especially in investment in lithium-ion battery electric power storage, which is a strategic investment conducive to future growth.
- Using a strategy of gradual implementation of investment projects by studying and checking related factual information (Due Diligence) and preparing a feasibility test of investment in various scenarios. If the project is found worth investment, the Company will first start with a small size of investment until there is more clarity and risks can be controlled and managed, the Company will then gradually expand investment to meet the target set forth. This investment strategy will be applied to new project of the Company.
- During project implementation, a working team will be set up which consists of the main business units will be in charge in the project to work together with the strategy development and investment planning department under close monitoring and supervision from Chief Executive Officer and Deputy Chief Executive Officer with support from relevant work units. The working team will hold meetings regularly and report the project progress to the Executive Committee at least once a month, and also report the risk issues to the Risk Management. Hence, control and monitoring mechanism is in place according to the strategic plan.

Risk from Investment in New Overseas Projects

The Company has planned to expand business to align with its commitment to growing business with determination, consistency and sustainability. However, despite the attractiveness of overseas business investment and operation, there are risks in association with such endeavors, including legal and regulatory risks, economic and political instability, and different and unfamiliar national policies and processes of application for relevant licenses. This might delay the project implementation or failure to achieve the targets. The Company has taken a risk management measure by setting prudent investment criteria and guidelines for supervising and monitoring development of new projects through due diligence. In addition, the Company will engage advisors who have specialized expertise such as legal advisors, accounting advisors, etc., to work closely with its qualified teams to ensure that the Company will be successful in developing its projects and/or business acquisitions as planned. Besides, the Company also has a policy to seek business allies with potential, experience,

and expertise in conducting business in a particular country to enhance investment capability and mitigate possible operational risk.

2. Operational Risk

Risk associated with human resources management

The Company has expanded investment in various businesses to ensure consistent growth and for value-add to its businesses. This necessitates it to prepare its human resource to accommodate the business growth in line with future personnel requirement which focuses on technology and innovation leadership. The Company gives priority to development of skills, knowledge and competence to keep pace with business demand and growth as well as global and technological changes. Human resource management plan which fails to align with the business expansion plan may affect the Company's competitiveness and operational performance. For human resource risk management, the Company has assessed risks and come out with medium risk in all aspects, i.e. personnel recruitment, turnover rate, potentiality development, the use of technology in workplace and adapting to hybrid work.

Personnel Recruitment: the Company is well-prepared in terms of human resources and risk of shortage of personnel with knowledge and skills related to the business to accommodate business expansion. To support its business growth, the Company has put in place EA Group Human Resource Management Policy to enable sharing of human resources within the Group with maximum efficiency. The Company has also speeded up building of network for manpower development and enhancement of technological expertise to create concrete output and extended its collaboration with the government and private sectors as well as leading organizations, both at home and abroad. The Company signed the Memorandum of Understanding (MOU) with the National Science Technology and Innovation Policy Office (STI) on networking for manpower development and expertise on modern automotive technology and national power storage system, and the MOU with educational institutions and entrepreneurs in the Eastern Economic Corridor (EEC). The Company has also served as a source of learning and manpower development by providing short-term training courses which focus on practical outcome according to the Company's demand and supports Thailand's National Strategy 4.0 and manpower development for the EEC.

Turnover Rate: The Company has put in place the Succession Policy and Plan for key positions to cushion turnover risk, and implemented the Executive Program of which three classes were completed and a new class is currently underway. It has also employed career management system to give opportunities to talented and interested employees to work for projects or work units within the EA Group and grow together with the Company.

Development of Personnel Potential: The Company has ensured knowledge management, prepared technology transfer plan, from both Thai and expatriate experts (expats), and provided training for the employees to enable self-dependence at an appropriate level. Knowledge transfer from Thai experts and expats also encourages creativity in the organization and enhances the ability to attract and retain talented personnel. The Company has further expanded knowledge and expertise of its personnel through research and technological development for the Group's new product initiatives, product quality improvement and greater competitiveness in the long run and for sustainability.

In addition, the Company has adopted Knowledge Management (KM) as a tool for organization knowledge exchange. The objective is to gather and systematize body of knowledge to enable the staff members' access to core business knowledge

for self-development toward competency and performance efficiency, which will contribute to maximum competitiveness of the organization. The Company has also promoted and created environment for knowledge exchange by arranging activities for staff members who have specialized knowledge to share their expertise and experience with others so that such knowledge learned from direct experiences can be adapted in the work or for improvement. This would help save time and resources required in general learning process.

The Company has encouraged new work challenges through “EA Inside EA Program,” a creative work and innovation competition which aims at multi-faceted improvement, such as faster delivery, improved quality, higher productivity, and sustainability. Emphasis has been given on development of employee potential to suit the organization needs with the use of systematic and continuous personnel development guidelines involving all staff members organization-wide according to the 10:20:70 learning principle. The 10% represents learning through training and self-learning. The Company has made available various learning channels to suit staff members’ learning platform and approach as well as applied digital technology and system for personnel development during the COVID-19 pandemic. The 20% represents learning from supervisors through advice and coaching as well as learning from knowledge exchange with others. Lastly, the 70% represents on-the-job learning and application of knowledge and skills learned from exchange with others into the work and On the Job Training.

Risk of operational disruption

Solar and wind power plants including electric vehicle assembly plant, battery plant and other plants may not be able to be operated during a disaster such as in cases of strong wind, flash flood, lightning, fire etc. These incidents may cause damage of machinery and equipment. The current COVID-19 pandemic may affect the travel of local and foreign experts for repair and maintenance of the plants. However, the Company has put in place a business continuity plan, and prepared spare parts and tools for repair and maintenance to reduce potential risk of machinery and equipment impairment and for prompt recovery to normalcy. Furthermore, the Company Group has applied for business interruption insurance for compensate when an unexpected situation occurs and in case that the project cannot operate. All business units will also have practice drills every year to understand the procedures and be able to timely deal with emergency cases.

3. Financial Risk

Risk associated with debt service capability

The Company has in place investment and business expansion plan both domestically and overseas, which requires a large amount of funds. The Group’s financial source mainly comes from financial institution loans, hence liability to comply with agreements and conditions in the loan agreements throughout the contractual period. The Company has systematically managed and worked out a long-term financial plan, alongside monitoring and management of liquidity. Viewing its quarterly performance so far, there have been consistent cash flows from operation as projected with an appropriate level of debt to equity ratio. According to TRIS Rating Co., Ltd. (TRIS) in 2022, the Company’s credit rating has been maintained at “A”. This reflects the Company’s stronger credibility with continued cash flow growth, which can help build confidence among creditors, trade partners, and other stakeholders, and ensure that the Company has good cash flow position and stable financial status for payment of principal and interest debts as scheduled. At present, the Group has

good debt payment record without any debt default, and considerable financial potential to support its efficient expansion of investment according to its master plan.

Risk of Investment returns lower than projected

The Company and its Group's business expansion is project based, depending on investment in new projects. This will involve diverse nature of projects, investment risks and investment returns. Certain necessary tools and equipment need to be imported, such as solar panels, wind turbines, and electric vehicle chargers, etc. Each project has to bear respective risks of changes in key factors used in investment assumptions like indefinite costs of projects due to uncertain prices of imported equipment as a result of foreign exchange volatility, demand and supply fluctuations, cost overrun, and so on. The Company has prevented such risks by prudently and comprehensively studying each project before making investment and working with as well as under advice from specialized experts. The Company has risk management tools for exchange rate risk such as entering in to FX Forward contract to mitigate risk of changes in exchange rate. It also has a policy to manage loan interest rate risk by employing such a financial instrument as interest rate swap to convert floating interest rates to fixed rates.

Risk associated with funding for new businesses

Project development requires high investment which the Company makes investment through each newly established subsidiary for each project with formulation of shareholding and investment structures as deemed appropriate to prepare for funding from financial institutions. However, the Company's projects always new in Southeast Asia so it may be considered high risk for financial institutions. In some cases, the financial institution might reject the projects, or set strict loan conditions that may affect the project operation.

However, in view of the Company's business operation with consistent growth, the Company has gained confidence from financial institutions and received a rating of "A" by TRIS Rating including gained confidence from financial institutions in approving long-term loans and also success in issuing long-term loans to investors. Besides, with its good debt payment record without any debt default, the Company is confident that it can negotiate with financial institutions and institutional investors to continuously provide financial support for the Company's future projects.

Risk of change in electricity offtake rate

The electricity offtake rate under the Power Purchase Agreement with the Electricity Generating Authority of Thailand and the Provincial Electricity Authority, besides the adder, consists of the base tariff and Ft rate. The Electricity Regulatory Commission (ERC) may consider and announce adjustment of the base tariff in line with the circumstances and related factors including cost of investment in the construction of power plant and transmission/distribution systems for the Ft charge ERC calculates and announces every 4 months with reference to uncontrollable fuel costs in production of electricity, i.e. fuel prices, inflation, foreign exchange rates. Therefore, the Company Group's revenues from sales of electricity will vary to Base Tariff and Ft change. However, there have been so far very few adjustments of the base tariff. Even though the Ft rate adjusts every 4 months but the change rate does not significant impact on the overall electricity sales, the Company should only be slightly affected and in some cases is the positive Impact or some are negative on its revenue.

4. Compliance Risk

Risk from changes in government policies

Biodiesel business policy

The government policy announced a reduction in the proportion of biodiesel blending of conventional diesel from the original (2021) B10 diesel to the B7 diesel. In addition, changing in price and palm oil inventory control policies of leading countries such as Indonesia and Malaysia directly affected the biodiesel market and is an out of control factor by company.

Policy on renewable power plant business

Even though the country's master plan on alternative energy development specifies priority and promotion of proportionate use of alternative energy or renewable energy to reduce environmental impact and increase dependence on domestic energy source in place of import. Therefore, the Company has focused on expanding business to related industries such as electric power storage, electric vehicles, electric charging station, etc., and explored opportunities of expanding its investment to neighboring countries and beyond.

Electric vehicle and battery business policy

The public sector's business stimulation through investment promotion for electric vehicle (EV) operators, policy or action plan to encourage or boost domestic demand for electric cars. Following the National Electric Vehicle Policy Committee ("EV Board") launch 30@30 Policy to driven the Low Carbon Society by becoming the global production base of electric vehicles and important parts or the center of the region (EV Hub) aiming to produce ZEV (Zero Emission Vehicle) at least 30% of total vehicle production in 2030. In the urgent phase, there is the incentive package for New EV up to 150,000 bath subsidy. As a result, the development of EV and related industries in Thailand has grown significantly as evidenced by new car registration statistics classified by fuel type for Battery electric vehicle market recorded a total number of 20,817 units in 2022 and 5,889 units in 2021 (data from Department of Land Transport). Besides, the Company has obtained support on import tariff for its electric bus assembly plant in the duty-free zone in which projects licensed to operate are required to use local content of more than 40%. As the Group supports use of local parts especially such key part as lithium-ion battery produced by its local plant, the Group has enjoyed a cost advantage and can well compete with newcomers in the electric vehicle market in the future. However, with its strong belief that electric vehicle business will replace the existing automotive business, the Company has stimulated market demand and prepared for future EV business operation by establishing Energy Mahanakhon Co., Ltd. to operate the installation of EV charging stations with the objective to build consumer confidence in buying electric cars. The Company will also expand channels for use of lithium-ion battery from electric cars, which is the major market, to electric bus and electric ferry as well as plan to add overseas distribution channels.

Risk related to compliance with relevant laws and regulations

The Company engages in diverse types of businesses such as biodiesel, renewable energy production and distribution, electric vehicle and related businesses, etc. Each business is governed by specific laws, rules and regulations. Any changes in these laws and regulations will have impacts on the Company's business operation. Violation of the rules, regulations, or requirements and relevant laws may also impair the performance and reputation of the Company. The Company is well aware of and gives importance to keeping abreast of new laws, rules and regulations. Its rigorous compliance is assured

through adoption of international standard systems, such as ISO 9001, RSPO, ISO 14001 and ISO 45001, etc. In addition, the Company has in place two key work units, namely ISO Department and Licensing and Investment Promotion Department in charge of the control and monitoring of compliance with the related rules, regulations, laws and requirements according to the delegated authority and responsibilities. The Internal Audit Department is also in place to perform the follow-up and examination to ensure operational consistency and prevent possible impacts on the business operation. Information is disseminated organization-wide to create understanding and awareness of the impacts and actions to be taken. This will help support strict regulatory compliance of the management and employees as well as contractors and mitigate risks or minimize impacts on the organization.

5. Business Operation Risk

Risk from dependence on large customers

The Company is a producer and distributor of biodiesel (B100) for use as fuel. It also produces and distributes purified glycerin and by-products. In the sale of biodiesel, the Company has relied on 7 large customers under sales agreements. A sale to large oil distributors in Thailand is an advantage to the Company as they are financially reliable. Nonetheless, the sale proportion may be adjusted downward in line with the demand in each period.

Moreover, the Company believes that likelihood of losing major customers is minimal as the sales are carried out under sales agreements each with contractual term from 3 months to a maximum of 3 years. Discount on biodiesel price announced by the government will also offered for the next agreement to be executed, which will help ensure consistent renewal of the agreement. Furthermore, the government stipulates that large fuel oil traders or distributors pursuant to Section 7 of Fuel Trade Act B.E. 2543 (Fuel Trade Act B.E. 2543: A fuel trader under Section 7 refers to any person who is a fuel trader having annual trade volume for each type or for all types together of fuel from 100,000 metric tons or approximately 120 million liters upward) must use biodiesel (B100) as a mixture in high-speed diesel to be distributed. Thus, demand for biodiesel (B100) should grow in line with the increase in automobiles that consume high speed diesel and in the mixture proportion of biodiesel in diesel oil.

Besides the production efficiency improvement, the Company recognizes that good customer relationship management leads to satisfaction and lasting relations between customers and the company, especially, in enhancing the probability of renewing long-term contracts with those nearing expires. The Company therefore seeks for feedback through the customer satisfaction survey every year, with elements focusing on product or service and deliver that meet customers' needs, behaving in an appropriate manner, etc. The outcomes reflect customers' satisfaction and expectations to the Company and also indicate how to develop work process to address even more needs of old and new customers. In 2022, the overall customers of biodiesel business are indeed satisfied with its operations at the excellent level.

Risk associated with raw material procurement and price fluctuations

Main raw materials for the Company's biodiesel production are crude palm oil (CPO), stearin, and refined bleached and deodorized palm oil (RBD palm oil) which are subject to supply and price volatility. For example, they may be affected by drought or flood, trade protectionism, and demand in overseas markets, etc. The government has given priority to maintaining the levels of palm oil prices and palm oil reserve in the stock to ensure adequacy in line with demand and supply situation in the country.

At present, the Company has made each raw material purchase and agreed on the prices based on the respective agreement. The raw materials are purchased from edible oil refineries and palm oil crushing mills who procure such raw materials for the Company. By this method, there may be risk incurred if these producers and suppliers are unable to produce or supply the raw materials to the Company within the specified time and under the set conditions. Moreover, if they decide to produce biodiesel and stop supplying the raw materials to the Company, the Company's business operation may be impacted. However, in such case, it may help lessen risk from loss on stockpiling of high-priced raw materials.

As such, the Company has prepared to prevent and relieve the impact from such risk by contacting and maintaining good relationship with raw material producers and suppliers and also has a policy in place to diversify the procurement sources of raw materials among producers in various regions of the country. Moreover, the Company has invested in two potential crude palm oil refineries to reduce the risk from raw materials shortage for RBD Palm Oil and Stearine. Furthermore, the Company will purchase from large vegetable oil factories in the central and eastern regions to prevent risk in case some regions may experience seasonal disruption or unprecedented incidents or disasters that might hinder their production and lead to shortage of supply.

6. Social Risk

Human Rights Risk

The Company recognizes the importance of respect for and protection of human rights and has included the EA Human Rights Policy, EA Human Rights Commitment, Non-Discrimination and Anti-Harassment Policy and business ethics, etc. in the Company's handbook and announcement which has been made to all staff members via the Company's website, email notification as well as employee orientation. It is also a mandatory course for all staff members to understand and be aware of the fundamental rights and freedom of all human beings. This will help reduce risk from violation of human rights in the business operation.

Risk from Operation that Impact to the Community, Society and Environment

The Company gives importance to the environmental management system (ISO 14001 : 2015) to ensure sustainable business operation alongside the community, the society and the environment, and focuses on preventing pollution which would affect the nearby community, including air, water and industrial waste pollution, as well as the climate change and water shortage. Therefore, the Company has set up ISO Working Group to take charge of the quality, safety and environmental management. Guidelines for operation and monitoring of environmental management, both inside and outside the plant, have been in place to ensure that the Company's operation has neither caused negative impact nor damage to community environment and resources, and is based on the 3R concept, i.e. Reuse, Reduce and Recycle, which helps reduce manufacturing waste, waste material emission and waste disposal expense. Various projects have also been implemented such as installation of solar rooftop, less use of liquefied petroleum gas (LPG) and control of electricity use in the buildings, etc., aiming to reduce greenhouse gas emissions. According to the audit result of ISO certification agency, the Company has complied with the standards, laws and regulations of relevant management standards without any impact or damage to the environment and resources of the community.

7. Emerging Risk

Technology and Innovation Risk

The Company's consistent business growth and expansion since 2017 has been attributable to its strength in the technology and innovation areas. Its long-term operational plan is to utilize energy storage technologies to bring energy security and to uplift use of eco-friendly renewable energy. The Company is aware of new risks that may arise from new technological inventions to replace the existing technologies which the Company is now investing in, or from the fact that power sale/purchase can freely be undertaken at both local and international levels and at low prices, which may lead to possible changes in the growth of electricity power production and storage. Possible changes in various forms have prompted the Company to make efforts in strengthening its business and income base, and continuously expand the market to the entire energy storage industry, electric vehicle industry and other related industries in parallel to exploring new investment opportunities along with human resource development and advanced technological study and development.

In addition, the Company recognizes that adoption of new technologies and innovations in the operation processes is significant and clearly beneficial in a long term, as well as can shorten operation time and save costs. The Company has thus launched projects to support invention and innovation development to promote self-learning among the employees and stimulate their creativity in adopting innovations for performance development and improvement.

Cybersecurity and Data Security Risk

The COVID-19 pandemic has drastically changed the way businesses operate and how employees perform their work, from working at the office to working anywhere or working from home, hence possible cybersecurity and data safety risk. The Company has thus worked out measures to prevent and reduce such risk to ensure continuity in business operation by providing the employees with cybersecurity training to strengthen their knowledge and understanding as well as increase their caution on utilization of work systems and business information. Information technology disaster recovery plan is also made available on a regular basis to ensure ongoing business operation of the Company in case of emergency.

3. Driving Business for Sustainability

3.1 Sustainability Management Policy and Target

Energy Absolute Public Company Limited and affiliated companies (EA group) aim to be “A leader in alternative energy business, by using the modern technology and environmentally friendly for the best benefit of consumers, shareholders, partners and fairness to employees”. Therefore, the company has announced a policy to set up sustainability system for all dimensions, with balance of economic, social and environmental dimension. The sustainability policy is set as a framework to operate under explicit procedure and continuity development, including business strategy and business plan, aiming to comply with international standard. All executive management and employees of EA group are anticipated to follow the policy in same direction. Sustainability policy of EA group is established as follow:

1.) Economic

Corporate Governance

- Determine plan and working procedure in accordance with corporate governance policy which is approval by the board of directors.
- Disclosure performance to shareholders and the public transparently.

Business Ethic and Anti-corruption

- Emphasize on compliance with business ethic and anti-corruption.
- Provide a monitoring process to ensure consistency with policy implementation.
- Encourage all stakeholders to perform accordingly

Risk management and Crisis Management

- Assess the risk of EA group in various areas including short and long term operation. This leads to introducing a risk management plan to mitigate and capture all risk.
- Introduce emergency plan of key function and rehearse the implementation of the plan.
- Encourage employees of EA group to be aware of the involving risk and to comply with the risk management plan.
- Report the significant issues to the Executive Committee / Risk Management Committee / Board of Directors, as the case may be.

Management of business partners in supply chain

- Assess the satisfaction and compare with the target, analyze the results to develop relationship with partners whom especially important to business operation of EA group.
- Evaluate risks from suppliers in the supply chain, and take action to manage that risk.
- Enhance relationship with business partners who are good citizen according to social and environment dimension, and also well comply with laws, regulations and good practice.

Innovation in business and social

- Conducting corporate strategy that focusing on innovation and business opportunity to enhance continually growth.
- Promote and support development both inside EA group and stakeholders.

2.) Environment

- Determine and announce policy covering quality, environment, energy saving, occupational health and safety, to be practice throughout EA group.
- Determine environmental program annually, focusing in continual support and development.

3.) Social

- Adherence in fairness and respect for human rights to all workers
- Determine and conduct employee development program at all levels
- Provide an explicit and consistent evaluation system.
- Emphasize on community and society development and continuously implement projects.

3.2 Stakeholder Impacts Management in the Business Value Chain

Recognizing the importance of value chain management as a key foundation of business operation toward sustainable growth, the Company has put in place the procedures to assess economic, social and environmental impacts as well as engagement of stakeholders throughout the value chain so as to manage key sustainability issues and properly respond to the demand and expectation of each stakeholder group.

Stakeholders of all sectors are significant to the continuity of business operation and play an important part in its sustainable growth. The Company has analyzed and assessed the impacts of the operational procedures and the value chain to identify the stakeholders and assess the expectation of internal and external stakeholders of all sectors. Key issues are scrutinized to cover all areas so as to ensure risk hedging and mitigate impacts which may cause business disruption since each process is of different importance to the stakeholders.

Engagement Channels and Stakeholder's Issues

(Importance of stakeholders ordered by high to low)

Stakeholders	Engagement Channels	Stakeholder's Issues and expectations	Responses to Stakeholders' Expectations
Employees	- Complaints or Whistleblowing Channels - Mailbox	- Fair wages and benefits - Career opportunities and Happiness in workplace	- Standard safety management - Standard environmental management - Provident fund
	- HR internal communications - Employee engagement survey - Town Hall Meeting	- Human rights and labor practices - Confidence in the equipment and safety of the production processes - Safety workplace	- Strict compliance with human rights and employment policies - Career path and advancement - Development staffs by using Knowledge Management
Business partner / Customer	- Customer Satisfaction Survey - Formal Meeting	- Confidence in the equipment and safety of the production process	- Clear and standard procurement policy - Anti-corruption policy and promotion through implementation
	- Complaints and Suggestions Channels - Meeting on occasions - Responding to Disclosure Requests - Contract and Written Agreement	- Confidence in the equipment and safety of the production process - Business transparency - Human rights and labor practices - GHG emissions - Innovation management - Quality of products and services	- Good corporate governance, transparency and examinability - Ethical obligation to protection of confidential information - Improvement and maintenance of equipment to ensure efficiency - Research team for development of products and services
Investors / Shareholders	- Investment Conference and Roadshow - Opportunity Day / Analyst Meeting - IR calls and Email - Public information on EA's website - Annual General Meeting - Site Visit	- Opportunity and Risk management - Innovation management - GHG emissions - Business transparency	- Anti-corruption policy and promotion through implementation - Good corporate governance, transparency and examinability - Appropriate dividend payment - Transparent information disclosure - Appropriate business plan and risk management
Society / Community	- Communication through Employees in local area - Community Survey - Complaints and Suggestions - Meeting on Occasions - Public information on EA's Website - Community Activities	- Community relations engagement - Human rights and labor practices - Social and Environmental impact from the Company's operations - Customer well-begin and economic distribution - Quality of products and services	- Human rights policy and promotion - Anti-corruption policy and promotion through implementation - Good corporate governance, transparency and examinability - Support for beneficial public activities - Environmental policy and promotion through implementation

Stakeholders	Engagement Channels	Stakeholder's Issues and expectations	Responses to Stakeholders' Expectations
Environment / Civil Society	<ul style="list-style-type: none"> - Public information on EA's Website - Complaints and Suggestions channels - Clarification of the facts to the public - Publication of Annual Report and Sustainability Report 	<ul style="list-style-type: none"> - Social and Environmental impact from the Company's operations - Customer well-begin and economic distribution - Innovation management - GHG emissions 	<ul style="list-style-type: none"> - Human rights policy and promotion - Anti-corruption policy and promotion through implementation - Good corporate governance, transparency and examinability - Support for beneficial public activities - Environmental policy and promotion through implementation
Co-investors	<ul style="list-style-type: none"> - Board and management meeting for subsidiaries and associated companies and Joint Venture - Public information on EA's Website - Publication of Annual Report and Sustainability Report 	<ul style="list-style-type: none"> - Business transparency - Human rights and labor practices - GHG emissions - Innovation management - Opportunity and Risk management 	<ul style="list-style-type: none"> - Anti-corruption policy and promotion through implementation - Good corporate governance, transparency and examinability - Transparent information disclosure - Appropriate business plan and risk management
Creditors	<ul style="list-style-type: none"> - Meeting between Management and Creditors - Public information on EA's Website - Publication of Annual Report and Sustainability Report - Contract and Written Agreement 	<ul style="list-style-type: none"> - Business transparency - Human rights and labor practices - Innovation management - Opportunity and Risk management 	<ul style="list-style-type: none"> - Anti-corruption policy and promotion through implementation - Good corporate governance, transparency and examinability - Transparent information disclosure - Appropriate business plan and risk management
Government Sector	<ul style="list-style-type: none"> - Meeting between the Company and related Sector - Meeting on Occasions - Partnership and supports of Government's Projects - Public information on EA's Website - Publication of Annual Report and Sustainability Report 	<ul style="list-style-type: none"> - Business transparency - Human rights and labor practices - Innovation management - Opportunity and Risk management - GHG emissions 	<ul style="list-style-type: none"> - Anti-corruption policy and promotion through implementation - Good corporate governance, transparency and examinability - Transparent information disclosure - Appropriate business plan and risk management - Environmental policy and promotion through implementation

Assessment Result of the Customer satisfaction level

Biodiesel

2022 Target of Customer Satisfaction is not less than 90%

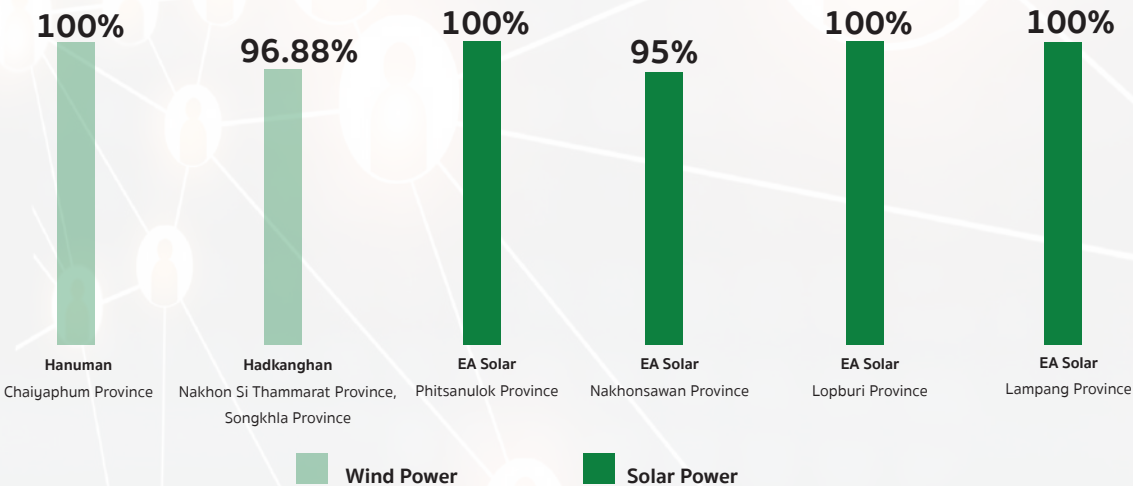


Products 95.5 %



Renewable Energy

2022 Target of Customer Satisfaction is not less than 90%



3.3 Sustainability Management in Environmental Dimension

3.3.1 Environmental Policy and Practice

The Company has committed to develop the standard of business operations and general management to be in line with our Sustainable Environment Management Policy. The focuses will be on safety environmental and health in workplaces including the social responsibility. The policy will cover all Company's operations which emphasize on resource management covering all business activities products, services, transportation and distribution, as well as waste management. Furthermore, this commitment is the direct responsibility of all executives, employees and transfer to business partners, contractors and the relevant stakeholders whom working on the company's behalf. The objectives are as follows:

1. To be a leader in alternative energy business by using the modern technology and environmentally friendly for the best benefit of shareholders.
2. To comply with all applicable quality health safety and environmental laws and regulations as well as other business operation and stakeholder requirements environment.
3. Create customer satisfaction in terms of the services , quality , safety and on-time delivery of all products
4. Prevent, minimize and protect impacts from our operations on the environment and communities while supporting a wide range of human and social development initiatives.
5. To commit on the prevention of all risks, terminate hazard for reduction of injury and illness from working which may occur to employee and stakeholder.
6. Continually improve our processes, operations and internal company management system.

3.3.2 Environmental Performance

- **Efficient Energy Use**

Management Approach

The company has Energy management guidelines by developing an appropriate energy management system. The operating guidelines are setting goals and creating energy projects for the reduction of fuel consumption. Fuels that the company can reduce are LPG and Coal.

Progress

In 2022, the Company group prepared a summary of the annual report on Energy management by setting goals and creating energy projects for the implementation of fuel consumption control to be in the appropriate amount for the operation as summarized below:

For Biodiesel Business

The factory set up a project to reduce fuel consumption by dividing into 2 projects as follows:

- 1. The project to reduce LPG** by reusing the remaining heat from hot RBD oil back to heat up directly on raw material. The ratio of LPG consumption during 2020, 2021 and 2022 are 0.71 Kg, 0.64 and 0.78 Kg of LPG / Kg of RBD oil respectively.
- 2. The project to reduce Coal** by changing 16 ton tubes Boiler. The ratio of Coal consumption reduces from 150 Kg of Coal / Ton steam in 2020 and 146 Kg of Coal / Ton steam in 2021 to 147.79 Kg of Coal / Ton steam in 2022.

For Solar Power Plant business

3. The project to reduce electric used. Adjust the fan speed according to the temperature and Change the type of blades to be lighter and reduce the fan speed which able to reduce electricity consumption from the original 216,000 kWh to 137,808 kWh.

- **Water Resource Management**

Management Approach

The Company has a guideline for water management resulting from its operations by reusing the used water to reduce the amount of water used. In addition, the company has an action plan to turn the treated wastewater into good quality water for use in the green areas of the factory. To replace the use of tap water, including campaigning and promoting the use of resources in a cost-effective manner and maximum efficiency. Although some of the Company's projects are located in a water-stressed area, no huge amounts of water are consumed and affect the stakeholders. The project also has a stakeholder-focused water management plan in place. In 2022, there were no water-related incidents with a financial impact above USD 10,000.

Progress

For Biodiesel business

For 2022 performance, the amount of water used in the production process is 138,181 cubic meters and the amount of recycled water is 3,210 cubic meters from the operation of 3 projects, as shown below:

- 1. Project on use of blowdown water from cooling tower to replace pipe water in the fire-fighting system:** The project helps reduce pipe water consumption by 2,821 cubic meters or 6% of water required to be filled in the cooling tower.
- 2. Project on reuse of treated water for plant cleaning:** The project reduces use of pipe water by 389 cubic meters or 0.28% of total pipe water consumption of the plant.
- 3. The project to reduce water used** by standardization of EC (Electrical Conductivity) parameter in Water Rinse2 and Water Rinse4 in order to reduce the addition of DI water (water that passes through the deionization process), which can reduce the amount of tap water used to produce DI water by 50.4 cubic meters/month.

- **Waste Management**

For waste management, the Company has implemented environmental policies in waste management through planning as a bottom-up approach, commencing with a decrease in resource consumption, in accordance with the organization's goals that encourage the most efficient use of resources. When the quantity of waste produced is decreased, the amount of waste produced and the waste disposal burden imposed by the Company's business operations and activities will be reduced.

Management Approach

Under the Quality, Environmental, and Occupational Health & Safety Policy, the Company has initiated waste management as a practical approach to reducing the negative impacts on the communities and the environment. Also, the Company focuses on the minimization of the amount of waste produced and recycles it to reduce the waste generated by management. The Company has constantly implemented waste management projects such as relocating solar panels that are decreasing in efficiency to other areas of the Company's Group or communities, etc. In addition, the Company has established a waste management procedure that covers the management of waste and hazardous waste generated by the Company's

production processes or activities, as well as the control of the sorting process/type of waste and hazardous waste, and proper waste and hazardous waste disposal.

In addition, the Company has established waste management guidelines. From previous operations, the Company has established waste management practices and implemented the 3Rs (Reduce, Reuse, Recycle) strategy by focusing on reducing, reusing, and recycling. Besides that, the Waste Management Procedure has been reviewed on a regular basis, and awareness among employees in the organization about excellence in environmental management and the commitment to complying with relevant laws has been established in order to lead to sustainable business development. By organizing the “3Rs Campaign Communication”, which focuses on reducing, reusing, and recycling, the Company has campaigned and cultivated the cost-effective use of resources for its employees and personnel. The Company has a management process in place as well as cost-effective resource utilization and regular control and follow-up.

Progress

For Biodiesel Business

The project to reduce dirt in wastewater from glycerin tower is implemented with the use of filter press so that filtered water can be reused in the production process. The project helps reduce treatment of wastewater from the production process by 40 tons per month, hence a decrease of wastewater treatment expense by Baht 31,600 per month.

• **The Management and Reduction of Greenhouse Gases**

From the rapid economic expansion causing the demand for goods and services to increase affecting the amount of greenhouse gas emissions and higher water demand, The effect can be seen from extreme weather linked to climate change from global warming. As a result of large amounts of greenhouse gas emissions into the atmosphere the overall temperature of the world is rising and climate changes. The company is aware of the risks and impacts that may affect the business operations. Therefore, the company has set a goal to reduce greenhouse gas emissions and management approaches that respond to the global sustainable development goals.

Management approach

The Company has a social and environmental policy as follows:

- Consider the impact of the business operation on society and environment
- Strictly comply with the relevant laws, regulations and related practices
- Develop and improve work standards to comply with environmental standards

Progress

The Company strictly complies with relevant environmental laws and regulations. In 2022, there were no environmental violations and the Company has not paid any significant fines (Environmental Violations Fine since USD 10,000 or more) related to environmental issues.

GHG Emissions of the Group

	2020	2021	2022*
Target: Direct and Indirect GHG emissions of the Group tons of carbon dioxide equivalent (tCO ₂ e) (Scope 1 and Scope 2)	58,270	55,355	69,529
Direct GHG emissions of the Group tons of carbon dioxide equivalent (tCO ₂ e) (Scope 1)	45,305	39,326	40,854
Energy Indirect GHG emissions of the Group tons of carbon dioxide equivalent (tCO ₂ e) (Scope 2)	12,965	13,559	25,977
Total Direct and Indirect GHG emissions of the Group tons of carbon dioxide equivalent (tCO ₂ e) (Scope1 and Scope2)	58,270	52,885	66,831
Other Indirect GHG emissions of the Group tons of carbon dioxide equivalent (tCO ₂ e) (Scope 3)	68	143,502	247,867
Total Direct and Indirect GHG emissions of the Group tons of carbon dioxide equivalent (tCO ₂ e) (Scope1,2,3)	58,338	196,387	314,698
Total Revenue (Million Baht)	17,199	20,558	27,547
GHG emissions intensity of the Group (tons of carbon dioxide equivalent (tCO ₂ e) per Baht 1 Million of Revenue)	3.39	9.55	11.42

Remark: A GHG emission from coal was revised last year referring to IPCC standard.

*2022 data has been reviewed by Bureau Veritas Certification (Thailand) Limited and issuance of the TGO greenhouse gas emission certificate (ISO 14064-1) is currently underway.

The Company gives importance to greenhouse gas management. The business that generates the largest volume of greenhouse gas emission is biodiesel business. The Company has thus continuously implemented projects such as those on reduction of electricity consumption, water consumption and waste treatments, etc. aiming to lessen direct and indirect greenhouse gas emission from the production process.

The Company conducted assessment according to the guidelines of Thailand Greenhouse Gas Management Organization (TGO) and the data was reviewed by Bureau Veritas Certification (Thailand) Co., Ltd. (TGO-registered verifier). In 2022, volume of greenhouse gas emission by the Group was as follows:

- Direct greenhouse gas emission = 40,854 tons of carbon dioxide equivalent (tCO₂e)
- Indirect greenhouse gas emission = 25,977 tons of carbon dioxide equivalent (tCO₂e) and
- Direct and indirect greenhouse gas emission = 66,831 tons of carbon dioxide equivalent (tCO₂e)

In 2022, the Group achieved target to control Direct and Indirect GHG emissions of the Group (Scope1 and Scope2) less than 69,529 tons of carbon dioxide equivalent (tCO₂e).

Increasing in greenhouse gas emission (Scope 1&2) from the foregoing year by 13,946 tons of carbon dioxide equivalent per year as the scope of collection of data on direct and indirect greenhouse gas emission was extended in 2022 according to TGO's requirements on carbon footprint calculation and report.

Climate Change Implementation

As the climate change situation has intensified and affected many continents of the world, which is partly a result of greenhouse gas emissions from human activities. Many countries have turned their attention and are aware of the disaster, which can reduce the severity of climate change by collaborating to reduce greenhouse gas emissions. The company, therefore, has implemented business processes to reduce greenhouse gas emissions as follows:

Promotion of a low carbon society (Reduce of Greenhouse Gas Emissions)

The Company supports building the low carbon society and the reduction of greenhouse gas emissions and it has been approved for listing in the Thailand Voluntary Emission Reduction Program: T-VER with the Thailand Greenhouse Gas Management Organization (public organization) or TGO. TGO develops the project to promote and support all sectors to take part in reducing the greenhouse voluntarily. The amount of greenhouse gas reduced or known as 'Carbon Credit' under T-VER or "TVERs" can be traded to the local voluntary carbon market. TGO has determined criteria and procedures for project development, the methodology for reducing greenhouse gas, listing and certifying the amount of greenhouse gas. The project must cause reduction/absorb the greenhouse gas in Thailand, to reduce the emission rate which is the main cause of global warming, increase the source to store the greenhouse gas, generating income from trading the greenhouse gas. As a result, in 2022, the Company has applied to participate in such initiatives. The following renewable energy projects can cut greenhouse gas emissions by 738,087 tons of carbon dioxide equivalent (tCO₂e):

Solar Power Plant Project: The TGO sub-committee approved the greenhouse gas mitigation in this project as follows:

Unit: tons of carbon dioxide equivalent (tCO₂e)

The amount of greenhouse gas reduced from the electricity generation	January - December 2020	January - December 2021	January - December 2022
Solar Farm at Nakhonsawan, Thailand - under an operation of the Company's subsidiary, EA Solar Nakhonsawan Co., Ltd. with a capacity of 90 MW.	99,629	102,999	113,385
Solar Farm at Lampang, Thailand - under an operation of the Company's subsidiary, EA Solar Lampang Co., Ltd. with a capacity of 90 MW.	116,526	115,795	124,347
Solar Farm at Phitsanulok, Thailand - under an operation of the Company's subsidiary, EA Solar Phitsanulok Co., Ltd. with a capacity of 90 MW.	124,960	127,211	125,600

Note: 2022 data has been reviewed by Bureau Veritas Certification (Thailand) Limited (registered verifier of TGO) and issuance of the TGO greenhouse gas emission certificate (voluntary type) is currently underway.

Wind Power Plant Project: The TGO sub-committee approved the greenhouse gas mitigation in this project as follows:

- 1.) **Wind Farm at Songkhla and Nakhon Si Thammarat, Thailand** - Indirect subsidiary, EA Wind Hadkanghan 3 Co., Ltd. with a capacity of 126 MW. The Sub-Committee of TGO has certified that the amount of greenhouse gas reduced as follows:

Unit: tons of carbon dioxide equivalent (tCO₂e)

The amount of greenhouse gas reduced from the electricity generation by Wind Power Plant	January - December 2020	January - December 2021	January - December 2022
Wind Farm at Songkhla and Nakhon Si Thammarat	143,270	162,371	127,164

2.) Wind Farm (Hanuman Wind Farm 1, 5, 8, 9 and 10) at Chaiphaphum, Thailand of a group of company with a capacity of 260 MW. The Sub-Committee of TGO has certified that the amount of greenhouse gas reduced as follows:

Unit: tons of carbon dioxide equivalent (tCO ₂ e)			
The amount of greenhouse gas reduced from the electricity generation by Wind Power Plant	January - December 2020	January - December 2021	January - December 2022
- Hanuman Wind Farm 1	43,164	43,883	37,512
- Hanuman Wind Farm 5	61,382	63,123	56,036
- Hanuman Wind Farm 8	43,457	45,832	38,106
- Hanuman Wind Farm 9	43,260	45,456	39,430
- Hanuman Wind Farm 10	82,644	87,481	76,507

Note: 2022 data has been reviewed by Bureau Veritas Certification (Thailand) Limited (registered verifier of TGO) and issuance of the TGO greenhouse gas emission certificate (voluntary type) is currently underway.

• Green Culture

The Company aims to create an environmental culture among employees in the organization. Create a campaign to raise awareness among employees in order to realize the cost-effective use of resources and energy and maximize the benefits both in the production process and in daily life inside and outside the organization through various activities such as using cloth bags instead of plastic bags, reusing paper, and campaigning for sorting waste by type to encourage reuse and reduce the amount of waste as well as increasing green areas both inside and outside the organization by participating in reforestation with communities and government agencies through the EA Forest Conservation project by planting 3,198 trees in 2022 for 7 provinces; Lampang, Phitsanulok, Chaiphaphum, Nakhon Sawan, Lopburi, Nakhon Si Thammarat, and Songkhla with a local plant species in order to promote and conserve plants in that province.

3.4 Sustainability Management in Social Dimension

The Company Group dedicate to business principle by focusing on sustainability in diverse dimensions such as economic, society, and environment. Meanwhile, we attempt to develop communities surround our plants by creating a value from organizational operation. The Company Group established a Corporate Social Responsibility (CSR) to develop and improve quality of well-being of the communities. Activities were created to respond in any areas such as occupation, quality of life, education, religion, culture, tradition and environment. All of these activities could build up our reputation and awareness of the communities around our sites. There is also public communication to third party and stakeholders by declaration our policy and vision.

As a guideline for business process management (CSR-in-Process), The Company Group established a “Corporate Social Responsibility Policy” with the following 7 principles.

Principle 1: Good Corporate Governance

Principle 2: Conduct Business with Fairness

Principle 3: Human Rights and Treatment to Employees

Principle 4: Responsibility to Consumers

Principle 5: Environment and Safety

Principle 6: Participation in Development of Community and Society

Principle 7: Development and Dissemination of Innovation from Social Responsibility

3.4.1 Personnel

Human Resource Management of the Group

The Company has continuously invested in various businesses for business value added and thus prepared its human resources to accommodate the business expansion and respond to future demand for human resources, as it aims to become the leader in eco-friendly technology and innovation. These businesses comprise electric charging station, electric vehicle, electric ferry, battery and high-density energy storage system, and others. Emphasis is put on development of skills, knowledge and competence to keep pace with the rapidly rising demand and business expansion.

For manpower preparation, the Company has set out EA Group human resource management policy to encourage the employees to be both smart and good employees so as to optimize deployment of human resources across the Group. Its human resource management guidelines are as follows:

1.) Corporate Values

The Company has determined EA's DNA as collaborative behavior within the EA Group. Employees are encouraged to be both smart and good manpower, with such qualifications as passion, eagerness, teamwork, EA smartness (bringing innovations and new values, having entrepreneurship spirit, and taking action with professional knowledge, skills and expertise), and EA goodness (thinking, speaking and acting in the good and right way, and having good intention for the organization and other stakeholders).

2.) Performance Management

In order to drive the organization toward achievement of its goals, the Company has intensely implemented the Pay for Performance system, and put in place procedures for setting goals and indicators in line with the organization strategies as well as behavioral assessment and 360-degree feedback from acquaintances to enable the employees to accomplish their performance goals and ensure behaviors in alignment with the organization culture. Assessment results have been applied in human resource development. The Company has also identified essential skills and competencies, wage rates and bonus as well as established a Trust Fund as a way of giving long-term returns and motivating the employees to create shared values for sustainable growth.

3.) Human Rights

The Company committed to human rights management in all process of Supply Chain Management in order to create value chain to its products and services. Besides, EA Group has also declared Human Rights Commitment reflecting relevant human rights process and guidance to mitigate the impact on human rights. EA Group aims to protect and diminish risk in order to prevent human rights violation. Pursuant to human rights due diligence processes, EA Group's procedure comprises of Policy Commitment, Human Rights Due Diligence, Impact Assessment, Identification of key issues, Risk Assessment, Complaint Channel, and Remedy of risk of human rights' violation, to ensure that operations of EA Group business shall be strictly in line with human rights' protection.

The Company provides the channel for whistleblowing and complaints pertaining to human right, the illegal conduct, the ethical misconduct and corruption for employees and other stakeholders. The Company ensures the protection of employees and whistleblowers by establishing the confidential database system accessible only by involved person. The team with non-conflict of interests will be assigned to investigate the complaints. Any remedies will be conducted in accordance with the law. The result of investigations will be informed to the informant.

The channel for receiving the complaints and whistleblowing are as below

- Email to Chairman of Audit Committee: chairman.audit.com@energyabsolute.co.th
- Company's Website: <https://www.energyabsolute.co.th/complaints>

Human Rights Performance

- The Company received Human Rights Awards 2022 at a Good Level for the third consecutive year from the Department of Labour Protection and Welfare, Ministry of Justice.
- The Company rolled out the EA human rights policy, EA human rights commitment, and code of business ethics, etc. as part of the content in the Company's handbook, which have been communicated to all employees via the Company's website, email as well as in the employee orientation course. They have also been arranged as mandatory course for all employees to develop understanding and realize fundamental rights and freedom that belong to every human being, aiming to lower risk from violation of human rights in the business operation. In 2022, a total of 1,864 employees joined the course and passed the test, representing 91% of total employees.
- One of the key human rights projects to promote differences and diversity among the employees and encourage learning and exchange of ideas, views and experiences is employment of the elderly. The Company has employed 8 elderly persons aged more than 60 who have proper knowledge and experiences to work for the Accounting department and Purchasing department.
- The EEC scholarship project is aimed to provide educational opportunities, enhance academic capacity and research potential, and develop manpower through short- and medium-term courses targeted at practical output in the areas of technology, high-density energy storage system, oleochemical industry and modern automotive industry to meet the demand under Thailand 4.0 Strategy and accommodate the Eastern Economic Corridors (EEC). This is a testament of the Company's consistent realization of the importance of respect for and protection of human rights.
- The Company joined as member of Bloomberg's Gender Equality Index (GEI) for the third consecutive year to enhance cooperation on gender equality promotion with the international agency.
- The Company entered into an agreement to promote gender equality with U.S. Agency for International Development (USAID).
- Other major human rights projects to promote differences and diversity among the employees and encourage learning and exchange of ideas, views and experiences include increase in female employment rate by 5% per year, employment of the elderly, employment of LGBTQI+ persons and providing a breastfeeding room.

Development of Personnel Potential

The Company gives importance to development of personnel's potential so that they will be a good and capable person in the EA way being instilled with the EA DNA and being in line with the Company's business operation with good citizenship always kept in mind. Self-learning is made available for employees under the courses classified according to the Company's rules and regulations, business ethics and policies, as follows:

- Business Ethics Course for companies in the EA Group so that executives and staff members have knowledge and understanding of prevention of conflict of interest, keeping company information in confidentiality, responsibility for company properties, behaving in a moral and ethical manner, accountability to the stakeholders, and so on. Altogether 1,864 employees, representing 91% of total employees, attended the Business Ethics Course and underwent and passed the test.
- Information Technology Security Course and Personal Data Protection Security pursuant to the Personal Data Protection Act, B.E. 2562 Course for executives and staff members. Altogether 1,841 employees, representing 90% of total employees, attended the Information Technology Security Course and underwent and passed the test, while altogether 1,894 employees, representing 93% of total employees, attended the Personal Data Protection Security pursuant to the Personal Data Protection Act, B.E. 2562 Course and underwent and passed the test.
- Anti-Corruption Course, attended by and with the test passed by altogether 1,852 employees, representing 91% of total employees.
- Risk Management Course, attended by and with the test passed by altogether 1,849 employees, representing 91% of total employees.

Besides, the Company has stimulated employees' energy and environmental awareness and organized various training courses related to energy and environmental management, such as Occupational Health and Safety at Workplace Course, Lab Hazardous Waste Management Course, Roundtable on Sustainable Palm Oil (RSPO) Course, etc.

To build capable employees, the Company focuses on development of employees' potential to match with the organization requirements and puts in place systematic, continuous and comprehensive personnel development guidelines which involve all employees in the organization according to the 10:20:70 learning principle.

The 10% learning: represents learning through training and self-learning. The Company has made available various learning channels to suit the employees' learning platform and approach. In 2022, the Company applied digital technology to personnel development that aligns with modern-style learning in the form of blended Learning to ensure continuous learning, and provided training in the format that would allow the employees to manage learning by themselves and with the content covering diverse areas of employee development to level up the skills as well as build necessary work-related skills in response to the rapidly changing business environment. The training was divided into 5 learning categories, i.e. rules and regulations of the Company, leadership skill, technical skill, communication skill and EA DNA, which can be chosen freely by the employees.

The 20% learning: represents learning from supervisors through advice and coaching as well as learning from knowledge exchange with others. In 2022, the Company adopted knowledge management (KM) as an organization knowledge exchange tool. The objective is to gather and systematize body of knowledge, which is in the persons or documents, to enable the

employees to access core business knowledge and develop themselves to become knowledgeable and perform tasks efficiently, which will contribute to optimum competitiveness of the organization. The Company has also promoted and created an environment for knowledge exchange by arranging knowledge sharing activities for employees who have specialized knowledge to share their expertise and experience with others so that such knowledge learned from direct experiences can be adapted in the work or for improvement. This would help save time and resources as required in general learning process. Moreover, the Company has developed knowledge management platform under the name “EA Knowledge Management System” as a knowledge storage accessible by the employees at any time and kept safe from outsiders. The knowledge management system also gives benefits at the organization level, i.e. preventing loss of key knowledge and more importantly developing horizontal knowledge culture where everyone is equally entitled to data access and learning.

The 70% learning: represents on-the-job training and application of knowledge and skills learned from exchange with others to the work in charge.

Development of Innovation and New Value

To instill the value of innovative thinking and new values with focus on shared values for sustainable growth and to support employees’ development of knowledge and skills that will truly be with them forever, the Company has initiated the “EA Inside EA” program to promote development of innovations within the organization or add value to the Company.

Performance on Development of Personnel Potential

- The Company initiated the Executive Trainee Program for direct transfer of experience from the Chief Executive Officer and top management through consideration of leadership skill from working on new challenging projects. It has also promoted development of skills and self-learning through hands-on practice, utilized career management and rotation system to allow talented employees to work for the projects or work units within the EA Group and grow together with the Company under the “Create Your Own Journey” project. Three classes of the Executive Trainee Program were completed and opening of a new class is currently underway for development and preparation of management personnel.
- The Company adopted digital technologies and systems in its human resource management to enable continuous self-development of the employees. A total of 22 training courses are provided for self-learning where the employees freely choose the topics of their interest. In 2022, a total of 1,818 employees attended the training averagely for 2.5 hours per year.
- The Company also arranged on-site training for a total of 1,367 employees through 47 courses, representing averagely 8.76 training hours per year.
- The Company encourages and creates knowledge exchange atmosphere by arranging knowledge sharing activity where the employees who have specialized knowledge and expertise share their knowledge and experience with their colleagues. In 2022, the knowledge sharing activity was organized on 7 topics and attended by 113 employees, representing averagely 3.64 training hours per year.
- The Company encouraged new work challenges through a creative work and innovation contest in “EA Inside EA” program. In 2022, a total of 29 projects were submitted in the EA Inside EA contest, e.g. project on reduction of the production cost by way of replacement of function heat coil C-1301, project on decrease of

fan speed rounds to save energy and project on reduction of chemicals and waste in the coating process, etc., which significantly pushed up the proportion from 2021 to 61%.

In summary, development of employee potential in 2022 under the 10:20:70 learning principle posted an average of 36.46 hours/person/year, representing 100% of the individual training target (15 hours/person/year).

Employment

Regarding employment of the elderly, the Company has employed eight people aged over 60 who have appropriate competence and experience to work for its Accounting and Procurement Departments, etc. It has also employed three people with disabilities to fill its additional manpower requirement. Remittance as contribution to the Empowerment for Person with Disabilities Fund has been made in full.

The Company has put in place systematic recruitment system and continuously provided opportunities for talented persons to join as a major force in driving the organization forward. Emphasis is put on development of manpower and technological expertise to create tangible outcome and accommodate business expansion in the future.

Diversity in Employment

The Company promotes acceptance of and adopts diversity & inclusion to create benefits. Foreign experts in various fields of the core businesses are hired to enhance knowledge and share experiences, and training is arranged for expats to ensure self-reliance of the Company at an appropriate level. Diversity & inclusion also help promote creativity in the organization, uplift the ability to attract and retain talented people, and benefit the corporate image and marketing. At present, there are 66 expats, representing 3% of total employees.

Employment Performance

- The Company has cooperated with the public and private sectors as well as leading local and international organizations through, for instance, signing of the memorandum of understanding (MOU) on networking for development of manpower and expertise in modern automotive technology and national energy storage system with educational institutions to prepare its personnel for bachelor's and master's degrees in applied artificial intelligence (AI), smart technology, mechanical engineering, mechatronics engineering and automation. The Company has also served as source of learning and practice for personnel development by providing short-term training courses with focus on practical outputs to meet the requirements of the Company and the country under Thailand 4.0 strategy as well as to accommodate the EEC.
- In 2022, the Company granted commitment-free scholarships to school and university students under the MOU with 15 institutions. qualified The committee considered and selected school and university students who have EA DNA, career goal, and intention to give back to the society according to the creating shared value guidelines. A total of 14 students received scholarships in 2022, comprising nine undergraduate students from four universities and five students from three high vocational institutions. The aggregate number of scholarship recipients throughout the academic years of 2021 and 2022 was 34 students, comprising 16 undergraduate students and 18 high vocational students. The scholarship covers tuition fee throughout four academic years, monthly allowance, and entitlement right to joining actual workplace as interns in conjunction with life insurance coverage and having mentors to closely give working advice. This will allow students to get prepared and learn practical experience in the workplace.

Employee Engagement

The Company has arranged to have an employee engagement survey by a locally and internationally renowned institution. The survey results in 2022 indicated the employee engagement of 53% from the target of 56%. The Company has reported information to top executives and strengthened employee engagement in relation to efficient, speedy and accurate work processes, good attitude in the EA DNA way, and employee learning and development, with addition of training channels, platforms, topics and courses to a greater extent. Information technology system has also been rationalized to better respond to user demand for speed and easy access, such as use of Microsoft 365 as a training channel. The Company has planned to conduct an employee engagement survey every two years and the next one will be undertaken in 2024. The turnover rate of employees in 2022 was 21% of total employees, an 18% decline from the previous year. To continue to lower the turnover rate, the Company has worked out the succession plan to enable the employees to realize their career advancement path and to ensure appropriate care by the management in respect of work performance and self-development.

Significant of labor dispute in the past 3 years

There is no significant of labor dispute in the past 3 years of the Company and subsidiaries.

3.4.2 Creating Shared Value - CSV

Policy and objectives

The Company is committed to enhancing the quality of life and well-being of locales, communities, and society and alleviating poverty and income inequality. Especially the agricultural industry in Thailand is more vulnerable, has unstable income, and leads to poverty in the future. Therefore, the Company implements social benefit initiatives through creating shared value, or CSV, with local people around the plant to develop career opportunities for people in the community and local farmers. The project focuses on sustainable career development, covering economic, social, and environmental dimensions that affect the strength of the community and resilience following the Sustainable Development Goals (SDGs) framework and Global Reporting Initiative (GRI) standards.

<ul style="list-style-type: none"> - Economic and career development, as well as the promotion of well-being 	   
<ul style="list-style-type: none"> • Environmental and natural resource conservation 	 
<ul style="list-style-type: none"> • Lifelong learning promotion 	
<ul style="list-style-type: none"> • Stakeholder Engagement 	

The Company applies a CSV (Creating Social Value) alongside C-SI (Corporate Social Innovation) approach that focuses on engaging a community in problem-solving analysis, teaching knowledge to do business, and creating innovation. Furthermore, developing cooperation from many sectors in supporting the community for sustainable and stable development, including

developing skills for the future, and promoting lifelong learning integrated with local wisdom to achieve a sustainable and equitable future for all in a stable and resilient community.

EASE – EA Social Enterprise

In late 2015, the Company initiated the EASE-EA Social Enterprise to pursue a social benefit that does not prioritize profits but aims to create social benefits through sustainable self-reliance, to enhance people's quality of life, starting with the communities surrounding the company's power plants as pilot project areas, and to create "a good job" in the community, providing local people with a stable income. As a consequence, there will be steady jobs, which will contribute to life stability and sustainable local economic growth.



The project implementation centers on promoting the participation of local farmers from upstream to downstream in order to foster ownership and shared values for social innovation.

1. Start with the needs of the community and the surrounding context
2. Design and plan projects together.
3. Assist with project implementation and promote knowledge, particularly future innovation skills.
4. Joint evaluation and scale up continuously

Implementation of Ease Organic Project

Since 2015, EASE (EA Social Enterprise) has been conducting social projects with local farmers, communities, organizations, universities, and related partners to strengthen communities, develop sustainable self-reliant farmers' businesses through the promotion of knowledge, support production, promote market channels, and increase business opportunities fairly, as well as support research and development for scale up.



Social Enterprise projects through Creating Shared Value in 2022

The Company continues to develop organic farming careers in Phitsanulok province and promote livestock occupations in goat and sheep farming in Nakhonsawan province, along with continuously creating value for communities and society as well as the environment. The projects in 2022 are as follows:

- The organic farming project in Phitsanulok province has developed a smart farm system to increase cultivation efficiency and reduce unnecessary work. An income guarantee for farmers joining the project is 320 baht per day, equivalent to the minimum wage in that area, in order to have income stability. Also, the project provides share profits from the production to farmers which can generate income for farmers on average of 340 baht per day, and the average goat and sheep raising project in Nakhon Sawan province has an average income of 473 baht per day.
- Careers are created for the elderly, with 12.5% of seniors among farmers in all projects.
- Careers are created for a new generation as Young Smart Farmers.
- Farmers in the project obtain the knowledge and skills to manage organic agriculture sustainably, as well as fundamental business and marketing, including the application of innovation and technology in organic farming.

3.4.3 Corporate Social Responsibility: CSR

CSR Strategy

CSR department adopt framework which focus on sustainable development in 3 dimensions: Economics, Social and Environment under the operation with fairness and equality, interdependence and balance. Our direction is focus on participation with the community to discuss and evaluate for satisfied solution both directly and indirectly. In addition, we cooperate to find the acceptable conditions by give an opportunity for communities to share their opinions and requirements. This could lead the solutions to solve any issues that happened. It could show that the Group adopts the framework of sustainable corporate social responsibility.

Sustainable Development Framework



CSR action plans

The CSR unit constitutes plans and indicators which can evaluate the result of CSR's project in various areas, with an emphasis on community participation and sustainable development, with the following objectives.



Participation in Community development

The Group considers about stakeholder of the Company in the operation process especially, the coexistence with the surrounding communities of the project in different regions. The CSR activities plan will focus on reaching out and listening to issues that arise within the community. The goal is to understand the real problems that may arise from business operations. Along with finding ways to solve problems in order to live together, the company also has goals and plans to improve the quality of life of the communities surrounding the project by holding to ESG principle: Environmental, Social and Governance to build good relationship in the community.

Company action toward stakeholders and community awareness surrounding the site location

The CSR department has arranged to listen to the opinions of the community since the beginning of the project establishment, as well as during the operation. There is also an opportunity for the community to express their opinions about the project continuously in each of the Company's projects. The Company has recruited personnel to take care of the surrounding

communities to receive an opinion and inform any information about the project. After that, it was analyzed until it came out with a plan that is suitable for each area to comply with the needs of the community.

CSR Performance

The Company's operations which adheres to the principles that want to operate with sincerity and pay attention to stakeholders in various dimensions such as shareholders, business partners, communities, external organizations / agencies including personnel within the organization which various stakeholders is very important to business operations both in the short term and in the long term The Company therefore focuses on operating guidelines based on social responsibility guidelines by dividing activities into 3 dimensions: economy, social and environment with the following activities.

1. Economy

- Cattle School for improving knowledge and support the local occupation, Chaiyaphum province
- Livestock activity by bringing grass from the empty area in the power plant, Phitsanulok province
- Sharing agricultural technology knowledge to start a new planting season, Nakhon Si Thammarat Province
- Seafood festival for tourism engagement, Nakhon Si Thammarat Province



2. Social

- Volunteer public area improvement with local communities in Rayong province
- Scholarship on Children's Day, Chaiyaphum province
- Supporting beverages for local staff during Songkran festival, Nakhon Si Thammarat Province
- Company staff visit for checking up on electricity in a poverty community, Chaiyaphum province
- Fixing the public road near the project from flood, Chaiyaphum province



3. Environment

- Reforestation project to increase green area, Phitsanulok province, Nakhon Sawan province, Chaiyaphum province and Lopburi province
- Coaching project about energy from the solar cell and donation of solar panels to the local community, Lampang province
- Solar Panels installation to local community, Nakhon Sawan province
- Guidance project about energy from wind turbine, Chaiyaphum province



3.4.4 Occupational Health and safety

The Company believes that occupational health, safety and environment at the work place is its basic responsibility and key and instrumental factor to its business operation and personnel well-being. It is committed to promoting and ensuring all work units have safe and good sanitary work environment and strict and continuous adherence by all employees alongside organization development toward excellence. This is in line with Sustainable Development Goal no. 8: Decent work and economic growth.

Management Approach

The Company has announced the “occupational health, safety and environment at the work place policy” to determine safety management guidelines and systems in compliance with the relevant laws and international standards to ensure occupational health, safety and environment at the work place for employees, trade partners and parties concerned. Measures have been put in place to prevent potential risks of work-related accidents, injuries and illness, and encourage improvement of work environment for sanitation and mental well-being, hence good health and quality of life at the workplace, as below:

- Prevent work-related accidents, injuries and illness with vigorous cooperation from employees and contractors concerned, along with limitation and control of risk from unsafe operation by providing briefing sessions and checking of preparation for safe operation before actual onsite operation.
- Cooperate with other government agencies and private entities in strict compliance with safety laws, rules and regulations and with quick, efficient and prudent handling of operational emergency or work-related accidents.
- Provide personal protective equipment appropriate for each type of risks and danger in order to contain and relieve potential risks of work-related accidents and health-hazardous operation, alongside guidelines for control of emergency incidents to minimize losses.
- Establish action plans and training roadmap to provide employees at all levels with appropriate knowledge so that they have adequate knowledge and understanding and are kept abreast of news and information on occupational safety with a view to safeguarding them from work-related danger or diseases and for their use in daily life.
- Put in place safety measures for employees and persons concerned by making available a safe and hygienic work environment and having the work environment inspected on a yearly basis.
- Arrange annual health check-up for all employees under the appropriate programs for them taking into account their respective work-related risk factors, such as working in confined work space or working in areas at high level, etc.
- Provide training, exercise and control to ensure that employees perform duties actively and accurately and can use tools and equipment correctly in case of any emergency incidents. The exercise plan is implemented on a yearly basis.
- Review the security management policy and have security assessment conducted from time to time.
- Accept feedbacks and suggestions from employees, contractors, trade partners, communities, government agencies and parties concerned to improve and jointly raise confidence in the Company’s occupational health and safety operation.

In 2022, the Company has provided training about work safety as follows:

- | | |
|---|---|
| • Training on basic firefighting and emergency preparedness | • Training to Confined Space entry. |
| • Training on chemical spill situation | • Training Process Safety Management Internal Auditor |
| • Training on the use of personal protective equipment. | • Training Officer in Management level and Supervisor level |
| • Training on Occupational disease | • Training on the management of waste or unused materials |
| • Training on First aids | • Training ISO 45001:2018 requirements |
| • Training to control external service providers | • Training assessment to identify risks, opportunities, and hazards |
| | • Forklift Safety Training |

Performance

The Group determined the operational indicators from Lost Time Injury Frequency Rate (LTIFR) and fatalities are as follows:

Indicators	2021		2022	
	Target	Performance	Target	Performance
Lost Time Injury Frequency Rate : LTIFR of employees (per 1 million hours)	0	0	0	5.49
Lost Time Injury Frequency Rate : LTIFR of contractors (per 1 million hours)	0	1.09	0	0
Work-related fatalities of employees (person)	0	0	0	0
Total number of employees (person)		1,169		2,039
Work-related fatalities of contractors (person)	0	0	0	0

Employees' work-related injury or accident statistics are as follows:

Work-related injury or accident indicators	2021		2022	
	Target	Performance	Target	Performance
Number of lost time work-related injury or accident cases (cases)	0	0	0	134
Number of employees with lost time work-related injury or accident from 1 day upward (persons)	0	0	0	134
Work-related fatalities of employees (persons)	0	0	0	0

Remark: Number of injury cases increased in 2022 due to the Company's expansion of business to electric vehicle business and the production has been commissioned on a full-fledged basis. However, the Company has strictly complied with its occupational health, safety and environment at the workplace policy to prevent any potential risk of work-related injury, accident and illness.

COVID-19 Safety Measures of the Company

The Company considered to health and safety and well-being of employees especially during the COVID-19 pandemic that effects to the business operation including the living condition of employee so the Company set out the measures to protect, take care and facilitate of all employees

- Employees and contractors have to report Antigen Test Kit result every 7 days before entering into the workplace.
- Use the 'Bubble and Seal' system to take care of the workers in the factory to control and prevent the spread of the virus.

- Safety measures when entering into the workplace such as providing alcohol gel, temperature checks, touching point cleaning, wearing a mask before entering into the workplace.
- Declaration of health and travel timeline or the contact with a probable or confirmed COVID-19 every day.
- Support employees to find hospital beds and track the health of employees in case of home isolation.
- Accommodations for vaccination. COVID-19 vaccines are highly effective at preventing infection, serious illness, and death.
- Educating employees on the seriousness of COVID-19 and steps they can take to avoid the spread of the disease.
- Coordinate with the relevant government sectors and hospital to investigate the infection and assess the number of close contact tracing.

4. Management Discussion and Analysis: MD&A

The operating results during the past 3 years for the Company and its subsidiaries, the revenue from sales and services can be divided into 5 business groups as follows:

- **Biodiesel Business:**
 1. Revenue from sales of biodiesel
 2. Revenue from sales of purified glycerin
 3. Revenue from sales of crude palm oil (“CPO”)
 4. Revenue from sales of PCM (Phase Change Material)
 5. Revenue from Green Diesel
 6. Revenue from sales of byproducts
- **Renewable Power Plant Business:**
 1. Revenue from sales of solar electric power
 2. Revenue from sales of wind electric power
 3. Revenue from sales of biogas electric power
 4. Revenue from subsidy for adders
- **Electric Vehicle and Mass Transport Business:**
 1. Revenue from sales of Electric Vehicle
 2. Revenue from Mass Transport
- **Battery development, manufacturing and distribution business:**
 1. Revenue from sales of lithium-ion battery manufacturing and distribution
- **Other Businesses:**
 1. Revenue from other services

Type of Revenue	2020	2021	2022
	THB (million)	THB (million)	THB (million)
Manufacturing and distributing biodiesel, purified glycerin, crude palm oil, PCM, Green Diesel and byproducts			
- Revenue from sales	6,262.29	8,225.75	7,422.27
- Cost of sales	5,745.15	7,940.88	7,656.70
- Gross Profit	517.14	284.87	(234.43)
Generating and distributing solar and wind electric power (including from subsidy for adders)			
- Revenue from sales	10,601.62	10,933.38	11,181.66
- Cost of sales	2,920.56	2,847.96	3,110.53
- Gross Profit	7,681.06	8,085.42	8,071.13
Manufacturing and distributing electric vehicle and mass transport			
- Revenue from sales and service	0.00	1,782.55	8,626.71
- Cost of sales and service	0.00	1,582.14	6,278.50
- Gross Profit	0.00	200.41	2,348.21

Type of Revenue	2020	2021	2022
	THB (million)	THB (million)	THB (million)
Manufacturing and distributing lithium-ion Battery			
- Revenue from sales	140.95	568.75	2,748.97
- Cost of sales	300.33	958.00	3,085.61
- Gross Profit	(159.38)	(389.25)	(336.64)
Other Business			
- Revenue from sales and service	299.53	200.55	304.26
- Cost of sales and service	530.22	299.01	365.20
- Gross Profit	(230.69)	(98.46)	(60.94)
Other income	119.59	384.29	354.29

*Details above include inter-segment revenue

Results of Operation for the Company and its Subsidiaries

Revenue from Sales of products and Total Revenue

1. Revenue from sales of biodiesel

Total revenue from sales of products of the Company and its subsidiaries in 2020, 2021 and 2022 were THB 6,262.29 million, THB 8,225.75 million and THB 7,422.27 million, respectively. In 2022, the revenue decreased from 2021 by THB 803.48 million and increased from 2020 by THB 1,159.98 million as categorized by products such as biodiesel, purified glycerin, byproducts, crude palm oil, Green Diesel and PCM (Phase Change Material).

1.1) Biodiesel

Revenue from biodiesel in 2020, 2021 and 2022 was THB 5,407.48 million, THB 5,773.00 million and THB 4,410.42 million, respectively. In 2022, the revenue decreased by THB 1,362.58 million from 2021, and decreased by THB 997.06 million from 2020. This was a result of the government policy to adjust the biodiesel mandate in high-speed diesel fuel from B7 and B10 to B6 from 11-31 October 2021, in addition to being reduced to B5 during 5 February 2022 until 9 October 2022 and then B7 again from 10 October 2022 until 31 March 2023. This is to minimize the impact on cost of living due to the rise in petrol prices. As a result, the demand of biodiesel (B100) in the market declined.

1.2) Purified Glycerin

Revenue from purified glycerin in 2020, 2021 and 2022 was THB 265.54 million, THB 364.42 million and THB 406.99 million, respectively. In 2022, the revenue increased by THB 42.57 million from 2021, and increased by THB 141.45 million from 2020. The main factor is an increase of selling price due to a relatively limited distribution amount of pure glycerin in the country, consistent with lower levels of biodiesel production, since glycerin is a by-product of biodiesel production. With momentum of demand greater than supply, the selling price of pure glycerin has been steadily rising.

1.3) Crude Palm Oil

Revenue from crude palm oil started recognize the revenue in 2020, 2021 and 2022 was THB 548.99 million, THB 1,750.61 million and THB 2,077.46 million, respectively. In 2022, the revenue increased by THB 326.85 million from 2021 and increased by THB 1,528.47 million from 2020. For the year 2022 revenue increased from 2021, this was mainly from the selling price factor. In late April, Indonesia which is the world's largest producer and exporter of palm oil announced a policy to ban palm oil export due to the demand and supply factors. As a result, palm oil prices have been steadily rising. For the year 2022, revenue increased from 2020, due to the company and its subsidiaries recognized the revenue from crude palm oil in Larp Pakdee Palm Co., Ltd. (EA shareholding 74.99%) in the second quarter of 2020 and Kanjanadit Palm Oil Co., Ltd. (EA shareholding 75.00%) in the third quarter of 2020.

1.4) PCM (Phase Change Material)

Revenue from PCM (Phase Change Material) in 2020, 2021 and 2022 was THB 8.54 million, THB 45.00 million and THB 104.21 million, respectively. In 2022, the revenue increased by THB 59.21 million from 2021 and increased by THB 95.67 million. For the year 2022, revenue increased from 2021. The main factor was sales volume increase and expanding the PCM market to be used in the textile industry. As a result, revenue increased, and increased from 2020, due to the company launching PCM and distributing it during the fourth quarter of 2020.

1.5) Green Diesel

The Company has launched the manufacturing and distribution of Green Diesel (GD) or Bio Hydrogenated Diesel (BHD) into the market and earned revenue for the fourth quarter ended 31 December 2022 of Baht 75.61 million for the first year. In order to get the competitive advantage, the Company has earned international sustainable certification and Carbon Credit Certification such as ISCC (International Sustainability and Carbon Certification), RSPO (Roundtable on Sustainable Palm Oil) and Carbon Footprint of products. These certifications would help us to access and sell for export markets.

1.6) Byproducts

Revenue from byproducts in 2020, 2021 and 2022 was THB 31.74 million, THB 292.72 million and THB 347.58 million, respectively. In 2022, the revenue increased by THB 54.86 million from 2021, and increased by THB 315.84 million from 2020. The main factor was the increase of palm kernel selling prices in alignment with the increase in palm prices (Palm Kernel is byproducts of crude palm oil production).

2. Revenue from solar and wind power plants

Revenue from solar and wind power plants in 2020, 2021 and 2022 was THB 10,601.62 million, THB 10,933.38 million and THB 11,181.66 million, respectively. In 2022, the revenue increase by THB 248.28 million from 2021, and increased by THB 580.04 million from 2020. The main factor was replacement of new solar panels in the both location of the Nakhon Sawan and Lampang power plants (Started gradually replacing in September 2021 and completed in March 2022), as a result, the efficiency electricity generating increased. In addition, the average selling price was increased following the wholesale FT price that increased.

3. Revenue from electric vehicle and mass transport business

Revenue from electric vehicle and mass transport business in 2021 and 2022 was THB 1,782.55 million and THB 8,626.71 million, respectively. In 2022, the revenue increase by THB 6,844.16 million from 2021. This was due to sales of electric vehicles in a total amount of 1,160 units during the third and fourth quarter of the year 2022. In addition, the Company had gain on the Entire Business Transfer (“EBT”) of the Electric boat business, which the main assets are 26 units. The Bus transportation business in regards to Smart Bus Co., Ltd (“SMB”) which has driving licenses for 37 routes, can add 1,250 new electric buses to the Thai Smile Bus Co., Ltd. (“TSB”) fleet.

4. Revenue from lithium-ion battery business

Revenue from lithium-ion battery business in 2020, 2021 and 2022 was THB 140.95 million, THB 568.75 million and THB 2,748.97 million, respectively. In 2022, the revenue increased by THB 2,180.22 million from 2021, and increased by THB 2,608.02 million from 2020. This was much of a result of the Company starting the manufacturing and distribution of lithium-ion battery business for EV assembly during the third and fourth quarter of 2022. The Company expects that in year 2023, it will be able to increase the production capacity to support electric vehicle expansion.

5. Revenue from other business

Revenue from other businesses in 2020, 2021 and 2022 was THB 299.53 million, THB 200.55 million and THB 304.26 million, respectively. In 2022, the revenue increased by THB 103.71 from 2021, and increased by THB 4.73 million from 2020. This was mainly from the service income of electric vehicle charging stations which aligned with the expansion of the charging station business for electric vehicles in 2022.

6. Other income

Other income in 2020, 2021 and 2022 was THB 119.59 million, THB 384.29 million and THB 354.29 million, respectively. In 2022, other income decreased by THB 30 million from 2021, and increased by THB 234.70 million from 2020.

Cost of sales and service

Cost of sales and services in 2020, 2021 and 2022 were THB 9,271.42 million, THB 11,893.35 million, and THB 17,394.11 million, respectively. In 2022, cost of sales increased by THB 5,500.76 million from 2021 and increased by THB 8,122.69 million from 2020, respectively. The reasons are summarized as follows:

1. Biodiesel Business: In 2020, 2021 and 2022 the cost of sales was THB 5,745.15 million, THB 7,940.88 million and THB 7,656.70 million. In 2022, cost of sales decreased by THB 284.18 million from 2021 and increased by THB 1,911.55 million from 2020, respectively. The main factor was palm fruit price fluctuations which is the raw material for biodiesel.
2. Generating and distributing Electricity: In 2020, 2021 and 2022 the cost of sales was THB 2,920.56 million, THB 2,847.96 million and THB 3,110.53 million. In 2022, cost of sales increased by THB 262.57 from 2021 and increased by THB 189.97 million from 2020, respectively. This was mainly from higher levels of depreciation due to replacement

of new solar panels in the both location of the Lampang and Nakhon Sawan provinces, which helps increase the efficiency of the electricity generating.

3. Manufacturing and distribution electric vehicle and mass transport: In 2021 and 2022 the cost of sales was THB 1,582.14 million and THB 6,278.50 million. In 2022, cost of sales increased by THB 4,696.36 million from 2021 which corresponds to the increased sales of electric vehicle.
4. Manufacturing and distribution lithium-ion battery: In 2020, 2021 and 2022 the cost of sales was THB 300.33 million, THB 958.00 million and THB 3,085.61 million. In 2022, cost of sales increased by THB 2,127.61 million from 2021 and increased by THB 2,785.28 million from 2020, respectively. This was mainly a result of the increasing lithium-ion batteries sales volume and the cost of depreciation during start-up initial operation (Ramp up) in 2022.
5. Other businesses: In 2020, 2021 and 2022 the cost of sales was THB 305.38 million, THB 299.01 million and THB 365.20 million. In 2022, cost of sales increased by THB 66.19 million from 2021 and increased by THB 59.82 from 2020, respectively. This aligned with the expansion of the charging station business for electric vehicles.

Selling Expenses

Selling expenses of the Company and its subsidiaries in 2020, 2021, and 2022 were THB 79.84 million, THB 71.84 million and THB 60.58 million, respectively. In 2022, selling expenses decreased by THB 11.26 million from 2021 and decreased by THB 19.26 million from 2020. A significant portion of selling expenses is related to manufacturing and distribution of Biodiesel Product which aligns with the decrease in biodiesel sales volume.

Administrative Expenses

Administrative expenses of the Company and its subsidiaries in 2020, 2021 and 2022 were THB 1,198.58 million, THB 1,365.49 million and THB 1,366.19 million, respectively. In 2022, administrative expenses increased by THB 0.70 million from 2021, and increased by THB 167.61 million from 2020. In 2022, expenses increased from 2020 due to employee expenses and factory management expenses to support the expansion of Battery and Electric Vehicle business.

Financial Costs

In 2020, 2021 and 2022, the financial cost of the Company and its subsidiaries were THB 1,636.80 million, THB 1,387.54 million and THB 1,412.78 million, respectively. An increase by THB 25.24 million from 2021 and decreased by THB 224.02 million from 2020. For the year 2022 an increase from 2021 due to bonds and short-term loans from financial institutions, including an increase in average interest rate of the Company Group, as according to the announcement, the increased interest rate of the Bank of Thailand. For the year 2022, a decrease from 2021 due to repayments of loan from financial institutions and lower average interest rate.

- **Trade accounts receivable and other receivable net**

As of 31 December 2020, 2021 and 2022, the trade accounts receivable and other receivables of the Company and its subsidiaries were THB 3,511.48 million, THB 7,013.10 million and THB 14,462.34 million, increased by THB 7,449.24 million from 2021, and increased by THB 10,950.86 million from 2020, respectively. This was mainly from an increase of finance lease receivables and trade accounts receivable of sales electric vehicle of year 2022.

- **Inventories**

As of 31 December 2020, 2021 and 2022, the inventories of the Company and its subsidiaries were THB 833.30 million, THB 1,483.15 million and THB 5,516.42 million, increased by THB 4,033.27 million from 2021, and increased by THB 4,683.12 million from 2020, respectively. Due to an increased the raw materials in preparation for lithium-ion battery production for Amita Technology (Thailand) Co., Ltd. and electric vehicle factory of year 2022.

- **Non-current assets held for sale**

As of 31 December 2021 and 2022 the non-current assets held for sale of the company and its subsidiaries were THB 713.91 million, and THB 3,918.64 million, an increase by Baht 3,204.73 million, due to the solar panels of the Phitsanulok power plant project and Lampang power plant project.

- **Investments in Associates**

As of 31 December 2020, 2021 and 2022, the investment in associates of the Company and its subsidiaries were THB 1,500.48 million, THB 1,512.97 million and THB 8,550.91 million, increased by THB 7,037.94 million from 2021, and increased by THB 7,050.43 million from 2020, respectively. This was from the subsidiary acquiring newly issued ordinary shares of Beyond Securities Public Company Limited in equivalent to 23.63% of the issued and paid-up ordinary shares in 2022

- **Property, plant and Equipment**

As of 31 December 2020, 2021 and 2022, the property, plant and equipment of the Company and its subsidiaries were THB 55,856.94 million, THB 58,420.63 million and THB 54,221.39 million, decreased by THB 4,199.24 million from 2021, and decreased by THB 1,635.55 million from 2020, respectively. This was from a decreased of solar panels classified as non-current assets held for sale of power plants in the Phitsanulok power plant project and Lampang power plant project.

Property, plant and Equipment by asset type

Unit: THB Million			
Property, plant and Equipment	As of 31 Dec 2020	As of 31 Dec 2021	As of 31 Dec 2022
Land	2,106.97	2,125.57	2,125.57
Buildings and Buildings improvement	1,317.71	1,708.57	5,942.01
Machines, equipment, and instruments in the plants	2,686.67	3,352.68	6,015.56
Office equipment, furniture and motor vehicles	97.76	143.88	167.54
Assets and Construction in progress	4,935.10	8,323.33	1,822.63
Power plants, substation, transmission system and components	44,712.73	42,766.60	38,148.08
Total	55,856.94	58,420.63	54,221.39

• Intangible Assets

The intangible assets of the Company and its subsidiaries as of 31 December 2020, 2021, and 2022 were THB 2,792.58 million, THB 2,789.70 million and THB 2,628.35 million. In 2022, intangible assets decreased by THB 161.35 million from 2021 and decreased by THB 164.23 million from 2020, respectively.

Intangible Assets details

Unit: THB Million

List of Intangible Assets	As of 31 Dec 2020	As of 31 Dec 2021	As of 31 Dec 2022
Right to power purchase agreement	28.52	26.83	25.13
Right to use transmission line and substation			
• Solar Power Plant in Lopburi	9.98	9.39	8.79
• Solar Power Plant in Nokhon Sawan	139.84	132.06	124.29
• Solar Power Plant In Lampang	143.98	136.45	128.93
• Solar Power Plant In Phitsanulok	219.11	208.79	197.96
• Wind Power Plant In Nakhon Si Thammarat and Sogkhla	297.61	283.70	269.80
• Wind Power Plant In Chaiyaphum	827.92	791.72	756.02
Computer software	38.40	58.96	66.29
Patents	675.45	729.31	636.90
Brand	232.93	247.75	216.29
Intangible assets under development	178.84	164.74	197.95
Total	2,792.58	2,789.70	2,628.35

Liquidity

As of December 31, 2021 and 2022, the current assets of the Company and its subsidiaries were THB 11,649.59 million and THB 22,527.28 million, respectively. The major current assets were with high quality and liquidity such as cash and cash equivalents amounting to THB 2,926.97 million and THB 3,210.73 million, respectively. Trade accounts receivable were THB 3,690.37 million and THB 6,329.53 million, respectively. An increase by THB 2,639.16 million from 2021, due to the increase of finance lease receivables and trade accounts receivable of sales electric vehicle in 2022. Inventories were THB 1,483.15 million and THB 5,516.42 million respectively. Inventories increased by THB 4,033.27 million from 2021, due to an increased in raw materials in preparation for lithium-ion battery production for Amita Technology (Thailand) Co., Ltd. and electric vehicle factory.

As of 31 December 2021 and 2022, the Company and its subsidiaries incurred the current liabilities of THB 12,675.97 million and THB 26,475.06 million, respectively. The current liabilities of the Company in 2022 compared to the same period of last year increased by THB 13,799.09 million mainly from an increase of short-term loans from financial institutions by THB 9,187.95 million and increased due to the current portion of long-term loans from financial institutions and debentures by THB 1,740.42 million in order to supporting the expansion of lithium-ion battery and electric vehicle assembly plants.

In case, the current assets are below than current liabilities. The Group's finance department evaluates liquidity risk regularly to maintain flexibility in funding by maintaining availability under committed credit lines due to the dynamic nature of the underlying business.

Source of Fund

Liability

As of 31 December 2020, 2021 and 2022, the Company and its subsidiaries incurred total liabilities of THB 48,856.89 million, THB 50,374.53 million and THB 62,059.98 million, respectively. The details of liabilities were as follows:

- **Short-term loan from financial institutions**

As of 31 December 2020, 2021 and 2022, the Company and its subsidiaries incurred short-term loans from financial institutions of THB 2,640.31 million, THB 1,618.06 million and THB 10,806.01 million, respectively. As of 31 December 2022, the short-term loan from financial institutions increased for repayment the maturity of old bonds and supporting the expansion of lithium-ion battery and electric vehicle assembly plants.

- **Long-term loan from financial institutions**

As of 31 December 2020, 2021 and 2022, long-term loans from financial institutions (including the portion due within 1 year) of the Company and its subsidiaries were THB 24,239.96 million, THB 29,163.22 million and THB 24,446.56 million, respectively.

- **Debenture**

The Company's outstanding debentures (including the portion due within 1 year) as of 31 December 2020, 2021 and 2022 were THB 16,191.77 million THB 12,194.35 million and THB 15,291.23 million, respectively. The objective is for investing in projects such as lithium-ion battery factory construction and electric vehicle assembly plants.

Shareholders' Equity

The Company and its subsidiaries' shareholder's equity continuously increased. As of 31 December 2020, 2021 and 2022, were THB 29,626.88 million, THB 35,101.72 million and THB 41,304.36 million, respectively. Shareholder's equity continued to increase due to the continuous profit leading to increase in retained earnings.

In 2020 and 2021, the Annual General Meeting of Shareholders approved the payment of dividend of THB 0.30 per share, or the dividend payout of THB 1,119 million from operating results under non-BOI businesses.

Dividend	2020	2021
Dividend (THB/Share)	0.30	0.30
Dividend payout (THB million)	1,119.00	1,119.00
Dividend payout ratio	33.32%	41.89%

Debt-to-equity ratio of the Company and its subsidiaries as of 31 December 2020, 2021 and 2022 were 1.65 times, 1.44 times and 1.50 times, respectively. In 2022, the debt-to-equity ratio increased due to higher total liabilities to support the expansion of lithium-ion battery and electric vehicle assembly plants.

Cash flow

The Company and its subsidiaries incurred net cash flows from operating activities in 2020, 2021 and 2022 were THB 9,237.64 million, THB 7,798.13 million and THB 1,890.95 million, respectively. The decreased of cash flows from operating activities come from purchased raw materials, other component parts, and increased of finance lease receivable for sales of electric vehicle transaction. However, the Company's profit increases continuously.

Net cash (payment) in investing activities in 2020, 2021 and 2022 were THB (14,195.54) million, THB (5,940.59) million and THB (6,870.60) million, respectively. In 2020 and 2021, the Company and its subsidiaries mostly invested in the construction of lithium-ion battery plants and car assembly plant. In 2022, the Company and its subsidiaries invested in an associate.

For financing activities in 2020, 2021 and 2022, cash flow receipts from (payments in) financing activities were equal to THB (2,140.88) million, THB (1,810.06) million and THB 5,329.53 million, respectively. In 2021, the Company repaid the debenture in the amount of THB 4,000 million. In 2022, the Company issued bonds in the amount of THB 5,100 million for repayment the maturity of old bonds and supporting the expansion of lithium-ion battery and electric vehicle assembly plants.

Cash flow from various activities for the year ended 31 December 2020, 2021 and 2022 are summarized as follows:

	Unit: THB Million		
Cash flow from activities	2020	2021	2022
Net cash receipts from operating activities	9,237.64	7,798.13	1,890.95
Net cash payments in investing activities	(14,195.54)	(5,940.59)	(6,870.60)
Net cash receipts from (payments in) financing activities	(2,140.88)	(1,810.06)	5,329.53
Increase (decrease) of net cash	(7,098.78)	47.48	349.88
Cash and cash equivalents at beginning of year	10,028.95	2,950.67	2,926.97
Currency transaction differences	20.50	(71.17)	(66.12)
Cash and cash equivalents at ending of year	2,950.67	2,926.97	3,210.73

Factors that may impact Future Operations (Forward Looking)

Energy Absolute Public Company ("the Company") Limited identified the significant factors that may affect the operations of the organization in the future, including key stakeholders both internal and external aspects, as well as risk and positive and negative impact on people and planet arising from business operations and the value chain for sustainable development, covering Environmental, Social and Governance Dimensions (ESG). Moreover, the Company has integrated the sustainable development goals as part of its corporate strategic planning to support capacity strengthening of the management of material risks and costs, minimize the negative impacts, creation and access to new markets, and creating innovations in business models making them more efficient therefore reinforce the viability of the Company in the long term.

In 2022, the Company has given importance to the issue of climate change, which is already affecting our world today including environmental issues, air pollution, and global warming such as severe weather, drought, floods, other disasters, and the issue of PM2.5 which is widespread across the region. In 2021, the Company has invested in a lithium-ion battery

factory and energy storage system to increase efficiency in the country's electricity generation and distribution system, serving to all types of electric vehicle industry, which in line with the government's promotion of new S-curve industry. Besides the electric vehicle production, the Company has also developed the energy storage systems for renewable energy power plants to reduce the fluctuation of electricity and create more stable power supply and supports the increase in the proportion of renewable energy power plants in the future toward energy sustainability especially, reduce air pollution and seeks to limit global warming, the most critical goal of COP27. The Company has a plan to develop Thailand as an EV production hub for the ASEAN region (ASEAN BEV HUB) by producing the battery as an essential part in the development of commercial electric vehicles for example, "MINE Bus", "MINE Smart Ferry", "MINE MT 30", "MINE Truck" and Charging Station under name "EA Anywhere".

In addition, the Company has a strategy to drive the public transportation systems to become modern, comfortable, and help reduce pollution sustainably along with drive the country towards a low-carbon society. The Company has been relentlessly determined to drive our sustainability operations in terms of create job opportunities for the Thai people, help improve the quality of life to have a better income and well-being, and help Thailand overcome the "middle-income trap", moving towards becoming a high-income economy. This will raise GDP per capita and promote inclusive and sustainable economic growth according to the country definitions.

The Company is focused on expanding its businesses in electric buses and electric ferries, and has restructured investment related to electric buses and electric ferries. The Company previously held 100% of shares in a company with rights to operate 37 bus routes, but has now restructured and holds shares to operate these routes indirectly through Thai Smile Bus Company Limited. This results in the Company owning the rights to operate a total of 122 routes in Bangkok. This enabled to company to cover all segments of transportation, from land to water. The Company's improvements to public transportation is not only limited to land and water transport, but also rail transport. The Company has developed "Mine Locomotive," which introduces the use of green energy to power rail transportation, for the sustainable future of Thailand and the Asia region. The Company has adjusted its strategy in regards to the expansion of EV charging stations, from previously focusing on small scale charging stations located in zones such as shopping malls, to developing and building large scale charging stations with Megawatt capacity to meet the future demand from electric buses, electric ferries, and electric trucks.

There has been continuous development regarding the Company's Li-ion battery business, and this business is one positive factor for the Company and will drive The Company's profits and its business group to grow sustainably.

Key Financial Information

Result of operations of the Company and its subsidiaries	Consolidated/Audited			
	For the year ended 31 Dec 2021		For the year ended 31 Dec 2022	
	Million Baht	Percentage %	Million Baht	Percentage %
Revenue from operating	20,173.81	100.00	25,354.61	100.00
Cost of sales and services	(11,893.35)	(58.95)	(17,394.10)	(68.60)
Gross profit	8,280.46	41.05	7,960.51	31.40

Result of operations of the Company and its subsidiaries	Consolidated/Audited			
	For the year ended 31 Dec 2021		For the year ended 31 Dec 2022	
	Million Baht	Percentage %	Million Baht	Percentage %
Selling expenses	(71.84)	(0.36)	(60.58)	(0.24)
Administrative expenses	(1,365.49)	(6.77)	(1,366.19)	(5.39)
Other revenue from operating	384.29	1.90	2,192.20	8.65
Profit before interest and tax	7,227.42	35.82	8,725.94	34.42
Finance cost	(1,387.54)	(6.88)	(1,412.77)	(5.57)
Share of gains (losses) from investments in associates and joint ventures, net	13.54	0.07	217.64	0.86
Income tax	(3.35)	(0.02)	(145.32)	(0.57)
Profit before currency exchange rate and special items	5,850.07	28.99	7,385.49	29.13
Currency exchange gains (losses), net	65.92	0.33	20.51	0.08
Gain (losses) on measurement of derivatives	13.36	0.07	0.47	0.00
Net Profit for the year	5,929.35	29.39	7,406.47	29.21
Depreciation and amortization	2,767.97	13.72	3,647.71	14.39
Profit before interest, income tax, depreciation and amortization	10,008.93	49.61	12,591.29	49.74
Profit attributable to:				
Owners of the parent	6,100.07	30.24	7,604.29	29.99
Non-controlling interests	(170.72)	(0.85)	(197.82)	(0.78)

Summary of Key Financial Ratios

Key Financial Ratios		Year 2020	Year 2021	Year 2022
Current ratio	Times	0.54	0.92	0.85
Quick ratio	Times	0.42	0.52	0.36
Operating Cash flow ratio	Times	0.94	0.59	0.10
Account Receivable Turnover	Times	6.31	6.26	5.06
Average Collection Period	Days	57.87	58.26	72.12
Inventory Turnover	Times	11.65	10.27	4.97
Average Sale Period	Days	31.32	35.55	73.44
Account Payable Turnover	Times	28.19	32.54	6.74
Average Payment Period	Days	12.95	11.22	54.13
Cash cycle	Days	76.24	82.59	91.43
Profitability Ratios				
Gross profit margin	%	45.72	41.05	31.40
Operating profit margin	%	39.39	36.23	33.08
Cash to profit margin	%	137.32	106.73	21.62

Key Financial Ratios		Year 2020	Year 2021	Year 2022
Net profit margin	%	29.35	28.84	26.89
Return on equity	%	20.34	20.23	21.29
Efficiency ratios				
Return on assets	%	8.97	8.93	9.49
Return on fixed assets	%	12.43	12.81	15.92
Asset turnover	Times	0.23	0.25	0.29
Leverage Ratios or Financial Ratios				
Debt to equity ratio	Times	1.65	1.44	1.50
Interest coverage ratio	Times	6.13	7.67	8.17
Dividend payout ratio	%	22.17	18.87	15.11

5. General and other important information

5.1 General information

Company Name : Energy Absolute Public Company Limited

Security Name : EA

Company Registration Number : 0107551000061

Head Office : No. 89 AIA Capital Center Building, 16th Floor, Ratchadapisek Road, Din Daeng Sub-district, Din Daeng District, Bangkok 10400

Tel : +66 2248 2488-92, +66 2002 3667-9

Fax: +66 2248 2493

Website : www.energyabsolute.co.th

: Corporate Communications Department

Tel : +66 2248 2488-92, +66 2002 3667-9 # 19531

Fax : +66 2248 2493

Email : ir@energyabsolute.co.th

Nature of Business : 1) **Biodiesel Business (through the Company and Subsidiaries)**

- Produces and Distributes biodiesel (B100), green diesel, purified glycerin and byproducts
- Produces and Distributes Phase Change Material (PCM)

2) **Renewable Power Plant Business (through Subsidiaries)**

- Produces and Distributes solar electric power
- Produces and Distributes wind electric power

3) **Electric Vehicle and Energy Storage System (through Subsidiaries)**

- Develop, Produces and Distributes of batteries
- Electric Charging Station Business (for electric vehicle)
- Electric Vehicle

4) **Other Businesses (through Subsidiaries)**

- Batteries, Electric Vehicles and Electronic Products Testing Center
- Research and Development Business
- Others

Registered Capital : THB 402,000,000.- (4,020,000,000 ordinary shares, with a par value of THB 0.10 per share)

Paid-up Capital : THB 373,000,000.- (3,730,000,000 ordinary shares, with a par value of THB 0.10 per share)
(as of December 31, 2022)

Plant Location / Project Office

Biodiesel Business

- Biodiesel (B100), Purified Glycerin and Byproducts Plant

Project Office / Project Location:

507, Moo 9, Soi 7, Kabinburi Industrial Estate,
Kabin Buri - Nakhon Ratchasima Road, Km.12,
Nong Ki Sub-district, Kabin Buri District,
Prachin Buri Province 25110

- Phase Change Material (PCM) Plant:

Project Office / Project Location:

WHA Eastern Industrial Estate (Map Ta Phut), 88, Soi G5,
Pakorn Songkrohraj Road, Map Ta Phut Sub-district,
Muang Rayong District, Rayong Province 21150

Renewable Power Plant Business

- **Solar Power Plant 8 megawatts /**
Lopburi Province
Project Office / Project Location:
188, 188/2, Moo 3, Khok Tum - Pa Sak River Road (Highway No. 3333) Km.21, Phatthana Nikhom Sub-district, Phatthana Nikhom District, Lop Buri Province 15140
- **Solar Power Plant 90 megawatts /**
Nakhon Sawan Province
Project Office / Project Location:
99/9, 99/10, Moo 5, Huawai Sub-District, Takhli District, Nakhon Sawan Province 60140
- **Solar Power Plant 90 megawatts /**
Lampang Province
Project Office:
333, Moo 1, Ban-uam Sub-district, Mueang Lampang District, Lampang Province 52100
Project Location:
Located at Ban-uam Sub-district, Ban-Pao District, Mueang Lampang District and Nonglom Sub-district, Hangchat District, Lampang Province
- **Solar Power Plant 90 megawatts /**
Phitsanulok Province
Project Office / Project Location:
88, Moo 11, Matong Sub-district, Phrom Phiram District, Phitsanulok Province 65180
- **Wind Power Plant 126 megawatts /**
Nakhon Si Thammarat and Songkhla province
Project Office:
212, Moo 2, Hua Sai Sub-district, Hua Sai District, Nakhon Sithammarat Province 80170
Project Location: Located at Hua Sai District, Pak Panang District, Nakhon Si Thammarat Province and Ranot District, Songkhla Province
- **Wind Power Plant 260 megawatts /**
Chaiyaphum province
Project Office:
8/9, Moo 8, Tako Thong Sub-district, Sub Yai District, Chaiyaphum Province 36130
Project Location:
Located at Thep Sathit District, Sub Yai District and Bamnet Narong District, Chaiyaphum Province

Electric Vehicle and Energy Storage System Business

- **Development, manufacturing and distribution of Batteries Plant**
Project Office / Project Location:
88/9, Moo 7, Khao Din Sub-district, Bangpakong District, Chachoengsao Province and 8/8, Moo 1, Khlong Prawet Sub-district, Ban Po District, Chachoengsao Province
- **Manufacturing of Electric Vehicle Plant**
Project Office / Project Location:
8/18, Moo 1, Khlong Prawet Sub-district, Ban Po District, Chachoengsao Province and 8/8, Moo 1, Khlong Prawet Sub-district, Ban Pho District, Chachoengsao Province

Other References

Securities Registrar

Name : Thailand Securities Depository Company Limited
(TSD)

Location : The Stock Exchange of Thailand Building
93 Ratchadaphisek Road, Din Daeng Sub-
district, Din Daeng District Bangkok 10400

Telephone : +66 2009 9999

Website : www.set.or.th/tsd

E-mail : SETContactCenter@set.or.th

Audit Firm

Name : 1) Ms. Amornrat Permpoonwattanasook

Certified Public Accountant Registration No. 4599

2) Mr. Boonrueng Lerdwiseswit

Certified Public Accountant Registration No. 6552

3) Ms. Rodjanart Banyatananusard

Certified Public Accountant Registration No. 8435

PricewaterhouseCoopers ABAS Company Limited

Location : Bangkok City Tower, 15th Floor, No. 179/74-80,
South Sathorn Road, Thung Maha Mek Sub-district,
Sathon District, Bangkok 10120

Tel : +66 2344 1000

Fax : +66 286 5050

Debenture Registrar / Debenture Holders Representative

1) Debentures No. 1-2/2019 (Tranche 2, 3)

Debenture Registrar

Name : Bank of Ayudhya Public Company Limited

Location : Head Office No. 1222, Rama 3 Road,
Bang Phong Pang Sub-district,
Yan Nawa District, Bangkok 10120

Debenture Holder Representative

Name : Kiatnakin Phatra Bank Public Company Limited

Location : Head Office No. 209 KKP Tower, Sukhumvit21
(Asoke), Khlong Toey Nua, Watthana,
Bangkok 10110

2) Debentures No. 3/2019

Debenture Registrar

Name : Bank of Ayudhya Public Company Limited

Location : Head Office No. 1222, Rama 3 Road,
Bang Phong Pang Sub-district,
Yan Nawa District, Bangkok 10120

3) Debentures No. 1/2020 (Tranche 2, 3)

Debenture Registrar

Name : Kasikorn Thai Bank Public Company Limited

Location : Head Officer No. 1 Soi Rat Burana 27/1,
Rat Burana Road, Rat Burana Sub-district,
Rat Burana District, Bangkok 10140

Debenture Holder Representative

Name : Kiatnakin Phatra Bank Public Company Limited

Location : Head Office No. 209 KKP Tower, Sukhumvit21
(Asoke), Khlong Toey Nua, Watthana,
Bangkok 10110

4) Debentures No. 1/2022 (Tranche 1, 2, 3 and 4)

Debenture Registrar

Name : Kasikorn Thai Bank Public Company Limited

Location : Head Officer No. 1 Soi Rat Burana 27/1,
Rat Burana Road, Rat Burana Sub-district,
Rat Burana District, Bangkok 10140

Debenture Holder Representative

Name : Kiatnakin Phatra Bank Public Company Limited

Location : Head Office No. 209 KKP Tower, Sukhumvit21
(Asoke), Khlong Toey Nua, Watthana,
Bangkok 10110

5.2 Other Information

Juristic persons whose shares are held by the Company: Details as specified under 1.3 Shareholding Structure of EA Group.

5.3 Legal Disputes

No cases related to the Company and its subsidiaries as follows:

- No cases that may have a negative impact on the assets of the Company or its subsidiaries which is higher 5% of shareholder's equity as at the 2022 year-end.
- No cases which significantly affect the business operations of the Company or its subsidiaries.
- No cases that do not arise from normal business operations of the Company or its subsidiaries.

5.4 Secondary Market

-None-

5.5 Regularly Contacted Financial Institutions

Bank of Ayudhya Public Company Limited

No. 1222, Rama 3 Road
Bang Phong Pang Sub-district,
Yan Nawa District, Bangkok 10120

Kiatnakin Phatra Bank Public Company Limited

No. 209 KKP Tower
Sukhumvit 21 (Asoke) , Khlong Toey Nua Sub-district
Watthana District, Bangkok 10110

Kasikorn Thai Bank Public Company Limited

No. 1 Soi Rat Burana 27/1,
Rat Burana Road, Rat Burana Sub-district,
Rat Burana District, Bangkok 10140

Siam Commercial Bank Public Company Limited

No. 9 Ratchadapisek Road
Jatujak Sub-district, Bangkok 10900



Corporate Governance

Section 2: Corporate Governance

6. Good Corporate Governance Policy

6.1 Corporate Governance Policy and Guidelines

Good Corporate Governance Policy

The Board of Directors understands the importance of implementing “Good Corporate Governance 2017” as announced by Stock Exchange of Thailand, and therefore, implemented such Good Corporate Governance as a guideline to enable effective and transparent management which will ensure trust and confidence among shareholders, investors, stakeholders and all related parties.

The Board of Directors defined “Company Manual” which consists of organizational culture (Vision, Mission, Values), Code of Business Ethics, Code of Conduct for Directors, Management and Employees, Corporate Governance, Social Responsibility and Anti-Corruption policy in writing for Directors, Management and all Employees to acknowledge, understand and strictly adhere to the policy and there are measures to monitor compliance with the policy. The Board of Directors assigned Directors, Management and Employees must comply with the policy. The Board of Directors also encourages to publish Company Manual to stakeholders and every related person as well as distribution on the Company’s website and reviewed annually.

The Board of Directors set forth the corporate governance policy that all level has to adhere to as guideline and has assigned the Corporate Governance Committee to govern and ascertain the Company’s corporate governance in compliance with standard performance including with operational assessment and practical enhancement in accordance with the Good Corporate Governance for listed companies amended B.E. 2560 of the Stock Exchange of Thailand (SET). Good Corporate Governance is divided into 5 categories as following details:

1. Rights of Shareholders
2. Equal treatment to shareholders
3. Roles of stakeholder
4. Information disclosure and transparency
5. Responsibilities of the Board of Directors

Policy and Guidelines for the Board of Directors

The Board of Directors plays an important role in corporate governance for the best interest of the Company. The Board of Directors responsible for performance of duties to shareholders and independent from management.

Structure of the Board of Directors

- The Board of Directors consists of at least 5 directors but not more than 15 directors, and at least half of the directors must have residence in Thailand.

- The Board of Directors consists of independent directors at least one-third (1/3) of the total number of directors and/or not less than 3 independent directors.
- The Chairman of the Board of Directors and the Chief Executive Officer must not be the same person for segregation of duties and responsibilities and balance of the power.
- Structure of the Board of Directors as of December 31, 2022, comprises of 11 members which having directors with diversified qualifications in terms of skills, experiences, and specific talents that benefits to the Company including Directors with knowledge and experience in engineering, accounting, finance, banking, law, management, energy industry etc..
- The Board of Directors has independent directors as specified by the SEC which able to be independent in giving opinions.
- Term and number of years of the Board of Directors in the position of director of the Company according to the Company's regulations specified the number of years in each position of the Board of Directors shall be in accordance with the Public Limited Companies Act. At every Annual General Meeting of Shareholders, one-third of the Directors, or, if their number is not a multiple of three, then the number nearest to one-third, must retire. The directors retiring in the first and second years following the registration of the Company shall be drawn by lots. In every subsequent year, the directors who have been longest in the board shall retire. However, the retiring directors may be re-elected.
- The Company has specified the qualifications of the person who will be "Independent Directors" so that the independent directors of the Company are truly independent in accordance with the regulations of the SEC and SET. The definition / qualifications of independent directors of the Company more than to the definition of independent directors of the SEC and SET.
- The Chairman of the Board of Directors and Chief Executive Officer has clearly separated roles and responsibilities between the Board of Directors and management. The director is responsible for policy making and overseeing the management's operations at the policy level, while the management manages various tasks to be in accordance with the specified policy.
- Therefore, the Chairman of the Board of Directors and Chief Executive Officer is a different person and the Chairman of the Board of Director is not an executive director and not being a chairman or member in any sub-committees. Furthermore, the duties of the sub-committees are truly independent and not participate in the management of the Company as well as having no authorization to sign for binding the Company. This is to separate the duties between the policy oversight of the Company and management of the Company.
- Determination of the number of listed companies in which the directors will be appointed as directors, the Board of Directors is aware of the Good Corporate Governance in relation to the number of listed companies which the directors will be appointed as directors. Therefore, the beneficial contribution from the directors being able to devote their time to perform their duties efficiently. There is no director in the company that takes a position more than other 4 listed companies.

- The Board of Directors has appointed the nomination and remuneration committee to set the remuneration for the board of directors and top executives for their tasks, as well as determining the criteria for remuneration for company directors, sub-committee, and top management per the Company's terms and related regulations.
- The Board of Directors appointed the Company Secretary who has legal knowledge, experience and passed the Company Secretary Program from the Thai Institute of Directors Association.

Meeting of the Board of Directors

- The meeting of the Board of Directors is held at least 3 months for a meeting, with advance schedule of total meeting per annum. Meeting with special agenda may be held as necessary.
- Not less than half (1/2) of the total directors attending the meeting shall constitute the quorum.
- To call for the Board of Directors meeting, the Chairman or the person assigned to do so shall send the notice of the meeting and meeting document to all directors not less than (7) days prior the meeting date. (except for the urgent case and in order to protect the interest of the Company, the notification by other methods and set the meeting date earlier than that shall be allowed)
- The Chairman of the Board of Directors should allocate appropriate time to enable directors to discuss important matters in each agenda.
- The meeting of the Board of Directors will be held at least once a year with no executive or management members attending the meeting in order to open the opportunity to discuss various issues concerning the business operation of the Company or the subject in the interest. The Chief Executive Officer will be reported for acknowledgement of the meeting result.
- The Company sets the meeting schedule and the main agenda of the Board of Directors' meeting and sub-committees meeting for the whole year in advance and notifies each director of the schedule. Therefore, the directors can arrange the time and attend the meeting.
- The Board of Directors organized regular meetings in order to be informed and to jointly decide in the Company's business operations. The meeting agenda is clearly set in advance and there may be additional special meetings to consider important matters urgently. In the year 2022, the Company held 8 Board of Directors' meetings, which consist of 5 quarterly meetings, and 3 special meetings. In each Board of Directors' meeting, sufficient time is allocated for management and those involved will provide information and sufficient time for the directors to carefully consider the important information. In every Board of Directors' meeting, the Chairman of the Board asked all directors to exercise discretion carefully including freely expressing opinions voting at a meeting of the Board of Directors shall be made by a majority vote in which one director has one vote. If the votes are equal, the Chairman of the meeting will have an additional vote as the deciding vote. In each Board of Director's meeting, a meeting document is sent to the directors in advance in order to have sufficient time to study the information. In considering various matters, the Chairman of the Board which chaired the meeting gave the directors an opportunity to express their opinions appropriately.

The Board of Directors' meeting organized a meeting between non-executive directors without management participation in the Board of Directors' meeting no. 1/2022, held on January 26, 2022 and no. 3/2022, held on July 15, 2022, which considered, Personnel management (succession plan).

- In considering matters as the agenda of the Board of Directors' meeting, the Chief Executive Officer / Vice President Executive Officer, is responsible for proposing matters to the Chairman of the Board of Directors in order to consider the matter as the agenda of the Board of Directors' meeting.
- The Board of Directors opened the opportunity and invited top executives to join the Board of Directors' meeting to provide more detailed information as directly related to the information and to have an opportunity to get to know senior executives for consideration of a succession plan.
- The Board of Directors assigns to the audit committee, which are all Independent Directors, to have a meeting at least once a year to discuss various issues about management that is of interest without the management team together and notify to the Chief Executive Officer.

Roles and Responsibilities of Chairman of the Board

- The Chairman of the Board is responsible for overseeing the use of policies and strategic operational guidelines of the management including providing advice and supporting the business operations of the management but not participate in the routine management of the Company.
- The Chairman of the Board acts as the Chairman of the Board of Directors' meeting and the shareholders' meeting and to encourage all directors to participate in the meeting as well as overseeing that the Board of Directors and shareholders' meetings are conducted effectively and successfully.
- Responsible as the leader of the Board of Directors in monitoring, supervising the Executive Committee and other sub-committees to achieve the objectives.
- Being the Chairman of the Board of Directors' Meeting and being the Chairman of the shareholders' meeting.
- Being a casting vote in the event that there are two equal votes in the Board of Directors' meeting.

The Company Secretary

The Board of Directors appointed the Corporate Secretary pursuant to Section 89/15 of the Securities and Exchange Act. B.E. 2535 and the amendment, to prepare and maintain important documents of the Company which are Registration of the Board of Directors, Invitation to the Board of Directors' meeting, minutes of the Board of Directors' meeting, Company's Annual Reports, Invitation to the shareholders' meeting, minutes of the shareholders' meeting, report of interest by the directors or executives, including any other matters as notified by the SEC regarding the applicable law of Securities and Stock Exchange.

Performance assessment of the Board of Directors and Sub-Committees

The Company conducts a self-assessment of the board of directors and sub-committees related to good corporate governance according to the board self-assessment form issued by the Stock Exchange of Thailand by conducting an evaluation form for both collectively and individually at least once a year. The Board of Directors jointly set criteria for self-assessment of the performance of both the collectively and individually. Self-Assessment is required to be conducted annually and the Board of Directors will jointly consider the evaluation results to determine ways to improve work.

Assessment form for the entire Board of Directors

1. Assessment form for the entire Board of Directors is comprised of 6 topics:
 - 1) Structure and qualification of the Board of Directors
 - 2) The meeting of the Board
 - 3) Roles, duties and responsibilities of the Board of Directors
 - 4) Performance of Directors' duties
 - 5) Relationship with the management
 - 6) Self-development of directors and executives development
2. Assessment form for the individual Board of Directors is comprised of 3 topics:
 - 1) Structure and qualification of the Board of Directors
 - 2) The meeting of the Board
 - 3) Roles, duties and responsibilities of the Committee

Assessment form for the sub-committees:

1. The criteria of assessment form for the entire sub-committees is comprised of 3 topics
 - 1) Structure and qualifications of the Committee.
 - 2) The meeting of the Committee.
 - 3) Roles, duties and responsibilities of the sub-committee.

The Audit Committee brings the assessment form from the guideline of the SEC to be complied with the Company's assessment by adding the general responsibilities and specific duties of the Audit Committee.

2. Assessment Form for individual sub-committees is comprised of 3 topics:
 - 1) Structure and qualifications of the Committee.
 - 2) Roles, duties and responsibilities of the sub-committee.
 - 3) The meeting of the Committee.

The criteria for scoring at each level are as follows.

90 – 100 percent	= Excellent
80 – 89 percent	= Very Good
70 – 79 percent	= Good
Below 69 percent	= Fair

Remuneration of the Board of Directors and CEO

The Nomination and Remuneration committee has duty to determine directors' remuneration policy and criteria and present to the Board for consideration and propose to the shareholders for approval. The remuneration is considered with appropriateness and consistent to the responsibility and contribution from each director.

In addition to the remuneration of the Board of Directors, the company also takes into of the increased responsibilities from having more sub-committees which the Board of Directors proposed to the shareholders' meeting to approve the remuneration of the sub-committees. For the compensation of the Chief Executive Officer, will go through the process of consideration by the Nomination and Remuneration committee before propose to the board of directors for approval

The criteria to determine the remuneration are as follows:

1. Remuneration of the Board of Directors comprises of the monthly remuneration because the Company considers that the duties and responsibilities of directors are at all the time during their directors' term;
2. Remuneration of Sub-Committees shall be the attendance meeting fees for which this remuneration shall be proposed and obtain the approval from shareholders' meeting as the budget every year. Each sub-committee will set their working plan for the year as assigned by the board of directors;
3. Annual award or bonus for the Company's Directors is proposed as budget for shareholders meeting approval in advance. The bonus budget is considered from overall performance of the Company. However, the Board of Directors also conducts the self-assessment both of the whole board and each of director as well before paying such bonus;
4. Remuneration of CEO consists of salary and bonus, the Nomination and Remuneration Committee considers and set KPI of Chief Executive Office according to goal and planning of the Company and as per assignment from the Board of Director. The evaluation, in comparing with the Key Performance Indicator (KPI) and remuneration of CEO of the company in the same size and sector of the Company, is conducted at the end of the year. The remuneration of CEO is proposed to the Board of Directors for approval.

Succession Plan

The Board of Directors formulates the succession plan of Chief executive officer and top executives to ensure the confidence among shareholder, investors, organizations and employees for business continuity. The succession plan is reviewed on annual basis.

- **Succession Plan Policy**

The succession plan is executed with transparency and adequacy to ensure that the Company will have professional and high potential executive. The details of succession plan are as follows:

1) Chairman of Executive Committee or equivalent position

Once the Chairman of the Executive Committee or equivalent position becomes vacant or unable to perform duties, the Company may assign the duties to other executive in the similar or lower position as an acting person until the qualified person will be elected. The person elected to replace the vacant position should have great vision, competent knowledge and skills as well as an experience which suit to the culture of organization. In the event that the Chief Executive Officer is vacant, the Nomination and Remuneration Committee will consider the qualifications of persons nominated for the position of Chief Executive Officer and propose to the Board of Directors to approve the appointment.

2) Executive Level

Once the executive position ranked from director upward, becomes vacant or person holding such position is unable to perform duties, the Company may propose the elected successor to the Board of Executive Committee. The consideration procedures are as follows:

- Analyze the business operation, strategy, policy, investment plan, expansion plan, and evaluation of personnel readiness to be consistent with both short-term and long-term strategy of the Company.
- Formulate plan to prepare readiness of personnel by improving existing personnel to nominating for new replacement.
- Formulate recruitment program, employee training and development prior to the retirement or early resignation.
- Determine the competency, which is knowledge, skill, personality and desirable attitude of the particular position, as well as to formulate development plan for individual person (Individual Development Plan).
- Select, evaluate on performance and competency of the applicant.
- Conduct testing and evaluating of applicant to analyze their competency.
- Specify the successor based on the evaluation, analysis of competency and performance, as well as advance notice to the applicant in to be prepared for handover and knowledge transfer, and to specify the alternative successor.
- Develop and evaluate applicant is expected to be successor to see career development and potential to achieve target, applicant who not meet the requirement will be replaced.

Training and Development for Directors

Directors Orientation

Newly appointed director will be given company overview, regulations and business information relate to his duties. The company secretary is assigned to provide the information of the organization structure, nature of business, business structure of the Group Company, regulations, the article of association of the Company, Code of Conduct consisting of corporate

culture, business ethics, code of conduct for directors, executives and employees, Good Corporate Governance, and anti-corruption policy, for the directors to understand the business of the Company and related regulations.

The Company also provides opportunity of skills development of directors through continual training courses to support directors to perform their duties with full efficiency and effectiveness. The Company recognizes the importance of directors and executives having knowledge and exchanging experiences in performing their duties as directors of the company, and sub-committee members continuously.

The Control of the subsidiaries and associates

- 1) Mechanism to control and manage work performance of the subsidiaries and associates to control and oversee work operation of the subsidiaries, the Company sends its representative to undertake different position such as director, executive or controlling party in the subsidiaries and associates in proportion of shareholding. The duty of such representatives is to ensure the best performance of the subsidiaries and associates. Moreover, the representatives must ensure that the subsidiaries and associates has regulations of connected transactions or acquisition or disposal of the assets or any significant transaction to be accurate, apply criteria related to information disclosure and transaction mentioned above to be in line with the regulations of the Company, to ensure the information storage and accounting record of the subsidiaries and associates can be reviewed and collected to enable delivering financial statement in timely manner.
- 2) The agreement between the Company and other shareholders in management of subsidiaries and associated (shareholder's agreement): The Company has no agreement with other shareholders in management of subsidiaries and associates.

Policy for holding director other companies of the Board of Director and CEO Policy

- 1) Holding position as a director in the maximum of 5 listed companies, including EA, and not in any competing business of the Company.
- 2) The board determines CEO can hold director position in 1) other companies but not the listed company 2) nonprofit organization. However, holding such position should not affect the CEO's exercise of its duties and responsibilities and not give rise to conflicts of interest.

Policy and Guideline relevant to shareholders and Stakeholders

Rights of shareholders:

The Company emphasizes and enhances the exercising of all shareholders right and protects all shareholders right as follows:

1) Rights of shareholders

- Right of holding Company's shares;
- Right to acquire, dispose and transfer the shares;

- Right to acknowledge complete information and news related to the Company;
- Right to attend and vote in the shareholders' meeting;
- Right to appoint or dismiss the Company's directors;
- Right to receive dividend from the Company;
- Right to take part in making decision and acknowledge the decision of the Company concerning changes of internal infrastructure which are
 - (1) Disposal or transfer the Company as a whole or important part to other persons;
 - (2) Acquisition or receive business of other companies or private companies under ownership of the Company;
 - (3) Covenant, amend or terminate of agreements concerning all leasing business of the Company, as a whole or important part, delegate other person to operate the Company's business, or consolidate with other person with intention to share the profit/ loss;
 - (4) Change details in memorandum of association or articles of association or other regulations of the same nature;
 - (5) Increase or reduce the Company's capital;
 - (6) Merge or liquidation of the Company;
 - (7) Issue debenture;
 - (8) Execute other special transactions which are not normal transaction
- Right to propose matter as the agenda in the general meeting of shareholders
- Right to propose a person as a director of the Company in the shareholders' meeting.

2) The shareholders' meeting.

Shareholders including institutional investors have right to attend and vote in Shareholders' meeting with equal treatment. The Company shall refrain from any action that may limit the right to access the Company's information or to attend the meeting. The Company undertakes procedures regarding each meeting as follows:

- Regarding shareholders' meeting in 2022, the Company held the extraordinary general meeting of shareholders no. 1/2022 on January 28, 2022, and had the 2022 annual general meeting of shareholders scheduled for April 22, 2022 at 14.00 hrs., at its meeting room. Due to the prevailing COVID-19 pandemic, to ensure safety for the shareholders and other attendees of the meetings, both meetings were organized by electronics means (E-EGM / E-AGM) and broadcast live from the meeting room at No. 89 AIA Capital Center Building, 16th Floor, Ratchadaphisek Road, Dindaeng, Bangkok 10400
- The meeting was held in compliance with the Emergency Decree on Electronic Meetings B.E. 2563 (2020) as well as the relevant laws and the guidelines under the AGM Checklist of the Thai Investors Association, Thai Listed Companies Association and the SEC.
- The Company provides notice of meeting with all necessary information and timely manner such as date, time, location and an agenda of the meeting, including supporting documents for each agenda in prior to the meeting

date to allow shareholders to study supporting information for their vote, without additional agenda other than specified in the notice of the meeting or changes of important information without prior notice to the shareholders.

- The Company publicizes invitation to the Annual General Meeting of Shareholders including relevant enclosures and make it available on the Company's website at www.energyabsolute.co.th in both Thai and English version not less than 30 days prior to the meeting date and sent by registered mail in advance at least 7 days prior to the meeting which requires ordinary resolution and 14 days prior to the meeting which requires special resolution.

Furthermore, the Company clearly specifies the shareholder's rights to attend meeting, voting rights, proxy for shareholders, and proxy forms, the profile of the Independent director to act as proxy of shareholder, requirement for attending the E-AGM are indicated in the notice of AGM.

The extraordinary general meeting no. 1/2565 and annual general meeting of shareholders 2022, the Company sent the invitation letter 14 days and 22 days, respectively and made it available on the Company's website 16 days and 31 days prior to the date of meeting respectively to provide shareholders an opportunity to study the key information in advance.

- The Company acknowledges rules and regulations of the shareholder's meeting as well as voting procedure to be clearly stated in the notice of the meeting and inform to shareholder in the meeting.
- The Company allows shareholders to propose agenda to the meeting, propose a list of candidates of director position and send the related questions in advance in respect to AGM as well as name and contact details to the company prior to the meeting date through following methods:

Energy Absolute Public Company Limited.

Attention to: Company Secretary

16th Floor, AIA Capital Center Building, 89 Ratchadaphisek Road, Din Daeng sub-district,

Din Daeng district, Bangkok 10400

Tel : 0 2248 2488-92, 0 2002 3667-9 (Ext.19131, 19133)

Fax : 0 2248 2493

- The Company determines criteria and pattern to enable minor shareholders to propose a list of candidates for nomination of director position as well as to approve the list of proposed candidates. The proposal is opened for 3 months prior to the date of the shareholders' meeting when the Nomination Committee will consider the pattern for proposing list of candidates for director position.
- The Company stipulates the criteria to enable shareholders to propose agenda to the meeting prior to the date of the shareholders' meeting by informing through the Stock Exchange of Thailand of which the form can be downloaded from the Company's website. For the AGM 2022, the Company had invited shareholders to propose agenda in advance and propose the qualified person to be elected as director of the Company and send their questions from 1 October 2021 to 15 January 2022 (*for the Annual General Meeting of Shareholder 2023, the Company determined to be proposed of name list for consideration propose agenda including sending their*

questions from 1 October 2022 - 15 January 2023) for the purpose of transparency and fairness. For AGM 2022, this attracted no recommendation of such agenda items or nomination of director.

- The shareholders can enquire, express their opinion and ask for clarification from the Board of Directors, sub-committee or the Management in regard to meeting agenda, policy, operation result, annual audit result from the independent auditor, remuneration policy of the directors and executives or other related matters.
- In the event that the shareholder is unable to attend the meeting, he/she can use proxy. The shareholders to be allowed to appoint an independent director or other person as considered an appropriate as well as their proxy on which he/she can specify their vote. Appointment of the proxy document must be clearly specified in invitation. In 2022 the Company has implemented online application allowing shareholders to watch the live shareholders' meeting online whereas the manual to watch live is also available on the Company's website.
- For the election of directors, the Company has enabling shareholders to vote each director individually to select a qualified representative to be a director in order to oversee the interests of shareholders and separated ballots individually by collecting all voting papers, whether agreed, disagreed or abstained.
- The Company held meetings in a timely manner, and support shareholders to fully express their opinion and ask for more information.
- The Company encourages directors, executives and auditors to attend the meeting for the benefit of answering questions of the shareholders. In the AGM 2022, the Chairman of the Board of Director, Chairman of the Audit Committee, Chairman of the Executive Committee and Chairman of other committees such as Chairman of the Nomination and Remuneration Committee, Chairman of the Corporate Governance and Sustainability Committee, Chairman of the Risk Management Committees and Chairman of the Strategic Planning Committee as well as the Chief Executive Officer and Deputy Chief Executive Officer, all abovementioned management attended the AGM.
- In the meeting date, the registration is performed through Barcode system to facilitate shareholders at best convenience.
- The Company Secretary provided minutes of meetings with accurate, complete and clear details and submitted to SET, SEC as well as disseminated through the Company website within 14 days after the date of meeting.

Equal treatment to shareholders:

All shareholders, investors, institutional investors both within the country and abroad, received equal treatment as specified in the Right of Shareholder Section. The Company has stipulated the policy to protect right of shareholders to ensure that everyone is being treated equally and fairly. Details appear in the corporate governance published on the Company's website.

Roles of stakeholders

The Company supports to conduct of business based on fairness and shared benefit between the Company and stakeholders. All related policies and measures are set forth as follows:

Treatment to stakeholders Policy: Stakeholders of the Company are categorized as follows:

- **Shareholders:** The Company determines to create quality and stable business growth for the full and sustainable benefit of the shareholders based on the effective work performance, excellent turnover, equal access to necessary information, disclosure of actual information, conducting business with honesty, integrity, transparency and fairness.
- **Customers:** The Company provides excellent service system to ensure that all customers receive appropriate response and complete, accurate information as required. The Company also has survey forms to take customers feedback as a guideline for continual improvement and development. The practice guideline to customers and product quality/marketing communication are as follows:
 1. Advertise products and services of the Company based on the fact, refrain from misleading, against morality and culture, and does not cause the conflict to society.
 2. Deliver products and service in accordance with the agreement made with customers.
 3. Maintain its standards, product/service quality to ensure confidence and satisfaction among customers.
 4. Willing to listen to claim from customers and take immediate action to improve. In case such improvement is limited or require longer period of time, the issue must be noticed to customer. Furthermore, status of the procedure must be reported to customers within timely manner from time to time.
 5. Not require for money, material or any benefit which indicate unfaithful action from customers.
- **Partner:** The Company continues to treat its partner whom deemed as business partner with equity and based on the mutual benefit, develop and maintain long-term relationship with partner, while creating trust between each other. The Company has complied with the procurement regulations which the procedures and practice guides are clearly stated. Treatment to contract parties (partner and creditors):
 1. Strictly comply with the conditions, terms or contract strictly, in case of non-compliance, promptly notify/negotiate with the contract party to find the solution and mitigate the damage with fairness.
 2. Procure transparently. Preceding the procurement with transparency, equally, accurately, clearly, completely, fairly and verifiably treat all stakeholders.
 3. Procure from entrepreneurs who comply with laws that are not or do not benefit from labor or production process which is unlawful and immoral.
 4. Take into account the quality, safety of purchased goods and services which may affect the health of users, employees, communities, society and environment.
 5. Not use the information obtained from the procurement operation for private benefit or other people who are not involved.
 6. Negotiate and enter into a contract with fairness, not taking advantage over the contract party by considering reputation and image of the Company.
- **Creditors:** The Company strictly adheres to the creditors' conditions, controls the repayment of the load and interest to all types of debtors, fully meets the term and conditions of the loan agreement in full. In case of having a dispute

or can not perform to the conditions, the Company will inform and negotiate with the creditors in advance to find a preliminary solution together.

- **Employees:** The Company treats its employees with fairness and appropriate manner in term of opportunity and compensation, appointment, transfer, skill development and safe working condition. The Company welcomes any opinion and suggestions from employees and treats everyone with fairness and equality.
- **Competitors:** The Company determines to conduct business under fair competition environment, not seeking competitor's confidential information dishonestly or inappropriately, not executing any action that violates their intellectual property. The practice guideline to competitors is stipulated as follow:
 1. Refrain from damaging reputation of competitors by accusing in negative way;
 2. Refrain from seeking information, trade secret of competitors by dishonest method;
 3. Support fair competition and adhere to the competition rules strictly;
 4. Not enter into any agreement with competitors or any person which reduce or limit them competitiveness;
 5. Consider the equality and honesty in conduct of business and mutual benefit with the trading partners;
 6. Conduct business with morality
- **Community, Society, Environment, Health and Safety:** The Company maintains its participation in society by complying with the law and/or approved regulations, coordinates with government authorities, ensures that business operation will not cause any damage to community, society and environment, supports and develop society in terms of life quality development, education development, energy saving and environmental care. The practice guideline toward communities, societies, environment, health and safety are set forth as follows:
 1. Comply with related laws correctly, completely and consistent to the management manual, and to support implementation of management system which in line with international standard (ISO) to business management within organization.
 2. Inspect, monitor and evaluate work performance to lower impact to environment, hygiene, safety of communities and environment.
 3. Communicate for better understanding; participate in providing information to communities and societies, investors, shareholders and general people with latest situation related to status and facts of the business operation of the Company without hiding any facts.
 4. Commit to participate in development and support social activities, environment care and development on life quality of local communities in accordance with sustainable development for the harmonized society.

Information disclosure and transparency

Information disclosure

The Board of Directors places attention on disclosure of reliable, accurate, complete, transparent and timely released information for financial and nonfinancial matters to investors and all stakeholders to have reliable and sufficient information

for decision. The Office of Company Secretary and the Department of Corporate Communication are responsible for communicate and disseminate information necessary for individual investors, corporate investors, analyst and individuals within the country and abroad different channels i.e. notify through the SET Community Portal and the Company's website, announcement of quarterly results, business operation plan. Important information being disclosed to the public are such as 56-1 One Report (Annual Report), financial information, information related to major shareholders and rights of voting, information related to directors and committee, information disclosed to SET, corporate governance policy, business ethic, activities and operative plan etc.

Disclosure of financial and non-financial information accurately, completely and in timely manner

The information appeared in the financial report is accurate in accordance with generally accepted accounting standards and reviewed by independent certified public auditors.

- The Company provides Report of the Board's Responsibility in the Financial Statements and encloses with the auditor's report in the Annual Report.
- Management Discussion and Analysis or MD&A has been provided to support disclosure of quarterly financial statement to ensure that investors acknowledge and understand well of any changes in relation to financial status and quarterly operation result besides the numbers shown in the financial statement.
- Disclose audit fee and other service fees related to the auditors in the Annual Report.
- Disclose roles and duties of the Board of Directors and sets of sub-committees, a number of meeting held and number of attendance of each director during the previous year in the annual report, under "Corporate Governance- Sub-committees". The Company has determined the policy on which directors and executives have to report their interest as well as related persons who involve with stake holding of business management of the Company or its subsidiaries. The criteria and method of report is as follow:
 - ❖ Report after first undertaking director or executive position;
 - ❖ Report for any changes related to stake holding.

Auditor and quality of financial reports

The financial statements of the Company and its subsidiaries are reviewed and audited by an auditor approved by the office of the Securities and Exchange Commission who is independently, knowledgeable, expertise and qualities to give confidence to the Board of Directors and shareholders that the financial statements of the Company and the subsidiaries shall present the actual financial position and operating results of the Company.

- Nevertheless, the Company has policy to change the auditors if the auditor has been appointed for 7 consecutive fiscal years, and the Company can appoint a new auditor that is affiliated with the former audit firm of the former auditor. From the execution of duties due to the auditor, the Company's auditor can be re-appointed after pass the appointment period at least two fiscal years since the date of such auditor passed the duty

- The Board of Directors places important and responsibility on the financial statements of the Company and its subsidiaries based on general accounting standards, with full caution, accuracy and completeness to reflect actual operative result of the Company. The Board of Directors provided operative result and information disclosure with transparency and sufficiency to related authorities such as SEC and SET regally by taking into account the benefit of shareholders and investors. Furthermore, the Audit Committee is appointed by the Board of Directors to verify and examine reliability and accuracy of the financial report and internal control system.

Investor Relations or IR

The Company has appointed Corporate Communication Division to be mainly responsible for Investors Relations in order to communicate with external parties such as shareholders, institution investors, public investors, analysts and related public sectors with fairness and justice and to enable them to meet the Company's executives as considered appropriate under the policy that the information provided has been disclosed to the public. The Company has prepared the investor relations ethics of the company. To be used as a framework and guideline for the investor relations operator of the company with the following requirements

- Disclose important and necessary information to make investment decisions accurately, adequately, timely in accordance with related regulations.
- Do not use inside information for personal benefit or for others, including refraining from buying-selling, transferring-accepting the Company's securities within 1 month before disclosing the financial statements and at least 1 day after the financial statements are disclosed as well as refrain from meeting and / or providing information about the Company's performance to outsiders at least 2 weeks before the disclosure of the financial statements.

Investor relations activities of the company in 2022 are as follows:

Investors Relations Activities	Total News/Times	Additional information
1. New Release: Publishing news in the form of Press release, Photo release. Such release contain the requisite information to disclose as the general business development of the group of the Company through domestic and international media	80 News for Domestic releases and 10 news for international releases	After the Company disclosed the official information to SET/SEC, the Investor Relations will release information through media channels.
2. Presenting information: The number of times to present information of the Company through various activities.		
2.1 "Opportunity Day" organized by SET	4 times via online channel	1. Financial Statements for the year ended 2021 2. Financial Statements for Q1 of 2022 3. Financial Statements for Q2 of 2022 4. Financial Statements for Q3 of 2022

Investors Relations Activities	Total News/Times	Additional information
2.2 “Analyst Group Meeting”	4 times via online channel	Number of participating company No. 1: 35 companies No. 2: 29 companies No. 3: 56 companies No. 4: 32 companies
2.3 “One-on-One Meeting” with analyst and institute investor at the office of the Company including the conference call after the announcement the operating results	40 times	Divided into : Q1/2022 : Total 8 times Q2/2022 : Total 5 times Q3/2022 : Total 12 times Q4/2022 : Total 15 times
2.4 “Road Show” for investors, analysts and shareholder both domestic and international	7 times via online channel	Divided into - Present to foreign investors: 5 times - Present to domestic investors: 2 times
<ul style="list-style-type: none"> Stakeholders site visit at 193 times <ul style="list-style-type: none"> Biodiesel factory at Prachin Buri province Solar Power Plants at Nakhon Sawan, Lampang, and Phitsanulok provinces Wind Power Plant at Chaiphaphum, Songkhla and Nakorn Si Thammarat provinces Battery Business, Electric Vehicle Business and Electric Charging Stations 		

Treatment of Insider Information

Use of internal information for purchase and sale of the Company’s securities

The Board of Directors has set the protection of internal information and purchase and sale of the Company’s securities to ensure equality and justice to all shareholders and to retrain directors and related executives from illegally sale and purchase of the securities for their own interest (Insider Trading).

- Use of Internal Information**

The Company has implemented policy and protection approach for misuse of internal information for personal interest and securities sale-purchase as follows:

- 1) All directors, executives and employees including their spouse and minor child, including related person as per Section 258 are not allowed to use internal information which has not been disclosed to the public domain, to purchase, sale, transfer or receive securities of the Company.
- 2) Any purchase, sell, transfer or receive securities of the Company by directors, executive, including their spouse and minor child and related person as per Section 258 of the Securities and Stock Exchange B.E. 2535 must be report to the SEC and SET within 3 days from the date of transaction. The violation or failure to comply with the regulation

issued in accordance with Section 275 of the Securities and stock Exchange B.E. 2535 is liable to a fine not exceeding Baht 500,000 and a further fine not exceeding Baht 10,000 for every day during which the contravention continues. A copy of transaction report must be submitted to the Company as evidence.

- 3) Directors, executives and employees of the Company who have access to the internal information shall not use such information prior to disclosure to the public, and shall not purchase, sell, transfer or receive securities of the Company within a period of one month prior to, and 1 day subsequent to the quarterly and annual financial statement will be disclosed to the public. The materiality content of the information is prohibited be disclosed to any other parties.
- 4) Report shareholding of director to the Board of Directors quarterly.

- **Control of internal information:**

All directors, executives and employees are not allowed to use internal information which has not been disclosed to the public domain for interest of their own or others. In addition, any third party who is involved or may have access to the important internal information of the Company, must enter into the non-disclosure agreement to ensure that the particular person will use the information with full caution and keep such information as confidential in the same manner as the executives and employees would practice.

- **Holding the Company's securities:**

All directors, executives and employees have freedom to sale and purchase of securities of the Company. However, to prevent conflict of interest, directors, executives and employees including their spouse and minor child are prohibited to sale and purchase of securities of the Company during 1 month prior to the date of disclosure of the financial statement to the public and at least 1 day after disclosure of the financial statement. Any acquisition, disposition, transfer, or receipt of the Company's securities held in their account must be reported and disclosed to the related authority. The Company reports changes in securities holding of directors and executives in quarterly to Board of the Directors and also must be reported in the Annual report.

In case there is any unpublished information which will be affected to the price of securities of the Company, the aforementioned persons must not sale and purchase the securities of the Company until such information has been published.

In this regard, if the executive and employee violate the use of internal information policy aforesaid, such person shall be deemed as violation of the Company's regulations. In addition, if such person is considered violation of Section 242, such person shall be punished under the Securities and Exchange Act (No.5) B.E. 2559.

Conflict of interest policy

The Company operated business with honesty, integrity, transparency and fairness. Directors, executives and all employees are not allowed to engage in any business that competes with the Company or execute any business transaction which involves themselves or related person/juristic person that may lead to conflict of interest. It is responsibilities of the Board of

Directors to monitor and ensure that everyone strictly comply with the rules and regulations of disclosing related transaction as stipulated by law or relevant authorities.

In case it is necessary to enter into a connected transaction, such transaction must be under general trade conditions as approved by the Board, with transparency and fairness, and executed in a manner as if to external party and conduct for the full benefit of the Company (Arm's length Basis). However, the connected transaction which is not based on the general trade conditions may lead to conflict of interest and must be reviewed and considered by the Audit Committee prior to being proposed to the Board or shareholders for approval.

Prevention on the conflict of interest

- The Company has structure of shareholding which is explicit, transparent without cross shareholding with major shareholders that may cause conflict of interest to a particular party. The structure of shareholding of the Company and subsidiaries is disclosed in the annual report with full details.
- The duties of the Board of Directors, executives and shareholders are clearly classified, therefore, there is no issue concerning intervening each other's duties.
- The Company determines that the directors and executives are responsible for providing report of stake holding as to review the related transactions.

Report on the interest of directors and related persons

It is the responsibility of directors and executives to report interest of directors and related persons regarding the management of the Company as regulations and conditions set forth by the SEC. The Company Secretary is responsible for collecting and submitting report of interest to the Chairman of the Board of Directors and the Chairman of the Audit Committee within 7 days from the date of receiving report.

Anti-Corruption Policy

The Company is aware of the importance of ethics, morals, and transparency in business operations including corporate social responsibility, the environment, and all stakeholders in accordance with the principles of good corporate governance. The Company prioritizes importance on the compliance with the rules, regulations and laws relating to anti-corruption including anti-corruption promotion activities within the company for better understanding and conscious commitment to against corruption in all forms.

To ensure that the Company has an appropriate risk management system to prevent corruption in all forms, the Company has set an anti-corruption policy to enable appropriate practices and operating regulations to prevent the corruption and to ensure the risk of fraud and corruption that may occur with the operations of the Company has been considered and implemented for prevention appropriately, sufficiently and prudently.

The Company has therefore established a written anti-corruption guideline in writing including explanations, understanding and communication of the said guidelines to the Board of Directors. The Board of directors various sub-committees as well as

employees at all levels of the Company and the Company group thoroughly. This is to be considered as a clear guideline for anti-corruption in all forms that may occur in the operations of the Company.

1. Prohibit the directors, executives, employees, and stakeholder groups of the Company and its affiliates proceed or accept all forms of corruption either directly or indirectly for the benefit of oneself, family, friends and acquaintances, covering all businesses in every country and all related agencies and to regularly review the implementation of this anti-corruption policy as well as reviewing the guidelines and operational requirements to be in line with business changes, regulations, and legal requirements.
2. To have measures to prevent and against corruption as a part of the Company's business operations. This is the responsibility of all departments, including directors, executives, employees of the Company and affiliates as well as groups of interested parties to participate in giving opinions on various practices to prevent and against corruption of the Company in order to achieve the Company's policy.
3. The Company must continually improve and develop measures to prevent and against corruption in accordance with relevant rules and regulations including the Code of Conduct and Good Corporate Governance, which must assess the risk of corruption that may occur in the Company's business operations and the preparation of guidelines under good internal control in order to prevent any forms of corruption from occurring in the Company's business operations.
4. The Company must not give or accept bribes or support all forms of bribery Including supervision and control of various donations including charitable donations, donations to political parties including giving or accepting gifts or receiving financial support as well as rewards or other benefits in order to make the transactions transparent and not to convince or motivate related persons, including directors, executives, employees of the Company and its affiliates as well as groups of public and private stakeholders performing improper operations.
5. The Company must provide a suitable, adequate, and sufficient internal control system to prevent corruption in all forms.
6. The Company must communicate the commitment of the Company in preventing and anti-corruption in all forms as well as promoting the knowledge on preventing and anti-corruption to the directors, executives and employees in order to instill good awareness and for all personnel of the Company being aware of their duties and responsibilities in carrying out their duty to fight against corruption in all forms.
7. The Company must provide a transparent financial reporting mechanism in accurate and reliable.
8. The Company must promote good and diverse communication channels in order to receive notification of fraud and corruption from directors, executives, employees and all relevant parties with a guarantee for the whistleblower to be protected by not being unfair punishment or being bullied and including the appointment of a person or group of people to closely monitor and monitor all corruption reports that have been reported.

Guidelines for the implementation of the anti-corruption policy

Directors, executives, and employees at all levels, stakeholder groups, and affiliates must comply with this anti-corruption policy including the code of ethics, good corporate governance policies, and guidelines for various groups of stakeholders as

well as regulations and regulations about the work of the Company and/or other guidelines that the Company will be determined further and must not directly or indirectly engage in corruption by the following:

1. The Company is very determined and determined to create and maintain the corporate culture as well as raising awareness among personnel in the organization to have a common awareness that corruption is not acceptable to the Company regardless of the form of corruption in any form.
2. There is no circumstance of giving bribery, or receiving bribery, or bribery to various stakeholders' related duties and their responsibilities, either directly or indirectly, in order to gain improper benefits despite being the Company's benefits or personal interests which must be treated as follows:
 - 2.1 Not accepting, and offering gifts, souvenirs, or similar items to any person related to their duties, responsibility, and their work both of government and private agencies
 - 2.2 Not accepting assets, things, gifts or other benefits which is an attract or inducement to refrain or omit to perform their duties. However, in the event that it is necessary to receive any property, gift, or other benefit, the recipient should ensure that it is carried out correctly in accordance with the regulations and/or the Company's policy as well as various related laws. In this regard, any property, item, gift, or other benefit which is given to each other in that function, its price should not expensive and should suitable for each occasion.
 - 2.3 Not giving the property, items, gifts, or other benefits which is an attract or inducement the recipient to make a decision or causing the recipient to not follow the trade practices as if they were with other partners. However, such giving must have a value not more than normal practice and suitable for each occasion.
 - 2.4 Not being an intermediary or having any affiliations in offering money, assets, things or other benefits to those involved in the Company's business operations both public and private agencies in exchange for any special privileges that should not be obtained or unlawful or causing government officials to refrain or abstain from performing their duties according to the rules, regulations, and laws as specified.
3. For business operations and procurement with government agencies, do not give or accept bribes of any kind and must be done correctly. And being aware that rules, regulations, laws or traditions in each locality or in each country, may have different conditions, procedures, or practices. Therefore, contacting government agencies must be transparent, honest, and must proceed in accordance with relevant laws.
4. In procurement whether done with government sectors or private agencies, it must proceed through the procedures in accordance with the Company's regulations, transparent, and can be inspected.
5. Expenses for rearing business can do, but it must be reasonable, transparent, and can be inspected and to be in accordance with the ethics.
6. Charitable donations must do as follows:
 - 6.1 Use of funds or other assets of the company for donations for that charity must operate on behalf of the company only and must be a foundation charity organizations, hospitals, clinics, temples, or organizations for social benefits with certificate or reliable can check This must be done through procedures in accordance with the regulations of the company.

6.2 Personal charitable donations can be done, but it must not cause suspicion of corruption or for any wrongful interest.

7. Use of money or assets of the Company in order to support the Company's projects must be specified in the name of the Company only and must have business objectives creating a good image or for the reputation of the Company. Disbursement must specify objectives that are clear, transparent, and can be inspected, and proceed through the procedures in accordance with the Company's regulations.
8. No political involvement. The Company will adhere to political neutrality, support and adhere to the law under democratic rule. And there is no policy to provide political assistance to any political party whether directly or indirectly.
9. Directors, executives and employees of the Company and its affiliates must notify the responsible person immediately, and cooperate in the investigation of various facts without neglecting or neglecting to see any action that is considered corruption. However, if in doubt or questions such person may consult with the responsible person through various channels.
10. The Company will provide fairness and protection for personnel of the Company who refuse or report fraud or corruption in accordance with the protection measures for whistle blowing, any offense and corruption without any action that is unfair to the whistleblowers, such as reducing positions, punishing or negatively affecting employees who refuse corruption, etc., although the said actions will cause the Company to lose business benefits or opportunities.
11. The Company considers that any corruption by directors, executives, employees of the Company and its affiliates, is a violation of the ethics and regulations of the Company. Such persons shall be subject to disciplinary consideration in accordance with the regulations stipulated by the Company, including legal penalties.

The Company is aware and gives importance to the dissemination of knowledge and understanding about anti-corruption policies to both of all employees of the Company and other parties relating to the company business operations. The "Anti-Corruption Handbook" is conducted as the guideline for good practice of Company operations enable to be sustainable organization. The Company conducted in-house training on anti-corruption to directors, executives and employees, as well as assessing knowledge and understanding and further notify to business partners and stakeholders including the public along with the announcement of the "No Gift Policy".

Whistle-blowing / Complaints Policy

In order to encourage both internal and external stakeholders to participate in Good Corporate Governance process, the company therefore has set a policy in the event that various groups of stakeholders have questions or see actions suspected of violation or non-compliance with laws, regulations, or business ethics, or suspicions that may lead to corruption can report clues or complaints together with sending evidence and details to the Chairman of the Audit Committee of the Company.

Conditions and consideration for receiving complaints / whistle-blowing

- 1) Details of the complaint must be true, clear, and have enough information to conduct a fact search for further action.
- 2) The complainant can choose not to reveal themselves in order to protect the complainant.

- 3) Information that the Chairman of the Audit Committee received will be considered a secret and reveal as necessary with regard to the safety of the complainant.
- 4) Complaints that have been screened and investigated will be reported to the Board of Directors to consider and determine suitable measures.
- 5) Complainants will be protected despite being a company employee and outsiders.

Whistle-blowing /Complaints Channels

Shareholders, directors, executives, employees and stakeholders in all groups can give clues in case of doubt or see actions suspected of violation or failure to comply with laws, regulations, or business ethics or events that may cause damage to the Company to the Chairman of the Audit Committee, which the Company will keep the said information confidential in order to prevent the whistleblower to suffer. Channels for whistleblowing are as follows:

- ❖ Letter to the recipient of the complaint :
Chairman of the Audit Committee
Address : Energy Absolute Public Company Limited
16th Floor, AIA Capital Center Building,
No. 89 Ratchadaphisek Road, Din Daeng sub-district,
Din Daeng district, Bangkok 10400 Thailand
- ❖ E-mail Address
chairman.audit.com@energyabsolute.co.th
- ❖ Website
<https://www.energyabsolute.co.th/complaints>

Implementation

1. Notify the progress/ consideration result of complaints to whistle-blower who disclosed his/her name and contact address;
2. The Company reserved its rights to not disclose any information and details concerning the interrogation or disciplinary action affecting the personal information and confidentiality.

Whistle-blowing procedures

1. The whistleblower is the Company's employee and outsider.
2. The person receiving the complaint in accordance with the channels specified by the Company is the Chairman of the Audit Committee.
3. Channels for reporting complaints / clues via:
 - chairman.audit.com@energyabsolute.co.th
 - www.energyabsolute.co.th/complaints
 - Send mail by post
4. Consider the facts and investigate and then report the results to the Board of Directors to determine further measures.

6.2 Business Code of Conduct

The Board of Directors has established the “Business Code of Conduct” for directors, executives and employees to use as a guideline for operations; it is divided into the following topics.

1. Human rights and treatment to employees
2. Communities, societies, environment, health and safety
3. Receiving or Providing Property or any benefits that might motivate the decision.
4. Conflict of interest in transactions of the Company
5. Acquisition and disposal securities of the Company and the use of internal information
6. Compliance with laws, regulations, provisions
7. Application of properties, information, IT and intellectual property of the Company
8. Treatment to customers and product quality / marketing communication
9. Treatment to contract parties (trading partner and creditors)
10. Treatment to competitors

In addition, the “Ethics of Director, Executives and employees” can also be summarized as follows:

1. Contain no conflict of interest
2. Protect the confidential information of the Company
3. Be responsible for the Company’s assets
4. Behave in line with morality and integrity
5. Be responsible for stakeholders

Details and Guidelines for Business Code of Conduct and Ethics of Director, Executives and employees are in the Code of Conduct section, which the Company discloses on the Company's website for acknowledgement of stakeholders and the public.

6.3 Compliance with the Principles of Good Corporate Governance

In 2022, the Board of Directors reviewed and approved the revision of corporate governance policy, guidelines and systems as described below:

- The Board of Directors reviewed the Company’s handbook which consists of the vision, mission, corporate values, code of business ethics, code of ethics for directors, management and employees, corporate governance (CG), anti-corruption and social responsibility to ensure the updatedness and alignment with the Company’s business operation.
- Employee awareness of the business ethics, internal control, anti-corruption and cybersecurity measures was enhanced by providing training courses and conducting test via E-learning system.

- The Board of Directors Charter and the committee charters were reviewed. In 2022, Change in the scope of duties and responsibilities in the audit committee charter.
- According to the result of the 2022 Corporate Governance Survey of Listed Companies by the Thai Institute of Directors (IOD), the Company's corporate governance was rated "Excellent".
- For the assessment based on the Annual General Meeting (AGM) Checklist of the Thai Investors Association which is aimed to ensure that annual meetings of shareholders in Thailand are comparable with international standards using the assessment criteria that cover procedures of the shareholders' meeting. The Company has received a full score of 100/100 from the AGM Checklist for the 6th consecutive year.
- The Company was Thailand Sustainability Investment (THSI) Award for 2022.
- The Company granted ASEAN Asset Class Award from ASEAN Corporate Governance Scorecard (ACGS) 2021.
- In monitoring of corruption complaints from January 1 to December 31, 2022, the Company had no corruption complaint.

In 2022, the Company complied with the principles of good corporate governance, which did not cover the criteria of the Corporate Governance Report of Thai Listed Companies (CGR) and the ASEAN Corporate Governance Scorecard in three categories, as follows:

1. The determination of policy for the term of service of an independent director for no more than 9 years: Since the nature of the Company's operation is specialized. Therefore, the Company's director who has experience, expertise, and vision in this sector of business is a key source for pushing and driving the company's growth and becoming an industry leader. The Company takes into account the knowledge, competence, and experience of independent directors, together with the Company's independent director, who can provide their opinion without a conflict of interest or gain and loss to the Company.
2. Cumulative Voting: By the Company's Articles of Association, shareholders have a vote at the shareholders' meeting and are deemed that one share has one vote. The shareholder who has conflict of interest can also vote for directors.
3. Having at least one female director: The Company does not discourage or limit a director's gender. Individual shareholders are also given the opportunity to nominate a person to be appointed as a director in advance of the shareholders' meeting. No shareholder nominates a woman as a director.



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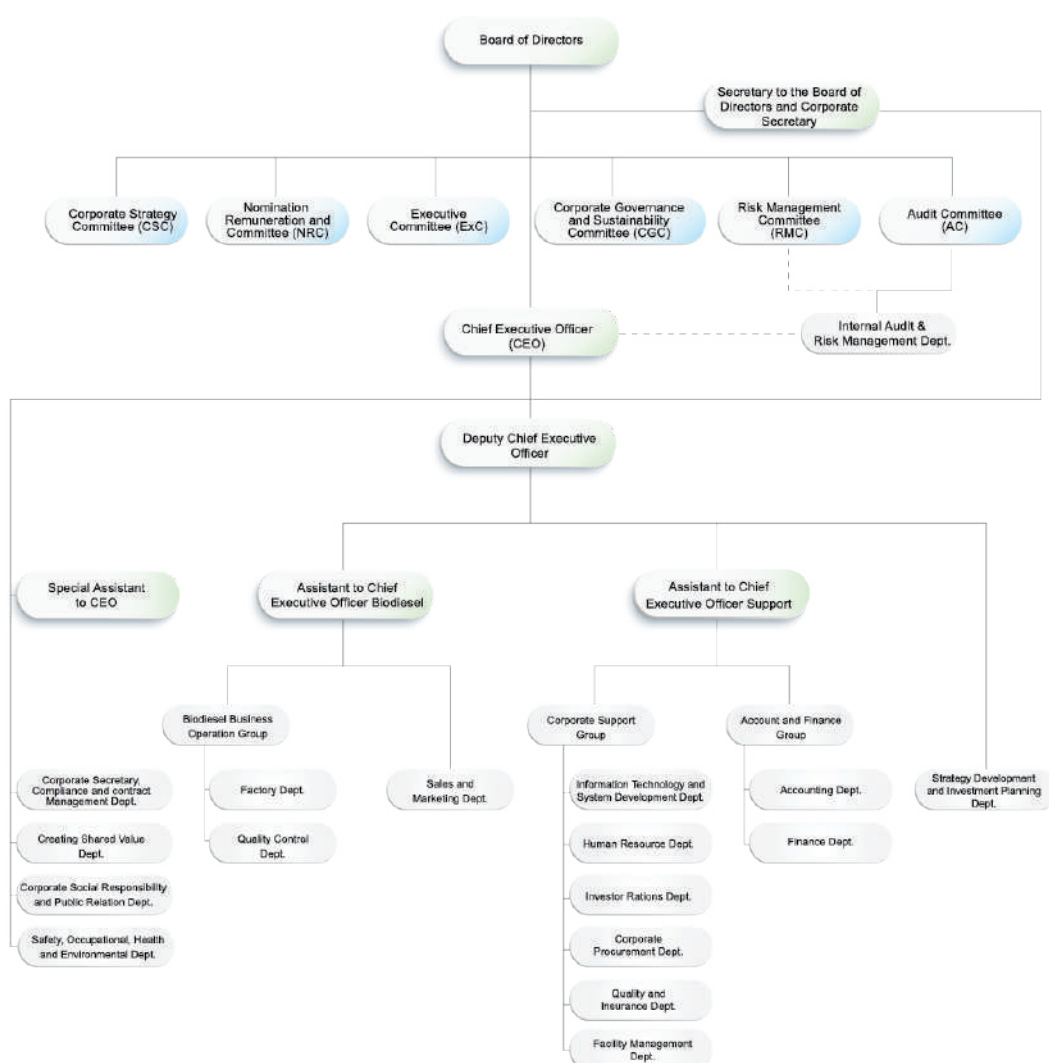
7. Governance Structure and Key Data on the Board of Directors, Sub-Committees, Management, Employees and Others

7.1 Management Structure

Organization Structure

As of December 31, 2022 the management structure of Energy Absolute Public Company Limited comprises of the Board of Directors and 6 Sub-Committees as follow:

1.) Executive Committee 2.) Audit Committee 3.) Nomination and Remuneration Committee 4.) Corporate Governance and Sustainability Committee 5.) Risk Management Committee and 6.) Strategic Planning Committee



7.2 Board of Directors

7.2.1 Composition of the Board of Directors

As of December 31, 2022, the Board of Directors consisted of 11 directors including 9 non-executive directors and 2 executive directors, namely Chief Executive Officer and Deputy Chief Executive Officer which 6 of whom are independent directors.

The composition above is in line with the Company's Articles of Association, which prescribes that the Board of Directors shall comprise of at least 5 but not exceeding 15 directors and not less than half of whom must reside in Thailand.

7.2.2 Board of Directors

Name	Position	Date Appointed
1. Mr. Somchainuk Engtrakul	Chairman of the Board of Directors / Independent Director (Qualified as an independent director in 2017)	12 March 2008
2. Mr. Somphote Ahunai	Director (Authorized Director) / Vice Chairman of the Board of Directors / Chairman of Strategic Planning Committee / Chairman of Executive Committee / Member of Risk Management Committee	12 March 2008
3. Mr. Amorn Saphthaweekul	Director (Authorized Director) / Member of Executive Committee / Member of Risk Management Committee / Member of Nomination and Remuneration Committee / Member of Strategic Planning Committee	30 March 2012
4. Mr. Wutthilerd Chiannilkulchai	Director (Authorized Director) / Member of Executive Committee / Member of Risk Management Committee	12 March 2008
5. Mr. Sutham Songsiri	Director / Member of Executive Committee / Member of Risk Management Committee / Member of Corporate Governance and Sustainability Committee / Member of Nomination and Remuneration Committee / Member of Strategic Planning Committee	12 March 2008
6. ACM. Chainan Thumasujarit	Independent Director / Chairman of Audit Committee / Chairman of Risk Management Committee / Member of Nomination and Remuneration Committee / Member of Corporate Governance and Sustainability Committee	7 August 2012
7. M.R. Bravochat Chatchai	Independent Director / Member of Audit Committee / Chairman of Corporate Governance and Sustainability Committee / Chairman of Nomination and Remuneration Committee / Member of Risk Management Committee	26 November 2010

Name	Position	Date Appointed
8. Pol.Gen. Phatcharavat Wongsuwan	Independent Director / Member of Risk Management Committee	18 April 2014
9. Mr. Somboon Ahunai	Director / Member of Executive Committee	22 April 2015
10. Mr. Amornsuk Noparumpa	Independent Director	27 April 2017
11. Mr. Somphop Keerasuntonpong	Independent Director / Member of Audit Committee (who has accounting knowledge and experience to review creditability of financial statements) / Member of Corporate Governance and Sustainability Committee / Member of Nomination and Remuneration Committee	23 April 2020

Mr. Amorn Sapthaweeikul : Acting - Corporate Secretary and Secretary of the Board of Directors

7.2.3 Role, Responsibilities, and Authority of the Board of Directors

Roles and Responsibilities of the Board of Directors

(Duty of Care, Duty of Obedience, Duty of Loyalty and Duty of Disclosure)

- To perform their duties under applicable laws, objectives, regulations of the Company and resolutions of shareholders' meetings with duty of loyalty, duty of care, respect the laws and regulations of the Company (Duty of Obedience) and disclose information to shareholders accurately, completely, transparently, timely (Duty of Disclosure) accountability, be respective to the law and regulations of the Company, as well as full benefit of all shareholders.
- To determine vision, strategy, policy and business direction of the Company, control and monitor whether the management's performance is effectively and efficiently conducted in line with regulations and policies in order to maximize economic value to the shareholders and achieve the sustainable growth.
- To determine policy and regulate the Company to prepare guidelines for supporting anti-corruption measures to ensure that management aware of the importance of this anti-corruption and cultivate to be an organizational culture.
- The Board of Directors is responsible in considering important subjects such as policies and business plans, big investment projects, corporate acquisition, management authority and other subjects prescribed by the law.
- The Board of Directors is responsible to evaluate and determination of remuneration for CEO annually.
- The Board of Directors is responsible business performance and management practices to carefully and cautiously perform.
- The Board of Directors is responsible for setting an accounting system, financial reports and reliable accounting audit as well as overseeing the process of assessment on the suitability of internal controls and the efficient and effective internal audit, risk management, financial reports and follow-ups.
- The Board of Directors is responsible to prevent the conflicts of interest between the stakeholders of the Company.

- The Board of Directors is responsible for reporting the responsibilities of the Board of Directors in preparing financial reports along with the auditor report in the Annual Report as well as covering important issues in accordance with the good practice for the directors of the listed company under the Stock Exchange of Thailand.
- To disclose information to shareholders, investors and all groups of stakeholders with accuracy, standard, transparency and in timely manner.
- To provide efficient internal control and internal audit.
- To provide efficient risk management and regularly follow up.
- To implement good corporate governance and regularly follow up the result.
- To appoint the Company Secretary to be responsible for arranging activities of the Board of Directors and to support the Board of Directors and the Company to comply with the law and related regulations.
- To implement business ethics for directors, executives and employees as a standard of work within the organization.
- It is duty of the independent directors to review the strategy, operating management, application of resource, appointment of directors and to determine standards of business conduct with their independent discretion, as well as to oppose the action of management or other directors in regard to the conflict which impact equality of all shareholders.
- The Board of Directors may seek for professional opinion in regard to business operation, from external advisor at own cost of the Company.
- However, The Board of Directors may delegate or assign on or more directors or any other person to act on behalf of the Board. such delegation shall not be the delegation or sub-delegation which enables the Board of Directors or the attorney of the Board to approve any particular which him/herself or person who may have conflict, gain or loss or any conflict of interest in any other manner or conflict with the interests of the Company or its subsidiaries (if any), except for the resolution for the particular according to the policy and the criteria that the shareholders' meeting has approved.

Board approval authority

- To approve and review the vision, mission and policy of the Company.
- To approve short-term and long-term strategic plans including the annual action plan, budget and manpower accordance with the strategic plan.
- To approve the work that benefits to the Company, shareholders and stakeholders and monitor the performance of the management and jointly consider and provide the suggestions to solve problems appropriately.
- To approve the sub-committees charter.
- To approve the organization structure of the Company.
- To elect and appoint director(s), in the event that the director retire during the year.
- To approve investment in business expansion and the investment.
- To appoint, withdraw and change sub-committee members.
- To approval of interim dividend payment.
- To approve the adjustment of remuneration for the Chief Executive Officer.
- To approve the succession plan for the position of Chief Executive Officer and Executive Levels.

- To approve accounting policies Additional investment Write-off or the disposal of the company's assets.
- To appoint the company secretary.
- To approve agenda for shareholders' meeting approval as follows:
 1. Entering into the connected transactions, the acquisition, the disposal of assets of the Company according to the laws and regulations of SEC.
 2. Disposal or transfer of all or part of the core Company's business.
 3. Acquisition or accepting the transfer of other companies' businesses to the Company.
 4. Modification of the Memorandum of Association and the article of association of the Company.
 5. Increase / decrease of registered capital.
 6. Issuing of any securities other than the ordinary shares.
 7. Dissolution of the Company / merging with other company.
 8. Determine the date of the shareholders' meeting and the annual meeting agenda.
 9. Annual dividend declaration.
 10. Any other business that required by law or the article of association of the Company to obtain the approval from the shareholders' meeting.

Authorized Directors

The directors authorized to act on behalf of the Company as stated in the Company affidavit are **“Mr. Somphote Ahunai, Mr. Wutthilerd Chiannikulchai, Mr. Amorn Saphthaweekul with two out of three mentioned directors jointly sign with the Company’s seal affixed”**

Appointment and Removal of the Directors

- 1.) The Company has Nomination and Remuneration Committee to select and propose the qualified person with morality, ethics and meets the requirements as prescribed in Section 68 of the Public Company Act B.E. 2535 and as stated in the related Notifications of the SEC and SET. The consideration also based on experience, knowledge, skills relevant to the business of the Company. Then the lists of selected applicants will be submitted to the Board of Directors for further proposal to the shareholders' meeting for selection and appointment. Currently, the Board of Directors consists of 11 members, 6 of them are Independent Directors, 2 of them are Executive Directors and 3 of them are non-Executive Directors.
- 2.) At the Annual General Meeting of Shareholders (AGM), one-third of all directors shall resign by rotation. In case the number of resigned directors cannot be precede, the similar amount to one-third of the directors to resign during the first year. In second year after registration of the company, the ballot papers will be provided for seeking director to resign. Later years, the directors who hold longest term shall be resigned. The resigning directors may be re-elected.
- 3.) Shareholders' meeting will appoint directors from majority votes according to the following rules and methods
 - 3.1 Shareholder has votes equal to one (1) share per one (1) vote.
 - 3.2 Each shareholder must use all existing votes according to Clause 3.1 to elect one person or many people as directors, however, the votes cannot be divided.
 - 3.3 Persons who receive the highest votes in descending order being elected as a director equal to the number of

directors that should have or should be elected at that time. In the event that the person elected in the next order having equal votes in excess of the number of directors that the shareholders' meeting must elect at that time, the chairman of the meeting is the casting vote

- 4.) In the event that the position of the director is vacant due to reasons other than the expiration of the term, the Board shall select the qualified person and does not have the characteristics of being prohibited under the law on public limited companies and the law on securities and stock exchange, to be replaced in the next board meeting except that director's remaining term shall be less than two months. The person who is the replacement director will be in the position of director only for the remaining term of the director that replaced.
- 5.) The shareholders' meeting may have resolution to removal director(s) prior to the term expiration with the votes of not less than three-fourths (3/4) of the attending shareholders with total shares no less than half of total shares hold by the attending shareholders with the rights to vote.

Criteria for shareholder to propose the qualified candidate to be elected for director of the Company

1. Being a shareholder holds at least 5% of total shares of the Company (Not less than 186.5 million shares). The shareholder who wishes to propose a person for directorship must be a shareholder holding shares at the amount as specified previously as of the date of proposal and as of the date of closing shareholders' register in order to determine right to attend the meeting of shareholders. A shareholder who possesses the qualifications as above can submit the annexed form titled "Form to nominate the qualified person to be elected as Director" and send to the Company within the specified period.
2. Provide evidence of shareholding such as certificate of Shareholding is sued by the securities company or any other evidence issued from the Stock Exchange of Thailand (SET) or the Thailand Securities Depository Co., Ltd. (TSD).
3. The person being proposed for directorship shall have qualifications as follows:
 - (1) Fully qualified, without any prohibited characteristics, under law related to the Public Company Limited, Securities and Stock Exchange, including other laws and notifications, and the good corporate governance of the Company.
 - (2) Knowledgeable, possess good background experience, capable, independent to perform director's duties with care and loyalty, and able to attend Directors' meetings on a regular basis, as well as gender equity to be nominated as a director. However, the benefits of the Company are the most important consideration.
 - (3) Having one or more specific knowledge in a particular field which will generate benefit to the Company which are business of manufacturing and distribution biodiesel oil/ business of production and distribution of electricity / Electric vehicle business / business of alternative energy and have knowledge useful for the Company to support the business expansion according to the strategic plan to achieve goals, such as accountings, finances, laws, strategy and business plan Management, Information Technology etc., including the good corporate governance.
 - (4) Holding position as a director in the maximum of 5 listed companies, including EA, and not in any competing business of the Company.

Qualifications of directors

- Qualified, not being prohibited to run Public Company, law and regulation of Securities and Stock Exchange, including other applicable laws and good corporate governance of the Company.

- Knowledgeable, possess good background experience, capable, independent to perform director's duties with care and loyalty, and able to attend Directors' meetings on a regular basis, as well as gender equity to be nominated as a director. However, the benefits of the Company are the most important consideration.
- Having one or more specific knowledge in a particular field which will generate benefit to the Company which are:
 - (1) Production and distribution of biodiesel oil
 - (2) Business of production and distribution of electricity
 - (3) Electric vehicle Business
 - (4) Production and distribution of alternative energy
 - (5) have specialized knowledge that useful for the Company to support the business expansion according to the strategic plan to achieve goals, such as, accountings, finances, laws, strategy and business plan, Management, Information Technology etc.
 - (6) Good corporate governance
- Should not serve as a director in the listed companies, if included as the Company's director of more than 5 companies, and should not hold any positions in the Company's business competitors.

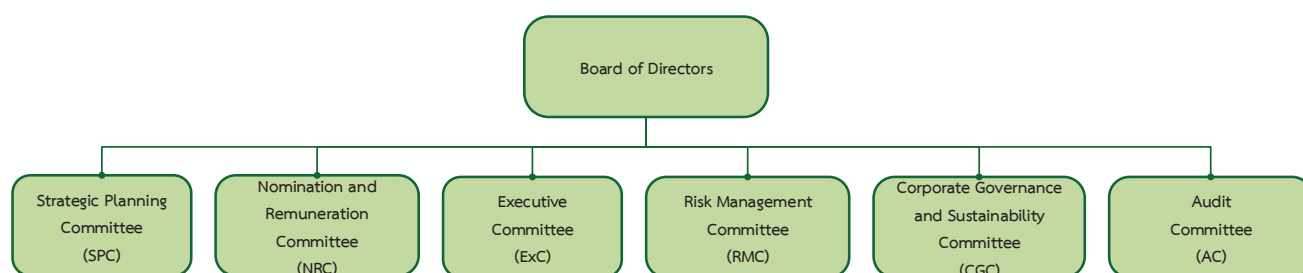
7.3 Sub-committees

Appointment of Sub-committees

The Board of Directors appointed sub-committees to oversee and monitor important issues and to regularly report to the Board. Sub-Committees are as follows:

- The Executive Committee
- The Audit Committee
- The Nomination and Remuneration Committee
- The Risk Management Committee
- The Strategic Planning Committee
- The Corporate Governance and Sustainability Committee

Structure of Sub-committees of the Company



1. The Executive Committee

The Executive Committee must be the Company's Director and/or the Company's Executive appointed by the Board of Directors based on the number of directors that the Board deemed appropriate and the Board of Directors will appoint one of executive committee member as the Chairman of the Executive Committee.

As of 31 December 2022: The Executive Committee consists of 5 members as follows:

	Name	Position
1	Mr. Somphote Ahunai	Chairman of the Executive Committee
2	Mr. Amorn Saphaweeikul	Executive Committee
3	Mr. Wutthilerd Chiannilkulchai	Executive Committee
4	Mr. Sutham Songsiri	Executive Committee
5	Mr. Somboon Ahunai	Executive Committee

Scope of duties and responsibilities of the Executive Committee

- 1.) To consider and review direction of business operation, business plan and strategy for approval of the Board of Directors.
- 2.) To control the business operation of the Company to ensure the compliance with strategic business plan and the budget approved by the Board of Directors and to report result to the Board of Directors for consideration.
- 3.) Establish a promotion and supporting system of the anti-corruption policy to communicate with all employees and related parties including reviewing the suitability of various processes and measures to comply with business changes, regulations, and legal requirements.
- 4.) To review the code of conduct, handbooks for different departments to ensure compliance with the regulations stipulated by related government authority.
- 5.) To set efficient internal control system and risk management system as well as monitoring system and to ensure work procedures are completed in line with law, regulations and good corporate governance.
- 6.) To consider and propose accounting policy, investment, removal of bad debt, or removal of asset disposal to the Board of Directors for further consideration and approval.
- 7.) To consider and approve work procedures as assigned by the Board of Directors.
- 8.) To perform or act as a representative of the Board of Directors on behalf of the Company in coordination with government authorities such as SEC and SET, etc.
- 9.) To consider and approve budget for normal transaction of the Company, which maximum value is 250 Million Baht.
- 10.) To consider and approve employment, shifts, dismissal, approve Remuneration of the executives, as well as to determine punishment, indemnification, and approve on executive's resignation.
- 11.) The meeting shall be held on a monthly basis where at least half of the directors attending the meeting shall constitute the quorum.

Nonetheless, the authority of the Executive Committee including authorization to other person as considered appropriate by the Executive Committee shall not constitute the authority to approve transactions that there is potentially conflicted persons may involve or any involvement causing conflicts of interest to the Company or any conflict with the Company or its subsidiaries (if any) or the transaction which is not under normal business transaction of the Company. To approve such transaction, the matter must be proposed to the meeting of the Board of Directors and/or shareholders for consideration and approval as stipulated by the regulations of the Company or related law.

2. The Audit Committee

The Audit Committee appointed by the Board of Directors are qualified in accordance with the Securities and Exchange Act including notification, rules and/or regulations prescribed by the SET that the Board of Directors appoints the Audit Committee, consisting of at least 3 Independent Directors, and at least 1 Independent Director has sufficiently knowledgeable and experienced to review the reliability of financial statements.

As of 31 December 2022: the Audit Committee consists of 3 Independent Directors as following details:

	Name	Position
1	ACM. Chainan Thumasujarit	Chairman of the Audit Committee and Independent Director
2	M.R. Bravochat Chatchai	Member of Audit Committee and Independent Director
3	Mr. Somphop Keerasuntonpong	Member of Audit Committee and Independent Director (who has accounting knowledge and experience to review credibility of financial statements)

Audit Committee Qualification

- 1.) Not being a director assigned by the Board of Directors to decide on the business operation of the Company, its parent company, subsidiaries, joint ventures, subsidiaries in the same level, major shareholders or the person authorizing and controlling the Company; and
- 2.) Not being director of the parent company, subsidiaries or subsidiaries in the same level, particularly at listed companies;
- 3.) Have sufficient knowledge and experience to be able to act as a member of the Audit Committee. There must be at least one member of the Audit Committee who has sufficient knowledge and experience to be able to review the reliability of the financial statements.
- 4.) Have the same duties as prescribed in the Notification of the Stock Exchange of Thailand regarding qualifications and scope of work of the Audit Committee.

Duties and responsibilities of the Audit Committee are:

1. Financial Reports
 - ❖ To review a financial report and consider the completeness of the information acknowledged and to assess the appropriate of accounting principles applied to the financial report;
 - ❖ To review accounting matters and significant financial report, including complicated or irregular transactions and the transaction which requires discretion;
 - ❖ To enquire management and auditors in regard to auditing result of the important risk concerning financial report and plan to reduce such risk;
 - ❖ To review efficiency of the internal control in regard to procedure of creating financial statement.
 - ❖ After the Audit Committee has been informed of a suspicious activity, in which the Auditor suspects that a Director or any person responsible for the Company's operations has committed an offence under the laws and regulations of the Stock Exchange of Thailand concerning his/her duties and responsibilities, the Audit Committee shall conduct an

audit and report preliminary findings to the Office of the Securities and Exchange Commission and the Auditor within thirty (30) days from the date the Auditor notifies the Audit Committee.

2. Internal control

- ❖ To review to ensure that the Management has set the internal control system as well as internal control of the proper technology implemented, communication guidelines, important of the internal control and risk management through the whole organization;
- ❖ To review to ensure that the advice regarding internal control suggested by the internal audit and auditor has been amended and improved.

3. Internal Audit

- ❖ Review and approve annual internal audit plan, as well as personnel and resources required;
- ❖ Review activities and performance of the Internal Audit Department to ensure independency as well as approve the appointment, transfer, employment termination of the Head of Internal Audit or any function responsible for internal audit;
- ❖ Review efficiency of the Internal Audit performance to ensure that the internal audit standard has been implemented;
- ❖ Review the effectiveness of Anti-Corruption guidelines as well as to consider and audit follows the Whistle Blowing policy to ensure that the Company performs with a concise and suitable operation and in accordance with international standards and able to prevent any form of corruptions.

4. Control the compliance with law and regulations

- ❖ Consider changes of law, regulations proposed by the Internal Audit which has impact to the business operation of the Company regularly;
- ❖ Review the facts found by controlling authority, follow up, improve, as well as report to the Board of Directors;
- ❖ Review efficiency of system which implemented to monitor compliance with the law, regulations, as well as correct in case the matter has not been followed.

5. Consider the connected transaction and conflict of interest

- ❖ Consider and review all proposed related transactions that may involve a conflict of interest or chance of fraud that may affect the operations of the company, so that they comply with the applicable laws and regulatory requirements of the Stock Exchange of Thailand. As such, this is to ensure that such transactions are reasonable and for the maximum benefit of the Company.

6. Select, propose, appoint and consider remuneration of the Auditors.

- ❖ Responsible for selection, appointment and proposal of the remuneration of the Auditors.

7. Compliance to the morality and ethic of the executives and employees

- ❖ To review to ensure that business ethics and morality of the executives and employees, prevention policy on conflict of interest are made in written form and acknowledged by all executives and employees;
- ❖ To support the compliance with morality, ethic and prevention policy on conflict of interest.

8. Provide report of activities of the Audit Committee by disclosure such information in the Annual Report of the Company which will be signed with affixed name by the Chairman of the Audit Committee.

9. Other responsibilities

- ❖ Otherwise act as assigned by the Board of Directors;
- ❖ Review and assess charter of the Audit Committee on regular basis, as well as propose to Board of Directors for approval in case of amendment;
- ❖ Provide self-assessment, at least, on annual basis, and report the result to the Board of Directors

The Audit Committee has the authority to terminate the external auditor contract if the external auditor is unable to perform his duties or neglected his duties or wrongfully performs his duties.

3. The Nomination and Remuneration Committee

The Board of Directors appointed the Nomination and Remuneration Committee to support the Board of Directors in setting policies, criteria and procedures for recruiting qualified persons to serve as the Company's director, sub-committee member including top executives¹ and the person assigned by the Board of Directors in accordance with the nomination process and propose to the Board of Directors, and setting policies, pattern and criteria for paying the remuneration for the Company's directors, sub-committees as well as setting the remuneration for top executives and the person assigned by the Board of Directors to propose to the Board of Directors.

The Nomination and Remuneration Committee consists of at least 5 directors. The Chairman shall be independent director and at least half of member shall be independent directors. The Nomination and Remuneration Committee meeting shall elect one member as the Chairman of the Nomination and Remuneration Committee.

As of 31 December 2022: The Nomination Committee consists of 5 Directors as following details:

	Name	Position
1	M.R. Bravochat Chatchai	Chairman of the Nomination and Remuneration Committee and Independent Director
2	ACM. Chainan Thumasujarit	Member of Nomination and Remuneration Committee and Independent Director
3	Mr. Somphop Keerasuntonpong	Member of Nomination and Remuneration Committee and Independent Director
4	Mr. Sutham Songsiri	Member of Nomination and Remuneration Committee
5	Mr. Amorn Sapthaweekul	Member of Nomination and Remuneration Committee

Duties of the Nomination and Remuneration Committee are as follows:

- 1.) To consider policy of nomination of directors and top executives, nominate, select and propose qualified person with morality, ethics and qualification suitable to the position of committee member and/or executives, as the case may be.
- 2.) To consider the policy and structure of directors' remuneration and sub-committee of the Company and propose to the Board of Directors for consideration and further propose to the meeting of shareholders for approval.

¹ Top Executives mean Chief Executive Officer or Managing Director or a person holding equivalent position with different position title of Energy Absolute Public Company Limited and its subsidiaries.

- 3.) To consider and review the remuneration structure and ratio of the top executives to be in compliance with the current market condition and suitable to the Company's business performance, and propose to the Board of Directors for further consideration. To perform such duties, the Nomination and Remuneration Committee considers from the reasonable and reflects the scope duties and responsibilities of director, the financial status of the Company in comparing with the good practice of other companies in the same size and same sector. The remuneration of directors shall be proposed to the Board of Directors for further approval by the shareholders' meeting consecutively.
- 4.) To review and assess the work performance of the Directors and Chief Executives Officer.
- 5.) To provide the succession plan, revise the development plan of the Chairman of the Executive Officers or top executives as a prepared plan in the event that the CEO or top executives in particular position will retire or will be unable to perform their duties to assure smooth and continual business operation
- 6.) Considering the vacant of the Board of Directors due to
 - Termination - Considering the selection of qualified candidates to be directors and propose to the Board of Directors for further propose to the annual shareholders' meeting for appointing
 - Termination other than the expiration of the term - Considering the selection of qualified persons as directors and propose to the Board of Directors for consideration and appointing to replace the vacant positions
- 7.) Encourage to allow shareholders to propose names of persons to be nominated as directors.
- 8.) Consider the preparation of the development plan for directors to develop knowledge of the current directors and new directors to understand the business, roles and duties of directors and important developments industry, such as the current conditions of the industry, the rules and laws related to the business of the Company.
- 9.) Selecting the qualified directors to be directors in sub-committees in order to propose to the Board of Directors' meeting for appointment to fill in the vacant position.
- 10.) Considering and reviewing the Charter of the Nomination Committee and regularly perform.
- 11.) Other duties assigned by the Board of Directors.

4. Risk Management Committee

The Board of Directors appointed the Risk Management Committee to support the Board of Directors in setting risk management policy for overall corporate as well as to supervise and control to have risk management system or procedures to suitably remove/reduce the impacts on the business of the Company Group, also setting the composition, scope of authorities, duties and responsibilities to enable the Risk Management Committee to perform its duties with effectiveness.

The Risk Management Committee consists of at least 5 directors. Their duty is to propose and support to the Board of Directors. At least half of the members must have competent knowledge in finance, accounting, law or specific skill related to the business operation of the Company or risk management. The Risk Management Committee will select one member as the Chairman of the Risk Management Committee.

As of 31 December 2022: The Risk Management Committee consists of 7 Directors as following details:

	Name	Position
1	ACM. Chainan Thumasujarit	Chairman of Risk Management Committee and Independent Director
2	M.R. Bravochat Chatchai	Member of Risk Management Committee and Independent Director
3	Pol.Gen. Phatcharavat Wongsuwan	Member of Risk Management Committee and Independent Director
4	Mr. Somphote Ahunai	Member of Risk Management Committee
5	Mr. Amorn Saphthaweeikul	Member of Risk Management Committee
6	Mr. Wutthilerd Chiannilkulchai	Member of Risk Management Committee
7	Mr. Sutham Songsiri	Member of Risk Management Committee

The duties of the Risk Management Committee are as follows:

- 1.) To establish risk management policies, supervise and support efficient risk management covering the business operations of the Company which includes the risk of corruption and considering and reviewing various measures to prevent those risks to be at an acceptable risk level.
- 2.) To follow up the implementation, review the report of risk management, ensure the appropriateness and sufficiency of the risk management, ensure the risk management remains in the acceptable level, and to ensure that the risk management has been continuously applied.
- 3.) To regularly coordinate with the Audit Committee by exchanging knowledge and information regarding risk and internal control which impacts or may impact the Company.
- 4.) Encourage to have culture of risk management and proper internal control.

5. The Corporate Governance and Sustainability Committee

The Board of Directors appointed the Corporate Governance and Sustainability Committee, consisting of at least 3 Directors to perform duties in setting and reviewing policies, regulations and operational approaches to be in line with the principles of good corporate governance, setting policies and planning activities related to the social responsibility, holding meeting to follow up the progress of corporate governance plan and social responsibility as well as providing suggestions and necessary support, implementing internal audit with the criteria of corporate governance in order to determine issues to be improved and being the Company's representative to communicate and implement activities related to the corporate governance with all executives, employees and external organizations.

As of 31 December 2022: The Corporate Governance Committee consists of 4 Directors as following details:

	Name	Position
1	M.R. Bravochat Chatchai	Chairman of Corporate Governance and Sustainability Committee and Independent Director
2	ACM. Chainan Thumasujarit	Member of Corporate Governance and Sustainability Committee and Independent Director
3	Mr. Somphop Keerasuntonpong	Member of Corporate Governance and Sustainability Committee and Independent Director
4	Mr. Sutham Songsiri	Member of Corporate Governance and Sustainability Committee

The duties of Corporate Governance Sustainability Committee are as follows:

- 1) Scope of duties and responsibilities of good corporate governance.
 - (1) To determine and review policy, regulations and work practices to be in line with good corporate governance, determine and plan about activities related to corporate social responsibilities
 - (2) To hold the meeting to monitor the progress of corporate governance plan as well as corporate social responsibilities, as well as to give advice and support as necessary;
 - (3) To conduct internal assessment based on corporate governance principles in order to seek for improvement;
 - (4) To act as representative of the Company in communication and conduct corporate governance with the executives, employees and external agencies.
- 2) Scope of Duties and Responsibilities for Sustainability
 - (1) To consider and give advice on preparation of sustainable development policy framework and guidelines to attain the standard and be on a par with international practices or principles so as to ensure operational efficiency, respond to stakeholders' demand, and achieve sustainable growth of the Group.
 - (2) To give suggestion on preparation of the Group's sustainable development plan in accordance with the policy framework set forth.
 - (3) To give advice and suggestion as well as recommendations that are useful to the Board of Directors and the management regarding the Group's sustainable development.
- 3) Other
 - (1) Review and propose amendments to the scope of duties and responsibilities of the Corporate Governance and Sustainability Committee in accordance with current situation.
 - (2) Performing other duties assigned by the Board of Director

6. The Strategic Planning Committee

The Board of Directors appointed the Strategic Planning Committee to support the Board in considering the overall strategic of the Company and group then propose to the Board of Directors for consideration

As of 31 December 2022: The Strategic Planning Committee consists of 3 Directors as the following details:

	Name	Position
1	Mr. Somphote Ahunai	Chairman of the Strategic Planning Committee
2	Mr. Amorn Saphaweekul	Member of the Strategic Planning Committee
3	Mr. Sutham Songsiri	Member of the Strategic Planning Committee

Scope of duties and responsibilities of the Strategic Planning Committee

- 1.) To consider and determine the corporate strategy of the group Company and propose to the Board of Directors for consideration and approval.
- 2.) To review and monitor the direction of the corporate strategy of the group Company and propose to the ultimate strategic direction as deemed appropriate to the Board of Directors.

- 3.) To consider and understand the strategic direction and initiatives, new business, as well as the corporate organization in overall to determine the essential resources to approach and support the corporate strategy of the group Company and propose to the Board of Directors.
- 4.) To appoint or set up the management team or consultant or expert in order to seek advices or opinion as deemed appropriate and necessary.
- 5.) To report the significant operations results and issue to the Board of Directors.
- 6.) To review the Charter of the Strategic Planning Committee, and to conduct committee's self-assessment annually.
- 7.) To perform other duty assigned by the Board of Directors.

7.4 Executive

7.4.1 Executives as of December 31, 2022

Executive's Name	Position
1. Mr. Somphote Ahunai	• Chief Executive Officer
2. Mr. Amorn Saphaweeikul	<ul style="list-style-type: none"> • Deputy CEO • Acting Vice President - Quality Control Department • Acting Corporate Secretary • Acting Secretary of the Board of Directors
3. Ms. Wimolmas Wongmakornpan	<ul style="list-style-type: none"> • Team of Assistant Chief Executive Officer-Support • Vice President - Creating Shared Value Department
4. Ms. Supaporn Ahunai	<ul style="list-style-type: none"> • Vice President – Quality and Insurance Department • Vice President – Corporate Procurement Department
5. Mr. Vasu Klomklang	<ul style="list-style-type: none"> • Senior Vice President - Strategy Development and Investment Planning Department • Acting Vice President – Investor Relation Department
6. Ms. Kotchanan Suwannadaj	• Vice President - Accounting Department
7. Mrs. Pornip Sangchan	<ul style="list-style-type: none"> • Vice President - Human Resource Department • Secretary of the Nomination and Remuneration Committee
8. Ms. Nunthima Ruangjarin	<ul style="list-style-type: none"> • Vice President - Internal Audit and Risk Management Department • Secretary of Audit Committee
9. Ms. Wira Ganthanawat	• Vice President - Finance Department
10. Mr. Cheerapan Panyanan	• Vice President - Factory Department
11. Mr. Chatrapon Sripratum	• Vice President - Strategy Development and Investment Planning Department
12. Mr. Puchong Prasonglert	• Vice President - Information Technology and System Development Department

Remark: No. 2 – 12 (Executives under SEC's Announcement)

Executives was appointed during the year 2022

Executive's Name	Position
Mr. Amorn Saphaweeikul (no. 2)	: Acting Corporate Secretary Acting Secretary of the Board of Directors effective as of December 1, 2022
Ms. Supaporn Ahunai (no. 4)	: Vice President – Corporate Procurement Department effective as of March 1, 2022
Ms. Nunthima Ruangjarin (no. 8)	: Vice President - Internal Audit and Risk Management Department Secretary of Audit Committee effective as of July 19, 2022
Ms. Wira Ganthanawat (no. 9)	: Vice President - Finance Department effective as of July 27, 2022

Executives resigned during the year 2022

Executive's Name	Position
Ms. Yaowaluk Pukpikul	: Resigned from Vice President - Corporate Secretary, Compliance and Contract Management Department Corporate Secretary Secretary of the Board of Directors Secretary of Executive Committee Secretary of Risk Management Committee Secretary of Corporate Governance and Sustainability Committee Secretary of Strategic Planning Committee effective as of December 1, 2022
Ms. Ornkamol Vitavasiri	: Resigned from Vice President - Finance Department effective as of April 19, 2022
Ms. Aiyaret Boonyaruang	: Resigned from Acting Vice President - Internal Audit and Risk Management Assistant Vice President - Internal Audit and Risk Management effective as of March 1, 2022
Mr. Kitiphong Tuesataya	: Resigned from Vice President - Corporate Procurement Department effective as of April 19, 2022
Ms. Supaporn Ahunai	: Resigned from Special Assistant to CEO Team of Assistant Chief Executive Officer-Support Vice President – Quality, Permit, Insurance and Environment effective as of March 1, 2022
Mr. Saranyoo Sornkamnerd	: Resigned from Acting Vice President – Office Management, Safety and Occupational Health Dept. Manager- Office Management, Safety and Occupational Health Department effective as of December 1, 2022

Executive's Name	Position
Mr. Kawin Kaewkong	: Resigned from Vice President - Sales and Marketing Department effective as of January 7, 2023

Roles and Responsibilities of the Chief Executive Officer

- Manage the business of the Company to be in accordance with laws, objectives, regulations and resolutions of the shareholders' meeting as well as policies, rules, regulations and resolutions of the Board of Directors.
- Perform duties with integrity and careful to protect the interests of the Company.
- Arrange the business plan, annual budget and operational goals including revising such plans during the year if deemed necessary in order to be consistent with the changing situation and propose to the Board of Directors for approval.
- Implement policies, business plans and budgets as approved by the Board of Directors to achieve the goals.
- Propose reports on the Company's performance and financial status for quarterly and annual including other reports that deem important to the Company's operations to the Board of Directors for consideration, acknowledgment or approval.
- Prepare or improve the organizational structure including the authority and responsibility of the executives under supervision, and propose to the Board of Directors for approval.
- Supervising the general administration of the Company to be effective including supervising the employees of the Company to strictly comply with the policies, rules, regulations, orders and resolutions of the Board of Directors and supporting anti-corruption policy by communicating to employee and related persons including review the process and measures to be in accordance with laws and regulations and up to date.
- To have authority to approve or take any action which the Board of Directors has already approved. The use of such approval authority cannot be done in the event that a person may have a conflict of interest (As defined in the Notification of the Securities and Exchange Commission) with the Company Or subsidiary. Except for the approval of normal business transactions with general trading conditions and the Board of Directors has already approved in principle under the Securities and Exchange Act.
- Perform other duties as assigned by the Board of Directors.
- The authority of the Chief Executive Officer as well as the authorizing to other persons that the Chief Executive Officer deems appropriate which will not include the authority or delegation of authority to approve any transactions that he or the person concerned may have conflicts or have interest or have any conflict of interest in any other manner or there is a conflict of interests with the Company or subsidiary (if any) or items that are not under normal business operations of the Company. The approval of such transactions must be proposed to the Board of Directors and / or the shareholders' meeting of the Company to consider and approve according to the regulations of the Company or related laws.

7.4.2 Executive's Remuneration Policy

Remuneration for executives is determined in association with the objectives and key results (OKR) indicators and behavioral characteristics. For the Chief Executive Officer, the Nomination and Remuneration Committee will be in charge of evaluating his performance to consider salary increment and bonus payment in each year before submission to the Board of Directors for consideration and approval. As regards executives, the Chief Executive Officer will consider salary increase and bonus payment in each year. Evaluation is based on the executives' performance and the evaluation criteria specified by the Company.

Monetary remuneration

- Monetary remuneration for the executives such as salary and bonus

Year 2022	
Number of executives (person)	18
Remuneration (million baht)	188.86

Remark : Executives under SEC's Announcement (Including executives appointed and retired during the year)

Other remuneration

- Other remuneration such as Social security fund and provident fund as follows:

Year 2022	
Number of executives (person)	18
Social security fund (Baht)	93,600
Provident fund (million Baht)	9.00

Remark : Executives under SEC's Announcement (Including executives appointed and retired during the year)

7.5 Employees

Number of employees, remuneration and forms of remuneration

As of 31 December 2022, the Company has total 266 employees (excluded executives, directors under SEC's Announcement and consultants).

- Number of employees of the Company separates by department (person)

Department	Full-Time
Corporate Secretary, Compliance and Contract Management	5
Creating Shared Value	3
Internal Audit and Risk Management	2
Accounting	14
Finance	6
Strategy Development and Investment Planning	6

Department	Full-Time
Information Technology and System Development	10
Human Resource	8
Facility Management	22
Investor Relation	1
Quality and Insurance	2
Corporate Social Responsibility and Public Relation	9
Sales and Marketing	3
Corporate Procurement	8
Factory	142
Quality Control	6
Special Project / Special Assistant to CEO	17
Safety, Occupational Health and Environmental	2

- **Number of employees of the Subsidiaries**

The Company has a total 1,760 employees in subsidiaries. Details are as follows:

Year 2022	
Number of executives (person)	9
Number of operating staff	1,751

Remark : The executives in subsidiaries consists of Vice presidents and equivalent responsible for management in subsidiaries.

Monetary remuneration and forms of remuneration

Energy Absolute Group evaluates the effectiveness of employees' performance at all levels by applying Performance Management System within the organization. It also helps to understand capability level of employees. The system focuses on how the employee achieving the targeted objectives. It links the organization's goals and deploys to department level and each individual employee.

The first dimension is to measure job accomplishment by using OKR or Objective Key Result to measure organization's or department's success. We also use PDA, or Performance Development Appraisal, to measure individual success.

The second dimension is to measure behavioral attributes by using the 360 Degree Feedback tool to get feedback from peers, colleagues from different departments, and subordinates. Recipients are assessed on their behaviors which are the identity of the Group (EA's DNA)

The remuneration of employees consists of monthly salary, bonus, overtime payments, social security fund and provident fund. In addition to the compensation paid to employees as consistent to the economic situation, competition, labor market, the Company also provides welfares to its employees that include medical expenses covering in and out patient case, marriage contribution, funeral contribution to employees' family and optical benefit etc.

Year 2022	
Remuneration of the Company (Million Baht)	147.96
Remuneration of Subsidiaries (Million Baht)	601.65

Remark: The remuneration amount of subsidiaries already included 9 executives.

Provident Fund

At present, the total number of the Company and subsidiaries employees in the provident fund scheme is 792, out of the total of 1,746 entitled employees, representing 45%. The fund is managed by Krungsri Asset Management Co., Ltd. which has disclosed the information according to the Investment Governance Code (I Code) and has the investments carried out taking into account the environmental, social, and governance (ESG) factors. The fund together with the fund manager have determined policy and assigned the fund manager to invest in organizations with prudence and care for all stakeholders including shareholders, employees, customers, partners, society and the global community.

7.6 Other important information

7.6.1 List of assigned person(s)

(1) The Corporate Secretary and Secretary of the Board of Directors

The Board of Directors appointed the Corporate Secretary pursuant to Section 89/15 of the Securities and Exchange Act, B.E. 2535 whose roles and responsibilities are as follow:

- 1) To prepare and maintain the Company's documents, namely a registrar of directors, notices and minutes of the Board of Directors' meetings, annual reports, notices and minutes of shareholders' meetings.
- 2) To maintain reports on interest submitted by directors or executives of the Company including any other matters as notified by the Capital Market Supervisory Board regarding to the applicable law of Securities and Exchange Act.

The Company Secretary is also responsible for the following duties as required by the Board:

- Organizing meetings of the Board, sub-committees, and shareholders.
- Governing the Company's subsidiaries, including preparing and safeguarding their important documents.
- Ensuring that all shareholders are treated fairly, ethically and lawfully as well as promoting good relationship with minority shareholders.

The Board of Directors appointed Ms. Yaowalug Pukpikul as the Company Secretary and Secretary of the Board of Directors, since November 14, 2013 – November 30, 2022, holds a Law degree and completed Corporate Secretary trainings as follows:

- Bachelor of Laws, Thammasat University.
- Certificate "Merchant Marine Management", Merchant Marine Institute of Chulalongkorn University.
- Certificate "Marine Insurance" from Singapore National Shipping Association, Republic of Singapore.
- Company Secretary Program (CSP 56/2014), Thai Institute of Directors.

- Training Course “Internal Control and Risk Management / Value adding support strategic management” held by the Company

The Board of Directors has appointed Mr. Amorn Sapthaweekul, the director as the Acting Company Secretary effective from December 1, 2022 onwards until a new Company Secretary can be recruited.

(2) The person supervising accounting

The Vice President of Accounting Department is assigned by position to be directly for supervising accounting. Miss Kotchanan Suwannadaj has been holding the position since October 1, 2021. She is a qualified as an accountant under the criteria prescribed by the Department of Business Development. Please see more profile details as appear in Executive Profile in Attachment 1.

(3) Head of the Office of Internal Audit

The Vice President of Internal Audit and Risk Management is assigned by position to be Head of the Internal Audit. Miss Nunthima Ruangjarin has in this position since July 19, 2022 (replacing Miss Aiyaret Boonyaruang). More profile details appear in Part 2 “9. Internal Control and Connected Transactions” and details of the Head of the Internal Audit and Risk Management Department also appear in Attachment 3.

7.6.2 Head of the Office of Investor Relations and Contact Information

Mr. Vasu Klomkliang

Acting Vice President of the Investor Relations Department

Energy Absolute Public Company Limited

16th Floor, AIA Capital Center Building, No. 89 Ratchadaphisek Road, Dindaeng Subdistrict, Dindaeng District, Bangkok 10400 Thailand

Tel: 0 2248 2488-92, 0 2002 3667-9 Ext.19531

E-mail: ir@energyabsolute.co.th

7.6.3 Audit Fee

For the fiscal year ended December 31, 2022, the Company and its subsidiaries has paid remuneration to the office of the Auditors for:

1. The auditing of financial statements (Audit Fee) in the total amount of 12,421,835.00 Baht, which is divided into the audit fees of the Company in the amount of 2,427,600.00 Baht, and the audit fees of the subsidiary companies in the amount of 9,994,235.00 Baht
2. Other non-audit fees of the Company and its subsidiaries amount of 5,350,000.00 Baht for certification purposes by BOI, in the amount of 700,000 Baht and for services related to the offering of International debt securities in the amount of 4,650,000 Baht which will be paid in the future as a result of unfinished audit service in the previous fiscal year.

The Company has decided in hiring an audit firm with expertise to provide non-audit services for the Company, as the firm has independence and impartiality when auditing.

8. Key Corporate Governance Implementation

8.1 Performance of the Board of Directors in 2022

The Board of Directors has reviewed and improved the Company's Manual, which consists of organizational culture (Vision, Mission, Values), Code of Business Ethics, Code of Conduct for Directors, Management and Employees, Corporate Governance, Social Responsibility, and Anti-Corruption policy to be in conformity with the principles of the Corporate Governance Code for Listed Companies 2017 of the Office of the Securities and Exchange Commission (SEC), which will serve as a guideline for Directors, executives and employees at all levels as work practice to enhance efficiency. This will build confidence in all stakeholders.

8.1.1 Nomination, Development and Performance Assessment of Directors

The Board has assigned the Nomination and Remuneration Committee to nominate qualified candidates to be appointed as directors from the list proposed by the major and minor shareholders. The Nomination and Remuneration Committee will consider the qualifications of directors and independent directors.

Qualifications of Independent Directors

At the Board of Directors Meeting No. 1/2021 on 4 February 2021, concurred with the Corporate Governance and Sustainability Committee, proposed the revised definition of the independence of directors, which is more stringent than the criteria set by the Securities and Exchange Commission (SEC) and the Stock Exchange of Thailand (SET):

- (1) Holding no more than 0.8% of total voting shares of the Company, parent company, subsidiaries, associate company, major shareholder or controlling person of the Company, including shares held by the connected persons of such independent director
- (2) Not being or having been an executive director, employee, staff, advisor earning regular monthly salary or the controlling person of the Company, its parent company, subsidiary, associate company, same-level subsidiary, major shareholder or controlling person, unless the foregoing status has ended for at least two years prior to the date of filing the application with the SEC Office. In this regard, such prohibited characteristics shall exclude the case where an independent director used to be a government official or advisor of a governmental agency, which is a major shareholder or the controlling person of the Company.
- (3) Not being a person who is related by blood or legal registration as father, mother, spouse, sibling and child, including spouse of child, other directors, executives, major shareholders, controlling person or person to be nominated as director, executive or controlling person of the Company or its subsidiary.
- (4) Not having or having had a business relationship with the Company, its parent company, subsidiary, associate company, major shareholder or controlling person in a manner that may interfere with independent discretion, which includes not being or having been a significant shareholder, director who is not independent director or the executive having a business relationship with the Company, its parent company, subsidiary, associate company, major shareholder or

controlling person, unless such foregoing relationships have ended for at least two years prior to the date of filing the Company with the SEC Office.

- (5) Not being or having been an auditor of the applicant, its parent company, subsidiary, associate company, majority shareholder, or controlling person, and not being a significant shareholder, controlling person, or partner of the audit firm which employs the auditor of the applicant, its parent company, subsidiary, associate company, majority shareholder, or controlling person, unless the foregoing relationship has ended for not less than 2 years prior to the date of filing the application with the SEC Office.
- (6) Not being or having been a provider of professional services, which includes serving as a legal advisor or financial advisor being paid with a service fee of more than two million baht per year by the applicant, its parent company, subsidiary, associated company, majority shareholder, or controlling person, and not being a significant shareholder, controlling person, or partner of such provider of professional services, unless the foregoing relationship has ended for not less than two years prior to the date of filing the application with the SEC Office.
- (7) Not being a director who is appointed as the representative of directors of the applicant, major shareholder, or shareholder who is a connected person of a majority shareholder.
- (8) Not undertaking any business of the same nature and in significant competition with the business of the applicant or its subsidiary, or not being a significant partner in a partnership, or an executive director, employee, staff, advisor earning regular monthly salary, or holding more than one (1) percent of the voting shares of another company that undertakes a business of the same nature and in significant competition with the business of the applicant or its subsidiary.
- (9) Not having any other characteristics that cause the inability to express independent opinions on the business operation of the applicant.

Nomination and appointment of the directors and CEO

1. Nomination of the directors

In 2022, four directors were retired by rotation and re-elected to serve as directors for another term, i.e., 1) Mr. Somphote Ahunai (Vice Chairman of the Board of Directors / Director (Authorized Director) / Chairman of Executive Committee / Member of Risk Management Committee / Chairman of Strategic Planning Committee / CEO) 2) ACM. Chainan Thumasujarit (Independent Director / Chairman of Audit Committee / Chairman of Risk Management Committee / Member of Corporate Governance and Sustainability Committee / Member of Nomination and Remuneration Committee) 3) M.R. Bravo Chat Chatchai (Independent Director / Member of Audit Committee / Chairman of Corporate Governance and Sustainability Committee / Chairman of Nomination and Remuneration Committee / Member of Risk Management Committee) and 4) Mr. Wutthilert Chainilkulchai (Director (Authorized Director) / Member of Executive Committee / Member of Risk Management Committee). No shareholders nominate any person to be considered as the Company's director, and no new directors have been appointed to replace the existing. The directors have been carefully chosen with qualifications and knowledge to help carry out the Company's business operations.

The Board has assigned the Nomination and Remuneration Committee to moderate the appropriate person to be appointed as a director of the Company. In this respect, information on the appointment and removal of directors, criteria for shareholders to propose the names of persons to be directors, and the qualifications of directors is reported under Section 2, Corporate Governance, “7.2.3 Information regarding the Roles and Duties of the Board of Directors”.

2. Nomination CEO

The Board has assigned the Nomination and Remuneration committee to consider qualifications and monitor the succession plan of the Chief Executive Officer. The Nomination and Remuneration Committee will consider the qualifications of the nominee for the position of Chief Executive Officer and recommend it to the Board of Directors for approval.

Director Development

For the year 2022, there were additional directors who attended the training as follows:

Director	Training / Public Lecture
ACM. Chainant Thumasujarit	<ul style="list-style-type: none"> Risk Management Program for Corporate Leaders (RCL 28/2022) by Thai Institute of Directors (IOD)
Mr. Somphote Ahunai	<ul style="list-style-type: none"> Lecture titled “As a Leader: Dare to Do What You Daren’t” organized by Ministry of Higher Education Special lecture titled “Strategy to Drive Organization in 2022 through Crisis toward Fresh Sustainable Opportunities” hosted by IBusiness Forum Special lecture titled “Thai Automotive Industry and Clean Energy Prospects” organized by Society of Automotive Engineers-Thailand (TSAE) Special lecture titled “Electric Vehicle and Future” by Institute of Business and Industrial Development (IBID) Lecture titled “CODE RED Strategy: Strategy to Capture Opportunities from Global Crises” and “Edge of Tomorrow: Thai Economy on the Verge of an Abyss” organized by The Standard Special talk titled “Drive Thailand’s Modern Automotive Development toward International Front” organized by King Mongkut’s University of Technology Thonburi Special lecture titled “Future of EV in Thailand” organized by Society of Automotive Engineers-Thailand (TSAE)
Mr. Amorn Saphaweeikul	<ul style="list-style-type: none"> Accounting practical about liabilities, accounts receivable, leases, and revenue from contracts with customers by Dharmniti E-learning

The 2022 Performance Assessment of the Board and the Sub-committees

In 2022, the Board and sub-committees were evaluated individually and individually, with the evaluation criteria as a percentage of the full score. The summary of the evaluation results is as follows:

	Collective basis (%)	Individual basis (%)
Board of Directors	98.90	98.55
Audit Committee	97.62	98.48
Nomination and Remuneration Committee	98.50	98.25
Risk Management Committee	99.33	99.33
Corporate Governance and Sustainability Committee	98.61	98.86
Executive Committee	98.83	98.00
Strategic Planning Committee	98.92	99.00

8.1.2 Meeting attendance and individual of directors compensation

Meeting attendance

The Board of Directors' Meeting is required at least once in every three (3) months, with a pre-scheduled meeting for the entire year, and a special session may be held as necessary. The Chairman of the Board of Directors or delegates send the meeting notices and supporting documents to the directors not less than seven (7) days prior to the meeting date, unless in a case of necessity or urgency for the purpose of maintaining the rights and interests of the Company, the summoning of the meeting may be made by other methods and the date of the meeting may be fixed sooner. Meetings are scheduled in advance annually.

In 2022, the COVID -19 pandemic, Chairman of the Board of Directors allowed had the meeting of Board of directors via e-meeting. In 2022, there were eight (8) meetings of the Board of Directors, five (5) regular meetings and three (3) special meetings, with (2) meeting of directors without executives.

Attendance of the Board and Sup - committee Meetings for 2022

Board of Directors and Sub-committee Meeting in 2022										
Name	Position	Board of Directors	Executive Committee	Audit Committee	Nomination and Remuneration Committee	Risk Management Committee	Corporate Governance and Sustainability Committee	Strategic Planning Committee	Annual General Meeting	Extraordinary General Meeting
		total 8 meetings	total 12 meetings	total 11 meetings	total 3 meetings	total 4 meetings	total 4 meetings	total 1 meetings		
1. Mr. Somchainuk Engtrakul	Chairman of the Board / Independent Director	8/8	-	-	-	-	-	-	1/1	1/1
2. Mr. Somphote Ahunai	Vice Chairman of the Board / Chairman of Strategic Planning Committee / Chairman of Executive Committee / Member of Risk Management Committee	7/7*	5/12	-	-	2/4	-	1/1	1/1	1/1
3. Mr. Amorn Saphaweekul	Director / Member of Executive Committee / Member of Risk Management Committee / Member of Nomination and Remuneration Committee / Member of Strategic Planning Committee	7/7*	11/12	-	2/3	3/4	-	1/1	1/1	1/1
4. Mr. Wuthilerd Chiannilkulchai	Director / Member of Executive Committee / Member of Risk Management Committee	8/8	11/12	-	-	3/4	-	-	1/1	1/1
5. Mr. Sutham Songsiri	Director / Member of Executive Committee / Member of Risk Management Committee / Corporate Governance and Sustainability Committee / Member of Nomination and Remuneration Committee / Member of Strategic Planning Committee	7/8	12/12	-	3/3	4/4	4/4	1/1	1/1	1/1
6. ACM. Chainan Thumasujarit	Independent Director / Chairman of Audit Committee / Chairman of Risk Management Committee / Member of Nomination and Remuneration Committee / Member of Corporate Governance and Sustainability Committee	8/8	-	11/11	3/3	4/4	4/4	-	1/1	1/1

Board of Directors and Sub-committee Meeting in 2022									
Name	Position	Board of Directors total 8 meetings	Executive Committee total 12 meetings	Audit Committee total 11 meetings	Nomination and Remuneration Committee total 3 meetings	Risk Management Committee total 4 meetings	Corporate Governance and Sustainability Committee total 4 meetings	Strategic Planning Committee total 1 meetings	Annual General Meeting Extraordinary General Meeting
7. M.R. Bravochat Chatchai	Independent Director / Member of Audit Committee / Chairman of Corporate Governance and Sustainability Committee / Chairman of Nomination and Remuneration Committee / Member of Risk Management Committee	8/8	-	11/11	3/3	4/4	4/4	-	1/1 1/1
8. Pol.Gen. Patcharavat Wongsuwan	Independent Director / Member of Risk Management Committee	0/8	-	-	-	0/4	-	-	0/1
9. Mr. Somboon Ahunai	Director / Member of Executive Committee	6/8	12/12	-	-	-	-	-	1/1
10. Mr. Amornsuk Noparumpa	Independent Director	8/8	-	-	-	-	-	-	1/1
11. Mr. Somphop Keerasuntongpong	Independent Director / Member of Audit Committee / Member of Corporate Governance and Sustainability Committee / Member of Nomination and Remuneration Committee	8/8	-	11/11	3/3	-	4/4	-	1/1 1/1

The reason for unattended director was due to engaging in other business

Remuneration Directors

In 2022, the Annual General Meeting of Shareholders resolved to approve the director remuneration as follows:

1. Monthly fee of the Board
 - Chairman 60,000 THB / month
 - Vice Chairman 55,000 THB / month
 - Directors 50,000 THB / month
2. Meeting allowances fee of Sub-committee:
 - Audit Committee, Nomination and Remuneration Committee, Corporate Governance and Sustainability Committee, Risk Management Committee, Strategic Planning Committee (only the directors who attend the meeting) are approved as a limit, with each payment and position as follows:
 - Chairmen of Sub-Committees 25,000 THB / meeting
 - Members of Sub-Committees 20,000 THB / meeting
 - Executive Committee payment 20,000 THB / person / meeting (The payment will be made only for member who has no received any monthly salary or consulting fees)
3. Annual Bonus
 - Chairman 2,000,000 THB
 - Vice Chairman 1,750,000 THB
 - Directors 1,500,000 THB
4. Other Remuneration
 - None -

The Remuneration for Directors in 2022

Name	Annual Bonus 2021 Paid in 2022	Remuneration for Directors (Monthly)	Meeting allowance for 2022						Total (Baht)
			Executive Committee	Audit Committee	Nomination and Remuneration Committee	Risk Management Committee	Corporate Governance and Sustainability Committee	Strategic Planning Committee	
1. Mr. Somchainuk Engtrakul	⊗ 2,000,000.00	600,000.00							2,600,000.00
2. Mr. Somphote Ahunai	★ 1,750,000.00	540,000.00	⊗ -		✓	40,000.00		⊗ 25,000.00	2,355,000.00
3. Mr. Amorn Sapthaweekul	✓ 1,500,000.00	480,000.00	✓ -		✓	60,000.00		✓ 20,000.00	2,100,000.00
4. Mr. Wuthilerd Chiannikulchai	✓ 1,500,000.00	480,000.00	✓ -		✓	60,000.00			2,040,000.00
5. Mr. Sutham Songsiri	✓ 1,500,000.00	480,000.00	✓ -		✓	80,000.00	✓ 80,000.00	✓ 20,000.00	2,220,000.00
6. ACM. Chainan Thumasujarit	✓ 1,500,000.00	480,000.00		⊗ 200,000.00	✓ 60,000.00	⊗ 100,000.00	✓ 80,000.00		2,420,000.00
7. M.R. Bravochat Chatchai	✓ 1,500,000.00	480,000.00		✓ 160,000.00	⊗ 75,000.00	✓ 80,000.00	⊗ 100,000.00		2,395,000.00
8. Pol.Gen. Patcharavat Wongsuwan	✓ 1,500,000.00	480,000.00			✓	-			1,980,000.00
9. Mr. Somboon Ahunai	✓ 1,500,000.00	480,000.00	✓ -						1,980,000.00
10. Mr. Amornsuk Noparumpa	✓ 1,500,000.00	480,000.00							1,980,000.00
11. Mr. Somphop Keerasuntonpong	✓ 1,500,000.00	480,000.00		✓ 160,000.00	✓ 60,000.00		✓ 80,000.00		2,280,000.00
Total	17,250,000.00	5,460,000.00	-	520,000.00	295,000.00	420,000.00	340,000.00	65,000.00	24,350,000.00

Remark: ⊗ = Chairman ★ = Vice Chairman ✓ = Director, Sub-committee member

8.1.3 Governance of Subsidiaries and Associates

The Company has established a policy of supervision of the Company's operations in which the Company holds shares (subsidiaries, associates) closely to maintain the interests of the Company's investments continuously, as well as to create added value and confidence for the Company's stakeholders, executives or controlling authorities in subsidiaries and associates, at least in proportion to the shareholding. To ensure that the subsidiaries and associates have complete and accurate regulations regarding connected transactions, acquisition or disposition of properties or any other important transaction.

8.1.4 Monitoring of Compliance with Corporate Governance Policy and Guideline

1) Prevention of Conflicts of Interest

The Company determines to disclose information to prevent conflicts of interest and transactions that may have conflicts of interest for directors and executives.

2) Maintenance of internal data usage

- The Company has measures to prevent the unlawful use of internal information by directors, executives and employees in the department related to the information, including spouses and underage children of such persons, by prohibiting the purchase and sale, transfer and transfer of the Company's securities within 1 month prior to the disclosure of quarterly financial statements and annual financial statements, and at least 1 day after the disclosure of such financial statements.
- The Company's directors, executives, and relevant employees will be notified in writing of the black-out period before public disclosure of information material to changes in securities prices, in order for that information to be made public first.
- The securities holdings of the Company's directors and executives will be disclosed in annual report and on the Company's website. In addition, the securities holdings of the Company's directors will be reported to the Board of Directors Meetings.

3) Corporate governance, code of conduct, and anti-corruption activities

The Company provides training on good corporate governance, business ethics, and anti-corruption to employees, as well as requiring knowledge tests through the E-Learning system to be used as a guideline for operations.

The Company has provided employees with training on corporate governance, business ethics and anti-corruption, and required them to undergo testing of their knowledge through e-learning and apply such knowledge as operation practice guidelines. The no gift policy has also been announced for compliance.

In 2022, the Company revised its anti-corruption measures, assessed bribery and corruption risk, and conducted self-assessment to develop its anti-corruption mechanism and renew the certification of its membership of the Thai Private Sector Collective Action Against Corruption (CAC).

Shareholdings of the Company by Directors and Executives' (according to the definition of SEC)

As at December 30, 2022

Name – Surname	Shareholding as at		Share
	30 Dec 2022	30 Dec 2021	Increase/(decrease) during the year
Director			
1. Mr. Somchainuk Engtrakul	-	-	-
Held by spouse and minor children	-	-	-
2. Mr. Somphote Ahunai	-	865,736,386	(865,736,386)
Held by Trustee	573,578,386	643,470,000	(69,891,614)
Held by SPBL Holding Co., Ltd. ^{1/}	936,230,000	-	936,230,000
Held by spouse	24,983,607	24,983,607	-
Held by minor children	-	-	-
3. Mr. Amorn Sapthaweeikul	72,968,316	72,968,316	-
Held by Custodian	27,000,000	27,000,000	-
Held by spouse	25,823,087	25,823,087	-
Held by minor children	-	-	-
4. Mr. Wutthilerd Chiannilkulchai	15,332,849	15,332,849	-
Held by spouse and minor children	-	-	-
5. Mr. Sutham Songsiri	1,000,000	1,000,000	-
Held by spouse and minor children	-	-	-
6. ACM Chainan Thumasujarit	-	-	-
Held by spouse and minor children	-	-	-
7. M.R. Bravochat Chatchai	-	-	-
Held by spouse and minor children	-	-	-
8. POL. GEN. Phatcharavat Wongsuwan	1,140,000	1,140,000	-
Held by spouse and minor children	-	-	-
9. Mr. Somboon Ahunai	6,992,951	6,992,951	-
Held by spouse and minor children	-	-	-
10. Mr. Amornsuk Noparumpa	-	-	-
Held by spouse and minor children	-	-	-
11. Mr. Somphop Keerasuntonpong	-	-	-
Held by spouse and minor children	-	-	-
Executives (according to definition of SEC)			
1. Mr. Somphote Ahunai	-	865,736,386	(865,736,386)
Held by Trustee	573,578,386	643,470,000	(69,891,614)
Held by SPBL Holding Co., Ltd. ^{1/}	936,230,000	-	936,230,000
Held by spouse	24,983,607	24,983,607	-
Held by minor children	-	-	-

Name – Surname	Shareholding as at		Share
	30 Dec 2022	30 Dec 2021	Increase/(decrease) during the year
2. Mr. Amorn Saphaweeikul	72,968,316	72,968,316	-
Held by Custodian	27,000,000	27,000,000	-
Held by spouse	25,823,087	25,823,087	-
Held by minor children	-	-	-
3. Ms. Supaporn Ahunai	23,997,049	23,997,049	-
Held by spouse	1,015,000	1,000,000	15,000
Held by minor children	-	-	-
4. Ms. Wimolmas Wongmakompan	17,600	17,600	-
Held by spouse and minor children	-	-	-
5. Mr. Vasu Klomkliang	-	-	-
Held by spouse and minor children	-	-	-
6. Ms. Kotchanan Suwannadaj	-	-	-
Held by spouse and minor children	-	-	-
7. Mrs. Pornthip Sangchan	-	-	-
Held by spouse and minor children	-	-	-
8. Ms. Nunthima Ruangjarin	-	N/A	N/A
Held by spouse and minor children	-	N/A	N/A
9. Ms. Wira Ganthanawat	-	N/A	N/A
Held by spouse and minor children	-	N/A	N/A
10. Mr. Cheerapan Panyanan	2,200	2,200	-
Held by spouse and minor children	-	-	-
11. Mr. Kawin Kaewkong	-	-	-
Held by spouse and minor children	-	-	-
12. Mr. Chatrapon Sripratum	-	-	-
Held by spouse and minor children	-	-	-
13. Mr. Puchong Prasonglert	-	-	-
Held by spouse and minor children	-	-	-

Remark : ^{1/} The company limited registered under the Law of Thailand, 99.99% shares held by Mr. Somphote Ahunai.

N/A means no information due to the executives was appointed or resigned during 2022.

8.2 Performance Report of Audit Committee

8.2.1 Report of Audit Committee

Dear Shareholders,

The Audit Committee of Energy Absolute Public Company Limited consists of 3 Independent Directors, and one of them is an experienced and competent to review the reliability of the financial statement. They are, therefore, qualified in accordance with the regulations of the Stock Exchange of Thailand and independently performed its duties as specified in the Audit Committee Charter.

The Audit Committee comprises of

- | | |
|--------------------------------|--|
| 1. ACM. Chainan Thumasujarit | Chairman of Audit Committee and Independent Director |
| 2. M.R. Bravochat Chatchai | Member of Audit Committee and Independent Director |
| 3. Mr. Somphop Keerasuntonpong | Member of Audit Committee and Independent Director |
- (Must be competent and experienced to review the reliability of the financial statements)

In 2022, the Audit Committee held 11 meetings attended by all 3 members, with 100 percent of the members attending. The Audit Committee invited executives to attend the meeting in the agenda related to them, and invited the internal audit officer to report the internal audit result including certified public accountant to propose the financial statement, clarify the facts and report the audit result with supporting evidence in each quarter.

The Audit Committee strictly complied with the Audit Committee Charter which approved by the Board of Directors and reported to the Board of Directors with suggestions as a guideline for the Management. The substance is described as follows;

1. The quarterly and annual financial statements for the year 2022 of Energy Absolute Public Co., Ltd. and consolidated financial statements were reviewed and audited by the auditors before submitting to the Board of Directors. This procedure was to ensure that the preparation of financial statements, accounting transactions with related companies would be accurate in accordance with accounting standard and legal requirement. The notes to financial statements were added with adequate information. Additionally, the related management team and the auditors were invited to attend the meeting to clarify and answer the inquiries of the Audit Committee regarding to the accuracy, adequacy, significant adjustment which affect its financial statements and auditor's opinions after considered and reviewed financial statements. The Audit Committee had an opinion that the financial statements was prepared in accordance with generally accepted accounting principles, accurate and reliable.

In addition, the Audit Committee arranged a meeting, together with the external auditor, with absence of the executives, discussed significant information and internal control system related to accounting and financial reports and other matters including obstacles occurred during work. The Committee found that the auditors had received full cooperation

from the management and had exercised full performance with complete independence. In addition, the external auditors were deemed to be knowledgeable, with experience and expertise commensurate with their duties as auditors.

2. The Audit Committee assessed and reviewed the adequacy of the internal control system under the guidance of the Securities and Exchange Commission and the internal audit result of the Internal Audit Unit. The assessment was based on the report of the internal audit result conducted by the Internal Audit Unit and auditors. The Audit Committee instructed the Internal Audit Unit to monitor the matters that need to be corrected or improved to ensure that the Management has corrected or improved as per suggestions of the Internal Audit within the prescribed period of time, including encouraging the Internal Audit Unit to provide a risk management assessment for the preparation of an audit plan to cover all significant activities of the Company. The Audit Committee had an opinion that the internal control system of the Company is effective and adequate, without any significant defects and the Internal Audit Unit was independent. The Audit Committee has approved the Internal Audit Plan for the year 2023 which focuses on the operation that results in the efficiency, effectiveness and the continual development.
3. The Audit Committee promoted, supported and pushed the Company to provide adequate and proper anti-corruption measures to prevent corruption risk from business transactions such as anti-corruption manual, internal and external communication, whistleblowing channel, anti-corruption risk assessment and internal control and reviewed the compliance with anti-corruption measures. The Audit Committee had an opinion that the anti-corruption measures of the Company is proper and adequate.

In 2022, the Audit Committee has proposed a revised company's anti-corruption manual to Board of Directors approval. Also to consider the results of risk assessment and audit results of compliance with anti-corruption measures as required to renew the Collective Action against Corruption (CAC) Membership in 2023.

4. The Audit Committee reviewed the compliance with Securities and Exchange Act of Thailand, regulations of the Stock Exchange of Thailand, laws related to the business and the policy of the Company. The Audit Committee considered that the Company has appropriately complied with the laws and regulations.
5. Review the related transactions or the transaction that may have a conflict of interest: The Audit Committee reviewed the related transactions or the transaction that may have a conflict of interest which was classified as a related transaction pursuant to the Notification of the Securities Exchange Commission of Thailand and the Securities and Exchange Commission. It was considered that the said transactions proceeded in accordance with the articles of association which adhering to the compliance with the notification of the Stock Exchange of Thailand. The related transactions were proceeded with the reasonable ground, taking into account the highest benefits of the Company and adequate disclosed.
6. To encourage having a risk management system and risk management policy, which is responsible for risk management committees to cover both potential opportunities and consequences, as well as develop a risk management plan to prevent or minimize the potential impact to an acceptable level.

7. The Audit Committee selected and proposed for an appointment of auditor and auditing fee based on transparency, independence and good corporate governance including the performance of the auditor in the previous year. Additionally, the Audit Committee also considered the reputation, reliability, the ability to perform auditing and certify on financial statements in time.
8. The Audit Committee reviewed the Audit Committee Charter. In 2022, the charter has been revised to be in line with criteria of the Stock Exchange of Thailand and SEC.
9. To conduct a fraud investigation by setting up a variety of systems and channels for receiving complaints or whistleblowers for ease of providing the complainant's information or whistleblowers, including on the website, <https://www.energyabsolute.co.th/complaints>, by email at chairman.audit.com@energyabsolute.co.th, by letter, or by telephone to the Audit Committee, as well as establishing confidentiality measures to protect whistleblowers.
10. To support the use of technology in operations in order to improve efficiency and effectiveness as well as to control operations in accordance with the Company's regulations, this is to reduce any mistakes or the possibility of fraud, such as by implementing Robotic Process Automation (RPA) in process.
11. The Audit Committee evaluates its own performance on an annual basis. This is to ensure that the Audit Committee's performance is effective, as well as to promote and support corporate governance through collective and individual assessment. In 2022, the average collective assessment was 97.62 percent, and the average individual assessment was 98.48 percent.

In conclusion, the Audit Committee sufficiently maintained its independence and fulfilled its duties in monitoring with proficiency in accordance with the roles and responsibilities prescribed in the Audit Committee Charter as well as giving opinions and suggestions for the benefits and equitable treatment of stakeholders. The Audit Committee was of the opinion that the Company's financial statements is accurate, reliable and consistent with general financial reporting standards. The Company operates activities to comply with the laws, obligations relevant to the business including good corporate governance, compliance with rules and regulations and sufficient internal control systems with an effectiveness and efficiency of internal audit.

Energy Absolute Public Company Limited

ACM 
(Chainan Thumasujarit)
Chairman of Audit Committee

8.3 Performance Report of Sub-committee

Report of Corporate Governance and Sustainability Committee

Dear Shareholders,

The Corporate Governance and Sustainability Committee of Energy Absolute Public Company Limited performs its duties by supporting the Board of Directors in determining criteria and practices in various fields to be in conformity to the good corporate governance principles and to operate a business with social responsibility

The Corporate Governance and Sustainability Committee comprises of 4 members (3 independent directors) namely below.

- | | |
|--------------------------------|--|
| 1. M.R. Bravochat Chatchai | Chairman of the Corporate Governance and Sustainability Committee and Independent Director |
| 2. ACM. Chainan Thumasujarit | Member of the Corporate Governance and Sustainability Committee and Independent Director |
| 3. Mr. Somphop Keerasuntonpong | Member of the Corporate Governance and Sustainability Committee and Independent Director |
| 4. Mr. Sutham Songsiri | Member of the Corporate Governance and Sustainability Committee |

In 2022, the Corporate Governance and Sustainability Committee performed its duties as assigned by the Board of Directors. Total 4 meetings, all members of the Corporate Governance and Sustainability Committee attended every meeting. were held to consider the following matters

1. To oversee the improvement of corporate governance and performance assessment. The Corporate Governance and Sustainability Committee monitored the improvement of corporate governance to ensure the conformity with good corporate governance principles. In 2022, the Stock Exchange of Thailand (SET) and the Thai Institute of Directors (IOD) collaborated in taking the survey on the corporate governance of the Thai listed companies. The Corporate Governance Assessment (CG 2022) scored 5 stars The Corporate Governance and Sustainability Committee is committed to develop and improve the corporate governance coupling with the growth of the Company Group, as well as to elevate to ASEAN corporate governance (ASEAN CG Scorecard).
2. To consider and seek information in order to get assessment at international level, i.e. Dow Jones Sustainability Index (DJSI) and ASEAN CG Scorecard.
3. To promote and support provision of training on enhancement of knowledge for executives regarding corporate governance, risks and compliance with relevant rules, regulations and laws.
4. To enhance and support using the result of quality assessment of AGM by Thai Investors Association (TIA) to be used as a guideline to maintain the quality of AGM in the future.
5. To review and amend the Corporate Governance and Sustainability Committee Charter to be at the current state and consistent with the responsibility of the Corporate Governance and Sustainability Committee.

6. To conduct self-assessment for both collectively and individually assessment. The performance assessment result on a collective basis was 98.61 percent and individual basis was 98.86 percent.

Energy Absolute Public Company Limited



(M.R. Bravochat Chatchai)

Chairman of the Corporate Governance and Sustainability Committee

Report of Nomination and Remuneration Committee

Dear Shareholders,

The Nomination and Remuneration Committee of Energy Absolute Public Company Limited is responsible for supporting the Board of Directors in nominating and proposing for qualified persons with knowledge and skills that suit the position of directors and top executives, and also sets the policy, form and criteria of the remuneration for directors, sub-committees and Chief Executive Officer of the Company in compliance with good corporate governance in order to create more transparency and fairness. The responsibility Includes proposing the opinion to the Board of Directors and shareholders' meeting.

The Nomination and Remuneration Committee comprises of

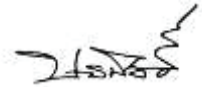
- | | |
|--------------------------------|--|
| 1. M.R. Bravochat Chatchai | Chairman of Nomination and Remuneration Committee and Independent Director |
| 2. ACM. Chainan Thumasujarit | Member of Nomination and Remuneration Committee and Independent Director |
| 3. Mr. Somphop Keerasuntonpong | Member of Nomination and Remuneration Committee and Independent Director |
| 4. Mr. Sutham Songsiri | Member of Nomination and Remuneration Committee |
| 5. Mr. Amorn Saphthaweeikul | Member of Nomination and Remuneration Committee |

The Nomination and Remuneration Committee performed their duties as assigned by the Board of Directors. In 2022, the Nomination and Remuneration Committee held 3 meetings, M.R. Bravochat Chatchai, ACM. Chainan Thumasuarit, Mr. Somphop Keerasuntonpong, Mr. Sutham Songsiri attended 3 meetings and Mr. Amorn Saphthaweeikul attended 2 meetings, were held to consider and proceed with the following matters.

1. To consider and nominate directors who retired by rotation to re-elect to be the directors for another term. The Nomination Committee considered and selected the duly qualified persons who had no involvement in prohibited characteristics as stipulated by the Securities and Exchange Commission of Thailand. The nominated persons were proposed to the Board of Directors, before proposing to the General Meeting of Shareholders for appointment as a director to replace the directors who retired by rotation.
2. To allow shareholders to propose names of the qualified person to be nominated as a director of the Company, which appeared to be none Shareholders nominate a person to be selected as the Company's director At the Annual General Meeting of Shareholders for the year 2022.
3. To consider succession plan for top management positions and senior management position.
4. To review the Nomination and Remuneration Committee Charter to ensure compliance with the good corporate governance and the compatibility with current duties.
5. To consider and propose the bonus to director based on the last year performance by referring to the result of self-assessment and operating result compared to the target setting.
6. To propose the remuneration of directors and sub-committees to the Board of Directors and shareholders' meeting including the budget allocation to be the bonus to director in each year.

7. To consider the performance evaluation of Chief Executive Officer to be in line with the Company's goal and plan for the year as well as the performance assessment in accordance with SET's criteria.
8. To consider the performance of the Chief Executive Officer including propose the opinion about salary and bonus for the year.
9. In 2022, the Nomination and Remuneration Committee organized the self-assessment for both collectively and individually assessment. The self-assessment result on a collective basis was 98.50 percent and individual basis was 98.25 percent.

Energy Absolute Public Company Limited



(M.R. Bravochat Chatchai)

Chairman of the Nomination and Remuneration Committee

Report of Strategic Planning Committee

Dear Shareholders,

The Strategic planning Committee of the Energy Absolute Public Company Limited (“the Company”) consists of 3 members from the Board of Directors. All of them are qualified with knowledge, specific skills that cover the determination and management of strategic direction which is beneficial to the business of the Company Group.

The Strategic Planning Committee consists of

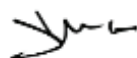
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|---------------------------|--|
| 1. Mr. Somphote Ahunai | Chairman of Strategic Planning Committee |
| 2. Mr. Amorn Sapthaweekul | Member of the Strategic Planning Committee |
| 3. Mr. Sutham Songsiri | Member of the Strategic Planning Committee |

The Strategic Planning Committee has performed its duties as assigned by the Board of Director and in accordance with the Strategic Planning Charter. In 2022, the Strategic Planning Committee held 1 meeting. The substance of the meetings is summarized as follows:

1. To review the Strategic Planning Committee Charter in order to stipulate the responsibilities, composition and qualifications, term of office, meeting schedule as a practice guideline.
2. To monitor and approach the business operation, the investment of new projects of the Company to be in accordance with the scope approved of the Board of Directors.
3. To review the strategic direction of the Company and the group company
4. In 2022, the Strategic Planning Committee organized the self-assessment for both collectively and individually assessment. The self-assessment result on a collective basis was 98.92 percent and individual basis was 99.00 percent

Under the strategic planning direction as set, the Strategic Planning Committee is committed to driving the Company and Group Company to be an efficient sustainable growth and effectiveness towards.

Energy Absolute Public Company Limited



(Mr. Somphote Ahunai)

Chairman of Strategic Planning Committee

Report of Risk Management Committee

Dear Shareholders,

The Risk Management Committee of the Energy Absolute Public Company Limited (the “**Company**”) consists of 7 members from the Board of Directors, 3 of whom were independent directors. All of them are qualified with knowledge, specific skills that cover the risk management function which is beneficial to the business of the Company Group.

The Risk Management Committee consists of:

- | | |
|-----------------------------------|---|
| 1. ACM Chainan Thumasujarit | Chairman of Risk Management Committee and Independent Director (attend meeting 4/4 times) |
| 2. M.R. Bravochat Chatchai | Member of the Risk Management Committee and Independent Director (attend meeting 4/4 times) |
| 3. Pol.Gen. Patcharawat Wongsuwan | Member of the Risk Management Committee and Independent Director (attend meeting 0/4 times) |
| 4. Mr. Somphote Ahunai | Member of the Risk Management Committee (attend meeting 2/4 times) |
| 5. Mr. Amorn Saphaweekul | Member of the Risk Management Committee (attend meeting 3/4 times) |
| 6. Mr. Wutthilerd Chiannilkulchai | Member of the Risk Management Committee (attend meeting 3/4 times) |
| 7. Mr. Sutham Songsiri | Member of the Risk Management Committee (attend meeting 4/4 times) |

The Risk Management Committee has performed its duties as assigned by the Board of Director and in accordance with the Risk Management Charter. In 2022, the Risk Management Committee held 4 meetings. The substance is summarized as follows:

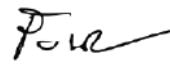
1. To review the Risk Management Committee Charter in order to stipulate the responsibilities, composition and qualifications, term of office, meeting schedule as a practice guideline
2. To follow up and evaluate major projects of the Company, to give advice and suggest the solution to reduce risks that may occur.
3. To follow up and evaluate operation, investment of new business projects of the Company to be in line with the direction and scope approved by the Board of Directors
4. The review the Risk Management framework, to determine level/change, impact and damage level precisely in order to adhere to as a guide for assessing the severity of the risk and risk management. The risk identification for business operation of the Company and the Company Group are classified in 6 types as follows:
 - 1.) Strategic Risk
 - 2.) Operational Risk
 - 3.) Financial Risk
 - 4.) Compliance Risk
 - 5.) Business Operation Risk
 - 6.) Emerging Risk
 - 7.) Social Risk

5. To consider assessment of the Company's corruption risk to support its renewal of membership certification of Thailand's Private Sector Collective Action Coalition against Corruption (CAC).
6. In 2022, the risk management committee organized the self-assessment for both collectively and individually assessment. The self-assessment result on a collective basis was 99.33 percent and individual basis was 99.33 percent.

The Risk Management Committee thrives to perform its duties to cause the adequate supervision and risk management, to ensure that such risks are within acceptable ranges and to promote the efficient and effective business operation of the Company Group.

Energy Absolute Public Company Limited

ACM



(Chainan Thumasujarit)

Chairman of Risk Management Committee

Report of the Executive Committee

Dear Shareholders

The Executive Committee of Energy Absolute Public Company Limited, appointed by the Board of Directors, is responsible for assisting, supporting and serve the board-level-oversight role to monitor and manage the Company's business to be in line with strategy, policy, business operation plans, regulation as well as the objectives and main target which approved by the Board of Directors in order to perform the business efficiently and comply with the Company's corporate governance policy.

The Executive Committee comprises of

- | | |
|-----------------------------------|---|
| 1. Mr. Somphote Ahunai | Chairman of Executive Committee and Chief Executive officer |
| 2. Mr. Amorn Saphaweeikul | Member of Executive Committee and Deputy CEO |
| 3. Mr. Somboon Ahunai | Member of Executive Committee |
| 4. Mr. Sutham Songsiri | Member of Executive Committee |
| 5. Mr. Wutthilerd Chiannilkulchai | Member of Executive Committee |

In 2022, the Executive Committee performed its duties delegated by the Board of Directors. The total 12 meetings were held to consider the following significant matters which summarized as.

1. Consider and review direction of business operation, strategy and business plan of the Company and its subsidiaries

The Executive Committee considered and reviewed direction of business operation, strategy and business plan of the Company and its subsidiaries in each line of business, by specifying that the meeting shall be arranged and such plans shall be conveyed to the management and the employees at all levels for their acknowledgement and compliance, so that the targets should be achieved as per specified.

2. Review and monitor performance of the Company and its subsidiaries

The Executive Committee reviewed and monitored performance of the Company and its subsidiaries every month, in order to drive goal achievement of business operations.

3. Consider and approve the Company's annual budget

The Executive Committee considered and approved the Company's annual budget prior to further approve of the Board of Directors.

4. Consider the Company's investment and operations

The Executive Committee considered the Company's investment including financial transactions and credits which are important for business and operations as assigned by the Board of Directors.

5. Promote and support Anti-Corruption policy

The Executive Committee promoted and supported the anti-corruption policy to communicate with the employees and related parties.

6. Self-evaluation of the Executive Committee

The Executive Committee has conducted a self-assessment for the year 2022, that there are 3 topics as the structure and qualifications, roles and responsibilities and meeting of the Executive Committee. The assessment result on a collective basis was 98.83 percent and individual basis was 98.00 percent in order to use for improving with aims to increase efficiency of the operations.

Energy Absolute Public Company Limited



(Mr. Somphote Ahunai)

Chairman of Executive Committee

9.1 Internal Control

The Audit Committee, appointed by the Board of Directors, consists of 3 Independent Directors is responsible for reviewing the accuracy and reliability of the financial reports, the efficiency of internal control system, the compliance with relevant laws and regulations including the transactions that may lead to a conflict of interest.

The Board of Directors, Audit Committee and Management place a great emphasis on the internal control system by evaluating the effectiveness and adequacy of the system. In doing this, the Company has applied international standard frameworks of COSO (The Committee of Sponsoring Organizations of the Treadway Commission), Good Corporate Governance according to the Stock Exchange of Thailand (SET)'s practices and Risk Management on a regular basis. The assessment is conducted to ensure that the Company's internal control and risk management systems are appropriate and effective with good corporate governance. The accounting system and financial reports are accurate and reliable including the compliance with relevant laws and regulations related to the business operation.

The Audit Committee assesses the adequacy and effectiveness of the internal control system using the assessment form provided by the Office of the Securities and Exchange Commission of Thailand (SEC) and report to the Board of Directors at least once a year. The components of the framework of COSO for assessment are as follows:

1. Control Environment
2. Risk Assessment
3. Control Activities
4. Information and Communication
5. Monitoring Activities

In addition to the assignment to the Management to regularly submit the performance report to Executive Committee, the Audit Committee and Internal Audit Department also determine the annual internal audit plan to ensure that the business operations are in compliance with laws and regulations including vision and mission of the Company.

In the Board of Directors' Meeting No. 2/2023 held on 24 February 2023, with the attendance of Audit Committee, the Board considered the assessment of internal control system for the year 2022 using the assessment form provided by the Office of the Securities and Exchange Commission of Thailand (SEC).

The Board endorsed the Audit Committee's report on the assessment of the Company's internal control system. Overall the company and its subsidiaries have sufficient and appropriate of internal control to operate effectively including review of transactions that may lead to conflict of interest and connected parties that have correct information disclosed. The Audit Committee and Management place great importance on Good Corporate Governance, Internal Control, Risk management in an acceptable level and the accounting and financial reports' accuracy and completeness. The Company also conducted the operations in compliance with the laws and regulations including Anti-Corruption policy that defines Directors, Managements, Employees, and related parties are aware of all kinds of corruptions

Note of auditors on internal control

PricewaterhouseCoopers ABAS Limited, the auditor of the Company and Subsidiaries has no comments and no suggestion regarding the internal control on accounting of the financial statements of the Company and its subsidiaries for the accounting year 2022, ended on 31 December 2022.

Head of the Internal Audit Unit

In 2022, the Audit Committee has appointed Ms. Nunthima Ruangjarin as a Secretary of the Audit Committee and Vice President of the Internal Audit and Risk Management Department. Audit Committee has considered the qualification, education and experience and is of the opinion that she is qualified to undertake the responsibility which will be benefit to the Company's business. At present, the consideration and approval on appointment, dismissal, relocation including performance assessment and compensation of Internal Audit must be approved by the Audit Committee.

Furthermore, the Company has established the Internal Audit Unit which the vice president of aforementioned department acting as a secretary of Audit Committee performing internal audit functions to ensure that the internal audit procedure is in accordance with the plan and reporting internal audit result to Audit Committee in the meeting. Before the internal audit result will be reported, there will be discussing with involved executives first. The comments and suggestion from audit committee is taken into, in order to develop internal audit procedure in the future. The internal audit result for the year 2022 of the Company Group is adequate and appropriate and Audit Committee is of the opinions that the Internal Auditor performed work completely and covering all important departments.

9.2 Connected Transactions

Connected Transactions of the Company and subsidiaries with other entities that may result in conflicts of interest during the year 2022 are as follows:

1.1 Dhipaya Insurance Public Company Limited (“TIP”)

Relationship: The Company and TIP have a common chairman of the board, namely Mr. Somchainuk Engtrakul.

Preconditions and Reasons: The Company and subsidiaries applied insurance under the co-insurance between TIP and other insurance companies and/or be the Fronting with other insurance companies in the case of foreign insurers. The insurance is made by broker that is not related to the Company, helping to find insurance company by considering term and condition including premium and propose to the Company for consideration to select the insurers with the reasonable premium and term that benefit to the Company.

Transaction	Connected Transaction Value for the year		
	Ended 31 Dec 20 (Million Baht)	Ended 31 Dec 21 (Million Baht)	Ended 31 Dec 22 (Million Baht)
The Company 1.) Applied for Industrial All Risk Insurance, Public Liability Insurance to cover its biodiesel factory (Kabinburi Factory) <ul style="list-style-type: none"> Such insurance premiums were recognized as Cost of Sales. (Cost of Production) Prepaid Insurance 2.) Applied for Motor Insurance <ul style="list-style-type: none"> Such insurance premiums were recognized as administrative expenses. Prepaid Insurance 	0.66 0.06 0.06 0.28	0.61 0.05 0.28 -	0.60 0.05 - -
EA Solar Co., Ltd. (Indirect Subsidiary) Applied for Industrial All Risks Insurance, Business Interruption and Public Liability Insurance to cover the solar power plant <ul style="list-style-type: none"> Such insurance premiums were recognized as Cost of Sales Prepaid Insurance Accrued Insurance Premium 	0.59 0.55 -	0.79 - 0.06	0.81 - 0.08
EA Solar Nakornsawan Co., Ltd. (Direct Subsidiary) Applied for Industrial All Risks Insurance, Business Interruption Insurance and Public Liability Insurance to cover the solar power plant <ul style="list-style-type: none"> Such insurance premiums were recognized as Cost of Sales Prepaid Insurance Accrued Insurance Premium 	5.76 - -	5.23 - 0.48	5.77 - 0.49
EA Solar Phitsanulok Co., Ltd. (Indirect Subsidiary) Applied for Industrial All Risks Insurance, Business Interruption Insurance and Public Liability Insurance to cover the solar			

Transaction	Connected Transaction Value for the year		
	Ended 31 Dec 20 (Million Baht)	Ended 31 Dec 21 (Million Baht)	Ended 31 Dec 22 (Million Baht)
power plant			
• Such insurance premiums were recognized a Cost of Sales	6.49	5.93	6.53
• Prepaid Insurance	-	-	0.01
• Accrued Insurance Premium	-	0.53	0.55
EA Solar Lampang Co., Ltd. (Indirect Subsidiary)			
Applied for Industrial All Risks Insurance, Business Interruption Insurance and Public Liability Insurance to cover the solar power plant			
• Such insurance premiums were recognized as Cost of Sales	6.38	5.78	6.36
• Prepaid Insurance	-	-	-
• Accrued Insurance Premium	-	0.53	-
EA Wind Hadkanghan 3 Co., Ltd. (Indirect Subsidiary)			
Applied for Industrial All Risks Insurance, Business Interruption and Public Liability Insurance to cover the wind power plant			
• Such insurance premiums were recognized as Cost of Sales	8.39	8.82	8.08
• Prepaid Insurance	7.11	-	-
• Accrued Insurance Premium	-	0.67	0.69
Nayangklak Development Co., Ltd. (Indirect Subsidiary)			
Applied for Industrial All Risks Insurance, Business Interruption Insurance and Public Liability Insurance to cover the wind power plant			
• Such insurance premiums were recognized as Cost of Sales	2.16	2.36	2.63
• Prepaid Insurance	-	-	-
• Accrued Insurance Premium	-	0.02	0.22
Nayangklak Wind Power Co., Ltd. (Indirect Subsidiary)			
Applied for Industrial All Risks Insurance, Business Interruption and Public Liability Insurance to cover the wind power plant			
• Such insurance premiums were recognized as Cost of Sales	2.19	2.39	2.66
• Prepaid Insurance	-	-	-
• Accrued Insurance Premium	-	0.22	0.23
Pongnok Development Co., Ltd. (Indirect Subsidiary)			
Applied for Industrial All Risks Insurance, Business Interruption and Public Liability Insurance to cover the wind power plant			
• Such insurance premiums were recognized as Cost of Sales	2.32	2.48	2.76
• Prepaid Insurance	-	-	-
• Accrued Insurance Premium	-	0.23	0.23

Transaction	Connected Transaction Value for the year		
	Ended 31 Dec 20 (Million Baht)	Ended 31 Dec 21 (Million Baht)	Ended 31 Dec 22 (Million Baht)
Benjarat Development Co., Ltd. (Indirect Subsidiary) Applied for Industrial All Risks Insurance, Business Interruption Insurance and Public Liability Insurance to cover the wind power plant <ul style="list-style-type: none"> Such insurance premiums were recognized as Cost of Sales Prepaid Insurance Accrued Insurance Premium 	1.95 - -	2.10 - 0.19	2.34 - 0.20
Banchuan Development Co., Ltd. (Indirect Subsidiary) Applied for Industrial All Risks Insurance, Business Interruption and Public Liability Insurance to cover the wind power plant <ul style="list-style-type: none"> Such insurance premiums were recognized as Cost of Sales Prepaid Insurance Accrued Insurance Premium 	3.97 - -	4.21 - 0.39	4.68 - 0.40
EA Bio Innovation Co., Ltd. (Direct Subsidiary) Applied for Industrial All Risks Insurance, Business Interruption Insurance and Public Liability Insurance <ul style="list-style-type: none"> Such insurance premiums were recognized as Cost of Sales Prepaid Insurance 	1.10 1.48	2.14 1.22	1.90 1.26
Energy Solution Management Co., Ltd. (Direct Subsidiary) Plant and Equipment All Risks Insurance <ul style="list-style-type: none"> Such insurance premiums were recognized as administrative expenses Prepaid Insurance 	3.49 4.49	6.92 -	7.21 -
Mine Mobility Corporation Co., Ltd. (Indirect Subsidiary) Applied for Industrial All Risks Insurance and Public Liability Insurance <ul style="list-style-type: none"> Such insurance premiums were recognized as administrative expenses Prepaid Insurance 	0.52 0.52	0.11 0.20	0.12 0.22
E Smart Transport Co., Ltd. (Indirect Subsidiary) Applied for Hull and Machinery Insurance <ul style="list-style-type: none"> Such insurance premiums were recognized as Cost of rendering services Prepaid Insurance 	0.11 0.19	1.44 0.76	1.67 -
Energy Mahanakhon Co., Ltd. (Direct Subsidiary) Applied for Property All Risks Insurance, Public Liability Insurance to cover Charging Station <ul style="list-style-type: none"> Such insurance premiums were recognized as administrative 	0.18	0.26	0.53

Transaction	Connected Transaction Value for the year		
	Ended 31 Dec 20 (Million Baht)	Ended 31 Dec 21 (Million Baht)	Ended 31 Dec 22 (Million Baht)
expenses			
• Prepaid Insurance	0.62	0.01	0.16
Amita Technology (Thailand) Co., Ltd. (Indirect Subsidiary)			
1.) Applied Contractors All Risks Insurance during construction or Machinery installation and Public Liability Insurance			
• Such insurance premiums were recognized as administrative expenses	0.21	-	0.15
• Prepaid Insurance	0.43	-	0.85
2.) Applied for Property All Risks Insurance, Business Interruption Insurance and Public Liability Insurance			
• Such insurance premiums were recognized as Cost of Sales	-	0.20	1.74
• Prepaid Insurance	-	0.03	0.94
Kanjanadit Palm Oil Co., Ltd. (Indirect Subsidiary)			
Applied for Property All Risks Insurance, Business Interruption Insurance and Public Liability Insurance			
• Such insurance premiums were recognized as Cost of Sales	0.12	0.61	0.61
• Prepaid Insurance	-	0.01	0.06
Larp Pakdee Palm Co., Ltd. (Indirect Subsidiary)			
Applied for Property All Risks Insurance, Business Interruption Insurance and Public Liability Insurance			
• Such insurance premiums were recognized as Cost of Sales	-	0.40	0.40
• Prepaid Insurance	-	0.04	0.04
Absolute Assembly Co., Ltd. (Indirect Subsidiary)			
Applied for Property All Risks Insurance, Business Interruption Insurance and Public Liability Insurance			
• Such insurance premiums were recognized as Cost of Sales	-	0.74	1.08
• Prepaid Insurance	-	0.34	0.36

1.2 Advance Finance PCL. (“Advance Finance”)

Relationship: The Company has director and executives which is the director and shareholder of Advance Finance as follows:

- The Company’s director and executive; Mr. Amorn Saphthaweeikul is the directors of Advance Finance.
- The Company’s directors and executives; Mr. Somphote Ahunai holds 10% of Advance Finance shares and Mr. Amorn Saphthaweeikul, holds 10% of Advance Finance shares.

Preconditions and Reasons: The Interest earned from short-term deposit which is another way to manage liquidity and increase interest earned by comparing the return with other financial institutions that is beneficial to the Company.

Transaction	Connected Transaction Value for the year		
	Ended 31 Dec 20 (Million Baht)	Ended 31 Dec 21 (Million Baht)	Ended 31 Dec 22 (Million Baht)
• Interest earned from short-term deposit	0.93	2.30	0.16

1.3 Double P Land Co., Ltd. (“PPL”)

Relationship: Mr. Ake Ahunai, a person who is an indirect major shareholder of PPL and close relative (child) of Mr. Somphote Ahunai, a major shareholder, director and executive of the Company.

Preconditions and Reasons:

1. Amita Technology (Thailand) Co., Ltd., an indirect subsidiary, leased the land for construction of a battery plant for a period of 15 years and proposed to the 2020 Annual General Meeting of Shareholders for approval of the entering into the transaction. Details can be found on the Company’s website.
2. The Company enters into the Service Agreement(s) with PPL by determining the price and contractual terms in the same manner as other customers both connected and not connected to the Company as a normal business of the Company.
3. Energy Mahanakorn Co., Ltd. (Direct Subsidiary) have contracted an electric power purchase agreement for the electric charging stations of Bluetech City Industrial Estate Station and Bodin Station which pricing agreement and contracts terms are in line with other clients. Inclusive of both related and unrelated to the Company which is the normal course of business.

Transaction	Connected Transaction Value for the year		
	Ended 31 Dec 20 (Million Baht)	Ended 31 Dec 21 (Million Baht)	Ended 31 Dec 22 (Million Baht)
1. Amita Technology (Thailand) Co., Ltd. (Indirect Subsidiary) Land leasing for building a factory for 15-year period. <ul style="list-style-type: none"> Recorded as Right of use asset Depreciation of Right of use asset was capitalized as construction in progress under Properties Plant and Equipment. 	651.03 14.83	628.85 22.18	606.67 22.18
2. The Company Service providing <ul style="list-style-type: none"> Revenue from services 	-	0.24	0.26
3. Energy Mahanakorn Co., Ltd. (Direct Subsidiary) Contracted a 3 year agreement for electric charging stations of Bluetech City Industrial Estate Station and Bodin Station <ul style="list-style-type: none"> Revenue from services 	-	-	-

1.4 Land Prosperity Holding Co., Ltd. (“LPH”)

Relationship: Mr. Ake Ahunai is an indirect major shareholder and a director of LPH as well as a close relative (son) of Mr. Somphote Ahunai, the major shareholder, director and executive of the Company.

Preconditions and Reasons: The Company enters into the Service Agreement(s) with LPH by determining the price and contractual terms in the same manner as other customers both connected and not connected to the Company as a normal business of the Company.

Transaction	Connected Transaction Value for the year		
	Ended 31 Dec 20 (Million Baht)	Ended 31 Dec 21 (Million Baht)	Ended 31 Dec 22 (Million Baht)
Revenue from services	-	0.06	0.06

1.5 Wattanapiboon Land (“WPBL”)

Relationship: Mr. Ake Ahunai is an indirect majority shareholder and a director of WPBL as well as a close relative (son) of Mr. Somphote Ahunai, the major shareholder, director and executive of the Company.

Preconditions and Reasons: The Company enters into the Service Agreement(s) with WPBL by determining the price and contractual terms in the same manner as other customers both connected and not connected to the Company as a normal business of the Company.

Transaction	Connected Transaction Value for the year		
	Ended 31 Dec 20 (Million Baht)	Ended 31 Dec 21 (Million Baht)	Ended 31 Dec 22 (Million Baht)
Revenue from services	-	0.06	0.06

1.6 Industrial Water Resource Management Co., Ltd. (IWRM)

Relationship: 25% of IWRM holds by LPH which Mr. Ake Ahunai is an indirect major shareholder and a director of LPH as well as a close relative (son) of Mr. Somphote Ahunai, the major shareholder, director and executive of the Company.

Preconditions and Reasons: EA Solar Lampang Co., Ltd., an indirect subsidiary, entered into the agreement for installation of floating solar equipment with IWRM, by determining the price and contractual terms in the same manner as other customers both connected and not connected to the Company as a normal business of the Company.

Transaction	Connected Transaction Value for the year		
	Ended 31 Dec 20 (Million Baht)	Ended 31 Dec 21 (Million Baht)	Ended 31 Dec 22 (Million Baht)
Revenue from equipment installation	-	0.63	2.52

1.7 Visionary Vanguard Co., Ltd. (VV)

Relationship: Cdr. Parinya Ruckwatin is a major shareholder, the authorized director of VV as well as Chief Executive Office of E Smart Transportation Co., Ltd.

Preconditions and Reasons: E Smart Transportation Co., Ltd. (“EST”), an indirect subsidiary, entered in to the Office Rental and Service Agreement with VV, by determining office rental and service fee as normal business and contractual terms in the same manner as other customer both connected and not connected to the Company.

Transaction	Connected Transaction Value for the year		
	Ended 31 Dec 20 (Million Baht)	Ended 31 Dec 21 (Million Baht)	Ended 31 Dec 22 (Million Baht)
Office rental and service fee	-	1.96	1.40

1.8 Health Companion Co., Ltd. (“Health”)

Relationship: Mr. Somphote Ahunai, Miss Wimolmas Wongmakornpan are directors of Health and Mr. Ake Ahunai is a close relative (son) of Mr. Somphote Ahunai and major shareholder of Health, Mr. Somphote Ahunai is director of the Company and Miss Wimolmas Wongmakornpan is executives officer of the Company.

Preconditions and Reasons: The Company contracted an agreement for renting office space and service fees. The rental price is normal business course and the contract conditions are in line with other customers, both related and unrelated to the Company.

Transaction	Connected Transaction Value for the year		
	Ended 31 Dec 20 (Million Baht)	Ended 31 Dec 21 (Million Baht)	Ended 31 Dec 22 (Million Baht)
• Office Space Rental and service fees	-	-	0.66

1.9 Trading Service Asia Co., Ltd. (“TSA”)

Relationship: In TSA, Mr. Chaiyaporn Mungkorndetchaikul and Mr. Wisan Soisuk is an authorized director and also a director of Battery Electric Vehicle and Electric Products Testing Center Co., Ltd. (a direct subsidiary) (“BEV”)

Preconditions and Reasons: BEV has contracted an office building lease agreement with TSA with the normal business rental rates and contract terms being in line with other customers, both related and unrelated to the Company.

Transaction	Connected Transaction Value for the year		
	Ended 31 Dec 20 (Million Baht)	Ended 31 Dec 21 (Million Baht)	Ended 31 Dec 22 (Million Baht)
• Office Space Rental and service fees	-	-	0.78

1.10 Solana Smart Lighting Co. Ltd

Relationship: In Solana Smart Lighting Company Limited, Ms. Inthira Chuaysanit is a shareholder, Authorized Director and a director of Absolute Assembly Co., Ltd. (an indirect subsidiary) (“AAB”)

Preconditions and Reasons: AAB has purchased special protective masks from Solana Smart Lighting Co., Ltd. by comparing with market price and quality.

Transaction	Connected Transaction Value for the year		
	Ended 31 Dec 20 (Million Baht)	Ended 31 Dec 21 (Million Baht)	Ended 31 Dec 22 (Million Baht)
• Expenses	-	-	0.01

1.11 Ruamplangpengnueng Co., Ltd.

Relationship: In Ruampalungpennueng Co., Ltd., Mr. Chatpol Sripatum and Miss Wimonmat Wongmakornphan are directors, shareholders and executives officer of the Company.

Preconditions and Reasons: Absolute Assembly Co., Ltd. (an indirect subsidiary) (“AAB”) has purchased UV Germicidal Air Purifier bulbs by comparing with market prices and quality.

Transaction	Connected Transaction Value for the year		
	Ended 31 Dec 20 (Million Baht)	Ended 31 Dec 21 (Million Baht)	Ended 31 Dec 22 (Million Baht)
• Expenses	-	-	5.57

In this regard, the Audit Committee of the Company has reviewed the above-mentioned connected transactions and determined that were necessary in term of fair condition and prices, and/or within the arm’s length basis. Prior to execution, the transactions were approved by management or the Company’s Board of Directors in accordance with the Company’s policies, SEC and SET’s policies.

2. Approval Measures and Procedures for Connected Transactions

The Company focuses on the consideration of transparent and beneficial transactions to the Company. In the event of connected transactions involving the Company and/or its subsidiaries with potential parties who may have conflict of interest, related party transaction, or connected transaction, the Approval Measures and Procedures for Connected Transactions are as follows;

- Criteria for the necessity and justification of such transactions for the best interest of the company and/or its subsidiaries to ensure that the company is operating in compliance with the code of conduct, rules and regulations of the Capital Market Supervisory Board and the Stock Exchange of Thailand including regulations, announcements, directives, or requirements of the Stock Exchange of Thailand.
- Criteria for fair price, the management executives provide its views on the price sensibility of such transactions to ensure that the terms involved follow the normal course of business, that third-party price comparison before proposes to the board of director and/or shareholders to approve. In the case that, Audit Committee does not have the expertise in the connected transactions, the company will provide an independent appraiser or external auditor of the company to ensure that such price is reasonable in support of decisions by the board of director and/or audit Committee and/or shareholders (as seen fit) which the potential conflicts of interest are not allowed to vote on the transactions.

3. Trends for Connected Transactions with Potential Parties of Conflict

- Directors and Management of the Company prepare reports on their individual vested interests with related parties and notify the company for use as reference for taking action under applicable requirements for connected transactions.
- Directors, Management and Employees are not allow to do business that may cause conflict of interests with the Company and avoiding to do the transaction that may cause conflict of interests with the Company. In addition, the board of director is to supervise and review the business transactions that are considered connected transactions according to the measures and procedures including disclosure of the Company connected transactions to comply with law and regulation.

For future connected transactions, must comply with all laws on securities and exchanges, regulations, announcements, directives, or requirements of the Capital Market Supervisory Board, SEC, and SET. For routine transactions likely to regularly occur, the Company must follow the criteria and approaches of general commercial practices, with price references and terms that are suitable and fair, sensible, and auditable. Such transaction engagement must follow principles on agreements with general commercial terms approved by the Board of Directors. To this end, the management must prepare a summary of connected transactions for reporting to the Audit Committee each year.



Attachment

Attachment 1


Information of the Board of Directors, Executives, Controlling Persons, The person taking the highest responsibility in finance and accounting, The person supervising accounting and Company Secretary

1. Mr. Somchainuk Engtrakul

Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Training	Working experiences in the 5 Preceding years		
					Period	Position	Company
Mr. Somchainuk Engtrakul  Independent Director/ Chairman of the Board of Directors (Non-Executive Director) (Appointed on March 12, 2008)	78	- None -	- None -	Education <ul style="list-style-type: none"> Ph.D. (Honorary Degree) in Public Administration, Sripatum University Bachelor of Laws, Sripatum University Bachelor of Arts in Economics, UPSALA College New Jersey, U.S.A. Diploma, National Defense Course Class 35, National Defense College (NDC) Training By Thai Institute of Directors (IOD) <ul style="list-style-type: none"> Role of the Chairman Program (RCP) Class 9/2006 Director Accreditation Program (DAP) Class 98/2012 	Position in the Company		
					2017 - Present	Independent Director	
					2008 - Present	Chairman of the Board of Directors	
					Position in Subsidiary of the Company		
					- None -		
					Position in other Listed Companies		
					2004 - Present	Chairman of the Board of Directors / Independent Director	Major Cineplex Group PCL.
					2020 - Present	Chairman of the Board of Directors	Dhipaya Group Holdings PCL.

Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Training	Working experiences in the 5 Preceding years		
					Period	Position	Company
					Position in other Company / Other Organization		
					1995 - Present	Chairman of the Board of Directors	Dhipaya Insurance PCL.
					2008 - Present	Chairman of the Board of Directors	Veithani PCL.
					2008 - Present	Director	Siam Piwat Co., Ltd.
					2000 - Present	Director	Siam Piwat Holding Co., Ltd.
					Meeting Attendance in 2022		
	● Board of Directors Meeting		8/8 Meetings				

2. Mr. Somphote Ahunai

Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Training	Working experiences in the 5 Preceding years		
					Period	Position	Company
Mr. Somphote Ahunai  Director (Authorized Director) / Vice Chairman of the Board / Chairman of Strategic Planning Committee / Member of Risk Management Committee / Chairman of Executive Committee / Chief Executive Officer (Appointed as a director on March 12, 2008)	55	41.1472 (Juristic entities holding more than 30% of shares 25.1000; Trustee 15.3774; spouse 0.6698) (Please refer to 8.1.4 Report of Securities Holding)	Younger Brother of Mr. Somboon Ahunai ¹ Elder Brother of Ms. Supaporn Ahunai ²	Education <ul style="list-style-type: none">Master of Business Administration, University of Pittsburgh, USABachelor of Engineering (Electrical Engineering), Chulalongkorn UniversityPh.D. (Honorary Degree) in Engineering, Rajamangala University of Technology Isan (Engineering in renewable energy and environment) Training By Thai Institute of Directors (IOD) Director Accreditation Program (DAP) Class 60/2006	Position in the Company		
					2020 – Present	Vice Chairman of the Board of Directors	
					2020 – Present	Chairman of Strategic Planning Committee	
					2014 – Present	Member of Risk Management Committee	
					2009 – Present	Chief Executive Officer	
					2008 – Present	Director / Chairman of Executive Committee	
					Position in Subsidiaries of the Company		
					Subsidiaries No. 1, 3, 9, 18, 41-45,48-49, 52, 55-56, 59 and 62-63 (Refer to 1.3.1 “the Information of companies which EA holds shares more than 10 percent of total paid up capital”)		
					Position in other Listed Company		
					July 2020 – April 2022	Director	Nex Point PCL.

¹ Mr. Somboon Ahunai (Director, Member of Executive Committee)


² Ms. Supaporn Ahunai (Vice President – Quality and, Insurance Department and Vice President – Corporate Procurement)

Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Training	Working experiences in the 5 Preceding years		
					Period	Position	Company
				Other Training <ul style="list-style-type: none">Top Executive Program in Industrial Development and Investment Class 2 by Institute of Business and Industrial Development (IBID)Ultra Wealth-Invest Like a master Class 1 by Economics Association Chulalongkorn UniversityThe Executive Program on the Rule of Law and Development by Thailand Institute of Justice (TIJ)The Executive Program in Energy Literacy for Sustainable Future Class 9 by Thailand Energy Academy (TEA)Lecture titled “As a Leader: Dare to Do What You Daren’t” organized by Ministry of Higher EducationSpecial lecture titled “Strategy to Drive Organization in 2022	Position in other Companies / Other Organizations		
					2022 - 2024	Vice Chairman	The Federation of Thai Industries
					2022 - 2024	Chairman of the Climate Action Institute	The Federation of Thai Industries
					2022 – Present	Administrative Council Member	Chulalongkorn University
					Oct 2022 – Oct 2024	Director	National Science and Technology Development Agency (NSTDA)
					Nov 2022 – Aug 2023	Project Advisory Board Member	Thailand Greenhouse Gas Management Organization (Public Organization)
					Apr 2022 – Present	Appointed Members, Senior Advisor	Burapha University
					Feb 2022 – Present	Qualified Director	Rail Technology Research and Development Agency (Public Organization)
					2021 – 2023	Advisor	Society of Automotive Engineers – Thailand (TSAE)

Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Training	Working experiences in the 5 Preceding years		
					Period	Position	Company
				<ul style="list-style-type: none"> through Crisis toward Fresh Sustainable Opportunities” hosted by IBusiness Forum Special lecture titled “Thai Automotive Industry and Clean Energy Prospects” organized by Thai Society of Automotive Engineering (TSAE) Special lecture titled “Electric Vehicle and Future” organized by Institute of Business and Industrial Development (IBID) Lecture titled “CODE RED Strategy: Strategy to Capture Opportunities from Global Crises” and “Edge of Tomorrow: Thai Economy on the Verge of an Abyss” organized by the Standard Special talk titled “Drive Thailand’s Modern Automotive Development toward International Front” organized by King Mongkut’s University of 	2021 - Present	Director	Burapha University Hospital Foundation
					2021 – Present	Qualified Director	Burapha University
					Jan 2021 – Present	Director	Nursing Home for Older People
							Ramathibodi Hospital
					2020 – 2022	Honorary Advisor	The Federation of Thai Industries Chachoengsao Chapter
					2020 – 2022	President of Institute of Industrial Energy	The Federation of Thai Industries
					2020 – 2022	Managing Director	Chulalongkorn University Engineering Alumni
					Jun 2020 – Present	Director	Absolute Infinity Co., Ltd.
					Apr 2020 – Present	Director	T Health Products Co., Ltd.
					Feb 2018 – Present	Director	AekYingKrit Holding Co., Ltd / Eternity Holding Co., Ltd
					Mar 2018 - Present	Director	SPBL Holding Co., Ltd.
					2022 – Present	Director	Agro Clean Co., Ltd.

Name and surname	Age (year)	Age (year)	Family Relationship among Directors and Executives	Education / Training	Working experiences in the 5 Preceding years		
					Period	Position	Company
				<ul style="list-style-type: none"> Technology Thonburi Special lecture titled “Future of EV in Thailand” organized by Thai Society of Automotive Engineering (TSAE) 	Meeting Attendance in 2022 <ul style="list-style-type: none"> Board of Directors Meeting Risk Management Committee Meeting Strategic Planning Committee Meeting Executive Committee Meeting <i>* Exclude Non-Executive Meeting</i>		
							7/7* Meetings 2/4 Meetings 1/1 Meetings 5/12 Meetings


3. Mr. Amorn Saphthaweekul

Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Training	Working experiences in the 5 Preceding years					
					Period	Position	Company			
Mr. Amorn Saphthaweekul  Director (Authorized Director) / Member of Risk Management Committee / Member of Nomination and Remuneration Committee / Member of Strategic Planning Committee/ Member of Executive Committee / Deputy CEO / Acting Vice President - Quality Control (Appointed on March 30, 2012) <i>The person taking the highest responsibility in finance and accounting</i>	48	3.3725 (own 1.9563; Custodian 0.7239; spouse 0.6923) (Please refer to 8.1.4 Report of Securities Holding)	- None -	<u>Education</u> <ul style="list-style-type: none">Master of Science in Finance, Chulalongkorn UniversityBachelor of Business Administration (Finance and Banking), Thammasat University <u>Training</u> By Thai Institute of Directors (IOD) <ul style="list-style-type: none">Director Accreditation Program (DAP) Class 98/2012 Other Training <ul style="list-style-type: none">Top Executive Program in Industrial Development and Investment Class 3 by Institute of Business and Industrial Development (IBID)The Executive Program in Energy Literacy for a Sustainable Future Class 14 by Thailand Energy Academy (TEA)TFRS 9 Training by	Position in the Company					
					2021 - Present	Member of Nomination and Remuneration Committee				
					2020 - Present	Member of Strategic Planning Committee				
					2015 - Present	Acting Vice President - Quality Control Department				
					2014 - Present	Member of Risk Management Committee / Deputy CEO				
					2012 - Present	Director / Member of Executive Committee				
					2014 - 2021	Member of Remuneration Committee				
					Position in Subsidiaries of the Company					
					Subsidiaries No. 1-11, 13-19, 21-22, 24-52, 54-57, 59 and 62-63 (Refer to 1.3.1 “the Information of companies which EA holds shares more than 10 percent of total paid-up capital.”)					
					Position in other Listed Company					
					Jul 2020 - Present	Director / Member of Executive Committee	Nex Point PCL.			

Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Training	Working experiences in the 5 Preceding years		
					Period	Position	Company
					Position in other Companies / Other Organizations		
				PricewaterhouseCoopers ABAS Co., Ltd. • Research, Development and Intangible Assets Workshop by PricewaterhouseCoopers ABAS Co., Ltd. • Zoom webinar on “Energy Transition to Sustainability” by The Institute of Industrial Energy, The Federation of Thai Industries • Zoom webinar on “Bio-Circular-Green Economy (BCG) for Bioenergy:Biogas, Biomass, and xEV” by Ministry of energy and Japan External Trade Organization (JETRO) • Lecture titled “Drivers of Climate Actions: the Push and Pull of Net Zero” by PTT Global Chemical PCL. • Special talk titled “Unveiling Business Plan to Penetrate EV Market” organized by	2020 - 2022	Vice Chairman of Energy Storage System of Renewable Energy Industry Club	The Federation of Thai Industries
					Oct 2020 - Present	Chairman of the Board of Directors	TF Tech Holding Co., Ltd.
					Dec 2019 - Present	Director	TF Tech Co., Ltd.
					2019 – Present	Director	Advance Finance PCL.
					2014 – Present	Director	Watabak Wind Co., Ltd.
					2022 – Present	Director	Agro Clean Co., Ltd.
					Meeting Attendance in 2022		
					• Board of Directors Meeting		7/7* Meetings
					• Risk Management Committee Meeting		3/4 Meetings
					• Nomination and Remuneration Committee Meeting		2/3 Meetings
					• Strategic Planning Committee Meeting		1/1 Meeting
					• Executive Committee Meeting		11/12 Meetings
					* Exclude Non-Executive Meeting		


Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Training	Working experiences in the 5 Preceding years		
					Period	Position	Company
				<p>Krungthep Turakij and Thansettakij</p> <p>Continuing Professional Development 2022</p> <ul style="list-style-type: none"> 6.30 Training hours on the course: Accounting Practice Guidelines and Methods relating to Liabilities, Accounts Receivable, Lease Agreements and Income from Contracts with Customers 			

4. Mr. Wutthilerd Chiannilkulchai

Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Training	Working experiences in the 5 Preceding years		
					Period	Position	Company
Mr. Wutthilerd Chiannilkulchai  Director (Authorized Director) / Member of Risk Management Committee / Member of Executive Committee (Non-Executive Director) (Appointed as a director on March 12, 2008)	52	0.4111 (own 0.4111; spouse 0) (Please refer to 8.1.4 Report of Securities Holding)	- None -	<u>Education</u> <ul style="list-style-type: none"> Master of Science in Computer and Engineering Management, Assumption University Bachelor of Accountancy, Chulalongkorn University <u>Training</u> By Thai Institute of Directors (IOD) Director Accreditation Program (DAP) Class 71/2008	Positions in the Company		
					2014 - Present	Member of Risk Management Committee	
					2008 - Present	Director / Member of Executive Committee	
					Positions in Subsidiaries of the Company		
					Subsidiaries No. 1, 6-7, 9, 12-18, 23, 50, 55-57, 59 and 62-63 (Refer to 1.3.1 “the Information of companies which EA holds shares more than 10 percent of total paid-up capital”)		
					Position in other Listed Company		
					- None -		
					Position in other Company / Other Organization		
					2020 - Present	Director	Window Asia Co., Ltd.
					2004 - Present	Director	Perfect Oil Co., Ltd.
					2001 - Present	Director	Power 10 Co., Ltd. / Double 10 Co., Ltd. / Famous 10 Co., Ltd. / Mitsiam oil Co., Ltd.


Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Training	Working experiences in the 5 Preceding years		
					Period	Position	Company
					1995 - Present	Director	Chalee Trading Co., Ltd. / Ma Jarearn Co., Ltd. / Sueb Nueng Karn Kha Co., Ltd. / Two Plus One Oil Co., Ltd.
					1994 - Present	Director	Malee Oil Co., Ltd. / C.C. Oil Co., Ltd.
					Meeting Attendance in 2022		
					• Board of Directors Meeting		8/8 Meetings
					• Risk Management Committee Meeting		3/4 Meetings
					• Executive Committee Meeting		11/12 Meetings

5. Mr. Sutham Songsiri

Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Training	Working experiences in the 5 Preceding years		
					Period	Position	Company
Mr. Sutham Songsiri 	84	0.0268 (own 0.0268, spouse 0) (Please refer to 8.1.4 Report of Securities Holding)	- None -	Education <ul style="list-style-type: none"> Master of Economics, San Francisco State University Bachelor of Economics, Lincoln University Strategy Formulation and Execution, Columbia University, USA Kaplan -Norton Master Class to Mastering New Management System Boston, USA Change Management Course Massachusetts Institute of Technology USA Training By Thai Institute of Directors (IOD) <ul style="list-style-type: none"> Directors Certification Program (DCP) Class 97/2007 Role of the Chairman Program (RCP) Class 22/2009 Role of the Nomination and Governance Committee (RNG) Class 1/2001 	Position in the Company		
					2021 - Present	Member of Nomination and Remuneration Committee	
					2020 - Present	Member of Strategic Planning Committee	
					2020 - Present	Member of Risk Management Committee	
					2021 - Present	Member of Corporate Governance and Sustainability Committee	
					2008 - Present	Director / Member of Executive Committee	
					2015 - 2021	Member of Corporate Governance Committee	
					2014 - 2021	Member of Remuneration Committee	
					Position in Subsidiaries of the Company		
					Subsidiaries No. 7, 9, and 15-18 (Refer to 1.3.1 "the Information of companies which EA holds shares more than 10 percent of total paid-up capital")		
					Position in other Listed Company		
					- None -		

Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Training	Working experiences in the 5 Preceding years		
					Period	Position	Company
					Position in other Company / Other Organization		
				Other Training <ul style="list-style-type: none">Internal control and Risk management / Value adding support strategic management held by Energy Absolute PCL.	Dec 2020 - Present	Member of Corporate Governance and Social Responsibility Committee	Thai Public Broadcast Service (Thai PBS)
					2019 - Present	Director	Public Policy for Social Governance Foundation
					Meeting Attendance in 2022		
					● Board of Directors Meeting		7/8 Meetings
					● Risk Management Committee Meeting		4/4 Meetings
					● Nomination and Remuneration Committee Meeting		3/3 Meetings
● Corporate Governance and Sustainability Committee		4/4 Meetings					
● Strategic Planning Committee Meeting		1/1 Meetings					
● Executive Committee Meeting		12/12 Meetings					

6. ACM. Chainan Thumasujarit


Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Training	Working experiences in the 5 Preceding years		
					Period	Position	Company
ACM. Chainan Thumasujarit  Independent Director / Chairman of Audit Committee / Chairman of Risk Management Committee / Member of Nomination and Remuneration Committee / Member of Corporate Governance and Sustainability Committee (Non- Executive Director) (Appointed as a director on August 7, 2012)	72	- None -	- None -	<u>Education</u> <ul style="list-style-type: none"> Bachelor of Engineering (the 2nd Class Honors), Chulalongkorn University Bachelor of Arts in Political Science, Ramkhamhaeng University Bachelor of Business Administration (General Managements), Ramkhamhaeng University Bachelor of Business Administration (the 1st Class Honors), Sukhothai Thammathirat Open University Diploma, The National Defence College Class 2003, National Defence College (NDC) Naval Command and staff college, Institute of Advanced Naval Studies 	Position in the Company		
					2021 - Present	Member of Nomination and Remuneration Committee	
					2021 - Present	Member of Corporate Governance and Sustainability Committee	
					2014 - Present	Chairman of Audit Committee / Chairman of Risk Management Committee	
					2012 - Present	Independent Director	
					2016 - 2021	Member of Remuneration Committee	
					2014 - 2021	Member of Nomination Committee	
					2012 - 2014	Member of Audit Committee	
					2015 - 2021	Member of Corporate Governance Committee	
					Position in Subsidiaries of the Company		
					- None -		
					Position in other Listed Company		
					- None -		

Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Training	Working experiences in the 5 Preceding years		
					Period	Position	Company
					Position in other Company / Other Organization		
				<ul style="list-style-type: none"> M. Eng. Asian Institute of Technology (A.I.T.) D. Eng. (Candidate) Asian Institute of Technology (A.I.T.) <p>Training</p> <p>By Thai Institute of Directors (IOD)</p> <ul style="list-style-type: none"> Director Accreditation Program (DAP) Class 67/2007 Audit Committee Program (ACP) Class 22/2008 Monitoring of the Quality of Financial Reporting (MFR) Class 16/2012 Risk Management Program for Corporate Leader (RCL) class 13/2018 Risk Management Program for Corporate Leader (RCL) class 28/2022 <p>Other Training</p> <ul style="list-style-type: none"> Drafting, Negotiating & Managing, Successful Construction Contracts” Summit 2015 held by Omega World Class Research Institute 	2006 - Present	Retired Government Official	Office of the Permanent Secretary, Ministry of Defence
					1974 - Present	Freelance Structural Engineer	The Permanent Secretary, Ministry of Defence
					Meeting Attendance in 2022		
					<ul style="list-style-type: none"> Board of Directors Meeting 8/8 Meetings Audit Committee Meeting 11/11 Meetings Risk Management Committee Meeting 4/4 Meetings Nomination and Remuneration Committee Meeting 3/3 Meetings Corporate Governance and Sustainability Committee Meeting 4/4 Meetings 		

Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Training	Working experiences in the 5 Preceding years		
					Period	Position	Company
				<ul style="list-style-type: none"> AC HOT UPDATE - Prepare for Next Generation CG and Sustainability held by Federation of Accounting Professions Under The Royal Patronage of His Majesty The King Forensic Data Analytics: Fighting Fraud with Big Data held by PricewaterhouseCoopers ABAS Co., Ltd. Intelligent City and Information Center organized held by Institute of Electrical and Electronics Engineers of Thailand Internal control and Risk management / Value adding support strategic management held by Energy Absolute PCL. The side nobody knows EV transformation in Thai way held by Chulalongkorn University Engineering Alumni Electric Vehicles (EVs): Technology, Design, Infrastructure and Applications 			


Name and surname	Age (year)	(% of share possession	Family Relationship among Directors and Executives	Education / Training	Working experiences in the 5 Preceding years		
					Period	Position	Company
				held by IEEE Thailand Section, IEEE Power & Energy Society – Thailand Chapter and Electric Vehicle Association of Thailand			

7. M.R. Bravochat Chatchai

Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Training	Working experiences in the 5 Preceding years																																						
					Period	Position	Company																																				
M.R. Bravochat Chatchai	62	- None -	- None -	<u>Education</u> <ul style="list-style-type: none">Master of Arts, Phranakhon Rajabhat UniversityBachelor of Laws, Ramkhamhaeng University <u>Training</u> <p>By Thai Institute of Directors (IOD)</p> <ul style="list-style-type: none">Director Accreditation Program (DAP) Class 98/2012Audit Committee Program (ACP) Class 41/2012Role of Nomination and Governance Committee (RNG) Class 7/2015Risk Management Program for Corporate Leader (RCL) Class 13/2018 Other Training <ul style="list-style-type: none">AC HOT UPDATE - Prepare for Next Generation CG and Sustainability held by Federation of Accounting Professions Under The Royal Patronage of His	Position in the Company <table><tr><td>2021 - Present</td><td>Chairman of Nomination and Remuneration Committee</td><td></td></tr><tr><td>2021 - Present</td><td>Chairman of Corporate Governance and Sustainability Committee</td><td></td></tr><tr><td>2014 - Present</td><td>Member of Risk Management Committee</td><td></td></tr><tr><td>2010 - Present</td><td>Independent Director / Member of Audit Committee</td><td></td></tr><tr><td>2020 - 2021</td><td>Chairman of Corporate Governance Committee</td><td></td></tr><tr><td>2020 - 2021</td><td>Chairman of Remuneration Committee</td><td></td></tr><tr><td>2014 - 2021</td><td>Chairman of Nomination Committee</td><td></td></tr><tr><td>2016 - 2020</td><td>Member of Remuneration Committee</td><td></td></tr><tr><td>2015 - 2020</td><td>Member of Corporate Governance Committee</td><td></td></tr></table> Position in Subsidiaries of the Company <table><tr><td>- None -</td><td></td><td></td></tr></table> Position in other Listed Company <table><tr><td>- None -</td><td></td><td></td></tr></table> Position in other Company / Other Organization <table><tr><td>1999 - Present</td><td>Director</td><td>M.R. Bravochat Chatchai Laws Office</td></tr></table>			2021 - Present	Chairman of Nomination and Remuneration Committee		2021 - Present	Chairman of Corporate Governance and Sustainability Committee		2014 - Present	Member of Risk Management Committee		2010 - Present	Independent Director / Member of Audit Committee		2020 - 2021	Chairman of Corporate Governance Committee		2020 - 2021	Chairman of Remuneration Committee		2014 - 2021	Chairman of Nomination Committee		2016 - 2020	Member of Remuneration Committee		2015 - 2020	Member of Corporate Governance Committee		- None -			- None -			1999 - Present	Director	M.R. Bravochat Chatchai Laws Office
2021 - Present	Chairman of Nomination and Remuneration Committee																																										
2021 - Present	Chairman of Corporate Governance and Sustainability Committee																																										
2014 - Present	Member of Risk Management Committee																																										
2010 - Present	Independent Director / Member of Audit Committee																																										
2020 - 2021	Chairman of Corporate Governance Committee																																										
2020 - 2021	Chairman of Remuneration Committee																																										
2014 - 2021	Chairman of Nomination Committee																																										
2016 - 2020	Member of Remuneration Committee																																										
2015 - 2020	Member of Corporate Governance Committee																																										
- None -																																											
- None -																																											
1999 - Present	Director	M.R. Bravochat Chatchai Laws Office																																									
 Independent Director / Member of Audit Committee / Chairman of Nomination and Remuneration Committee / Chairman of Corporate Governance and Sustainability Committee / Member of Risk Management Committee																																											


Name and surname	Age (year)	(% of share possession	Family Relationship among Directors and Executives	Education / Training	Working experiences in the 5 Preceding years		
					Period	Position	Company
					Meeting Attendance in 2022		
				Majesty The King <ul style="list-style-type: none"> Forensic Data Analytics: Fighting Fraud with Big Data held by PricewaterhouseCoopers ABAS Co., Ltd. Internal control and Risk management / Value adding support strategic management held by Energy Absolute PCL. 	<ul style="list-style-type: none"> Board of Directors Meeting Audit Committee Meeting Risk Management Committee Meeting Nomination and Remuneration Committee Meeting Corporate Governance and Sustainability Committee Meeting 		
							8/8 Meetings 11/11 Meetings 4/4 Meetings 3/3 Meetings 4/4 Meetings

8. Pol.Gen. Phatcharavat Wongsuwan

Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Certification	Working experiences in the 5 Preceding years		
					Period	Position	Company
PolGen. Phatcharavat Wongsuwan  Independent Director / Member of Risk Management Committee (Non- Executive Director) (Appointed as a director on April 18, 2014)	73	0.0305 (own 0.0305; spouse 0) (Please refer to 8.1.4 Report of Securities Holding)	- None -	Education <ul style="list-style-type: none">● Master of Arts (Social Development), Kasetsart University● Royal Police Cadet Academy Class 25● Diploma, The National Defence College, The State, Private Sector and Political Sectors Class 2, National Defence College Training By Thai Institute of Directors (IOD) Director Accreditation Program (DAP) No.137/2017	Position in the Company		
					2014 - Present	Independent Director	
					2014 - Present	Member of Risk Management Committee	
					Position in Subsidiary of the Company		
					- None -		
Position in other Listed Companies					2021 - Present	Member of the Corporate Governance and Sustainable Development Committee	Charoen Pokphand Foods PCL.
					2017 - Present	Vice Chairman of the Board of Director	Country Group Development PCL.
					2016 - Present	Independent Director/ Chairman of the Remuneration and Nominating Committee	Charoen Pokphand Foods PCL.
					2013 - Present	Independent Director / Chairman of the Remuneration and Nominating Committee/ Member of Sustainability and Corporate Governance Committee	CP ALL PCL.

Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Certification	Working experiences in the 5 Preceding years		
					Period	Position	Company
					Position in other Company / Other Organization		
					Present	Director	The Thai Dairy Industry Co., Ltd.
					Meeting Attendance in 2022		
					● Board of Directors Meeting	-/8 Meetings	
					● Risk Management Committee Meeting	-/4 Meetings	


9. Mr. Somboon Ahunai

Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Training	Working experiences in the 5 Preceding years		
					Period	Position	Company
Mr. Somboon Ahunai  Director / Member of Executive Committee (Non-Executive Director) (Appointed on April 22, 2015)	67	0.1875 (own 0.1875; spouse 0) (Please refer to 8.1.4 Report of Securities Holding)	Elder Brother of Mr. Somphote Ahunai ¹ and Ms. Supaporn Ahunai ²	Education <ul style="list-style-type: none">Master of Business Administration, Jacksonville State UniversityBachelor of Science (cum laude) in Chemical Engineering, University of Alabama Training <p>By Thai Institute of Directors (IOD)</p> <ul style="list-style-type: none">Director Accreditation Program (DAP) Class 47/2005Audit Committee Program (ACP) Class 12/2006 Other Training <ul style="list-style-type: none">Internal control and Risk management / Value adding support strategic management held by Energy Absolute PCL.	Position in the Company		
					2017 - Present	Member of Executive Committee	
					2015 - Present	Director	
					Position in Subsidiary of the Company		
					- None -		
					Position in other Listed Company		
					- None -		
Position in other Company / Other Organization							
				1983 - Present	Director	Ruammit Panich Co., Ltd.	
				2000 – Present	Director	Songphon Co., Ltd.	
				2004 - 2015	Executive Vice President (Director)	Small and Medium Enterprise Development Bank of Thailand	
Meeting Attendance in 2022							
● Board of Directors Meeting						6/8 Meetings	
● Executive Committee Meeting						12/12 Meetings	

¹ Mr. Somphote Ahunai (Director / Vice Chairman of the Board / Chairman of Strategy Planning Committee / Member of Risk Management Committee / Chairman of Executive Committee / Chief Executive Officer)


² Ms. Supaporn Ahunai (Vice President – Quality and, Insurance Department and Vice President – Corporate Procurement)

10. Mr. Amornsuk Noparumpa

Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Training	Working experiences in the 5 Preceding years		
					Period	Position	Company
Mr. Amornsuk Noparumpa  Independent Director (Non-Executive Director) (Appointed as a director on April 27, 2017)	77	- None -	- None -	<u>Education</u> <ul style="list-style-type: none">• Barrister-at-Law, Lincoln’s Inn, London• Barrister-at-Law, Council of Legal Education Thailand• Bachelor of Laws (Honors), Thammasat University• Diploma, The National Defence College Class 399 <u>Training</u> By Thai Institute of Directors (IOD) <ul style="list-style-type: none">• Director Certification Program (DCP) Class 30/2003• Audit Committee Program (ACP) Class 23/2008• Role of Compensation Committee Program (RCC) Class 9/2009• Role of the Chairman Program (RCP) 36/2015	Position in the Company		
					2017 - Present	Independent Director	
					Position in Subsidiary of the Company		
					- None -		
					Position in other Listed Companies		
					2005 - Present	Chairman of the Board of Directors / Independent Director	L.P.N. Development PCL.
					1998 - Present	Chairman of the Audit Committee / Independent Director / Member of Nomination Remuneration and Corporate Governance Committee	Regional Container Lines PCL.
					Position in other Company / Other Organization		
					- None –		
					Meeting Attendance in 2022		
• Board of Directors Meeting 8/8 Meetings							

Name and surname	Age (year)	(% of share possession	Family Relationship among Directors and Executives	Education / Training	Working experiences in the 5 Preceding years		
					Period	Position	Company
				Other Training <ul style="list-style-type: none"> • Security Psychology Program Class 31 • Senior Management Program Class 7 			

11. Mr. Somphop Keerasuntonpong


Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Training	Working experiences in the 5 Preceding years		
					Period	Position	Company
Mr. Somphop Keerasuntonpong 	55	- None -	- None -	<p>Education</p> <ul style="list-style-type: none">Bachelor of Engineering (Mechanical Engineering), King Mongkut’s University of Technology ThonburiMBA, General Administration, Pittsburg State University, U.S.A. <p>Training By Thai Institute of Directors (IOD)</p> <ul style="list-style-type: none">Director Accreditation Program (DAP) Class 16/2004Corporate Governance Program for Capital Market Intermediaries (CGI) Class 3/2015	Position in the Company		
					2020 - Present	Independent Director / Member of Audit Committee	
					2021 - Present	Member of Corporate Governance and Sustainability Committee	
					2021 - Present	Member of Nomination and Remuneration Committee	
					2020 - 2021	Member of Remuneration Committee	
					2020 - 2021	Member of Nomination Committee	
					2020 - 2021	Member of Corporate Governance Committee	
					Position in Subsidiaries of the Company		
					- None –		
					Position in other Listed Company		
	2009 - Present	Director (Authorized Director) / President	Finasia Syrus Securities PCL.				

Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Training	Working experiences in the 5 Preceding years		
					Period	Position	Company
				Other Training <ul style="list-style-type: none"> Executive Course Class 9/2009 Capital Market Academy, the Stock Exchange of Thailand Program for Senior Executive on Justice Administration, Class 23, National Justice Academy, Office of the Judiciary, 2019 	Position in other Companies / Other Organizations		
					2018 - Present	Chairman	Investment Banking Club, Association of the Thai Securities Company
					Mar 2022 - Present	Director	Finansia X PCL.
					Meeting Attendance in 2022		
					<ul style="list-style-type: none"> Board of Directors Meeting Audit Committee Meeting Nomination and Remuneration Committee Meeting Corporate Governance and Sustainability Committee Meeting 	8/8 Meetings 11/11 Meetings 3/3 Meetings 4/4 Meetings	


Details of Executive (according to the definition of the SEC)

Profile of Executives (as at December 31, 2022)


1. Mr. Amorn Saphaweekul (Please refer to “Profile of the Board of Directors” (No. 3))
2. Miss Wimolmas Wongmakornpan

Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Certification	Working experiences in the 5 Preceding years		
					Period	Position	Company
Miss Wimolmas Wongmakornpan 	42	0.0005 (Please refer to 8.1.4 Report of Securities Holding)	- None -	Education <ul style="list-style-type: none"> International MBA, Asian Institute of Technology, Thailand Master in Management Science, ESCP-EAP, France Training <ul style="list-style-type: none"> Training course “Brain FTI” class 4 organized by The Federation of Thai Industries Strategic CFO in Capital Markets Program held by Stock Exchange of Thailand Training course “Leader As Coach” organized by Energy Absolute Public Company Limited Internal control and risk management / Value adding and strategy support management, organized by Energy Absolute Public Company Limited 	Position in the Company		
					Nov 2021 - Present	Assistant Chief Executive Officer - Support	
					Jun 2016 - Present	Vice President - Creating Shared Value Department	
					2012 – 2016	Deputy Vice President - Strategy Development and Investment Planning	
					Position in Subsidiaries of the Company		
Assistant Chief Executive Officer - Support (Appointed on November 1, 2021) Vice President - Creating Shared Value Department (Appointed on June 1, 2016)					Subsidiaries No. 43, 53 and 56 (Refer to 13.1 the information of companies which EA holds shares more than 10 percent of total paid-up capital)		
					Position in other Listed Company		
					- None -		
					Position in other Company / Other Organization		
					Present	Director	Agro Clean Co., Ltd.
					Present	Director	Health Companion Co., Ltd.
					Present	Director	Ruampalangpennueng Co., Ltd.

3. Mr. Vasu Klomklang

Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Certification	Working experiences in the 5 Preceding years		
					Period	Position	Company
Mr. Vasu Klomklang  Senior Vice Present – Strategy Development and Investment Planning Department (Appointed on June 1, 2020) Acting Vice President Corporate Communication Department (Appointed on April 1, 2021)	43	-None-	-None-	<u>Education</u>	Position in the Company		
				<ul style="list-style-type: none">Master of International Management in Global Finance, Thunderbird, The School of International Management Arizona, U.S.A.	Apr 2021 - Present	Acting Vice President Corporate Communication Department	
				<ul style="list-style-type: none">Graduate Diploma in Property Valuation, Faculty of Commerce and Accountancy, Thammasat University	Jun 2020 - Present	Senior Vice Present – Strategy Development and Investment Planning Department	
				Position in Subsidiaries of the Company			
				Subsidiaries No. 3, 40-41, 45-47, 50-51, 53, 58 and 61 (Refer to 1.3.1 “the Information of companies which EA holds shares more than 10 percent of total paid-up capital”)			
				Position in other Listed Company			
				2020 – Present	Director and Executive Director	Nex Point PCL.	
				Position in other Company / Other Organization			
				2020 – Present	Director	Nex Express Co., Ltd. / Terabyte Net Solution PCL.	
				2021 – Present	Director	Ranong Clean 2021 Co., Ltd.	
2018 - 2019	First Vice President of Corporate Investment Department	Export-Import Bank of Thailand					
2015 - 2017	First Vice President	Krungthai Bank PCL.					

4. Miss Supaporn Ahunai


Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Certification	Working experiences in the 5 Preceding years		
					Period	Position	Company
Miss Supaporn Ahunai  Vice President – Quality and Insurance Department / Vice President – Corporate Procurement Department (Appointed on March 1, 2022)	46	0.6702 (own 0.6434, spouse 0.0272) (Please refer to 8.1.4 Report of Securities Holding)	Younger Sister of Mr. Somphote Ahunai ¹ and Mr. Somboon Ahunai ²	Education <ul style="list-style-type: none">Master of Science Information System, The Pennsylvania State University, U.S.A.Bachelor’s degree from faculty of Commerce and Accountancy, Thammasat UniversityCertificate “AFPT” (Associate Financial Planner Thailand : AFPT)Complex Type 1 Investment Consultant, held by SECInvestment Planner, by SEC Training By Thai Institute of Directors (IOD) <ul style="list-style-type: none">Director Accreditation Program (DAP) Class 71/2008Company Secretary Program (CSP) Class 27/2008 Other Training <ul style="list-style-type: none">Expert Investor, Class 15 held by Thai Investors Association	Position in the Company		
					Mar 2022 - Present	Vice President – Quality and Insurance Department / Vice President – Corporate Procurement Department	
					Nov 2021 – Feb 2022	Assistant Chief Executive Officer – Support Special Assistant to CEO	
					Sep 2021 - Feb 2022	Vice President - Quality, Permit, Insurance and Environment Department	
					Apr 2020 – Aug 2021	Vice President – Quality, Health Safety and Environment Department	
					Jan 2008 – Sep 2019	Vice President – Finance Department	
					Position in Subsidiaries of the Company		
					Subsidiaries No. 2, 6-8, 10-17, 19-41, 44, 46-47, 51-54, 57 and 61 (Refer to 1.3.1 the Information of companies which EA holds shares more than 10 percent of total paid-up capital)		
					Position in other Listed Company		
					- None –		

¹ Mr. Somphote Ahunai (Authorized Director / Vice Chairman of the Board / Chairman of Strategy Planning Committee / Member of Risk Management Committee / Chairman of Executive Committee / Chief Executive Officer)

² Mr. Somboon Ahunai (Director / Member of Executive Committee)


Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Certification	Working experiences in the 5 Preceding years		
					Period	Position	Company
					Position in other Company / Other Organization		
				<ul style="list-style-type: none"> • Complex Products : Derivatives from ATI-Asco Training Institute • Foundation of Financial & Tax Planning / Investment Planner from Thai PFA 	Join Venture No. 70 (Refer to 1.3.1 the Information of companies which EA holds shares more than 10 percent of total paid-up capital)		

5. Ms. Kotchanan Suwannadaj


Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Certification	Working experiences in the 5 Preceding years		
					Period	Position	Company
					Position in the Company		
Ms. Kotchanan Suwannadaj 	43	-None-	-None-	Education <ul style="list-style-type: none"> Master Degree in Economics, Kasetsart University Bachelor of Accountancy (B.Acc.), Chiang Mai University Training <ul style="list-style-type: none"> Pursuit of excellence held by IDEA FORUM GROUP CO., LTD. Systematic Problem Solving and Decision Making held by ACI Consultants Co., Ltd. Effective financial reports for the management by developing presentation skills in financial highlights and performance highlights held by Dharmniti Seminar and Training Co., Ltd. Deferred Tax held by Dharmniti Seminar and Training Co., Ltd. Accounting Standard: Property, Plant, and Equipment held by Department of Business Development. 	2021 – Present	Vice President – Accounting Department	
					Position in Subsidiaries of the Company		
					- None -		
					Position in Listed Company		
					2019 – 2021	Accounting Director	National Power Supply PCL.
Vice President – Accounting Department (Appointed on October 1, 2021) (The person supervising Accounting)					2011 – 2019	Accounting Manager	Double A (1991) PCL.
					Position in other Company / Other Organization		
					- None -		

Name and surname	Age (year)	(% of share possession	Family Relationship among Directors and Executives	Education / Certification	Working experiences in the 5 Preceding years		
					Period	Position	Company
				<ul style="list-style-type: none"> Cash Flow held by Department of Business Development. <p>Continuing Professional Development 2022</p> <ul style="list-style-type: none"> Insight into NPAs for revenue and assets including tax benefits - CPD 7 hours Guidelines and Accounting treatment related to liabilities, accounts receivable, lease agreements and revenue from contracts with customers.- CPD 6.30 hours <p>An Accountant with criteria Specified by the Department of Business Development.</p>			

6. Miss Wira Ganthanawat

Name and surname	Age (year)	(% of share possession	Family Relationship among Directors and Executives	Education / Certification	Working experiences in the 5 Preceding years		
					Period	Position	Company
Miss Wira Ganthanawat  Vice President - Finance Department (Appointed on July 27, 2022)	41	-None-	-None-	<u>Education</u> <ul style="list-style-type: none"> • Master of Accountancy, Kasetsart University <u>Training</u> <ul style="list-style-type: none"> • CFO Certification Program, Federation of Accounting Professions • Mini Master in HR Management, Chulalongkorn University • Tax Law, Thammasat University • Financial Projection, Thailand Securities Institute • Business Management for Internal Audit, Federation of Accounting Professions • Fraud Prevention, Federation of Accounting Professions 	Position in the Company		
					Jul 2022 - Present	Vice President - Finance Department	
					Position in Subsidiaries of the Company		
					-None-		
					Position in other Listed Company		
					2016 - 2019	Department Manager - Accounting	Thaicom PLC.
					Position in other Company / Other Organization		
					2019 - 2022	Vice President - Finance and Accounting	Ocean Property Co., Ltd.


7. Miss Nunthima Ruangjarin (Head of the Internal Audit)

Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Training	Working experiences in the 5 Preceding years		
					Period	Position	Company
Ms. Nunthima Ruangjarin  Vice President - Internal Audit and Risk Management Department (Appointed on July 19, 2022)	44	-None-	-None-	<p>Education</p> <ul style="list-style-type: none">Bachelor of Business Administration Program, Major in Accountancy. Prince of Songkla University, Hat Yai. <p>Training</p> <ul style="list-style-type: none">Internal Audit Management and Risk Assessment for Audit Planning, Federation of Accounting Professions.COSO 2013 Internal Control, Federation of Accounting Professions.Manage Risk for Value-Added Business, The Institute of Internal Auditors.Logistics Management, Technology Promotion Association (Thailand-Japan).ISO9001, ISO14001 and OHSAS18001, Bureau Veritas (Thailand)	Position in the Company		
					Jul 2022 - Present	Vice President - Internal Audit and Risk Management Department	
					Position in Subsidiary of the Company		
					- None -		
					Position in other Listed Company		
					2016 - 2019	Assistant Vice President – Internal Audit Department	Malee Group PCL.
Position in other Company / Other Organization							
	2014 - 2016	Assistant Manager – Internal Audit Department	Mitsubishi Motors (Thailand) Co., Ltd.				
	2012 – 2014	Internal Audit Supervisor	TOA Paint (Thailand) Co., Ltd.				
	2007 – 2012	Senior Internal Auditor	Belton Industrial (Thailand) Ltd.				

8. Mr. Chatrapon Sripratrum

Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Certification	Working experiences in the 5 Preceding years		
					Period	Position	Company
Mr. Chatrapon Sripratrum  Vice President - Strategy Development and Investment Planning Department (Appointed on June 1, 2020)	38	-None-	-None-	<u>Education</u> <ul style="list-style-type: none">● MBA in Finance, Johnson & Wales University, USA● Bachelor of Engineer, Chulalongkorn University <u>Training</u> <ul style="list-style-type: none">● Institute of Business and Industrial Development, Class 7 by Institute of Business and Industrial Development (IBID)● Executive Energy Program (EEP) Class 7 by The Institute of Industrial Energy	Position in the Company		
					2020 - Present	Vice President - Strategy Development and Investment Planning Department	
					Position in Subsidiaries of the Company		
					Subsidiaries No. 2, 4-5, 20, 24-33, 35-39 and 43 (Refer to 1.3.1 “the Information of companies which EA holds shares more than 10 percent of total paid-up capital”)		
					Position in other Listed Company		
					- None -		
					Position in other Company / Other Organization		
					Present	Director	Wan Meng Automatic Precision Co., Ltd.
					Present	Director	TF Tech Holding Co., Ltd.
					Present	Director	Ruampalangpennueng Co., Ltd.


9. Mr. Cheerapan Panyanan

Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Certification	Working experiences in the 5 Preceding years		
					Period	Position	Company
Mr. Cheerapan Panyanan 	39	0.0001 (Please refer to 8.1.4 Report of Securities Holding)	-None-	Education <ul style="list-style-type: none">Bachelor of Chemical Engineering, King Mongkut’s University of Technology Thonburi	Position in the Company		
					Sep 2019 - Present	Vice President - Factory Department	
					Position in Subsidiaries of the Company		
					Present	Vice President - Factory Department	EA Bio Innovation Co.,Ltd
					Present	Vice President	Green Technology Research Co.,Ltd.
Vice President - Factory Department (Appointed on September 1, 2019)					Position in other Listed Company		
					-None-		
					Position in other Company / Other Organization		
					-None-		

10. Mr. Puchong Prasonglert

Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Certification	Working experiences in the 5 Preceding years		
					Period	Position	Company
Mr. Puchong Prasonglert  Vice President – Information Technology and System Development Department (Appointed on February 15, 2021)	43	-None-	-None-	<u>Education</u> <ul style="list-style-type: none"> Master of Science Program in Web Engineering and Mobile Application Development, Dhurakij Pundit University 	Position in the Company		
					Feb 2021 - Present	Vice President – Information Technology and System Development Department	
					Position in Subsidiaries of the Company		
					-None-		
					Position in other Listed Company		
					2015 – 2020	Group IT Director	CMO PLC.
					2017 – 2021	Senior Project Director (Digital Business Unit)	CMO PLC.
					Position in other Company / Other Organization		
					-None-		


11. Mrs. Porntip Sangchan

Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Certification	Working experiences in the 5 Preceding years		
					Period	Position	Company
Mrs. Porntip Sangchan  Vice President - Human Resource Department (Appointed on June 1, 2017)	54	-None-	-None-	Education <ul style="list-style-type: none"> Master of Education Program in Educational Measurement and Evaluation, Srinakharinwirot University Bachelor of Education Program in Mathematics, Srinakharinwirot University Training <ul style="list-style-type: none"> Leadership Development Program held by Slingsot Group Co., Ltd. 7 Habits of Highly Effective People held by PacRim Group The 4 Discipline of Execution (4DX) held by PacRim Group Coaching & Feedback for the highest performance held by P&P Consultants Co., Ltd. Training course “Leader As Coach” organized by Energy Absolute Public Company Limited 	Position in the Company		
					Jun 2017 – Present	Vice President - Human Resource Department	
					Position in Subsidiaries of the Company		
					-None-		
					Position in other Listed Company		
					-None-		
					Position in other Company / Other Organization		
					-None-		

Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Certification	Working experiences in the 5 Preceding years		
					Period	Position	Company
				<ul style="list-style-type: none"> Internal control and risk management / Value adding and strategy support management, organized by Energy Absolute Public Company Limited 			

Company Secretary

12. Miss Yaowalug Pukpikul

Name and surname	Age (year)	(%) of share possession	Family Relationship among Directors and Executives	Education / Certification	Working experiences in the 5 Preceding years		
					Time period	Position	Company
Ms. Yaowalug Pukpikul  Company Secretary (Appointed on November 14, 2013)	55	-None-	None	Education <ul style="list-style-type: none">Bachelor of Laws, Thammasat UniversityCertificate “Merchant Marine Management, Chulalongkorn UniversityCertificate “Marine Insurance”, Singapore National Shipping Association, Singapore Training <ul style="list-style-type: none">Company Secretary Program (CPS 56/2557) by IODInternal control and Risk Management / Value adding and Strategy Support Management by Energy Absolute Public Company Limited	Position in the Company		
					2013 – Nov 30, 2022	Company Secretary / Secretary to the Board of Directors / Vice President - Corporate Secretary, Compliance and Contract Management Department	
					Position in Subsidiaries of the Company		
					- None -		
					Position in Listed Company		
					2011 – 2012	Manager (Office of Company Secretariat)	Thai Beverage PCL.
1999 – 2011	Manager (Legal)	Precious Shipping PCL.					
Position in other Company / Other Organization					- None -		

Attachment 2 Details of the Board of Directors of Subsidiaries, Associated Companies and Joint Ventures

1. Direct Subsidiaries :

As of December 31, 2022, the Company had 23 Direct Subsidiaries and 40 Indirect Subsidiaries.

List of Companies List of Directors	EBI	EPN	SU97	ERH	ESN	TWF	WNYK	WPGS	WTSP	EMN	ESM	EMMA	GTR	MMR	EBR	EMH	SWM	EWM	BEV	AmiTa-Taiwan	EA Con Dao	BVI Holding	EAF
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Mr. Somphote Ahunai	/					/				/	/		/	/		/				/		/	
Mr. Amorn Saphaweekul	/	/	/	/	/	/	/	/		/	/	/	/	/	/	/	/	/		/		/	/
Mr. Wuthilerd Chiannikulchai	/		/	/		/			/				/	/	/		/					/	
Mr. Sutham Songsir				/		/																	
Ms. Supaporn Anunai		/	/	/	/		/	/	/		/	/			/	/		/	/				/
Crd. Parinya Ruckwatin																							/
Mr. Vasu Klomklang																/	/	/	/		/		/
Mr. Chatrapon Sripratun		/																		/			
Mr. Chanyut Chayawattana											/									/			
Mr. Sittadol Toauravong											/												
Mr. Pornlert Techarattanopas										/													
Ms. Rassarin Ruangrojanin										/													
Mr. Thanin Wanasuthanon																				/			
Mr. Chakrawut Raisaeng																				/			
Ms. Wimalmas Wongmakompan														/					/				
Mr. Wison Soisuke																			/				
Mr. Chaiporn Mankhondechaikul																			/		/		
Mr. Patel Cyrus Jonathan																					/		
Mr. Le Minh Tam																					/		
Mr. Lee Chee Seng Christopher																				/			
Mr. Huang Wen Hung																				/			
Mr. ChungYu Tung																				/			
Mr. Chen Cihen Jen																				/			

Remark : / = Director

2. Indirect Subsidiaries :

List of Companies List of Directors	CET	LPD	KJD	ESLO	SUSO	ESL	ESP	EWHK2	EWHK3	NYKD	NWP	BJRD	PND	BCD	SWF	WKK1	WKK2	WKS1	WKS2	WMHK1	WMHK2	WMHK3	WUBON1	WAMR1	ETB1	ETB2	ETB3	ETB4	ETB5
	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
Mr. Somphote Ahunai	/								/																				
Mr. Amorn Saphaweekul	/	/	/	/	/	/	/	/	/	/		/	/		/	/	/	/	/	/	/	/	/	/	/	/	/	/	
Mr. Wutthilerd Chiannikulchai				/	/	/	/	/	/					/															
Mr. Sutham Songsiri						/	/	/	/																				
Ms. Supaporn Anunai				/	/	/	/	/		/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
Mr. Vasu Klomkiang	/																												
Mr. Chatrapon Sripratum		/	/								/				/	/	/	/	/	/	/	/	/	/	/	/	/	/	
Mr. Chanyut Chayawattana											/																		
Mr. Kasama Poyai	/																												
Mr. Narisorn Pinthong	/																												
Mr. Kuson Hatthakarn		/																											
Mr. Dusit Nuamnual			/																										

Remark: / = Director

2. Indirect Subsidiaries : (continue)

List of Companies List of Directors	Amita-TH	MMC	AAB	EAST	POP	Amita-SG	Sun Field	BV1	BV2	ETH	EWMP
	53	54	55	56	57	58	59	60	61	62	63
Mr. Somphote Ahunai	/	/	/			/		/	/		
Mr. Amorn Sapthaweeikul	/	/	/	/	/	/		/	/	/	
Mr. Wutthilerd Chiannilkulchai								/	/		
Mr. Sutham Songsiri											
Ms. Supaporn Anunai		/		/	/					/	/
Mr. Vasu Klomkliang			/		/					/	/
Mr. Chanyut Chayawattana	/										
Mr. Thanin Wanasuthanon						/	/				
Mr. Khanist Srivajiraprabha			/								
Ms. Inthira Chuaysanit			/								
Mr. Akarin Suwannarat				/							
Mr. Mike Yuan Shan-Hao	/					/					
Ms. Wong Ying Cheeng						/					

Remark: / = Director

3. Associated Companies and Joint Venture :

As of December 31, 2022, the Company had 5 Associated Companies and 2 Joint Ventures.

List of Companies List of Directors	Wan Meng	NEX	TFTH	AGC	BYD	RNC	Atess Power
	64/ ¹	65/ ²	66/ ³	67/ ⁴	68/ ⁵	69/ [*]	70/ [*]
Mr. Somphote Ahunai				/			
Mr. Amorn Saphaweekul		/	/	/			
Ms. Supaporn Anunai						/	
Mr. Vasu Klomkliang		/				/	
Mr. Chatrapon Sripratum	/		/				
Mr. Chanyut Chayawattana		/					
Ms. Wimolmas Wongmakornpan				/			
Mr. Mike yuan Shan-Hao	/						
Mr. Khanist Srivajiraprabha		/					
Pol. Gen. Aek Angsanant		/					
Mr. Suthep Pongpitak		/					
Mr. Suchart Suphayak		/					
Mr. Somboon Wongrassamee		/					
Mr. Winai Taewsomboonkij			/				
Mr. Phet Nuntavisai			/				
Mr. Rattana Meetem			/				
Mr. Komsahaspob Nuttayakul		/					
Mr. Pan Ming Liang	/						
Ms. Wang Xiu Mei	/						
Mr. Hsu Min Tsung	/						
Mr. Yuttana Charoenphon						/	
Mr. Pachara Preeyanupap						/	
Mr. Supachai Rakpanitmanee				/			
Mr. Chayapat Rukpanichmanee				/			
Mr. Panyakorn Rakpanitmanee				/			

Remark : / = Director

1, 2, 3, 4, 5 = Associate

* = Joint venture is monitored by shareholding.

4. **Related Companies** (Juristic person of person who may have conflict of interest)

List of Companies	List of Directors								
	Mr. Somchainuk Engtrakul	M.R. Bravochat Chatchai	Pol.Gen. Phatcharavat Wongsuwan	Mr. Somphote Ahunai	Mr. Amorn Sapthaweeekul	Mr. Wutthilerd Chiannikulchai	Mr. Somboon Ahunai	Mr. Amornsak Noparumpa	Mr. Somphop Keerasuntonpong
	1	2	3	4	5	6	7	8	9
1. Dhipaya Insurance PCL.	/								
2. Dhipaya Group Holdings PCL.	/								
3. Vejthani PCL.	/								
4. Major Cineplex Group PLC.	/								
5. Siampiwat Holding Co., Ltd.	/								
6. Siam Piwat Co., Ltd.	/								
7. M.R. Bravochat Chatchai Laws Office		/							
8. Country Group Development PCL.			/						
9. Charoen Pokphand Foods PCL.			/						
10. CP ALL PCL.			/						
11. The Thai Dairy Industry Co., Ltd.			/						
12. AekYingKrit Holding Co., Ltd.				/					
13. Eternity Holding Co., Ltd.				/					
14. SPBL Holding Co., Ltd.				/					
15. Absolute Infinity Co., Ltd.				/					
16. T Health Products Co., Ltd.				/					
17. Watabak Wind Co., Ltd.					/				
18. Advance Finance PCL.					/				
19. TF Tech Co., Ltd.					/				
20. C.C. Oil Co., Ltd.						/			
21. Two Plus One Oil Co., Ltd.						/			
22. Power 10 Co., Ltd.						/			
23. Double 10 Co., Ltd.						/			
24. Malee Oil Co., Ltd.						/			
25. Sueb Nueng Kan Kha Co., Ltd.						/			
26. Perfect Oil Co., Ltd.						/			
27. Famous 10 Co., Ltd.						/			
28. Macharoen Co., Ltd.						/			
29. Chalee Trading Co., Ltd.						/			
30. MitrSiam Oil Co., Ltd.						/			
31. Window Asia PCL.						/			
32. Ruammit Panich Co., Ltd.							/		

List of Companies	List of Directors								
	Mr. Somchainuk Engtrakul	M.R. Bravo Chat Chatchai	Pol.Gen. Phatcharavat Wongsuwan	Mr. Somphote Ahunai	Mr. Amorn Saphaweeekul	Mr. Wutthilerd Chiannilkulchai	Mr. Somboon Ahunai	Mr. Amornsak Noparumpa	Mr. Somphop Keerasuntongpong
	1	2	3	4	5	6	7	8	9
33. Song Phol Co., Ltd.							/		
34. Regional Container Lines PCL.								/	
35. L.P.N. Development PCL.								/	
36. Finansia Syrus Securities PCL.									/
37. Finansia X PCL.									/

Remark : / = Director

Attachment 3 Detail of Head of the Internal Audit

Miss Nunthima Ruanjarin (Please refer to “Profile of Executives” (No. 7)

Attachment 4

Business Assets and Details on Asset Valuation

The details are disclosed under “1.2.3 Business Assets” topic.

Attachment 5

Good Corporate Governance and Business Ethics

- Good Corporate Governance Policy
https://www.energyabsolute.co.th/corporate_governance_policy.asp?lang=E
 - Business Ethics
https://www.energyabsolute.co.th/code_of_conduct.asp?lang=E
-

Attachment 6

Report of the Audit Committee

The details are disclosed under “8.2 The Audit Committee Report” topic.



Financial Statements

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

The Board of Directors is responsible for the Company's financial statements and financial information presented in this Annual Report. The financial statement is prepared in accordance with generally accepted accounting standard in Thailand using proper accounting policy of which the Board of Directors always adheres to. With best discretion and calculation of the Board of Directors, the financial statement contains adequate information disclosed in the note to financial statement.

The Board of Directors provides to have and maintains the effective internal control system to assure that the accounting record is accurate, complete and adequate to safeguard the Company's asset and to identify the weakness. Eventually, the effectiveness of the internal control system will prevent the corruption or significant unusual operation. In this regard, the Board of Directors has appointed the Audit Committee which comprises of all independent directors, to be responsible for quality of the financial report and internal control system. The opinion of the Audit Committee is expressed in the Report of the Audit Committee in this Annual Report.

The Board of Directors is of the opinion that overall of the Company's internal control system is in satisfactory level that creating trust and reliability. The Company's financial statement as at 31 December 2022 is accurate, complete and in line with generally accepted accounting standard and in compliance with relevant laws and regulations.

On behalf of the Board of Directors,
Energy Absolute Public Company Limited



(Mr. Somchainuk Engtrakul)

Chairman of the Board of Directors

Independent Auditor's Report

To the shareholders of Energy Absolute Public Company Limited

My opinion

In my opinion, the consolidated financial statements and the separate financial statements present fairly, in all material respects, the consolidated financial position of Energy Absolute Public Company Limited (the Company) and its subsidiaries (the Group) and the separate financial position of the Company as at 31 December 2022, and its consolidated and separate financial performance and its consolidated and separate cash flows for the year then ended in accordance with Thai Financial Reporting Standards (TFRS).

What I have audited

The consolidated financial statements and the separate financial statements comprise:

- the consolidated and separate statements of financial position as at 31 December 2022;
- the consolidated and separate statements of comprehensive income for the year then ended;
- the consolidated and separate statements of changes in equity for the year then ended;
- the consolidated and separate statements of cash flows for the year then ended; and
- the notes to the consolidated and separate financial statements, which include significant accounting policies and other explanatory information.

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 consolidated and separate financial statements section of my report. I am independent of the Group and the Company in accordance with the Code of Ethics for Professional Accountants including Independence Standards issued by the Federation of Accounting Professions (TFAC Code) that are relevant to my audit of the consolidated and separate financial statements, and I have fulfilled my other ethical responsibilities in accordance with the TFAC Code. I believe that the audit evidence I have obtained is sufficient and appropriate to provide a basis for my opinion.

Key audit matters

Key audit matters are those matters that, in my professional judgement, were of most significance in my audit of the consolidated and separate financial statements of the current period. These matters were addressed in the context of my audit of the consolidated and separate financial statements as a whole, and in forming my opinion thereon, and I do not provide a separate opinion on these matters.

Key audit matter	How my audit addressed the key audit matter
<p><i>Impairment assessment of goodwill</i></p> <p>Refer to Note 21 Goodwill, as at 31 December 2022, the Group recognised goodwill of Baht 1,375 million, which represents 1% of the total assets in the consolidated financial statements. Goodwill of Baht 1,000 million arose from the acquisition of a battery developing, manufacturing and distributing business. The remaining of Baht 375 million mostly arose from the acquisitions of palm crushing mills and biomass power plant business. The Group did not recognise an impairment loss on goodwill in the 2022 consolidated financial statements.</p> <p>The management tests goodwill impairment annually and whenever there is an indicator of impairment. Also, the management performs impairment test at the cash-generating unit level (CGU) and calculates its recoverable amount by applying the value-in-use model. This model involves management's significant judgments in respect to the future operating results, the projected cash flows and the appropriate discount rate to be applied to those projected cash flows. Key assumptions applied in the value-in-use model are as follows:</p> <ul style="list-style-type: none"> • revenue growth rate and estimated changes in expenditures of the business. • discount rate applied to the projected cash flows which is calculated from capital structure, industry specific risk and beta from available industry information. <p>I focussed on the valuation of goodwill arising from the acquisition of a battery developing, manufacturing and distributing business due to its significant value and the fact that the determination of value-in-use depends on a number of assumptions. Those assumptions involve management's significant judgements in assessing the feasibility of future business plans.</p>	<p>I carried out the following procedures to assess the impairment testing of the goodwill arising from the acquisition of a battery developing, manufacturing and distributing business which was prepared by the management.</p> <ul style="list-style-type: none"> • assessed the appropriateness of management's identification of the CGUs. • held discussions with management to understand the basis for the assumptions applied and evaluated whether the goodwill impairment testing process and assumptions had been applied appropriately and were in line with the nature of the business. • challenged management's significant assumptions used in the goodwill impairment testing, especially the revenue growth rate, estimated changes in expenditures and discount rate. My procedures included comparing those assumptions to reliable external sources and the approved business plan. • assessed the reasonableness of the business plan by comparing the 2022 plan with actual results. • assessed the discount rate taking into account independently obtained data from publicly available information on other companies in the industry, obtained independently by the auditor's expert, to evaluate whether the discount rate used by the management was within an acceptable range compared to comparable companies in the industry. • assessed the factors which were sensitive to assumptions and tested the sensitivity analysis of key assumptions to assess the potential impact from changing in those assumptions. <p>As a result of the procedures performed, the key assumptions used by the management were reasonable and within the acceptable range. They were consistent with supporting evidence.</p>

Key audit matter	How my audit addressed the key audit matter
<p><i>Fair value measurement of investments in equity instruments</i></p> <p>Refer to Note 14 Financial assets measured at fair value through other comprehensive income, as at 31 December 2022, the Group recognised investments in equity instruments of non-listed companies of Baht 5,161 million, which represents 5% of the total assets in the consolidated financial statements. An investment of Baht 5,119 million is an investment in the business of property development (the investment). The Group determined that this investment is an investment in an equity instrument under the scope of TAS 32 “Financial Instruments: Presentation” and requires subsequent measurement to fair value under the scope of TFRS 9 “Financial Instruments”. The Group irrevocably elected to account for the equity investment at fair value through other comprehensive income (FVOCI).</p> <p>The management calculates the fair value of the investment by applying the income approach. Fair value measurement involves significant judgements made by the management in respect to the future operating results, projected cash flows and the appropriate discount rate to be applied to the projected cash flows. Key assumptions applied in determining the fair value are the growth rate of the land price, projected revenue, capital expenditure, operating expenditure, capital structure and discount rate applied to the projected cash flows. The result of calculation indicates that the fair value is higher than its carrying amount as at 31 December 2022. Therefore, the Group recognised a gain through other comprehensive income net of tax amounting to Baht 113 million in the 2022 consolidated financial statements.</p> <p>I focussed on the fair value measurement of the investment because the management applied the income approach (the discounted cash flows) and the model involves the management’s significant estimations and judgment to assess the projected cash flows and discount rate applied for the projected cash flows.</p>	<p>I carried out the following procedures to obtain evidence for fair value measurement of the investment which was prepared by the management.</p> <ul style="list-style-type: none"> • reviewed management’s assessment that the classification of the investment should be accounted as a financial asset measured at fair value through other comprehensive income. • tested the calculation of fair values of the investment and also challenged management’s significant assumptions applied in the future cash flows estimation (e.g. the growth rate of the land price, projected revenue, capital expenditure, operating expenditure, capital structure and discount rate) by comparing those assumptions to the underlying agreements, reliable external sources and the approved business plan. • assessed the reasonableness of the business plan by comparing the 2022 plan with actual results. • assessed the discount rate taking into account independently obtained data from publicly available information on other companies in the industry, obtained independently by the auditor’s expert, to evaluate whether the discount rate used by the management was within an acceptable range compared to comparable companies in the industry. <p>As a result of the procedures performed, I determined that the method and assumptions applied in fair value measurement of the investment were reasonable and in line with the accounting for the fair value.</p>

Other information

The directors are responsible for the other information. The other information comprises the information included in the annual report, but does not include the consolidated and separate 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 consolidated and separate 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 consolidated and separate 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 consolidated and separate 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 the audit committee.

Responsibilities of the directors for the consolidated and separate financial statements

The directors are responsible for the preparation and fair presentation of the consolidated and separate financial statements in accordance with TFRS, and for such internal control as the directors determine is necessary to enable the preparation of consolidated and separate financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated and separate financial statements, the directors are 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 the directors either intend to liquidate the Group and the Company or to cease operations, or has no realistic alternative but to do so.

The audit committee assists the directors in discharging their responsibilities for overseeing the Group's and the Company's financial reporting process.

Auditor's responsibilities for the audit of the consolidated and separate financial statements

My objectives are to obtain reasonable assurance about whether the consolidated and separate 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 TSAs 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 consolidated and separate financial statements.

As part of an audit in accordance with TSAs, I exercise professional judgement and maintain professional scepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the consolidated and separate 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 and the Company's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.
- Conclude on the appropriateness of the directors' 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 and the Company's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the consolidated and separate 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 and the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated and separate financial statements, including the disclosures, and whether the consolidated and separate 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 the audit committee 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 the audit committee 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 the audit committee, I determine those matters that were of most significance in the audit of the consolidated and separate 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.

PricewaterhouseCoopers ABAS Ltd.



Amornrat Pearmpoonvatanasuk
 Certified Public Accountant (Thailand) No. 4599
 Bangkok
 24 February 2023

Energy Absolute Public Company Limited
Statement of Financial Position
As at 31 December 2022

		Consolidated financial statements		Separate financial statements	
		2022	2021	2022	2021
	Notes	Baht	Baht	Baht	Baht
Assets					
Current assets					
Cash and cash equivalents	9	3,210,732,378	2,926,971,651	250,396,273	662,435,476
Deposits at financial institutions used as collateral	10	11,971,854	16,877,915	-	-
Trade accounts receivable, net	11	6,329,529,175	3,690,367,236	201,929,548	532,213,164
Current portion of instalment receivables					
from a related party, net	40.3	77,807,279	-	-	-
Current portion of finance lease receivables, net	12	774,413,795	98,666,773	-	-
Other accounts receivable, net	13	2,626,972,114	2,719,648,758	841,877,504	578,821,699
Short-term loans to related parties, net	40.5	60,800,000	-	10,816,624,160	3,744,906,850
Current portion of long-term loans to					
other parties and related parties	40.5	-	-	628,605,582	332,471,263
Inventories, net	15	5,516,416,732	1,483,146,410	237,233,993	214,220,660
Non-current assets held for sale	16	3,918,640,430	713,908,748	-	-
Total current assets		22,527,283,757	11,649,587,491	12,976,667,060	6,065,069,112
Non-current assets					
Instalment receivables from a related party, net	40.3	447,104,630	-	-	-
Finance lease receivables, net	12	4,206,509,716	504,411,718	-	-
Deposits at financial institutions used as collateral	10	130,329,608	114,210,043	15,000	9,229,195
Financial assets measured at fair value					
through other comprehensive income	14	5,160,577,097	5,022,697,447	5,119,409,497	4,968,126,754
Investments in subsidiaries	17	-	1	34,235,627,901	29,483,663,951
Investments in associates	17	8,550,914,202	1,512,972,555	-	-
Investment in joint ventures	17	239,547,136	100,948,312	45,471,090	45,471,090
Long-term loans to other parties and related parties, net	40.5	65,160,213	79,846,250	6,808,472,178	7,912,931,477
Investment property, net	18	63,989,932	65,459,993	1,035,639,768	1,037,109,829
Property, plant and equipment, net	19	54,221,386,740	58,420,633,428	237,004,670	294,633,200
Right-of-use assets, net	20	1,610,605,443	1,733,641,582	281,172,942	304,215,680
Goodwill	21	1,374,751,407	1,453,470,894	-	-
Intangible assets, net	22	2,628,350,669	2,789,704,299	11,885,597	11,667,101
Deferred tax assets, net	23	181,458,716	178,649,403	18,694,794	38,954,617
Other non-current assets, net	24	1,956,374,065	1,850,016,716	1,077,553,659	987,916,757
Total non-current assets		80,837,059,574	73,826,662,641	48,870,947,096	45,093,919,651
Total assets		103,364,343,331	85,476,250,132	61,847,614,156	51,158,988,763

The notes to the financial statements are an integral part to these financial statements.

	Notes	Consolidated financial statements		Separate financial statements	
		2022	2021	2022	2021
		Baht	Baht	Baht	Baht
Liabilities and equity					
Current liabilities					
Short-term loans from financial institutions, net	25	10,806,006,503	1,618,059,869	6,833,966,052	883,988,564
Trade accounts payable	40.3	4,800,656,504	358,316,700	125,985,097	232,833,237
Other accounts payable	26	1,136,233,087	888,949,075	468,002,019	473,270,664
Construction payables and payables for purchase of assets		876,850,044	1,884,279,824	-	-
Short-term loans from other parties and related parties		418,725,953	258,725,953	6,232,710,000	5,272,710,000
Current portion of long-term loans from financial institutions, net	27	7,322,063,339	5,581,640,244	1,270,613,580	935,618,978
Derivative liabilities		-	474,479	-	-
Current portion of lease liabilities, net		47,167,021	56,972,874	970,990	3,011,272
Current portion of long-term loans from a related party	40.6	-	-	1,424,800,000	816,000,000
Current portion of debentures, net	28	998,434,939	1,998,849,124	998,434,939	1,998,849,124
Income tax payable		68,924,200	16,333,922	-	-
Retention for constructions		-	13,367,167	-	-
Total current liabilities		26,475,061,590	12,675,969,231	17,355,482,677	10,616,281,839
Non-current liabilities					
Long-term loans from financial institutions, net	27	17,124,500,323	23,581,583,387	3,973,051,059	4,443,952,624
Long-term loans from a related party	40.6	-	-	1,603,200,000	2,416,000,000
Debentures, net	28	14,292,796,884	10,195,499,517	14,292,796,884	10,195,499,517
Retention for constructions		170,230,856	148,973,627	-	-
Lease liabilities, net		1,634,299,558	1,684,532,956	285,168,094	284,525,660
Deferred tax liabilities, net	23	245,333,640	254,365,702	-	-
Retirement benefit obligations		102,469,898	86,320,024	72,218,173	62,861,399
Advance receipts for land rental from related parties	40.7	-	-	857,928,952	805,359,701
Provision for decommissioning costs	29	1,989,603,743	1,740,988,514	1,592,750	1,592,750
Other non-current liabilities		25,689,964	6,296,469	1,539,947	1,539,947
Total non-current liabilities		35,584,924,866	37,698,560,196	21,087,495,859	18,211,331,598
Total liabilities		62,059,986,456	50,374,529,427	38,442,978,536	28,827,613,437

The notes to the financial statements are an integral part to these financial statements.

	Note	Consolidated financial statements		Separate financial statements	
		2022	2021	2022	2021
		Baht	Baht	Baht	Baht
Liabilities and equity (continued)					
Equity					
Share capital					
Authorised share capital					
- 4,020,000,000 ordinary shares					
at par value of Baht 0.10 per share					
(2021: 3,730,000,000 ordinary shares					
at par value of Baht 0.10 per share)					
		402,000,000	373,000,000	402,000,000	373,000,000
Issued and paid-up share capital					
- 3,730,000,000 ordinary shares					
paid-up at Baht 0.10 per share					
		373,000,000	373,000,000	373,000,000	373,000,000
Premium on share capital		3,680,616,000	3,680,616,000	3,680,616,000	3,680,616,000
Retained earnings					
Appropriated					
- Legal reserve	30	40,200,000	37,300,000	40,200,000	37,300,000
Unappropriated		35,612,545,339	29,130,158,026	19,338,745,822	18,389,411,722
Other components of equity		(777,394,050)	(720,052,699)	(27,926,202)	(148,952,396)
Equity attributable to owners					
of the parent		38,928,967,289	32,501,021,327	23,404,635,620	22,331,375,326
Non-controlling interests		2,375,389,586	2,600,699,378	-	-
Total equity					
		41,304,356,875	35,101,720,705	23,404,635,620	22,331,375,326
Total liabilities and equity					
		103,364,343,331	85,476,250,132	61,847,614,156	51,158,988,763

The notes to the financial statements are an integral part to these financial statements.

Energy Absolute Public Company Limited

Statement of Comprehensive Income

For the year ended 31 December 2022

	Notes	Consolidated financial statements		Separate financial statements	
		2022	2021	2022	2021
		Baht	Baht	Baht	Baht
Revenue from sales and services	31, 40.1	18,763,630,897	13,286,347,588	4,824,515,929	6,141,781,236
Revenue from subsidy for adders	32	6,590,983,596	6,887,462,572	-	-
Dividend income	17.2, 40.8	-	-	2,856,187,584	2,816,357,289
Other income	33, 40.2	2,192,200,404	384,286,480	508,173,110	546,443,227
Total revenues		27,546,814,897	20,558,096,640	8,188,876,623	9,504,581,752
Cost of sales and services		(17,394,106,015)	(11,893,352,868)	(4,844,633,518)	(5,660,294,416)
Selling expenses		(60,580,967)	(71,841,661)	(33,567,075)	(49,964,757)
Administrative expenses		(1,366,186,282)	(1,365,490,459)	(504,322,388)	(490,788,633)
Gain on measurement of derivatives		474,479	13,359,553	-	-
Currency exchange gains, net		20,506,868	65,919,621	27,149,087	64,526,341
Finance costs	34	(1,412,778,113)	(1,387,538,451)	(772,265,355)	(691,417,927)
Total expenses		(20,212,670,030)	(14,638,944,265)	(6,127,639,249)	(6,827,939,392)
Share of profit from investments in associates and joint ventures, net	17.1	217,643,121	13,545,817	-	-
Profit before income tax		7,551,787,988	5,932,698,192	2,061,237,374	2,676,642,360
Income tax	36	(145,318,798)	(3,345,312)	9,996,726	(5,647,782)
Profit for the year		7,406,469,190	5,929,352,880	2,071,234,100	2,670,994,578
Other comprehensive income (expense)					
Items that will not be reclassified subsequently to profit or loss					
Remeasurements of retirement benefit obligations		-	4,697,512	-	2,186,329
Gain (loss) from remeasurement of investments in equity instruments at fair value through other comprehensive income, net	14	141,161,225	(510,152,298)	151,282,743	(511,196,855)
Income tax on items that will not be reclassified subsequently to profit or loss		(28,232,245)	102,031,536	(30,256,549)	102,239,371
Total items that will not be reclassified subsequently to profit or loss		112,928,980	(403,423,250)	121,026,194	(406,771,155)

The notes to the financial statements are an integral part to these financial statements.

Energy Absolute Public Company Limited
Statement of Comprehensive Income
For the year ended 31 December 2022

		Consolidated financial statements		Separate financial statements	
		2022	2021	2022	2021
	Notes	Baht	Baht	Baht	Baht
Items that will be reclassified subsequently to profit or loss					
Share of other comprehensive income (expense)					
from associates and joint ventures accounted for					
using the equity method, net	17.1	(10,422,882)	7,833,336	-	-
Currency translation differences		(191,298,716)	213,427,982	-	-
Income tax on items that will be reclassified					
subsequently to profit or loss		-	-	-	-
Total items that will be reclassified subsequently					
to profit or loss		(201,721,598)	221,261,318	-	-
Other comprehensive income (expense)					
for the year, net of tax		(88,792,618)	(182,161,932)	121,026,194	(406,771,155)
Total comprehensive income for the year		7,317,676,572	5,747,190,948	2,192,260,294	2,264,223,423
Profit (loss) attributable to:					
Owners of the parent		7,604,287,313	6,100,068,004	2,071,234,100	2,670,994,578
Non-controlling interests		(197,818,123)	(170,715,124)	-	-
		7,406,469,190	5,929,352,880	2,071,234,100	2,670,994,578
Total comprehensive income (expense) attributable to:					
Owners of the parent		7,546,945,961	5,879,984,994	2,192,260,294	2,264,223,423
Non-controlling interests		(229,269,389)	(132,794,046)	-	-
		7,317,676,572	5,747,190,948	2,192,260,294	2,264,223,423
Earnings per share					
Basic earnings per share	37	2.04	1.64	0.56	0.72

The notes to the financial statements are an integral part to these financial statements.

Attributable to owners of the parent															Consolidated financial statements			
	Notes	Other components of equity																
		Other comprehensive income (expense)												Non-controlling interests				
		Issued and paid-up share capital	Premium on share capital	Retained earnings	Discount from changes in shareholding	Remeasurements of retirement benefit obligations	Change in fair value of investment in equity instruments	Currency translation differences	Income of associates and joint ventures	Total other components of equity	Total owners of the parent	Total equity						
Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht	Baht		
Opening balance as at 1 January 2021																		
Changes in equity for the year																		
Capital increase and call for paid-up of subsidiaries																		
Change in shareholding interests in a subsidiary																		
Dividend paid																		
Total comprehensive income (expense) for the year																		
Closing balance as at 31 December 2021																		
Opening balance as at 1 January 2022																		
Changes in equity for the year																		
Increase from business acquisition																		
Change in shareholding interests in a subsidiary																		
Disposal of investments in indirect subsidiaries																		
Dividend paid																		
Legal reserve																		
Total comprehensive income (expense) for the year																		
Closing balance as at 31 December 2022																		

The notes to the financial statements are an integral part to these financial statements

Energy Absolute Public Company Limited
Statement of Changes in Equity
For the year ended 31 December 2022

[illegible]

The notes to the financial statements are an integral part to these financial statements.

	Notes	Consolidated financial statements		Separate financial statements	
		2022	2021	2022	2021
		Baht	Baht	Baht	Baht
Cash flows from operating activities					
Profit before income tax for the year		7,551,787,988	5,932,698,192	2,061,237,374	2,676,642,360
Adjustments to reconcile profit before income tax to net cash provided by operations:					
- Depreciation and amortisation		3,647,706,823	2,767,972,376	94,477,676	96,920,120
- (Reversal) losses on impairment of assets		8,115,478	98,423,901	(3,000,000)	22,306,229
- Gain on measurement of financial instruments		(474,479)	(13,359,553)	-	-
- Interest income		(67,634,272)	(32,846,917)	(423,356,598)	(366,207,111)
- Dividend income	17.2	-	-	(2,856,187,584)	(2,816,357,289)
- Finance costs	34	1,412,778,113	1,387,538,451	772,265,355	691,417,927
- Retirement benefit expenses		18,385,153	23,404,636	9,356,774	12,118,676
- Share of profit from investments in associates and joint ventures, net	17.1	(217,643,121)	(13,545,817)	-	-
- Gains from disposal of an investment in an associate	17.1.2	(6,787,652)	-	-	-
- Losses on disposals of investments in subsidiaries		-	61,464	-	-
- Gains on disposals of investments in indirect subsidiaries	17.1.1	(1,840,034,942)	-	-	-
- (Gains) losses on disposals of machines and equipment		(247,939,378)	(190,906,163)	-	993,748
- Gains on disposals of assets from finance lease		-	(127,857,170)	-	-
- Losses on write-off of intangible assets		-	5,530,993	-	1,286,250
- Losses on write-off of machines and equipment	19	17,776,483	11,696,854	-	287
- (Reversal) allowance for decrease in value of inventories, net		(3,373,389)	25,238,526	(7,034,222)	-
- Unrealised gains on exchange rates, net		(2,300,301)	(65,377,189)	(48,992,983)	(64,996,626)
- Write-off of withholding tax		8,241,261	-	-	-
- Write-off of deferred financing fee of long-term loans from a financial institution	27.1	-	133,837,806	-	-
- Gains on lease modifications		(392,683)	-	-	-
- Amortisation of advance receipts for land rental from related parties	40.7	-	-	(57,779,857)	(57,742,854)
Cash flows before changes in operating assets and liabilities		10,278,211,082	9,942,510,390	(459,014,065)	196,381,717
Change in operating assets and liabilities:					
- Trade accounts receivable		(2,648,522,973)	(1,015,963,266)	330,283,616	(34,718,562)
- Instalment receivables - related party		(515,640,000)	-	-	-
- Finance lease receivables		(4,357,752,571)	-	-	-
- Other accounts receivable		(1,277,225,909)	(400,780,056)	(15,845,355)	(85,720,085)
- Inventories		(4,055,001,976)	(675,085,535)	(15,979,111)	68,588,675
- Other non-current assets		(13,867,080)	266,135	(24,410,206)	(257,022)
- Trade accounts payable		4,425,190,617	(14,270,122)	(106,848,140)	(36,695,551)
- Other accounts payable		152,992,760	17,392,277	(28,960,890)	96,766,143
- Other non-current liabilities		37,961,827	(3,323,060)	-	-
Cash generated from (used in) operations		2,026,345,777	7,850,746,763	(320,774,151)	204,345,315
- Income tax paid		(135,400,585)	(52,622,656)	(8,751,941)	(6,785,320)
Net cash receipts from (payments in) operating activities		1,890,945,192	7,798,124,107	(329,526,092)	197,559,995

The notes to the financial statements are an integral part to these financial statements.

Statement of Cash Flows

For the year ended 31 December 2022

		Consolidated financial statements		Separate financial statements	
		2022	2021	2022	2021
	Notes	Baht	Baht	Baht	Baht
Cash flows from investing activities					
Deposits at financial institutions used as collateral		(29,781,836)	58,088,679	9,214,195	83,715,805
Proceeds from short-term loans to an other party and related parties	40.5	7,350,000	-	4,420,158,750	100,000,000
Payments for short-term loans to related parties	40.5	(60,800,000)	-	(11,466,398,150)	(2,191,633,800)
Proceeds from long-term loans to related parties	40.5	4,846,250	-	2,574,000,000	2,737,000,000
Payments for long-term loans to related parties	40.5	-	-	(1,760,000,000)	(359,511,000)
Payments for acquisitions of indirect subsidiaries	17.1.1	(3,215,267,351)	-	-	-
Payments for investments in subsidiaries	17.1.1	-	-	(4,751,900,000)	(1,764,541,525)
Net proceeds from disposals of investments in indirect subsidiaries	17.1.1	5,877,262,604	6,691,196	-	-
Payments for investments in associates	17.1.2	(6,997,029,600)	(21,990,000)	-	-
Proceeds from disposals of investments in associates	17.1.2	20,658,105	-	-	-
Payments for investments in joint ventures	17.1.3	(9,499,979)	(35,000,100)	-	-
Payments for purchase of investment property		-	(400,000)	-	(400,000)
Payments for purchase of property, plant and equipment		(2,514,692,261)	(5,956,609,070)	(63,412,104)	(90,445,347)
Payments for decommissioning of fixed assets		-	(351,498)	-	-
Proceeds from disposals of machines and equipment		44,005,215	8,567,032	-	3,294,234
Payments for purchase of intangible assets	22	(59,111,727)	(33,958,195)	(2,804,457)	(3,222,734)
Proceeds from advance receipts for land rental from related parties	40.7	-	-	110,349,108	93,543,741
Proceeds from dividend income	17	36,750,000	1,459,944	2,816,840,599	2,816,357,289
Proceeds from interest income		12,206,732	19,834,071	237,875,361	175,921,334
Proceeds from finance lease receivables		26,063,182	47,000,000	-	-
Interest paid capitalised in property, plant and equipment	19	(13,556,608)	(33,921,600)	-	-
Net cash receipts from (payments in) investing activities		(6,870,597,274)	(5,940,589,541)	(7,876,076,698)	1,600,077,997
Cash flows from financing activities					
Proceeds from short-term loans from financial institutions	25	22,854,059,545	5,154,290,186	18,048,284,833	3,317,897,487
Payments for short-term loans from financial institutions	25	(13,672,620,818)	(6,143,629,065)	(12,128,363,693)	(2,803,949,440)
Proceeds from long-term loans from financial institutions	27.1	1,129,262,930	29,224,166,432	1,000,000,000	3,500,000,000
Payments for long-term loans from financial institutions	27.1	(5,833,042,077)	(24,433,157,887)	(1,140,000,000)	(3,540,000,000)
Payments for deferred financing fee of long-term loan from financial institutions	27.1	(55,833,550)	(38,964,997)	(1,000,000)	(9,500,000)
Proceeds from short-term loans from related parties	40.6	160,000,000	225,000,000	1,246,500,000	580,000,000
Payments for short-term loans from other parties and related parties	40.6	-	-	(286,500,000)	(87,193,740)
Proceeds from long-term loans from a related party	40.6	-	-	-	4,000,000,000
Payments for long-term loans from a related party	40.6	-	-	(204,000,000)	(768,000,000)
Payments for lease liabilities	20	(131,698,629)	(156,139,448)	(13,741,306)	(64,202,602)
Proceeds from issuing debentures	28	5,100,000,000	-	5,100,000,000	-
Payments for repayment of debentures	28	(2,000,000,000)	(4,000,000,000)	(2,000,000,000)	(4,000,000,000)
Payments for deferred financing fees of debentures	28	(5,100,000)	-	(5,100,000)	-
Proceeds from paid-up ordinary shares of subsidiaries from non-controlling interest		-	845,156,702	-	-
Dividend paid		(1,118,809,764)	(1,118,603,956)	(1,118,809,764)	(1,118,603,956)
Interest paid		(1,096,687,764)	(1,368,175,273)	(702,164,308)	(777,923,988)
Net cash receipts from (payments in) financing activities		5,329,529,873	(1,810,057,306)	7,795,105,762	(1,771,476,239)

The notes to the financial statements are an integral part to these financial statements.

		Consolidated financial statements		Separate financial statements	
		2022	2021	2022	2021
	Notes	Baht	Baht	Baht	Baht
Net increase (decrease) in cash and cash equivalents		349,877,791	47,477,260	(410,497,028)	26,161,753
Beginning balance		2,926,971,651	2,950,667,329	662,435,476	637,794,878
Currency translation differences on cash and cash equivalents		(66,117,064)	(71,172,938)	(1,542,175)	(1,521,155)
Ending balance		3,210,732,378	2,926,971,651	250,396,273	662,435,476
Cash and cash equivalents are made up as follows:					
- Cash on hand and deposits at financial institutions					
- maturities within three months	9	3,210,732,378	2,926,971,651	250,396,273	662,435,476
		3,210,732,378	2,926,971,651	250,396,273	662,435,476
Supplementary information					
Changes in construction payables and payables for purchase of assets (including retention for constructions)		(999,539,718)	1,832,278,773	-	-
Changes in decommissioning costs	29	199,856,015	371,753,161	-	-
Changes in right-of-use assets	20	47,633,985	75,253,117	2,813,037	26,843,023
Reclassification of deferred financing fee		-	(13,500,000)	-	-
Changes in finance lease receivables		-	(603,078,491)	-	-
Changes in accounts receivable from sales of machines and equipment		(2,677,114,990)	(1,570,854,927)	-	-
Offsetting payables for construction and purchase of fixed assets with other receivables		3,981,403,348	-	-	-

The notes to the financial statements are an integral part to these financial statements.

1 General information

Energy Absolute Public Company Limited (the Company) is a public limited company, incorporated and resident in Thailand. The address of its registered office is 89, AIA Capital Center Building, 16th Floor, Ratchadaphisek Road, Dindaeng, Bangkok.

The Company is listed on The Stock Exchange of Thailand. For reporting purposes, the Company and its subsidiaries are referred to as “the Group”.

The Group engages in business of manufacturing and distributing crude palm oil, biodiesel products and glycerol, operating renewable power plants and develop, manufacture and distribute lithium-ion polymer battery and electric vehicle.

The consolidated and separate financial statements were authorised for issue by the Board of Directors on 24 February 2023.

2 Basis of preparation

The consolidated and separate financial statements have been prepared in accordance with Thai Financial Reporting Standards (TFRS) and the financial reporting requirements issued under the Securities and Exchange Act.

The consolidated and separate financial statements have been prepared under the historical cost convention except as disclosed in the below accounting policies.

The preparation of financial statements in conformity with TFRS requires management to use certain critical accounting estimates, and to exercise its judgement in applying the Group’s accounting policies. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements and separate financial statements are disclosed in Note 7.

An English language version of the consolidated and separate financial statements has been prepared from the statutory financial statements that are in the Thai language. In the event of a conflict or a difference in interpretation between the two languages, the Thai language statutory financial statements shall prevail.

3 Amended financial reporting standards

3.1 Amended financial reporting standards that are effective for accounting periods beginning on or after 1 January 2022 and have impacts to the Group.

Interest rate benchmark (IBOR) reform - phase 2, amendments to TFRS 9, TFRS 7, TFRS 16 and TFRS 4, and accounting guidance, financial instruments and disclosures for insurance business provide relief measures addressing issues that might affect financial reporting during the reform, including the effects of changes to contractual cash flows or hedging relationship arising from the replacement of one benchmark with an alternative benchmark.

Key relief measures of the phase 2 amendments are as follows:

- When changing the basis for determining contractual cash flows for financial assets and financial liabilities (including lease liabilities), changes that are necessary as a direct result of the IBOR reform and which are considered economically equivalent, will not result in an immediate gain or loss in the income statement. TFRS 16 has also been amended to require lessees to use a similar practical expedient when accounting for lease modifications that change the basis for determining future lease payments as a result of the IBOR reform.
- Hedge accounting relief measures will allow most TFRS 9 hedge relationships that are directly affected by the IBOR reform to continue. However, additional ineffectiveness might need to be recorded.

TFRS 7 requires additional disclosure about:

- The nature and extent of risks arising from the IBOR reform to which the entity is exposed to
- How the entity manages those risks
- The entity's progress in transitioning from the IBOR to alternative benchmark rates and how the entity is managing this transition.

The impacts from the amendments are disclosed in Note 5.1.1 b) Effect of IBOR reform

3.2 Amended financial reporting standards that are effective for accounting period beginning or after 1 January 2023 and relevant to the Group. The Group did not early adopt these standards.

- Amendment to TAS 16 - Property, plant and equipment** clarified to prohibit entities from deducting from the cost of an item of property, plant and equipment any proceeds received from selling any items produced while the entity is preparing that asset for its intended use.
- Amendment to TAS 37 - Provisions, contingent liabilities and contingent assets** clarified that, in considering whether a contract is onerous, the direct costs of fulfilling a contract include both the incremental costs of fulfilling the contract and an allocation of other costs directly related to fulfilling the contract. Before recognising a separate provision for an onerous contract, the Group must recognise any impairment losses that have occurred on the assets used in fulfilling the contract.
- Amendment to TFRS 3 - Business combinations** clarified some minor amendments to update its references to the Conceptual Framework for Financial Reporting and added a consideration for the recognition of liabilities and contingent liabilities acquired from business combinations. The amendments also confirmed that contingent assets shouldn't be recognised at the acquisition date.
- Amendment to TFRS 9 - Financial Instruments** clarified which fees should be included in the 10% test for the derecognition of financial liabilities. It should only include fees between the borrower and lender.

The Group's management is currently assessing the impact of adoption of these standards.

4 Accounting policies

The significant accounting policies used for the preparation of the consolidated and separate financial statements are as follows:

4.1 Principle of consolidation

4.1.1 Subsidiaries

Subsidiaries are all entities over which the Group has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are consolidated from the date on which control is transferred to the Group until the date that control ceases.

In the separate financial statements, investments in subsidiaries are accounted for using cost method less allowance for impairment (if any).

4.1.2 Associates

Associates are all entities over which the Group has significant influence but not control or joint control. Investments in associates are accounted for using the equity method of accounting.

In the separate financial statements, investments in associates are accounted for using cost method less allowance for impairment (if any).

4.1.3 Joint arrangements

Investments in joint arrangements are classified as either joint operations or joint ventures depending on the contractual rights and obligations of each investor, rather than the legal structure of the joint arrangements.

Joint ventures

A joint venture is a joint arrangement whereby the Group has rights to the net assets of the arrangement. Interests in joint ventures are accounted for using the equity method.

In the separate financial statements, investments in joint ventures are accounted for using cost method less allowance for impairment (if any).

4.1.4 Equity method

The investment is initially recognised at cost which is consideration paid and directly attributable costs.

The Group's subsequently recognises shares of its associates and joint ventures' profits or losses and other comprehensive income in the profit or loss and other comprehensive income, respectively. The subsequent cumulative movements are adjusted against the carrying amount of the investment.

When the Group's share of losses in associates and joint ventures equals or exceeds its interest in the associates and joint ventures, the Group does not recognise further losses, unless it has incurred obligations or made payments on behalf of the associates and joint ventures.

4.1.5 Changes in ownership interests

The Group treats transactions with non-controlling interests that do not result in a loss of control as transactions with equity owners of the Group. A difference between the amount of the adjustment to non-controlling interests to reflect their relative interest in the subsidiary and any consideration paid or received is recognised within equity.

If the ownership interest in associates and joint ventures is reduced but significant influence and joint control is retained, only a proportionate share of the amounts previously recognised in other comprehensive income is reclassified to profit or loss where appropriate. Profit or loss from reduce of the ownership interest in associates and joint ventures is recognise in profit or loss.

When the Group losses control, joint control or significant influence over investments, any retained interest in the investment is remeasured to its fair value, with the change in carrying amount recognised in profit or loss. The fair value becomes the initial carrying amount of the retained interest which is reclassified to investment in an associate, or a joint venture or a financial asset accordingly.

4.1.6 Intercompany transactions on consolidation

Intra-group transactions, balances and unrealised gains on transactions are eliminated. Unrealised gains on transactions between the Group and its associates and joint ventures are eliminated to the extent of the Group's interest in the associates and joint ventures. Unrealised losses are also eliminated in the same manner unless the transaction provides evidence of an impairment of the asset transferred.

4.2 Business combination

The Group applies the acquisition method to account for business combinations with an exception on business combination under common control. The consideration transferred for the acquisition of a subsidiary comprises.

- fair value of the assets transferred
- liabilities incurred to the former owners of the acquiree
- equity interests issued by the Group

Identifiable assets and liabilities acquired and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date.

On an acquisition-by-acquisition basis, the Group initially recognises any non-controlling interest in the acquiree either at fair value or at the non-controlling interest's proportionate share of the acquiree's net assets.

The excess of the consideration transferred, the amount of any non-controlling interest recognised and the acquisition-date fair value of any previous equity interest in the acquiree (for business combination achieved in stages) over the fair value of the net identifiable assets acquired is recorded as goodwill. In the case of a bargain purchase, the difference is recognised directly in profit or loss.

Acquisition-related cost

Acquisition-related cost are recognised as expenses in consolidated financial statements.

Step-up acquisition

If the business combination is achieved in stages, the acquisition date carrying value of the acquirer's previously held equity interest in the acquiree is re-measured to fair value at the acquisition date; any gains or losses arising from such re-measured are recognised in profit or loss.

Business combination under common control

The Group accounts for business combination under common control by measuring acquired assets and liabilities of the acquiree at their carrying values presented in the highest level of the consolidation. The Group retrospectively adjusted the business combination under common control transactions as if the combination had occurred on the later of the beginning of the preceding comparative period and the date the acquiree has become under common control.

Consideration of business combination under common control are the aggregated amount of fair value of assets transferred, liabilities incurred and equity instruments issued by the acquirer at the date of which the exchange in control occurs.

The difference between consideration under business combination under common control and the acquirer's interests in the carrying value of the acquiree is presented as "surplus (discount) arising from business combination under common control" in equity and is derecognised when the investment is disposed by transferred to retained earnings.

4.3 Foreign currency translation

4.3.1 Functional and presentation currency

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates (the functional currency). The financial statements are presented in Thai Baht, which is the functional currency of the Company and the presentation currency of the Group and the Company.

4.3.2 Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions.

Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the profit or loss.

Any exchange component of gains and losses on a non-monetary item that recognised in profit or loss, or other comprehensive income is recognised following the recognition of a gain or loss on the non-monetary item.

4.3.3 Group companies

The operational results and financial position of all of the Group's entities (none of which has the currency of a hyper-inflationary economy) that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

- Assets and liabilities for each statement of financial position presented are translated at the closing rate at the date of that statement of financial position;
- Income and expenses for each statement of comprehensive income are translated at average exchange rates; and
- All resulting exchange differences are recognised in other comprehensive income.

Goodwill and fair value adjustments arising on the acquisition of a foreign operation are treated as assets and liabilities of the foreign operation and translated at the closing rate.

4.4 Cash and cash equivalents

In the statements of cash flows, cash and cash equivalents includes cash on hand, deposits held at call, short-term highly liquid investments with maturities of three months or less from acquisition date.

4.5 Trade accounts receivable

Trade accounts receivable are amounts due from customers for goods sold or services performed in the ordinary course of business. They are generally due for settlement within 30 - 45 days and therefore are all classified as current.

Trade accounts receivable are recognised initially at the amount of consideration that is unconditional unless they contain significant financing components, they are recognised at fair value. The Group holds the trade receivables with the objective to collect the contractual cash flows and therefore measures them subsequently at amortised cost.

The impairment of trade receivables are disclosed in Note 4.7.6.

4.6 Inventories

Inventories are stated at the lower of cost and net realisable value.

Cost is determined by the first-in, first-out method, except for cost of battery which is determined by weighted average method. The cost of purchase comprises both the purchase price and costs directly attributable to the acquisition of the inventory, such as import duties and transportation charges, less all attributable discounts, allowances or rebates.

The cost of finished goods and work in progress comprises raw materials, direct labour, other direct costs and related production overheads based on normal operating capacity. It excludes borrowing costs. Net realisable value is the estimate of the selling price in the ordinary course of business, less applicable variable selling expenses. Allowance is made, where necessary, for obsolete, slow-moving and defective inventories.

4.7 Financial asset

4.7.1 Classification

The Group classifies its debt instrument financial assets in the following measurement categories depending on i) business model for managing the asset and ii) the cash flow characteristics of the asset whether they represent solely payments of principal and interest (SPPI).

- those to be measured subsequently at fair value (either through other comprehensive income or through profit or loss); and
- those to be measured at amortised cost.

The Group reclassifies debt investments when and only when its business model for managing those assets changes.

For investments in equity instruments, the Group has an irrevocable election at the time of initial recognition to account for the equity investment at fair value through profit or loss (FVPL) or at fair value through other comprehensive income (FVOCI) except those that are held for trading, they are measured at FVPL.

4.7.2 Recognition and derecognition

Regular way purchases, acquires and sales of financial assets are recognised on trade-date, the date on which the Group commits to purchase or sell the asset. Financial assets are derecognised when the rights to receive cash flows from the financial assets have expired or have been transferred and the Group has transferred substantially all the risks and rewards of ownership.

4.7.3 Measurement

At initial recognition, the Group measures a financial asset at its fair value plus, in the case of a financial asset not at FVPL, transaction costs that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets carried at FVPL are expensed in profit or loss.

Financial assets with embedded derivatives are considered in their entirety when determining whether the cash flows are solely payment of principal and interest.

4.7.4 Debt instruments

Subsequent measurement of debt instruments depends on the Group's business model for managing the asset and the cash flow characteristics of the financial assets. There are three measurement categories into which the Group classifies its debt instruments:

- Amortised cost: Financial assets that the Group held for collection of contractual cash flows that represent solely payments of principal and interest (SPPI) are measured at amortised cost. Interest income from these financial assets is recognised using the effective interest method and presented in other income. Any gain or loss on derecognition and foreign exchange gains (losses) are recognised through profit or loss, and presented in other gains (losses) and currency exchange gains (losses), respectively. Impairment losses are recognised and presented as a separate line item in the statement of profit or loss.
- FVOCI: Financial assets that the Group held for i) collection of contractual cash flows; and ii) for selling the financial assets, where the assets' cash flows represent solely payments of principal and interest, are measured at FVOCI. Movements in the carrying amount are taken through other comprehensive income (OCI), except for the recognition of impairment gains or losses, interest income using the effective interest method, and foreign exchange gains and losses which are recognised in profit or loss. When the Group derecognised that financial assets, the cumulative gain or loss previously recognised in OCI is reclassified from equity to profit or loss and presented in other gains (losses). Interest income is included in other income. Impairment expenses are presented separately in the statement of profit or loss.
- FVPL: Financial assets that the Group held do not meet the criteria for amortised cost or FVOCI are measured at FVPL. A gain or loss on a debt investment that is subsequently measured at FVPL is recognised in profit or loss and presented net within gain or loss on measurement of financial instruments in the period in which it arises.

4.7.5 Equity instruments

The Group measures all equity investments at fair value. Where the Group has elected to present fair value gains and losses on equity instruments in OCI, When the Group derecognised that equity instrument, the cumulative gain or loss previously recognised is not subsequent recycling to profit or loss. Dividends from such investments continue to be recognised in profit or loss as dividend income when the right to receive payments is established.

Changes in the fair value of equity instruments at FVPL are recognised in gain or loss on measurement of financial instruments in profit or loss.

Impairment losses and reversal of impairment losses on equity investments are reported together with changes in fair value.

4.7.6 Impairment

The Group applies the TFRS 9 simplified approach and general approach in measuring the impairment of trade accounts receivable, other accounts receivable and loans to other parties and related parties, which applies lifetime expected credit loss, from initial recognition, for all trade accounts receivable, other accounts receivable and loan to other parties and related parties.

To measure the expected credit losses by using to simplified approach, the managements grouped the receivables based on shared credit risk characteristics and the days past due. The expected credit loss rates are based on payment profiles, historical credit losses as well as forward-looking information and factors that may affect the ability of the customers to settle the outstanding balances. In addition to the simplified approach, the management applies the general approach, which is consider the individual assessments by applying the discounted cash flow method. For this, management uses an estimate debtor's future cash flows based on the original effective interest rate.

For other financial assets carried at amortised cost and FVOCI, the Group applies TFRS 9 general approach in measuring the impairment of those financial assets. Under the general approach, the 12-month or the lifetime expected credit loss is applied depending on whether there has been a significant increase in credit risk since the initial recognition.

The significant increase in credit risk (from initial recognition) assessment is performed every end of reporting period by comparing i) expected risk of default as of the reporting date and ii) estimated risk of default on the date of initial recognition.

The Group assesses expected credit loss by taking into consideration forward-looking information and past experiences. The expected credit loss is a probability-weighted estimate of credit losses (probability-weighted present value of estimated cash shortfall). The cash shortfall is the difference between all contractual cash flows that are due to the Group and all cash flows expected to receive, discounted at the original effective interest rate.

When measuring expected credit losses, the Group reflects the following:

- Probability-weighted estimated uncollectible amounts;
- Time value of money; and
- Supportable and reasonable information as of the reporting date about past experience, current conditions and forecasts of future situations.

Impairment and reversal of impairment losses are recognised in profit or loss and included in administrative expenses.

4.8 Non-current assets held for sale

Non-current assets are classified as assets held-for-sale when their carrying amount will be recovered principally through a sale transaction and a sale is considered highly probable. They are measured at the lower of the carrying amount and fair value less costs to sell.

An impairment loss is recognised for write-down of the asset to fair value less costs to sell. A gain is recognised for any subsequent increases in fair value less costs to sell of an asset, but not in excess of any cumulative impairment loss previously recognised.

The Group has not depreciated or amortised non-current assets.

4.9 Investment property

Investment property that is held for long-term rental yields or for capital appreciation or both, and that is not occupied by the companies in the Group, is classified as investment property. Investment property also includes property that is being constructed or developed for future use as investment property.

Investment property is measured initially at cost, including directly attributable costs and borrowing costs. Subsequent expenditure is capitalised to the asset's carrying amount only when it is probable that future economic benefits associated with the expenditure will flow to the Group and the cost of the item can be measured reliably. All other repairs and maintenance costs are expensed when incurred. When part of an investment property is replaced, the carrying amount of the replaced part is derecognised.

Subsequently investment property is carried at cost less accumulated depreciation and allowance for impairment (if any).

Land is not depreciated. Depreciation on other investment properties is calculated using the straight-line method to allocate their cost to their residual values over their estimated useful lives which is 20 years.

4.10 Property, plant and equipment

Property, plant and equipment is initially recorded at cost. Plant and equipment are subsequently stated at historical cost less accumulated depreciation and allowance for impairment (if any). The costs of property, plant and equipment comprise both the purchase price and any costs directly attributable to bringing the assets to location and condition necessary for them to be capable of operating in the manner intended by management. Their costs also include the initial estimate of the costs of dismantling and removing the item and restoring the site on which they are located, the obligation for which the Group incurs either when the items are acquired or as a consequence of having used the items during a particular period.

Subsequent costs are included in the asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably. The carrying amount of the replaced part is derecognised. All other repairs and maintenance are charged to profit or loss during the financial period in which they are incurred.

Depreciation on assets is calculated using the straight-line method to allocate their cost to their residual values over their estimated useful lives, except for land, which is considered to have an indefinite life.

	Years
Buildings and buildings improvement	5 to 25
Machines and equipment	3, 5 and 10
Power plant, substations, transmission system and components	10 to 25
Office equipment, furniture, computers, and motor vehicles	5 and 10

At the end of each reporting period, the assets' residual values and useful lives are reviewed, and adjusted if appropriate.

If the asset's carrying amount is greater than its estimated recoverable amount, the asset's carrying amount is written-down immediately to its recoverable amount.

Gains or losses on disposals are determined by comparing the proceeds with the carrying amount. The net gains or losses are recognised in profit or loss.

4.11 Goodwill

Goodwill is tested for impairment annually, or more frequently if events or changes in circumstances indicate that it might be impaired. It is carried at cost less accumulated impairment losses.

For the purpose of impairment testing, goodwill is allocated to cash-generating units or groups of cash-generating units that are expected to benefit from the business combination in which the goodwill arose. The units or groups of units are identified at the lowest level at which goodwill is monitored for internal management purposes.

4.12 Intangible assets

4.12.1 Research and development

Research expenditure is recognised as an expense as incurred.

Development expenditure is recognised as an asset when the Group can demonstrate all of the following:

- the expenditure attributable to its development can be measured reliably and that it is technically, financially, commercially, and resourcefully feasible; and
- the Group intends to and has the ability to complete the development for the purpose of using or selling.

Development costs previously recognised as an expense are not recognised as an asset in a subsequent period.

Capitalised development costs are amortised from the commencement of the commercial production of the product on a straight-line basis over the period of its expected benefit.

4.12.2 Right to use transmission line

Right to use transmission line is stated at historical cost less accumulated amortisation. Right to use transmission line cost is amortised by using straight-line method based on its estimated useful life which is 25 years.

4.12.3 Right to power purchase agreement

Right to power purchase agreement from acquisition of a subsidiary is amortised by using straight-line method based on its estimated useful life which is 25 years.

4.12.4 Computer software

Acquired computer software recognised as assets and subsequently amortised by using straight-line method over their estimated useful lives, which are 5 and 10 years.

Costs associated with maintaining computer software programmes are recognised as an expense as incurred.

4.12.5 Patent and brand

Separately acquired patent and brand are shown at historical cost. Patent and brand acquired from a business combination are recognised at fair value at the acquisition date. Patent and brand have a finite useful life and are carried at cost less accumulated amortisation. Amortisation is calculated using the straight-line method to allocate the cost of patent and brand over their estimated useful lives of 20 years.

4.13 Impairment of assets

Intangible assets that have an indefinite useful life are not subject to amortisation and are tested annually for impairment, or more frequently if events or changes in circumstances indicate that it might be impaired. Assets that are subject to amortisation are reviewed for impairment whenever there is an indication of impairment. An impairment loss is recognised for the amount by which the carrying amount of the assets exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs of disposal and value in use.

Where the reasons for previously recognised impairments no longer exist, the impairment losses on the assets concerned other than goodwill is reversed.

4.14 Leases

Leases - where the Group is the lessee

The Group recognized leases as a right-of-use asset and a corresponding liability at the date at which the leased asset is available for use by the Group. Each lease payment is allocated between the liability and finance cost. The finance cost is charged to profit or loss over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period. The right-of-use asset is depreciated over the shorter of the asset's useful life and the lease term on a straight-line basis.

The Group allocates the consideration in the contract to the lease and non-lease components based on their relative stand-alone prices. However, for leases of real estate for which the group is a lessee, it has elected to separate lease and non-lease components and accounts for only a lease component.

Assets and liabilities arising from a lease are initially measured on a present value basis. Lease liabilities include the net present value of the following lease payments:

- fixed payments (including in-substance fixed payments), less any lease incentives receivable
- variable lease payment that are based on an index or a rate
- amounts expected to be payable by the lessee under residual value guarantees
- the exercise price of a purchase option if the lessee is reasonably certain to exercise that option, and
- payments of penalties for terminating the lease, if the lease term reflects the lessee exercising that option.

Lease payments to be made under reasonably certain extension options are also included in the measurement of the liability.

The lease payments are discounted using the interest rate implicit in the lease. If that rate cannot be determined, the lessee's incremental borrowing rate is used, being the rate that the lessee would have to pay to borrow the funds necessary to obtain an asset of similar value in a similar economic environment with similar terms and conditions.

Right-of-use assets are measured at cost comprising the following:

- the amount of the initial measurement of lease liability
- any lease payments made at or before the commencement date less any lease incentives received
- any initial direct costs, and
- restoration costs.

Payments associated with short-term leases and leases of low-value assets are recognised on a straight-line basis as an expense in profit or loss. Short-term leases are leases with a lease term of 12 months or less. Low-value assets comprise small office equipment.

Leases - where the Group is the lessor

When assets are leased out under a finance lease, the present value of the lease payments is recognised as a receivable. The difference between the gross receivable and the present value of the receivable is recognised as unearned finance income. Lease income is recognised over the term of the lease which reflects a constant periodic rate of return. Initial direct costs are included in initial measurement of the finance lease receivable and reduce the amount of income recognised over the lease term.

Rental income under operating leases (net of any incentives given to lessees) is recognised on a straight-line basis over the lease term. Initial direct costs incurred in obtaining an operating lease are added to the carrying amount of the underlying asset and recognised as expense over the lease term on the same basis as lease income. The respective leased assets are included in the statement of financial position based on their nature.

4.15 Financial liabilities

4.15.1 Classification

Financial instruments issued by the Group are classified as either financial liabilities or equity securities by considering contractual obligations.

- Where the Group has an unconditional contractual obligation to deliver cash or another financial asset to another entity, it is considered a financial liability unless there is a predetermined or possible settlement for a fixed amount of cash in exchange of a fixed number of the Group's own equity instruments.
- Where the Group has no contractual obligation or has an unconditional right to avoid delivering cash or another financial asset in settlement of the obligation, it is considered an equity instrument.

Borrowings are classified as current liabilities unless the Group has an unconditional right to defer settlement of the liability for at least 12 months after the reporting date.

4.15.2 Measurement

Financial liabilities are initially recognised at fair value and are subsequently measured at amortised cost.

4.15.3 Derecognition and modification

Financial liabilities are derecognised when the obligation specified in the contract is discharged, cancelled, or expired.

Where the terms of a financial liability are renegotiated/modified, the Group assesses whether the renegotiation/modification results in the derecognition of that financial liability. Where the modification results in an extinguishment, the new financial liability is recognised based on fair value of its obligation. The remaining carrying amount of financial liability is derecognised. The difference as well as proceed paid is recognised as other gains (losses) in profit or loss.

Where the modification does not result in the derecognition of the financial liability, the carrying amount of the financial liability is recalculated as the present value of the renegotiated / modified contractual cash flows discounted at its original effective interest rate. The difference is recognised in other gains (losses) in profit or loss.

4.16 Borrowing cost

General and specific borrowing costs directly attributable to the acquisition, construction or production of qualifying assets (assets that take a substantial period of time to get ready for its intended use or sale) are added to the cost of those assets less investment income earned from those specific borrowings. The capitalisation of borrowing costs is ceased when substantially all the activities necessary to prepare the qualifying asset for its intended use or sale are complete.

Other borrowing costs are expensed in the period in which they are incurred.

4.17 Current and deferred income taxes

The tax expense for the period comprises current and deferred tax. Tax is recognised in profit or loss, except to the extent that it relates to items recognised in other comprehensive income or directly in equity.

Current tax

The current income tax is calculated on the basis of the tax laws enacted or substantively enacted at the end of the reporting period. Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. It establishes provisions where appropriate on the basis of amounts expected to be paid to the tax authorities.

Deferred income tax

Deferred income tax is recognised on temporary differences arising from differences between the tax base of assets and liabilities and their carrying amounts in the financial statements. However, deferred income tax is not recognised for temporary differences arise from:

- initial recognition of an asset or liability in a transaction other than a business combination that affects neither accounting nor taxable profit or loss is not recognised
- investments in subsidiaries, associates and joint arrangements where the timing of the reversal of the temporary difference is controlled by the Group and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred income tax is measured using tax rates of the period in which temporary difference is expected to be reversed, based on tax rates and laws that have been enacted or substantially enacted by the end of the reporting period.

Deferred tax assets are recognised only to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets and liabilities and when the deferred tax balances relate to the same taxation authority. Current tax assets and tax liabilities are offset where the entity has a legally enforceable right to offset and intends either to settle on a net basis, or to realise the asset and settle the liability simultaneously.

4.18 Employee benefits

The Group operates various post-employment benefits schemes. The Group has both defined benefit and defined contribution plans.

4.18.1 Defined contribution

The Group provides provident fund, which is contributed by the employees and the Group, and managed by an external fund manager in accordance with the Provident Fund Act. B.E. 2530. The Group has no legal or constructive obligations to pay further contributions once the contributions have been paid even if the fund does not hold sufficient assets to pay all employees the benefits relating to employee service in the current and prior periods. The contributions are recognised as employee benefit expense when they are due.

4.18.2 Retirement benefits

The Group provides for post-employment benefits, payable to employees under the labour laws in Thailand and country which the Group are operating. Typically, defined benefit plans define an amount of retirement benefit that an employee will receive on retirement, usually depends on one or more factors such as age, years of service and compensation.

The liability recognised in the statement of financial position in respect of defined benefit retirement plans is the present value of the defined benefit obligation at the end of the reporting period. The defined benefit obligation is calculated by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using yields on government bonds which have terms to maturity approximating the terms of the related liability that are denominated in the currency in which the benefits will be paid.

Remeasurement gains and losses arising from experience adjustments and changes in actuarial assumptions are charged or credited to equity in other comprehensive income in the period in which they arise.

Past-service costs are recognised immediately in profit or loss.

4.19 Share-based payment

The Group receives services from employees as consideration for equity instruments (options) of the Group. The fair value of the employee services received in exchange for the grant of the options is recognised as an expense. The total amount to be expensed is determined by reference to the fair value of the options granted:

- including any market performance conditions. For example, the entity's share price;
- including the impact of any non-vesting conditions. For example, the requirement for employees to save or holdings shares for a specific period of time; and
- excluding the impact of any service and non-market performance vesting conditions. For example, profitability, sales growth targets and remaining an employee of the Group over a specified time period.

Non-market performance and service conditions are included in assumptions about the number of options that are expected to vest.

At the end of each reporting period, the entity reviews the number of options that are expected to vest. It recognises the impact of the revision to original estimates (if any) in profit or loss, with a corresponding adjustment to equity.

When the options are exercised, the Group issues new shares. The proceeds received net of any directly attributable transaction costs are credited to share capital and share premium.

4.20 Provisions

4.20.1 General provisions

Provisions are recognised when the Group has a present legal or constructive obligation as a result of past events; it is probable that an outflow of resources will be required to settle the obligation; and the amount has been reliably estimated.

4.20.2 Provisions for decommissioning cost

The Group recognises provision for decommissioning costs, which are provided at the onset of completion of the project, for the estimate of the eventual costs that relate to the removal of the power and water plants. The recognised provisions for decommissioning costs are based on future removal cost estimates and incorporate many assumptions such as abandonment times and future inflation rate and discounted to present value at the discount rate estimated by the management. Those costs are included as part of the related assets.

4.21 Government grants

Government grants from the government are recognised at their fair value where there is a reasonable assurance that the grant will be received, and the Group will comply with all attached conditions.

The Group receives government grants relating to revenue as revenue from subsidy for adders in accordance with the Power Purchase Agreement with Electricity Generating Authority of Thailand and Provincial Electricity Authority. The compensations of costs are deferred and recognised in profit or loss over the period necessary to match them with the costs they are intended to compensate and are presented as revenue from subsidy for adders.

4.22 Share capital

Ordinary shares are classified as equity.

Incremental costs directly attributable to the issue of new shares or options are shown in equity as a deduction, net of tax, from the proceeds.

4.23 Revenue recognition

Revenues are recorded net of value added tax. They are recognised in accordance with the provision of goods or services provided that collectability of the consideration is probable.

Multiple element arrangements involving delivery or provision of multiple products or services are separated into individual distinct performance obligations. Total transaction price of the bundled contract is allocated to each performance obligation based on their relative standalone selling prices or estimated standalone selling prices. Each performance obligation is recognised as revenue on fulfilment of the obligation to the customer as follows:

Sales of goods

Sales are recognised at a point in time when control of the products has transferred, being when the products are delivered to the destination as agreed in the contract. The revenue is recognised based on transaction price net of output tax, rebates and discounts.

Sales of services

The Group recognised service contracts with a continuous service provision as revenue on a straight line basis over the contract term, regardless of the payment pattern.

Interest income

Interest income is recognised on an effective interest rate method.

Dividend income

Dividend income is recognised when the right to receive payment is established.

4.24 Dividend distribution

Dividend distribution to the shareholders is recognised as a liability in the Group's financial statements in the period in which the dividends are approved by the shareholders, and interim dividend are approved by the Board of Directors.

4.25 Derivatives

Derivatives accounting

Derivatives that do not qualify for hedge accounting is initially recognises at fair value on measurement of derivative. Changes in the fair value are included in gain or loss.

Fair value of derivatives is classified as a current or non-current following its remaining maturity.

4.26 Financial guarantee contracts

Financial guarantee contracts are recognised as a financial liability at the time the guarantee is issued. The liability is initially measured at fair value and subsequently at the higher of:

- the amount determined in accordance with the expected credit loss model under TFRS 9; and
- the amount initially recognised less the cumulative amount of income recognised in accordance with the principles of TFRS 15.

The fair value of financial guarantees is determined based on the present value of the difference in cash flows between a) the contractual payments required under the debt instrument; and b) the payments that would be required without the guarantee, or the estimated amount that would be payable to a third party for assuming the obligations.

Where guarantees in relation to loans or other payables of associates are provided for no compensation, the fair values are accounted for as contributions and recognised as part of the cost of the investment.

4.27 Segment reporting

Operating segments are reported in a manner consistent with the internal reporting provided to the chief operating decision-maker. The chief operating decision-maker, who is responsible for allocating resources and assessing performance of the operating segments, has been identified as the Steering Committee that makes strategic decisions.

5 Financial risk management

5.1 Financial risk

The Group exposes to a variety of financial risk: market risk (including foreign exchange risk, interest rate risk and price risk), credit risk and liquidity risk. The Group's overall risk management programme focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the Group's financial performance. The Group may consider using derivative financial instruments to hedge certain exposure.

The Group's risk management is carried out by the finance department under policies approved by the Board of Directors. The finance department identifies, evaluates and manages financial risks in close co-operation with the Group's operating units. The Board of Directors provides written principles for overall risk management, as well as policies covering specific areas, such as foreign exchange risk, interest rate risk, credit risk, use of derivative and other financial instruments as well as investment of excess liquidity.

Trading for speculative purposes is not allowed. All derivative transactions are subject to pre-approval by the respective board of each company in the Group.

5.1.1 Market risk

a) Foreign exchange risk

The Group are exposed to foreign exchange risk from future commercial transactions and net monetary assets and liabilities that are denominated in a currency that is not the functional currency of each entity.

Financial instruments using for risk management

The Group considers use hedge instrument to reduce the fluctuation of exchange rate by entering into foreign currency forward contracts if the Group assess that there is a significant foreign currency exposure. The Group's policy, the critical term of the forward contracts must align with hedge items.

Exposure

The Group's and the Company's exposure to foreign currency risk which is not a functional currency at the end of the reporting period, expressed in Baht are as follows:

As at 31 December	Consolidated financial statements					
	2022			2021		
	US Dollar Million Baht	Taiwan Dollar Million Baht	Chinese Yuan Million Baht	US Dollar Million Baht	Taiwan Dollar Million Baht	Chinese Yuan Million Baht
Cash and cash equivalents	36	45	-	28	23	-
Trade and other accounts receivable, net	45	2	-	73	-	-
Short-term loans from financial institutions	179	130	-	4	-	-
Trade and other accounts payable	19	32	841	83	-	-

As at 31 December	Separate financial statements			
	2022		2021	
	US Dollar Million Baht	Taiwan Dollar Million Baht	US Dollar Million Baht	Taiwan Dollar Million Baht
Cash and cash equivalents	-	20	7	23
Short-term loans to related parties	829	-	-	-

Sensitivity

As shown in the table above, the Group is primarily exposed to changes in Baht and US Dollar, Baht and Taiwan Dollar and Baht and Chinese Yuan exchange rate. The sensitivity of profit or loss to changes in the exchange rates arises mainly from financial assets and financial liabilities denominated in US Dollar, Taiwan Dollar and Chinese Yuan. The impacts of movement in exchange rate on Group's net profit are as follows:

	Consolidated financial statements		Separate financial statements	
	2022	2021	2022	2021
	Million Baht	Million Baht	Million Baht	Million Baht
US Dollar to Baht exchange rate				
- Increase 10%*	71	19	83	1
- Decrease 10%*	(71)	(19)	(83)	(1)
Taiwan Dollar to Baht exchange rate				
- Increase 10%*	(12)	2	2	2
- Decrease 10%*	12	(2)	(2)	(2)
Chinese Yuan to Baht exchange rate				
- Increase 10%*	(84)	-	-	-
- Decrease 10%*	84	-	-	-

* Holding all other variables constant

b) Cash flows and interest rate risk

The Group manages interest rate risk by closely monitoring the movement of interest rates in the market. The Group allocates its debt portfolio in either short-term and long-term borrowings with fixed and floating interest rates corresponding to their types of investments. The Group partially borrows and issues debentures with fixed interest rate to specify a certain amount of future cash outflows of the Group.

The interest rate exposure on the long-term loans from financial institutions and debentures of the Group is as follows:

	Consolidated financial statements		Separate financial statements	
	2022	2021	2022	2021
	Million Baht	Million Baht	Million Baht	Million Baht
Long-term loans from financial institutions, net				
- at fixed rates	2,864	3,941	2,846	3,382
- at floating rates	21,583	25,222	2,398	1,998
Total long-term loans from financial institutions, net	24,447	29,163	5,244	5,380
Debenture, net				
- at fixed rates	15,291	12,194	15,291	12,194
Total debenture, net	15,291	12,194	15,291	12,194

An analysis by maturities is provided in Note 5.1.3.

Sensitivity

Profit or loss is sensitive to higher or lower interest income from loans to related parties, and interest expenses from borrowings as a result of changes in interest rates. The sensitivity of profit or loss to changes in the interest rates are as follows:

	Consolidated financial statements		Separate financial statements	
	2022	2021	2022	2021
	Million Baht	Million Baht	Million Baht	Million Baht
Interest rate - increase 1%*	(250)	(101)	(29)	(3)
Interest rate - decrease 1%*	250	101	29	3

* Holding all other variables constant

Effect of IBOR reform

In 2022, the Group established an IBOR transition plan to amend existing contracts and agreements that reference THBFIX with maturity after 30 June 2023 to other reference rates, or include fallback provisions. There have been general communications with debt counterparties, but specific changes required by the IBOR reform haven't been agreed on yet. The Group plans to complete the transition before the THBFIX cessation date.

For the year ended 31 December 2022, the Group only applied the practical expedients offered under Phase 2 of the amendments to Baht 11,934 million of the modified long-term borrowings measured at amortised cost. The modified interest rate benchmark of these amended contracts will be effective after 1 January 2023 (Note 27.1).

The following table contains details of all the financial instruments the Group holds as at 31 December 2022 which reference THBFIX and have not transitioned to an alternative interest rate benchmark yet.

	Consolidated financial statements	Separate financial statements
	THBFIX	THBFIX
	Million Baht	Million Baht
Non-derivative assets and liabilities measured at amortised cost		
- Long term loans to related parties	-	1,036
- Long term loans from financial institutions	(6,030)	-
	(6,030)	1,036

The Group does not apply hedge accounting.

c) Price risk

The Group's exposures to commodity price risk arises from:

- Crude palm oil that the Group uses as raw materials for manufacturing and distributing biodiesel business. The Group manages its risk by closely monitoring the trend of crude palm oil price for planning the procurement of crude palm oil at reasonable volume and price. In addition, the Group adjusts the selling price of biodiesel to align with changes in crude palm oil market price.
- Industrial metal supplies which are steel, aluminum and lithium-ion that the Group uses as raw materials for manufacturing and distributing battery and electric vehicles. For raw material procurement planning, the Group manages its risk by closely monitoring and comparing the trend of industrial metal supply market price in both domestic and overseas markets. In addition, the Group focused on raw material cost management to achieve economic of scale and closely monitors government's subsidy policies.

5.1.2 Credit risk

a) Risk management

The Group has no material credit risks for cash and deposits with financial institutions. This is because the Group uses quality financial institutions for cash and deposits. To reduce potential risks for deposits with financial institutions, the Group has laid down a policy to limit the transactions to be made with a particular financial institution and to invest surplus only in low-risk investments. In its experience, the Group has never suffered any losses from cash and deposits. For trade accounts receivable, the Group sets up policies to ensure that sales of biodiesel, batter and electric vehicles are made to customer with appropriate credit profile. For sales of electricity, the Group's sales are made to state-owned enterprises under the terms and conditions of the long-term Power Purchase Agreements.

b) Impairment of financial assets

The Group and the Company has financial assets that are subject to the expected credit loss model:

- Cash and cash equivalents
- Trade and other accounts receivable
- Instalment receivables – related party
- Finance lease receivables
- Deposits at financial institutions used as collateral
- Loan to other parties and related parties

The management considered the amount of those expected credit losses of financial assets are immaterial.

5.1.3 Liquidity risk

a) Risk management

Prudent liquidity risk management implies maintaining sufficient cash and marketable securities and the availability of funding through an adequate amount of committed credit facilities to meet obligations when due and to close out market positions. At the end of reporting period, the Group has available deposits at financial institutions of Baht 3,209 million (2021: Baht 2,926 million) for purpose of Group's liquidity management. The Group's finance department maintains flexibility in funding by maintaining availability under committed credit lines due to the dynamic nature of the underlying business. The information of available credit facilities is provided in Note 25, Note 27.1 and Note 28.

b) Maturity of financial liabilities

The table below analysed the maturity of financial liabilities grouping based on their contractual maturity. The amounts disclosed were the contractual undiscounted cash flow.

Maturity of financial liabilities as at 31 December 2022	Consolidated financial statements				
	Within 1 year Million Baht	1-5 years Million Baht	Over 5 years Million Baht	Total Million Baht	Carrying amount Million Baht
Short-term loans from financial institutions	10,806	-	-	10,806	10,806
Short-term loans from other parties and related parties	419	-	-	419	419
Trade and other accounts payable and construction payables	6,594	-	-	6,594	6,594
Lease liabilities	87	433	1,771	2,291	1,681
Long-term loans from financial institutions and related interests	7,943	14,455	4,702	27,100	24,447
Debentures and related interests	1,569	8,501	7,496	17,566	15,291
Total	27,418	23,389	13,969	64,776	59,238

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	Consolidated financial statements				
	Within 1 year Million Baht	1-5 years Million Baht	Over 5 years Million Baht	Total Million Baht	Carrying amount Million Baht
Maturity of financial liabilities as at 31 December 2021					
Short-term loans from financial institutions	1,618	-	-	1,618	1,618
Short-term loans from other parties and related parties	259	-	-	259	259
Trade and other accounts payable and construction payables	3,056	-	-	3,056	3,056
Lease liabilities	80	362	2,005	2,447	1,742
Long-term loans from financial institutions and related interests	6,316	20,021	5,080	31,417	29,176
Debentures and related interests	2,353	7,238	4,371	13,962	12,257
Total	13,682	27,621	11,456	52,759	48,108
	Separate financial statements				
	Within 1 year Million Baht	1-5 years Million Baht	Over 5 years Million Baht	Total Million Baht	Carrying amount Million Baht
Maturity of financial liabilities as at 31 December 2022					
Short-term loans from financial institutions	6,834	-	-	6,834	6,834
Short-term loans from related parties	6,233	-	-	6,233	6,233
Trade and other accounts payable	411	-	-	411	411
Lease liabilities	1	112	202	315	286
Long-term loans from financial institutions and related interests	1,417	4,229	-	5,646	5,244
Debentures and related interests	1,569	8,501	7,496	17,566	15,291
Total	16,465	12,842	7,698	37,005	34,299
	Separate financial statements				
	Within 1 year Million Baht	1-5 years Million Baht	Over 5 years Million Baht	Total Million Baht	Carrying amount Million Baht
Maturity of financial liabilities as at 31 December 2021					
Short-term loans from financial institutions	884	-	-	884	884
Short-term loans from related parties	5,273	-	-	5,273	5,273
Trade and other accounts payable	643	-	-	643	643
Lease liabilities	4	86	265	355	288
Long-term loans from financial institutions and related interests	1,097	4,764	-	5,861	5,380
Debentures and related interests	2,353	7,238	4,371	13,962	12,257
Total	10,254	12,088	4,636	26,978	24,725

5.2 Capital management

Risk management

The Group's objectives when managing capital are to safeguard their ability to continue as a going concern, to provide returns for shareholders and benefits for other stakeholders and maintain an optimal capital structure to reduce the cost of capital.

As at 31 December, net debt to equity ratios of the Group are as follows:

	Consolidated financial statements	
	2022	2021
	Million Baht	Million Baht
Net debt	50,963	43,050
Equity (including non-controlling interests)	41,304	35,074
Net debt to equity ratio	1.23	1.23

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6 Fair value

The following table presented financial assets and liabilities that are measured at fair value in each level including fair value of financial assets and liabilities. The table exclude financial assets and liabilities measured at amortised cost where their carrying value approximated fair value.

		Consolidated financial statements				
	Fair value level	Fair value through profit or loss (FVPL) Million Baht	Fair value through other comprehensive income (FVOCI) Million Baht	Amortised cost Million Baht	carrying amount Million Baht	Total Fair value Million Baht
As at 31 December 2022						
Assets						
Financial assets						
	3	-	5,161	-		5,161
	2	-	-	65		65
Total assets						
		-	5,161	65		5,226
Liabilities						
Long-term loans from financial institutions, net						
	2	-	-	2,864		2,864
	2	-	-	15,291		15,291
Total liabilities						
		-	-	18,155		18,155
						18,275

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		Separate financial statements				
		Fair value through profit or loss (FVPL)	Fair value through other comprehensive income (FVOCI)	Amortised cost	carrying amount	Fair value
		Million Baht	Million Baht	Million Baht	Million Baht	Million Baht
As at 31 December 2022						
Assets						
Financial assets						
- Investment in an equity instrument			5,119	-	5,119	5,119
Long-term loans to related parties		-	-	6,401	6,401	6,517
Total assets		-	5,119	6,401	11,520	11,636
Liabilities						
Long-term loans from financial institutions, net		-	-	2,846	2,846	2,870
Debentures, net		-	-	15,291	15,291	15,388
Total liabilities		-	-	18,137	18,137	18,258

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		Consolidated financial statements				
		Fair value through profit or loss (FVPL) Million Baht	Fair value through other comprehensive income (FVOCI) Million Baht	Amortised cost Million Baht	carrying amount Million Baht	Total Fair value Million Baht
As at 31 December 2021		Fair value level				
Assets						
Financial assets						
- Investments in equity instruments		3	-	5,023	-	5,023
Long-term loans to other parties		2	-	-	80	80
Total assets			-	5,023	80	5,103
Liabilities						
Long-term loans from financial institutions, net		2	-	-	3,941	3,941
Debentures, net		2	-	-	12,194	12,194
Total liabilities			-	-	16,135	16,135
						5,105
						5,023
						82
						4,005
						12,315
						16,320

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		Separate financial statements				
		Fair value through profit or loss (FVPL)	Fair value through other comprehensive income (FVOCI)	Amortised cost	carrying amount	Fair value
		Million Baht	Million Baht	Million Baht	Million Baht	Million Baht
		Fair value level			Total	
As at 31 December 2021						
Assets						
Financial assets						
- Investment in an equity instrument	3	-	4,968	-	4,968	4,968
Long-term loans to related parties	2	-	-	5,508	5,508	5,862
Total assets		-	4,968	5,508	10,476	10,830
Liabilities						
Long-term loans from financial institutions, net	2	-	-	3,390	3,390	3,455
Debentures, net	2	-	-	12,194	12,194	12,315
Total liabilities		-	-	15,584	15,584	15,770

Fair value of following financial assets and liabilities measured at amortised cost where their carrying value approximated fair value are as follows:

Consolidated financial statements	Separate financial statements
Financial assets	Financial assets
<ul style="list-style-type: none"> - Cash and cash equivalents - Deposits at financial institutions used as collateral - Trade accounts receivable, net - Instalment receivable – related party, net - Finance lease receivable, net - Other accounts receivable, net - Short-term loans to other parties, net 	<ul style="list-style-type: none"> - Cash and cash equivalents - Deposits at financial institutions used as collateral - Trade accounts receivable, net - Other accounts receivable, net - Short-term loans to related parties, net - Long-term loans to related parties (floating interest rate)
Financial liabilities	Financial liabilities
<ul style="list-style-type: none"> - Short-term loans from financial institutions, net - Trade accounts payable - Other accounts payable - Short-term loan from other parties - Construction payables and payables for purchase of assets - Long-term loans from financial institutions, net (floating interest rate) 	<ul style="list-style-type: none"> - Short-term loans from financial institutions, net - Trade accounts payable - Other accounts payable - Short-term loans from related parties - Long-term loans from related parties (floating interest rate) - Long-term loans from financial institutions, net (floating interest rate)

6.1 Valuation technique used to measure fair value level 2

Valuation technique used to measure fair value level 2 of derivatives is fair value of loans and debentures are calculated from the net present value of future cash flows discounted by market interest rates.

6.2 Valuation technique used to measure fair value level 3

The Group's valuation technique used to measure fair value level 3 is discounted cash flows for measurement of financial assets measured at fair value to other comprehensive income.

Change in financial assets that are measured by fair value level 3 through other comprehensive income are disclosed in Note 14.

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The following table summarises the quantitative information about the significant unobservable inputs used in level 3 fair value measurements.

	Consolidated financial statements				
	Fair value		Unobservable inputs	Range of inputs	
	31 December 2022	31 December 2021		31 December 2022	31 December 2021
	Million Baht	Million Baht			
Financial assets measured at fair value through other comprehensive income	5,161	5,023	Risk-adjusted discount rate	9.02%	8.53%
			Growth rate of land price	10.05%	10.05%
	Separate financial statements				
	Fair value		Unobservable inputs	Range of inputs	
	31 December 2022	31 December 2021		31 December 2022	31 December 2021
	Million Baht	Million Baht			
Financial assets measured at fair value through other comprehensive income	5,119	4,968	Risk-adjusted discount rate	9.02%	8.53%
			Growth rate of land price	10.05%	10.05%

Relationships of unobservable inputs to fair value are shown as follows:

Consolidated financial statements				
	Unobservable inputs	Movement	Change in fair value	
			Increase in assumptions	Decrease in assumptions
			31 December 2022	31 December 2022
Financial assets measured at fair value through other comprehensive income	Risk-adjusted discount rate	1%	Decreased by Baht 747 million	Increased by Baht 967 million
	Growth rate of land price	1%	Increased by Baht 944 million	Decreased by Baht 725 million
Separate financial statements				
	Unobservable inputs	Movement	Change in fair value	
			Increase in assumptions	Decrease in assumptions
			31 December 2022	31 December 2022
Financial assets measured at fair value through other comprehensive income	Risk-adjusted discount rate	1%	Decreased by Baht 747 million	Increased by Baht 967 million
	Growth rate of land price	1%	Increased by Baht 944 million	Decreased by Baht 725 million

The Group's valuation processes

The accounting and finance teams discuss valuation processes and results at least every quarter.

Significant unobservable input of fair value hierarchy level 3 is risk adjusted discount rate. It is estimated based on public companies' weighted average cost of capital that, in opinion of the Group, is in a comparable nature of business and financial position with the counterparty in the contract. The growth rate of land price is based on land price index that, in opinion of the Group, is in a comparable location and characteristic with the Group's investment.

7 Critical accounting estimates and judgements

Estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances:

Impairment of goodwill

The Group tests goodwill impairment annually and whenever there is an indicator of impairment. The recoverable amounts of cash-generating units have been determined based on value-in-use calculations. These calculations use cash flow projections based on financial budget covering useful lives of assets used in developing, manufacturing and distributing battery business incorporated in the Republic of China (Taiwan) and palm crushing mills and biomass power plants business as disclosed in Note 21.

Fair value measurement of equity instrument

Fair value of equity instrument which is not trade in the active market is measured by valuation technique. The Group uses judgement to select a variety of methods and make assumptions that are mainly based on market conditions existing at the end of each reporting period. Details of key assumptions used are included in Note 6.

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8 Segment information - Consolidated financial statements

The Group has five reportable segments which comprises of manufacturing and distributing crude palm oil, biodiesel products, and pure glycerine products, manufacturing and distributing electricity from solar, wind power and biomass, consulting in the project regarding alternative electric energy, manufacturing and distributing electric vehicles, manufacturing and distributing battery and head office and others. The chief operating decision-maker evaluates the segment's performance by using profit before income tax which is measured in the same basis as profit before income tax in the financial statements.

	Unit: Million Baht															
	Consolidated financial statements															
	For the year ended 31 December															
	Manufacturing and distributing crude palm oil, biodiesel products and pure glycerine products		Manufacturing and distributing electricity from solar and wind power and biomass		Consulting in the project regarding alternative electric energy		Manufacturing and distributing electric vehicles		Manufacturing and distributing battery		Head office and others		Intercompany Elimination		Total	
	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021
Segment revenue	7,422	8,226	11,181	10,933	191	181	6,475	1,783	2,749	569	418	19	(3,091)	(1,537)	25,345	20,174
Other segment revenue	-	-	-	-	-	-	-	1	-	294	7,673	6,015	(7,318)	(5,926)	355	384
Segment expenses	(7,797)	(8,047)	(4,318)	(4,379)	(183)	(346)	(5,947)	(1,834)	(3,563)	(1,254)	(2,590)	(1,440)	4,185	2,661	(20,213)	(14,639)
Share of gain (loss) from investments in associates and joint ventures	-	-	15	10	-	-	89	27	(13)	(8)	126	(16)	-	-	217	13
Gains from disposal of investments in indirect subsidiaries	-	-	-	-	-	-	-	-	-	-	1,840	-	-	-	1,840	-
Gains from disposal of an investment in an associate	-	-	-	-	-	-	-	-	-	-	7	-	-	-	7	-
Profit (loss) before income tax	(375)	179	6,878	6,564	8	(165)	617	(23)	(827)	(399)	7,474	4,578	(6,224)	(4,802)	7,551	5,932
Income tax															(145)	(3)
Profit for the year															7,406	5,929
Timing of revenue recognition																
At a point in time	7,422	8,226	11,181	10,933	-	-	6,127	1,782	2,749	863	7,988	6,031	(10,409)	(7,463)	25,058	20,372
Over time	-	-	-	-	191	181	348	2	-	-	103	3	-	-	642	186
Total segment revenue	7,422	8,226	11,181	10,933	191	181	6,475	1,784	2,749	863	8,091	6,034	(10,409)	(7,463)	25,700	20,558

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During the year ended 31 December 2022, the chief operating decision-maker of the Group considered changing operating segments by disaggregating manufacturing and distributing electric vehicles segment and battery segment from the head office and others segment. The Group reclassified comparative figures to confirm with changes in operating segments in the current year.

	Unit: Million Baht					
	Separate financial statements					
	For the year ended 31 December					
	Manufacturing and distributing crude palm oil, biodiesel products and pure glycerine products		Head office and others		Total	
	2022	2021	2022	2021	2022	2021
Timing of revenue recognition						
At a point in time	4,825	6,142	3,364	3,363	8,189	9,505
Over time	-	-	-	-	-	-
Total segment revenue	4,825	6,142	3,364	3,363	8,189	9,505

The Group generates revenue from sales and services by utilising the majority of assets located in Thailand and overseas. The proportions are shown as follows:

		Consolidated financial statements	
		Proportion of sales by region	
For the year ended 31 December		2022	2021
		%	%
Thailand		99	99
Overseas		1	1

9 Cash and cash equivalents

As at 31 December	Consolidated financial statements		Separate financial statements	
	2022	2021	2022	2021
	Baht'000	Baht'000	Baht'000	Baht'000
Cash on hand	2,107	1,507	37	60
Cash at banks in current accounts	40,518	103,766	28,931	37,113
Cash at banks in savings accounts	3,167,962	2,821,699	221,428	625,262
Short-term bank deposits	145	-	-	-
Total cash and cash equivalents	3,210,732	2,926,972	250,396	662,435

As at 31 December 2022, cash and cash equivalents mainly comprised of cash at savings accounts with the banks. The interest rates were 0.15% - 0.85% per annum (2021: 0.05% - 0.25% per annum).

10 Deposits at financial institutions used as collateral

As at 31 December 2022, deposits at financial institutions of the Group and the Company amounting to Baht 130 million and Baht 0.02 million, respectively (2021: Deposits at financial institutions of the Group and the Company amounting to Baht 114 million and Baht 9 million, respectively) are pledged as collateral for issuing the letters of guarantee by commercial banks and long-term loans from financial institutions. The deposits at financial institutions of the Group amounting to Taiwan Dollar 11 million or equivalent to Baht 12 million (2021: Taiwan Dollar 14 million or equivalent to Baht 17 million) are pledged as collateral for short-term loans from financial institutions. The interest rates were 0.20% - 0.82% per annum (2021: 0.05% - 2.11% per annum).

11 Trade accounts receivable, net

Trade accounts receivable, net as at 31 December can be analysed by aging as follows:

As at 31 December	Consolidated financial statements		Separate financial statements	
	2022 Baht'000	2021 Baht'000	2022 Baht'000	2021 Baht'000
Other parties				
Not yet due	2,845,932	2,834,648	201,930	532,213
Overdue below 3 months	15,190	854,268	-	-
Overdue 3 - 6 months	20,276	84,487	-	-
Overdue 6 - 12 months	48	11,290	-	-
Overdue more than 12 months	8,379	-	-	-
<u>Less</u> Allowance for impairment losses	(12,237)	(94,326)	-	-
Total trade accounts receivable - other parties, net	2,877,588	3,690,367	201,930	532,213
Related parties				
Not yet due	2,228,656	-	-	-
Overdue below 3 months	1,079,959	-	-	-
Overdue 3 - 6 months	143,327	-	-	-
Overdue 6 - 12 months	-	-	-	-
Overdue more than 12 months	-	-	-	-
<u>Less</u> Allowance for impairment losses	-	-	-	-
Total trade accounts receivable - related parties	3,451,942	-	-	-
Total trade accounts receivable, net	6,329,530	3,690,367	201,930	532,213

Realised allowance for impairment losses is from trade accounts receivable which are overdue more than 6 months, or when the Group expects the amount will not be received.

12 Finance lease receivable, net

As at 31 December	Consolidated financial statements			
	Lease payment to be received		Present value of net investment in lease	
	2022 Baht'000	2021 Baht'000	2022 Baht'000	2021 Baht'000
Less than 1 year	1,010,054	118,650	774,414	98,667
Later than 1 year to 5 years	4,692,725	429,783	4,193,176	371,220
Later than 5 years	14,248	138,598	13,334	133,192
	5,717,027	687,031	4,980,924	603,079
Less Deferred finance income	(736,103)	(83,952)		
Present value of net investment in lease	4,980,924	603,079		

Finance lease receivable can be analysed as follows:

As at 31 December	Consolidated financial statements	
	2022 Baht'000	2021 Baht'000
- Current portion of finance lease receivable, net	774,414	98,667
- Non-current portion of finance lease receivable, net	4,206,510	504,412
Finance lease receivable, net	4,980,924	603,079

During 2022, the Group and a third party entered into electric bus hire purchase contracts totalling Baht 4,853 million in which the Group are lessors. The contract term are 4 years and interest rates are between 5.14% and 5.82% per annum. The payment schedules are made on a monthly basis.

13 Other accounts receivable, net

As at 31 December	Consolidated financial statements		Separate financial statements	
	2022 Baht'000	2021 Baht'000	2022 Baht'000	2021 Baht'000
Other accounts receivable				
- third parties	85,218	64,545	37,217	29,612
- related parties	336	-	759,694	522,880
Accounts receivable from sales of machines and equipment	266,566	1,570,855	-	-
Prepaid expenses	113,555	79,631	19,635	14,029
Revenue department receivables	886,768	387,344	10,851	223
Undue input tax	50,265	29,657	2,955	1,663
Deposits for goods	1,140,038	508,925	-	-
Advance payments	85,332	79,058	12,111	11,000
Other	546	659	463	463
Less Allowance for impairment losses	(1,652)	(1,025)	(1,048)	(1,048)
Total other accounts receivable, net	2,626,972	2,719,649	841,878	578,822

14 Financial assets measured at fair value through other comprehensive income

	Consolidated financial statements		Separate financial statements	
	2022 Baht'000	2021 Baht'000	2022 Baht'000	2021 Baht'000
As at 31 December				
Financial assets - investments in unquoted equity instruments	5,160,577	5,022,697	5,119,409	4,968,127
Total financial assets measured at fair value through other comprehensive income	5,160,577	5,022,697	5,119,409	4,968,127
	Consolidated financial statements		Separate financial statements	
	2022 Baht'000	2021 Baht'000	2022 Baht'000	2021 Baht'000
For the year ended 31 December				
Opening net book value	5,022,697	5,526,612	4,968,127	5,479,324
Changes in fair value of equity investments at fair value through other comprehensive income	141,161	(510,152)	151,282	(511,197)
Currency translation differences	(3,281)	6,237	-	-
Closing net book value	5,160,577	5,022,697	5,119,409	4,968,127

15 Inventories, net

	Consolidated financial statements		Separate financial statements	
	2022 Baht'000	2021 Baht'000	2022 Baht'000	2021 Baht'000
As at 31 December				
Raw materials	2,036,485	654,365	60,106	69,301
Work in process	2,403,461	319,336	85,996	91,119
Finished goods	747,062	426,294	75,555	46,297
Spare parts and supplies	391,046	148,161	17,205	16,166
	5,578,054	1,548,156	238,862	222,883
<u>Less</u> Allowance for decrease in value of raw materials	(16,945)	(24,183)	(393)	(7,427)
Allowance for decrease in value of works in process	(7,723)	(7,663)	-	-
Allowance for decrease in value of finished goods	(35,734)	(31,929)	-	-
Allowance for decrease in value of spare parts and supplies	(1,235)	(1,235)	(1,235)	(1,235)
Total inventories, net	5,516,417	1,483,146	237,234	214,221

16 Non-current assets held for sale

As at 31 December 2022, the Group classified solar panels of Baht 3,919 million (2021: Baht 714 million) as non-current assets held for sale because the subsidiaries and a third party entered into solar cell sales and purchases agreement and the management expected to sell the said assets within 2023. As a result, the Group measured the assets at the lower of carrying amount and fair value less costs to sell. There was no impairment loss of assets occurred from the measurement.

17 Investments in subsidiaries, associates and joint ventures

As at 31 December	Consolidated financial statements		Separate financial statements	
	2022 Baht'000	2021 Baht'000	2022 Baht'000	2021 Baht'000
Investments in subsidiaries (Note 17.2)	-	-	34,235,628	29,483,664
Investments in associates (Note 17.3)	8,550,914	1,512,973	-	-
Investment in joint ventures (Note 17.4)	239,547	100,948	45,471	45,471
Total investments in subsidiaries, associates and joint ventures	8,790,461	1,613,921	34,281,099	29,529,135

17.1 The movement of the investments in subsidiaries, associates and joint ventures can be analysed as follows:

	Consolidated financial statements	
	2022 Baht'000	2021 Baht'000
For the years ended 31 December		
Opening net book value	1,613,921	1,529,472
Acquisition of investments in associates	6,997,030	21,990
Acquisition of investments in joint ventures	2,500	20,000
Calling for additional capital contributions of a joint venture	7,000	15,000
Increase in an investment in an associate from business combination	26,860	-
Decrease in an investment in an associate from business disposal	(10,167)	-
Dividend received from an associate	(36,750)	(1,460)
Share of gains from investments in associates and joint ventures, net	217,643	13,546
Share of other comprehensive income (expense) from investments in associates and joint ventures, net	(10,423)	7,833
Disposal of an investment in an associate	(13,870)	-
Currency translation differences	(3,283)	7,540
Closing net book value	8,790,461	1,613,921
	Separate financial statements	
	2022 Baht'000	2021 Baht'000
For the years ended 31 December		
Opening net book value	29,529,135	27,764,593
Acquisition of investments in subsidiaries	64	-
Increase in share capital of subsidiaries	4,751,900	1,764,542
Closing net book value	34,281,099	29,529,135

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17.1.1 The movement of the investments in subsidiaries during the year ended 31 December 2022 were as follows:

Direct subsidiaries

Capital increase of subsidiaries

Subsidiaries	Date of annual general meeting and extra ordinary general meeting of subsidiaries	Nature of capital increasing	Original registered capital (Million Baht)	Newly registered capital (Million Baht)	Issuing share amount (Million share)	Par value (Baht per share)	Called paid-up value (Baht per share)	Total (Million Baht)
EA Mobility Holding Co., Ltd.	16 February 2022	Newly-issued	3,348	6,848	350	10.00	10.00	3,500
	7 June 2022	Newly-issued	6,848	6,933	8.50	10.00	10.00	85
	30 August 2022	Newly-issued	6,933	7,963	103	10.00	10.00	1,030
EA Futura Co., Ltd.	30 May 2022	Newly-issued	0.10	10	1	10.00	10.00	10
(Former EA Mobility Rental Co., Ltd.)	10 October 2022	Newly-issued	10	180	17	10.00	2.50	43
Energy Beyond Research Co., Ltd.	30 September 2022	Newly-issued	20	180	16	10.00	2.50	40
Thepsathit Wind Farm Co., Ltd.	30 September 2022	Newly-issued	2	180	178	100.00	25.00	44
								4,752

Acquisition of an investment from a subsidiary

EA Futura Co., Ltd. (Former EA Mobility Rental Co., Ltd.)

On 14 May 2022, the Company acquired 9,997 ordinary shares of EA Mobility Rental Co., Ltd. from EA Mobility Holding Co., Ltd., a direct subsidiary of the Company, at Baht 6.40 per share, totalling Baht 0.06 million. As a result, the Company holds 99.99% of the issued and paid-up ordinary share capital of the EA Mobility Rental Co., Ltd. As a result, EA Mobility Rental Co., Ltd. has become the Company's direct subsidiary.

On 30 May 2022, EA Mobility Rental Co., Ltd., a direct subsidiary, registered a new name as EA Futura Co., Ltd., with the Department of Business Development.

Indirect subsidiaries

Acquisition of an investment in an indirect subsidiary

Smart Bus Co., Ltd.

On 18 March 2022, the Group acquired ordinary shares of Smart Bus Co., Ltd. from its former shareholder according to a share purchase agreement and a shareholder agreement with the former shareholder. The Group made a payment for 9,999,998 ordinary shares at Baht 327.91 per share, totalling Baht 3,279 million. As a result, the Group holds 99.99% of the issued and paid-up ordinary share capital. Smart Bus Co., Ltd. engages in the business of public transit bus service.

Detail of consideration paid at the acquisition date were as follows:

	Consolidated financial statements As at acquisition date Baht'000
Cash	3,279,171
Purchase consideration	3,279,171

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Details of estimated fair value of the net assets acquired recognised at the acquisition date were as follows:

	Consolidated financial statements As at acquisition date Baht'000
Cash and cash equivalents	63,903
Other accounts receivable, net	15,704
Short-term loans to a related party, net	7,350
Investment in an associate	26,860
Property, plant and equipment, net	1,475,923
Intangible assets, net	2,034,976
Right-of-use assets, net	61,796
Other non-current assets	46,431
Trade and other accounts payable	(130,704)
Short-term loans from other parties	(15,790)
Lease liabilities, net	(61,878)
Deferred tax liabilities, net	(287,603)
Retirement benefit obligation	(6,738)
Other liabilities	(32)
Net identifiable assets	3,230,198
<u>Less</u> Non-controlling interests	(1)
Goodwill	48,974
Purchase consideration	3,279,171

Revenue from services and net loss contributed by Smart Bus Co., Ltd. since the date of the Group obtained control until the date of losing control (as described in the disposal of an investment in an indirect subsidiary section in relation to E Transport Holding Co., Ltd.) which included in the consolidated statement of comprehensive income for the year ended 31 December 2022 were Baht 285 million and Baht 141 million, respectively.

Disposal of investments in indirect subsidiaries

EV Now Co., Ltd.

On 9 February 2022, the Group disposed its entire shareholding in EV Now Co., Ltd. to NEX Point PCL at the amount of Baht 28 million. During the year, the Group received a payment for this in full and recognised gains on disposal of investment of Baht 2 million in the consolidated statement of comprehensive income.

E Transport Holding Co., Ltd.

On 13 September 2022, the Group processed the Entire Business Transfer of E Transport Holding Co., Ltd. including investments in 1) Chaophraya River Line Co., Ltd. 2) E Smart Transport Co., Ltd. and 3) Smart Bus Co., Ltd. and its subsidiaries, to Thai Smile Bus Co., Ltd., an indirect associate of Beyond Securities PCL.

Details of the Entire Business Transfer were as follows:

	Consolidated financial statements Baht'000
Consideration received from disposal of businesses	6,000,000
<u>Less</u> cash and cash equivalent of businesses on disposal date	(149,227)
Consideration received from disposal of businesses, net	5,850,773
<u>Less</u> carrying amount of net asset sold	(4,012,800)
<u>Less</u> non-controlling interest	(60)
Gain on disposal of businesses	1,837,913

Book value of assets and liabilities as at transferring date were as follows:

	Consolidated financial statements Baht'000
Assets	
Property, plant and equipment, net	2,342,764
Intangible assets, net	1,940,172
Right-of-use assets, net	109,280
Goodwill	54,557
Other assets	118,630
Total assets	4,565,403
Liabilities	
Lease liabilities, net	(95,144)
Deferred tax liabilities, net	(283,900)
Other liabilities	(173,559)
Total liabilities	(552,603)
Net assets	4,012,800

17.1.2 The significant movement of the investments in associates during the year ended 31 December 2022 were as follows:

Associates held by the Group

Beyond Securities PCL

On 13 September 2022, the Group acquired newly issued ordinary shares of Beyond Securities PCL through a private placement for 990,800,000 shares, at Baht 7.062 per share. The Group made a payment for the solid shares totalling Baht 6,997 million after the process of increasing the authorised share capital. As a result, the Group holds 23.63% of issued and paid-up ordinary shares. Beyond Securities PCL engages in the business of securities brokerage, investment consulting, and investing in other businesses.

Details of consideration paid at acquisition date were as follows:

	Consolidated financial statements As at acquisition date Baht'000
Purchase consideration	6,997,030
Book value of the net assets under interest acquired	2,862,203
Exceed of acquisition cost over net assets acquired	4,134,827

As at 31 December 2022, the Group is in the process of determining fair value of the net identifiable assets and reviewing purchase price allocation (PPA). Therefore, any differences between the acquisition cost and net assets' carrying value are subjected to further adjustments depending on the determination of fair value and the results of the PPA. The Group expected to finalise its fair value calculation within 12 months from the acquisition date of the investment in such associate.

CSBC Power Technology Co., Ltd.

During the year ended 31 December 2022, the Group disposed its entire shareholding in CSBC Power Technology Co., Ltd. to the other shareholders in the amount of Taiwan Dollar 18 million or equivalent to Baht 21 million. The Group received payment for this in full. Consequently, the Group recognised a net gain on disposal of its investment in an associate, under the equity method, of Taiwan Dollar 6 million or equivalent to Baht 7 million in other income of the consolidated statement of comprehensive income for the year ended 31 December 2022.

17.1.3 The significant movement of the investment in a joint venture during the year ended 31 December 2022 were as follows:

Joint venture held by the Group

Ranong Clean 2021 Co., Ltd.

On 1 March 2022, Ranong Clean 2021 Co., Ltd. called for additional payment of unpaid capital at Baht 14 per share for ordinary shares of 500,000 shares, totalling Baht 7 million. The Group made payment for this in full during the period.

Agro Clean Co., Ltd.

On 1 September 2022, the Group and a private company jointly incorporated Agro Clean Co., Ltd. The Group made payment for 249,998 shares at Baht 10 per share, totalling Baht 2 million. As a result, the Group holds 49.99% of the issued and paid-up ordinary shares. Agro Clean Co., Ltd. engages in the business of export of agricultural products.

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17.2 Investments in subsidiaries

	Business	Consolidated and separate financial statements									
		Portion of ordinary shares held by the Company		Portion of ordinary shares held by the subsidiaries		Cost method		Dividend for the year			
		31 December 2022	31 December 2021	31 December 2022	31 December 2021	31 December 2022	31 December 2021	31 December 2022	31 December 2021	Baht'000	Baht'000
		%	%	%	%	Baht'000	Baht'000	Baht'000	Baht'000		
The details of direct subsidiaries incorporated in Thailand											
Surachai (1997) Co., Ltd.	Investing in manufacturing and distributing electricity from solar energy business	99.90	99.90	-	-	231,550	231,550	-	-	-	-
EA Solar Co., Ltd.	Manufacturing and distributing electricity from solar energy	49.00	49.00	51.00	51.00	313,030	313,030	150,570	-	-	-
EA Solar Nakornsawan Co., Ltd.	Manufacturing and distributing electricity from solar energy	99.99	99.99	-	-	5,590,000	5,590,000	933,530	978,250	-	-
Energy Solution Management Co., Ltd.	Consulting in the construction project	99.99	99.99	-	-	530,000	530,000	-	-	-	-
EA Renewable Holding Co., Ltd.	Investing in manufacturing and distributing electricity business	99.99	99.99	-	-	7,383,700	7,383,700	1,772,088	1,838,107	-	-
Wind Nayaangklaik Co., Ltd.	Investing in manufacturing and distributing electricity business	99.99	99.99	-	-	1,879,500	1,879,500	-	-	-	-
Wind Progressive Co., Ltd.	Investing in manufacturing and distributing electricity business	99.99	99.99	-	-	1,879,500	1,879,500	-	-	-	-
Wind Tossaphum Co., Ltd.	Investing in manufacturing and distributing electricity business	99.99	99.99	-	-	1,670,000	1,670,000	-	-	-	-
Emma Corporation Co., Ltd.	Research and development of electricity equipment (not commercial operations yet)	50.00	50.00	-	-	50	50	-	-	-	-
Thepsathit Wind Farm Co., Ltd.	Manufacturing and distributing electricity from wind power (not commercial operations yet)	99.99	99.99	-	-	44,500	44,500	-	-	-	-
Energy Mahanakon Co., Ltd.	Charging station	50.00	50.00	2.11	2.11	100,000	100,000	-	-	-	-
Green Technology Research Co., Ltd.	Research and Development of biodiesel	99.99	99.99	-	-	112,000	112,000	-	-	-	-
Mine Mobility Research Co., Ltd.	Research and Development of electricity vehicle	99.99	99.99	-	-	410,000	410,000	-	-	-	-
Energy Beyond Research Co., Ltd.	Research and Development of battery (not commercial operations yet)	99.99	99.99	-	-	45,075	5,075	-	-	-	-
EA Bio Innovation Co., Ltd.	Manufacturing and distributing biodiesel	99.99	99.99	-	-	400,100	400,100	-	-	-	-
Smart Waste Management Co., Ltd.	Service of waste management (not commercial operations yet)	99.99	99.99	-	-	20,000	20,000	-	-	-	-
EA Palm Network Co., Ltd.	Investing in manufacturing and distributing crude palm oil and service of shore tanks rental	99.99	99.99	-	-	800,000	800,000	-	-	-	-

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Consolidated and separate financial statements										
Business	Portion of ordinary shares held by the Company				Portion of ordinary shares held by the subsidiaries				Cost method	
	31 December 2022	31 December 2021	%	%	31 December 2022	31 December 2021	%	%	31 December 2022	31 December 2021
	%	%			%	%			Baht'000	Baht'000
The details of direct subsidiaries incorporated in Thailand (continued)										
EA Mobility Holding Co., Ltd.	99.99	99.99	99.99	-	-	-	-	-	7,963,470	3,348,470
EA Waste Management Co., Ltd.	99.99	99.99	99.99	-	-	-	-	-	237,600	237,600
Battery Electric Vehicle And Electronic Products Testing Center Co., Ltd.	50.00	50.00	50.00	47.99	47.99	47.99	47.99	-	35,587	35,587
EA Futura Co., Ltd.	99.99	-	-	-	-	99.99	99.99	-	52,464	-
(Former EA Mobility Rental Co., Ltd.)								-	-	-
Total									29,698,126	24,946,162
									2,856,188	2,816,357
The details of direct subsidiaries incorporated in other countries										
Amita Technologies Inc. (Incorporated in the Republic of China (Taiwan))	62.53	62.53	62.53	8.67	8.67	8.67	8.67	-	4,521,465	4,521,465
EA Con Dao (SG) Pte. Ltd. (Incorporated in Singapore)	95.00	95.00	95.00	-	-	-	-	-	-	-
EA BVI Holding Limited (Incorporated in British Virgin Islands)	100	100	100	-	-	-	-	-	16,037	16,037
Total									4,537,502	4,537,502
Total investments and dividend form subsidiaries									34,235,628	29,483,664
									2,856,188	2,816,357

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Consolidated and separate financial statements													
Business	Portion of ordinary shares held by the Company		Portion of ordinary shares held by the subsidiaries				Cost method					Dividend for the year	
	31 December 2022	31 December 2021	31 December 2022	31 December 2021	%	31 December 2022	31 December 2021	31 December 2022	31 December 2021	Baht'000	Baht'000	31 December 2022	31 December 2021
	%	%	%	%	%			Baht'000	Baht'000			Baht'000	Baht'000
The details of indirect subsidiaries incorporated in Thailand													
Surachai (1997) Solar Co., Ltd.	-	-	99.99	99.99	99.99	-	-	-	-	-	-	-	-
EA Solar Phitsanulok Co., Ltd.	-	-	99.99	99.99	99.99	-	-	-	-	-	-	-	-
EA Wind Hadkanghan 2 Co., Ltd.	-	-	99.99	99.99	99.99	-	-	-	-	-	-	-	-
EA Wind Hadkanghan 3 Co., Ltd.	-	-	99.99	99.99	99.99	-	-	-	-	-	-	-	-
EA Solar Lampang Co., Ltd.	-	-	99.99	99.99	99.99	-	-	-	-	-	-	-	-
Nayangklak Development Co., Ltd.	-	-	99.99	99.99	99.99	-	-	-	-	-	-	-	-
Nayangklak Wind Power Co., Ltd.	-	-	99.99	99.99	99.99	-	-	-	-	-	-	-	-
Benjarat Development Co., Ltd.	-	-	99.99	99.99	99.99	-	-	-	-	-	-	-	-
Pongnok Development Co., Ltd.	-	-	99.99	99.99	99.99	-	-	-	-	-	-	-	-
Banchuan Development Co., Ltd.	-	-	99.99	99.99	99.99	-	-	-	-	-	-	-	-
Paypop Co., Ltd.	-	-	99.99	99.97	99.97	-	-	-	-	-	-	-	-
Amita Technology (Thailand) Co., Ltd.	-	-	99.99	99.99	99.99	-	-	-	-	-	-	-	-
EA Station Co., Ltd.	-	-	99.99	99.94	99.94	-	-	-	-	-	-	-	-
Larp Pakdee Palm Co., Ltd.	-	-	74.99	74.99	74.99	-	-	-	-	-	-	-	-
Subyai Wind Farm (1) Co., Ltd.	-	-	99.99	99.99	99.99	-	-	-	-	-	-	-	-
Combine Energy Tech Co., Ltd.	-	-	70.00	70.00	70.00	-	-	-	-	-	-	-	-
Absolute Assembly Co., Ltd.	-	-	54.99	54.99	54.99	-	-	-	-	-	-	-	-
Kanjanadit Palm Oil Co., Ltd.	-	-	75.00	75.00	75.00	-	-	-	-	-	-	-	-
E Smart Transport Co., Ltd.	-	-	-	99.99	99.99	-	-	-	-	-	-	-	-
Mine Mobility Corporation Co., Ltd.	-	-	99.99	99.99	99.99	-	-	-	-	-	-	-	-
EV Now Co., Ltd.	-	-	-	99.99	99.99	-	-	-	-	-	-	-	-

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Consolidated and separate financial statements									
	Business	Portion of ordinary shares held by the Company		Portion of ordinary shares held by the Group		Cost method		Dividend for the year	
		31 December 2022	31 December 2021	31 December 2022	31 December 2021	31 December 2022	31 December 2021	31 December 2022	31 December 2021
		%	%	%	%	Baht'000	Baht'000	Baht'000	Baht'000
The details of indirect subsidiaries incorporated in Thailand (continued)									
Chaopraya River Line Co., Ltd.	Service of ferry transportation and tourism	-	-	-	99.99	-	-	-	-
Wind Kalasin 1 Co., Ltd.	Research and development of wind power plant (not commercial operations yet)	-	-	99.99	99.99	-	-	-	-
Wind Kalasin 2 Co., Ltd.	Research and development of wind power plant (not commercial operations yet)	-	-	99.99	99.99	-	-	-	-
Wind Khon Kaen 1 Co., Ltd.	Research and development of wind power plant (not commercial operations yet)	-	-	99.99	99.99	-	-	-	-
Wind Khon Kaen 2 Co., Ltd.	Research and development of wind power plant (not commercial operations yet)	-	-	99.99	99.99	-	-	-	-
Wind Amnaddharaoen 1 Co., Ltd.	Research and development of wind power plant (not commercial operations yet)	-	-	99.99	99.99	-	-	-	-
Wind Ubon Ratchathani 1 Co., Ltd.	Research and development of wind power plant (not commercial operations yet)	-	-	99.99	99.99	-	-	-	-
Wind Mahasarakham 1 Co., Ltd.	Research and development of wind power plant (not commercial operations yet)	-	-	99.99	99.99	-	-	-	-
Wind Mahasarakham 2 Co., Ltd.	Research and development of wind power plant (not commercial operations yet)	-	-	99.99	99.99	-	-	-	-
Wind Mahasarakham 3 Co., Ltd.	Research and development of wind power plant (not commercial operations yet)	-	-	99.99	99.99	-	-	-	-
E Transport Holding Co., Ltd.	Investing in public transport bus business	-	-	99.99	99.99	-	-	-	-
EA Waste Management Phuket Co., Ltd.	Providing service of waste management (not commercial operations yet)	-	-	90.00	99.99	-	-	-	-
Etulosba Energy 1 Co., Ltd.	Research and development of solar and wind power plant (not commercial operations yet)	-	-	99.99	99.99	-	-	-	-
Etulosba Energy 2 Co., Ltd.	Research and development of solar and wind power plant (not commercial operations yet)	-	-	99.99	99.99	-	-	-	-
Etulosba Energy 3 Co., Ltd.	Research and development of solar and wind power plant (not commercial operations yet)	-	-	99.99	99.99	-	-	-	-
Etulosba Energy 4 Co., Ltd.	Research and development of solar and wind power plant (not commercial operations yet)	-	-	99.99	99.99	-	-	-	-
Etulosba Energy 5 Co., Ltd.	Research and development of solar and wind power plant (not commercial operations yet)	-	-	99.99	99.99	-	-	-	-
The details of indirect subsidiaries incorporated in other countries									
Amita New Technologies Pte. Ltd. (Incorporated in Singapore)	Investing in developing, manufacturing and distributing battery business	-	-	100	100	-	-	-	-
Sun Field Investments Co., Ltd. (Incorporated in Samoa)	Investing in battery business	-	-	100	100	-	-	-	-
EA (BVI) 1 Limited (Incorporated in British Virgin Islands)	Investing in developing, manufacturing and distributing battery business	-	-	100	100	-	-	-	-
EA (BVI) 2 Limited (Incorporated in British Virgin Islands)	Investing in developing, manufacturing and distributing battery business	-	-	100	100	-	-	-	-

As at 31 December 2022 and 2021, the Group pledged ordinary shares of subsidiaries which were 1) EA Solar Nakhonsawan Co., Ltd., 2) EA Solar Lampang Co., Ltd., 3) EA Solar Phitsanulok Co., Ltd. and 4) EA Wind Hadkanghan 3 Co., Ltd. as collateral for the long-term loans with a financial institution (Note 27).

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Summarised financial information on subsidiaries with material non-controlling interests

Set out below are the summarised financial information for each subsidiary that has non-controlling interests that are material to the Group. The amounts disclosed for each subsidiary are before intercompany eliminations.

Summarised statement of financial position

As at 31 December	Amita Technologies Inc.		Energy Mahanakorn Co., Ltd.		Absolute Assembly Co., Ltd.		Total	
	2022 Baht'000	2021 Baht'000	2022 Baht'000	2021 Baht'000	2022 Baht'000	2021 Baht'000	2022 Baht'000	2021 Baht'000
Current assets	4,994,679	1,749,286	193,351	64,589	5,621,509	931,203	10,809,539	2,745,078
Current liabilities	9,282,748	1,337,448	557,256	48,679	6,186,977	1,099,539	16,026,981	2,485,666
Total current net assets (liabilities)	(4,288,069)	411,838	(363,905)	15,910	(565,468)	(168,336)	(5,217,442)	259,412
Non-current assets	8,367,162	7,272,918	689,224	417,219	2,671,635	1,689,587	11,728,021	9,379,724
Non-current liabilities	817,040	3,490,356	17,800	15,498	313,271	38,378	1,148,111	3,544,232
Total non-current net assets	7,550,122	3,782,562	671,424	401,721	2,358,364	1,651,209	10,579,910	5,835,492
Net assets	3,262,053	4,194,400	307,519	417,631	1,792,896	1,482,873	5,362,468	6,094,904
Non-controlling interests	939,471	1,571,642	147,271	200,003	806,804	667,293	1,893,546	2,438,938

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Summarised statement of comprehensive income

	Amita Technologies Inc.		Energy Mahanakorn Co., Ltd.		Absolute Assembly Co., Ltd.		Total
	2022	2021	2022	2021	2022	2021	
	Baht'000	Baht'000	Baht'000	Baht'000	Baht'000	Baht'000	Baht'000
For the year ended 31 December							
Revenue	892,169	367,015	112,811	18,355	5,618,113	683,100	1,068,470
Profit (loss) for the year	(874,344)	(329,191)	(110,112)	(74,483)	313,625	(7,378)	(411,052)
Other comprehensive income (expense)	(58,004)	43,726	-	-	-	(58,004)	43,726
Total comprehensive income (expense)	(932,348)	(285,465)	(110,112)	(74,483)	313,625	(7,378)	(367,326)
Profit (loss) allocated to non-controlling interests	(268,516)	(106,964)	(52,744)	(35,670)	141,131	(3,320)	(145,954)
Dividends paid to non-controlling interests	-	-	-	-	-	-	-

Summarised statement of cash flows

	Amita Technologies Inc.		Energy Mahanakorn Co., Ltd.		Absolute Assembly Co., Ltd.		Total
	2022	2021	2022	2021	2022	2021	
	Baht'000	Baht'000	Baht'000	Baht'000	Baht'000	Baht'000	Baht'000
For the year ended 31 December							
Net cash receipts from (payments in) operating activities	(2,652,833)	767,426	(84,597)	448	(2,262,400)	(315,747)	452,127
Net cash payments in investing activities	(1,090,990)	(2,724,597)	(332,469)	(118,921)	(438,469)	(1,050,678)	(3,894,196)
Net cash receipts from financing activities	3,974,387	1,493,174	449,781	30,000	3,123,735	1,312,500	2,835,674
Net increase (decrease) in cash and cash equivalents	230,564	(463,997)	32,715	(88,473)	422,866	(53,925)	(606,395)
Cash and cash equivalents at beginning of year	159,728	580,152	21,994	110,468	55,753	109,678	800,298
Currency translation differences on cash and cash equivalents	(108)	43,573	-	-	-	(108)	43,573
Cash and cash equivalents at the end of year	390,184	159,728	54,709	21,995	478,619	55,753	237,476

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17.3 Investments in associates

	Business	Consolidated financial statements									
		Portion of ordinary shares held by the Group				Cost method				Equity method	
		31 December 2022	31 December 2021	%		31 December 2022	31 December 2021	31 December 2022	31 December 2021	31 December 2022	31 December 2021
		%				Baht'000	Baht'000	Baht'000	Baht'000	Baht'000	Baht'000
The details of the investments in associates											
Indirect associates incorporated in Thailand											
NEX Point PCL	Service of property rental, sale and rent a bus service, supply assets service and investing in other businesses	40.01	40.01			1,474,000	1,474,000	1,485,765	1,397,092	-	-
TF Tech Holding Co., Ltd.	Investing in renewable energy businesses	40.00	40.00			40,000	40,000	66,093	50,755	-	-
Beli Service Co., Ltd.	Service of vehicle maintenance	-	-			-	-	-	-	36,750	-
Beyond Securities PCL	Securities brokerage, investment consulting and investing in other businesses	23.63	-			6,997,030	-	6,964,005	-	-	-
Indirect associates incorporated in the Republic of China (Taiwan)											
Wan Meng Automatic Precision Co., Ltd.	Distributing electric equipment and machinery	36.04	36.04			39,988	39,988	35,051	43,920	-	1,460
CSBC Power Technology Co., Ltd.	Distributing marine equipment and vehicles	-	26.67			-	21,990	-	21,206	-	-
Total investment in associates						8,551,018	1,575,978	8,550,914	1,512,973	36,750	1,460

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Summarised financial information for an associate

The table below is the summarised financial information for an associate that is material to the Group. The financial information is included in its own financial statements which has been adjusted with adjustments for the equity method, including fair value adjustments and modifications for differences in accounting policies.

Summarised statement of financial position

As at 31 December	NEX Point PCL		Beyond Securities PCL		Total	
	2022 Million Baht	2021 Million Baht	2022 Million Baht	2021 Million Baht	2022 Million Baht	2021 Million Baht
Total current assets	5,103	1,745	2,300	-	7,403	1,745
Total non-current assets	2,796	2,042	9,855	-	12,651	2,042
Total current liabilities	(4,038)	(735)	(53)	-	(4,091)	(735)
Total non-current liabilities	(695)	(108)	(129)	-	(824)	(108)
Net assets	3,166	2,944	11,973	-	15,139	2,944

Summarised statement of comprehensive income

For the year ended 31 December	NEX Point PCL	
	2022 Million Baht	2021 Million Baht
Revenue	6,617	688
Profit (loss) after tax from continuing operations	223	(122)
Reconciliation to carrying amounts:		
Opening net assets as at 1 December	2,944	3,058
Profit (loss) for the year	223	(122)
Other comprehensive income (expense) for the year	(1)	8
Closing net assets as at 31 December	3,166	2,944
The Group's share in an associate (%)	40.01	40.01
The Group's share in an associate	1,267	1,178
Goodwill	219	219
Associate carrying amount	1,486	1,397

For the period ended 13 September (the acquisition date) to 31 December 2022	Beyond Securities PCL	
	Million Baht	
Revenue	287	
Loss after tax from continuing operations	(136)	
Reconciliation to carrying amounts:		
Opening net assets at the acquisition date	12,113	
Loss for the period	(136)	
Other comprehensive income (expense) for the period	(4)	
Closing net assets as at 31 December 2022	11,973	
The Group's share in an associate (%)	23.63	
The Group's share in an associate	2,829	
Goodwill	4,135	
Associate carrying amount	6,964	

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As at 31 December 2022, the fair value of the Group's interest in NEX Point PCL and Beyond Securities PCL, listed companies in Stock Exchange of Thailand, were Baht 12,261 million and Baht 13,178 million, respectively (2021: NEX Point Public Company Limited were Baht 13,065 million).

Individually immaterial associates

In addition to the interests in the associates disclosed above, the Group also had interests in a number of individually immaterial associates that are accounted for using the equity method as follows:

	Consolidated financial statements	
	2022	2021
	Million Baht	Million Baht
Aggregate carrying amount of individually immaterial associates	101	116
The Group's share of:		
Profit from continuing operations	22	2
Other comprehensive expense	(3)	(7)
Total comprehensive income (expense)	19	(5)

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17.4 Investments in joint ventures

		Consolidated financial statements							
		Portion of ordinary shares held by the Group		Cost method		Equity method		Dividend for the year	
Business		31 December 2022	31 December 2021	31 December 2022	31 December 2021	31 December 2022	31 December 2021	31 December 2022	31 December 2021
		%	%	Baht'000	Baht'000	Baht'000	Baht'000	Baht'000	Baht'000
The details of the investments in joint ventures									
Indirect joint venture incorporated in Thailand									
	Ranong Clean 2021 Co., Ltd.	50.00	50.00	42,000	35,000	39,145	33,749	-	-
	Agro Clean Co., Ltd.	49.99	-	2,500	-	2,466	-	-	-
Joint venture incorporated in the People's Republic of China									
	Shenzhen Ateess Power Technology Co., Ltd	38.58	38.58	45,471	45,471	197,936	67,199	-	-
Total investment in joint ventures									
				89,971	80,471	239,547	100,948	-	-

Business	Portion of ordinary shares held by the Company								Separate financial statements			
	31 December 2022		31 December 2021		31 December 2022		31 December 2021		31 December 2022		31 December 2021	
	%		%		Baht'000		Baht'000		Baht'000		Baht'000	
The details of the investments in a joint venture												
Joint venture incorporated in the People's Republic of China												
Shenzhen Ateess Power Technology Co., Ltd. Distributing electric equipment and machinery												
Total investment in a joint venture												

18 Investment property, net

	Consolidated financial statements		
	Buildings and building improvements		
	Land	improvements	Total
	Baht'000	Baht'000	Baht'000
As at 1 January 2021			
Cost	38,791	42,047	80,838
<u>Less</u> Accumulated depreciation	-	(13,644)	(13,644)
Net book value	38,791	28,403	67,194
Fair value	52,266	38,990	91,226
For the year ended 31 December 2021			
Opening net book value	38,791	28,403	67,194
Additions	-	400	400
Depreciation charge	-	(2,134)	(2,134)
Closing net book value	38,791	26,669	65,460
As at 31 December 2021			
Cost	38,791	42,447	81,238
<u>Less</u> Accumulated depreciation	-	(15,778)	(15,778)
Net book value	38,791	26,669	65,460
Fair value	38,396	39,000	77,396
For the year ended 31 December 2022			
Opening net book value	38,791	26,669	65,460
Transfer from property, plant and equipment (Note 19)	-	711	711
Depreciation charge	-	(2,181)	(2,181)
Closing net book value	38,791	25,199	63,990
As at 31 December 2022			
Cost	38,791	43,158	81,949
<u>Less</u> Accumulated depreciation	-	(17,959)	(17,959)
Net book value	38,791	25,199	63,990
Fair value	38,396	39,711	78,107

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	Separate financial statements		
	Buildings and building improvements		
	Land Baht'000	Baht'000	Total Baht'000
As at 1 January 2021			
Cost	1,010,441	42,047	1,052,488
<u>Less</u> Accumulated depreciation	-	(13,644)	(13,644)
Net book value	1,010,441	28,403	1,038,844
Fair value	1,130,645	38,990	1,169,635
For the year ended 31 December 2021			
Opening net book value	1,010,441	28,403	1,038,844
Additions	-	400	400
Depreciation charge	-	(2,134)	(2,134)
Closing net book value	1,010,441	26,669	1,037,110
As at 31 December 2021			
Cost	1,010,441	42,447	1,052,888
<u>Less</u> Accumulated depreciation	-	(15,778)	(15,778)
Net book value	1,010,441	26,669	1,037,110
Fair value	1,130,100	39,000	1,169,100
For the year ended 31 December 2022			
Opening net book value	1,010,441	26,669	1,037,110
Transfer from Property, plant and equipment (Note 19)	-	711	711
Depreciation charge	-	(2,181)	(2,181)
Closing net book value	1,010,441	25,199	1,035,640
As at 31 December 2022			
Cost	1,010,441	43,158	1,053,599
<u>Less</u> Accumulated depreciation	-	(17,959)	(17,959)
Net book value	1,010,441	25,199	1,035,640
Fair value	1,130,100	39,711	1,169,811

The Group measured fair value of investment properties by appointing an independent appraisal with professional qualification. The valuation technique used for measurement was classified as level 3. The valuation technique used by the Group is market approach which located in nearby location and that have similar purpose of use.

As at 31 December 2022 and 2021, investment property of the Company represented land leased to its subsidiaries for the operations of solar power plant and wind farm and the commercial buildings leased to its subsidiaries and external parties for purpose of office building.

As at 31 December 2022 and 2021, investment property of the Group represented land held for undetermined future use and the commercial buildings leased to external parties for purpose of office building.

Amount recognised in profit and loss that are related to investment property are as follows:

	Consolidated financial statements		Separate financial statements	
	2022	2021	2022	2021
	Baht'000	Baht'000	Baht'000	Baht'000
Rental income	720	720	57,780	57,743

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19 Property, plant and equipment, net

	Consolidated financial statements					
	Land Baht'000	Buildings and buildings improvement Baht'000	Machines and equipment Baht'000	Power plants, substation, transmission system and components Baht'000	Office equipment, furniture, computers and motor vehicles Baht'000	Construction in progress Baht'000
As at 1 January 2021						
Cost	2,106,965	1,668,677	4,946,889	53,170,096	293,976	67,121,702
Less Accumulated depreciation	-	(350,964)	(2,260,217)	(8,457,363)	(196,220)	(11,264,764)
Net book value	2,106,965	1,317,713	2,686,672	44,712,733	97,756	55,856,938
For the year ended 31 December 2021						
Opening net book value	2,106,965	1,317,713	2,686,672	44,712,733	97,756	55,856,938
Additions	18,601	57,794	772,688	2,479,031	43,313	7,902,573
Revise provision for decommissioning costs (Note 29)	-	-	3,768	(375,170)	-	(371,402)
Disposals, net	-	-	(497,089)	(1,300,223)	(271)	(1,797,583)
Write off, net	-	-	(7,407)	(766)	(1,305)	(11,697)
Transfer	-	424,852	659,038	67,310	8	(1,151,208)
Transfer the components of power plants to non-current assets held for sale (Note 16)	-	-	-	(713,909)	-	(713,909)
Depreciation charge	-	(94,426)	(266,669)	(2,102,406)	(27,656)	(2,491,157)
Currency translation differences	-	2,639	1,680	-	32,033	46,870
Closing net book value	2,125,566	1,708,572	3,352,681	42,766,600	143,878	58,420,633
As at 31 December 2021						
Cost	2,125,566	2,159,500	5,300,892	52,544,603	397,625	70,851,522
Less Accumulated depreciation	-	(450,928)	(1,948,211)	(9,778,003)	(253,747)	(12,430,889)
Net book value	2,125,566	1,708,572	3,352,681	42,766,600	143,878	58,420,633

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		Consolidated financial statements						
		Land Baht'000	Buildings and buildings improvement Baht'000	Machines and equipment Baht'000	Power plants, substation, transmission system and components Baht'000	Office equipment, furniture, computers and motor vehicles Baht'000	Construction in progress Baht'000	Total Baht'000
As at 1 January 2022								
Cost		2,125,566	2,159,500	5,300,892	52,544,603	397,625	8,323,336	70,851,522
Less Accumulated depreciation		-	(450,928)	(1,948,211)	(9,778,003)	(253,747)	-	(12,430,889)
Net book value		2,125,566	1,708,572	3,352,681	42,766,600	143,878	8,323,336	58,420,633
For the year ended 31 December 2022								
Opening net book value		2,125,566	1,708,572	3,352,681	42,766,600	143,878	8,323,336	58,420,633
Additions		-	74,648	274,481	2,533,010	30,947	2,502,198	5,415,284
Revise provision for decommissioning costs (Note 29)		-	-	-	199,856	-	-	199,856
Disposals, net		-	(376)	(391)	(1,672,073)	(3,240)	(28,325)	(1,704,405)
Write off, net		-	-	(1,618)	(6,072)	-	(10,086)	(17,776)
Transfer		-	4,371,900	4,010,447	503,892	79,927	(8,966,166)	-
Transfer to investment property (Note 18)		-	(711)	-	-	-	-	(711)
Transfer the components of power plants to non-current assets held for sale (Note 16)		-	-	-	(3,918,640)	-	-	(3,918,640)
Increase from business combination (Note 17.1.1)		-	-	-	-	1,475,923	-	1,475,923
Decrease from disposal of investments in subsidiaries		-	(3,924)	(900,071)	-	(1,453,939)	(476)	(2,358,410)
Depreciation charge		-	(206,178)	(696,775)	(2,258,489)	(105,095)	-	(3,266,537)
Currency translation differences		-	(1,917)	(23,196)	-	(864)	2,147	(23,830)
Closing net book value		2,125,566	5,942,014	6,015,558	38,148,084	167,537	1,822,628	54,221,387
As at 31 December 2022								
Cost		2,125,566	6,598,966	8,590,905	47,783,114	424,451	1,822,628	67,345,630
Less Accumulated depreciation		-	(656,952)	(2,575,347)	(9,635,030)	(256,914)	-	(13,124,243)
Net book value		2,125,566	5,942,014	6,015,558	38,148,084	167,537	1,822,628	54,221,387

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	Separate financial statements					
	Land Baht'000	Buildings and buildings improvement Baht'000	Machines and equipment Baht'000	Office equipment, furniture, computers and motor vehicles Baht'000	Construction in progress Baht'000	Total Baht'000
As at 1 January 2021						
Cost	55,789	171,218	902,100	79,198	58,313	1,266,618
Less Accumulated depreciation	-	(102,863)	(772,281)	(44,125)	-	(919,269)
Net book value	55,789	68,355	129,819	35,073	58,313	347,349
For the year ended 31 December 2021						
Opening net book value	55,789	68,355	129,819	35,073	58,313	347,349
Additions	519	790	860	9,538	6,415	18,122
Disposals, net	-	(1,994)	(2,293)	-	-	(4,287)
Transfer	-	-	28,378	8	(28,386)	-
Depreciation charge	-	(7,519)	(48,508)	(10,524)	-	(66,551)
Closing net book value	56,308	59,632	108,256	34,095	36,342	294,633
As at 31 December 2021						
Cost	56,308	169,564	917,590	87,903	36,342	1,267,707
Less Accumulated depreciation	-	(109,932)	(809,334)	(53,808)	-	(973,074)
Net book value	56,308	59,632	108,256	34,095	36,342	294,633

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	Separate financial statements					
	Land Baht'000	Buildings and buildings improvement Baht'000	Machines and equipment Baht'000	Office equipment, furniture, computers and motor vehicles Baht'000	Construction in progress Baht'000	Total Baht'000
As at 1 January 2022						
Cost	56,308	169,564	917,590	87,903	36,342	1,267,707
Less Accumulated depreciation	-	(109,932)	(809,334)	(53,808)	-	(973,074)
Net book value	56,308	59,632	108,256	34,095	36,342	294,633
For the year ended 31 December 2022						
Opening net book value	56,308	59,632	108,256	34,095	36,342	294,633
Additions	-	241	1,571	4,964	162	6,938
Transfer to investment property (Note 18)	-	(711)	-	-	-	(711)
Depreciation charge	-	(7,359)	(45,892)	(10,604)	-	(63,855)
Closing net book value	56,308	51,803	63,935	28,455	36,504	237,005
As at 31 December 2022						
Cost	56,308	169,094	919,160	92,867	36,504	1,273,933
Less Accumulated depreciation	-	(117,291)	(855,225)	(64,412)	-	(1,036,928)
Net book value	56,308	51,803	63,935	28,455	36,504	237,005

For the year ended 31 December 2022, borrowing costs of the Group amounting to Baht 14 million (2021: Baht 34 million) arising from general financing were capitalised and included in additions of property, plants and equipment during the year in the consolidated financial statement. The Group used capitalised rate at 1.55% (2021: 1.80%) in the calculation of which the rate referred from borrowing cost for the construction project.

As at 31 December 2022 property, plant and equipment with net book value amounting to Baht 26,857 million were mortgaged and pledged as collateral for credit facilities with a financial institution (2021: Baht 27,038 million) (Note 25 and 27).

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20 Right-of-use assets, net

Consolidated financial statements				
	Land Baht'000	Building Baht'000	Motor vehicle Baht'000	Total Baht'000
For the year ended 31 December 2021				
Opening net book value	1,615,413	94,771	68,141	1,778,325
Additions	43,968	6,616	6,786	57,370
Depreciation charge	(71,647)	(44,883)	(11,093)	(127,623)
Adjustments related to renewal of contract and cancellation of contract	(2,354)	21,192	(955)	17,883
Currency translation differences	4,098	3,527	62	7,687
Closing net book value	1,589,478	81,223	62,941	1,733,642
Consolidated financial statements				
	Land Baht'000	Building Baht'000	Motor vehicle Baht'000	Total Baht'000
For the year ended 31 December 2022				
Opening net book value	1,589,478	81,223	62,941	1,733,642
Additions	20,249	18,089	8,903	47,241
Depreciation charge	(85,339)	(25,387)	(8,777)	(119,503)
Increase from business combination (Note 17.1.1)	-	61,796	-	61,796
Decrease from disposal of investments in subsidiaries	(4,866)	(61,101)	(43,849)	(109,816)
Adjustments related to renewal of contract and cancellation of contract	-	797	(404)	393
Currency translation differences	(2,234)	240	(1,154)	(3,148)
Closing net book value	1,517,288	75,657	17,660	1,610,605
Separate financial statements				
	Land Baht'000	Building Baht'000	Motor vehicle Baht'000	Total Baht'000
For the year ended 31 December 2021				
Opening net book value	275,779	27,249	751	303,779
Additions	628	-	5,410	6,038
Depreciation charge	(14,951)	(10,496)	(959)	(26,406)
Adjustments related to renewal of contract	-	20,805	-	20,805
Closing net book value	261,456	37,558	5,202	304,216

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	Separate financial statements			
	Land Baht'000	Building Baht'000	Motor vehicle Baht'000	Total Baht'000
For the year ended 31 December 2022				
Opening net book value	261,456	37,558	5,202	304,216
Additions	945	-	1,868	2,813
Depreciation charge	(12,864)	(11,645)	(1,347)	(25,856)
Closing net book value	249,537	25,913	5,723	281,173

Expenses related to leases that are not included in the measurement of lease liabilities and right-of-use are as follows:

	Consolidated financial statements		Separate financial statements	
	2022 Baht'000	2021 Baht'000	2022 Baht'000	2021 Baht'000
For the year ended 31 December				
Expense relating to leases of low-value assets	174	4,588	23	-
Total cash outflow for leases	131,699	156,139	13,741	64,203

21 Goodwill

	Consolidated financial statements	
	2022 Baht'000	2021 Baht'000
As at 1 January		
Cost	1,453,471	1,337,333
<u>Less</u> allowance for impairment	-	-
Net book value	1,453,471	1,337,333
For the years ended 31 December		
Opening net book value	1,453,471	1,337,333
Increase from business acquisition	48,974	-
Decrease from disposal of investments in subsidiaries	(54,557)	-
Decrease from fair value measurement of net identifiable assets and reallocation of cost of business acquisition	-	(7,888)
Currency translation differences	(73,137)	124,026
Closing net book value	1,374,751	1,453,471
As at 31 December		
Cost	1,374,751	1,453,471
<u>Less</u> allowance for impairment	-	-
Net book value	1,374,751	1,453,471

Goodwill allocation for each material cash generation unit (CGU) is presented as:

	Consolidated financial statements			
	2022		2021	
	Battery developing, manufacturing and distributing business Million Baht	Palm crushing mills and biomass power plant business Million Baht	Battery developing, manufacturing and distributing business Million Baht	Palm crushing mills and biomass power plant business Million Baht
Goodwill allocation	1,000	330	1,073	330

Impairment tests for goodwill

The Group tests impairment of goodwill annually and whenever there is an indicator of impairment by comparing the net book value of goodwill with the recoverable amount of a CGU, which is determined based on value-in-use calculations. For the years 2022 and 2021, these calculations use cash flow projections from financial budgets approved by the management covering period between 10 and 25 years and growth rates between 0% to 2% per annum, for the projected period and beyond. The growth rate does not exceed the average long-term growth rate for the business in which the CGU operates.

As at 31 December, the key assumptions used for value-in-use calculations are as follows:

	Consolidated financial statements			
	2022		2021	
	Battery developing, manufacturing and distributing business Percent	Palm crushing mills and biomass power plant business Percent	Battery developing, manufacturing and distributing business Percent	Palm crushing mills and biomass power plant business Percent
Discount rate	10.40 - 12.60	9.12 - 10.00	12.39 - 13.40	8.37 - 9.26

If the discount rate used in the calculation increases by 1% per annum, there is no impairment of goodwill recorded in the consolidated financial statements for the year ended 31 December 2022.

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22 Intangible assets, net

Consolidated financial statements						
	Patents Baht'000	Brand Baht'000	Right to use transmission line Baht'000	Right to power purchase agreement Baht'000	Computer software Baht'000	Intangible assets under development Baht'000
						Total Baht'000
As at 1 January 2021						
Cost	795,544	274,391	1,909,028	42,461	61,364	3,261,621
Less Accumulated amortisation	(120,092)	(41,463)	(270,584)	(13,940)	(22,962)	(469,041)
Net book value	675,452	232,928	1,638,444	28,521	38,402	2,792,580
For the year ended 31 December 2021						
Opening net book value	675,452	232,928	1,638,444	28,521	38,402	2,792,580
Additions	-	-	-	-	30,307	33,492
Transfer	12,090	-	-	-	-	-
Write off, net	-	-	-	-	(351)	(5,531)
Amortisation	(43,863)	(14,710)	(76,332)	(1,694)	(10,457)	(147,056)
Currency translation differences	85,634	29,531	-	-	1,055	116,220
Closing net book value	729,313	247,749	1,562,112	26,827	58,956	2,789,705
As at 31 December 2021						
Cost	919,766	313,009	1,909,028	42,461	93,199	3,442,211
Less Accumulated amortisation	(190,453)	(65,260)	(346,916)	(15,634)	(34,243)	(652,506)
Net book value	729,313	247,749	1,562,112	26,827	58,956	2,789,705

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Consolidated financial statements									
	Patents Baht'000	Brand Baht'000	Right to use transmission line Baht'000	Right to power purchase agreement Baht'000	Right to operate public bus transportation Baht'000	Computer software Baht'000	Intangible assets under development Baht'000	Total Baht'000	
As at 1 January 2022									
Cost	919,766	313,009	1,909,028	42,461	-	93,199	164,748	3,442,211	
Less Accumulated amortisation	(190,453)	(65,260)	(346,916)	(15,634)	-	(34,243)	-	(652,506)	
Net book value	729,313	247,749	1,562,112	26,827	-	58,956	164,748	2,789,705	
For the year ended 31 December 2022									
Opening net book value	729,313	247,749	1,562,112	26,827	-	58,956	164,748	2,789,705	
Additions	-	-	-	-	7,992	25,907	33,204	67,103	
Increase from business combination (Note 17.1.1)	-	-	-	-	2,034,976	-	-	2,034,976	
Decrease from disposal of investments in subsidiaries (Note 17.1.1)	(45,406)	(15,242)	(76,332)	(1,698)	(1,938,700)	(1,472)	-	(1,940,172)	
Amortisation	(47,006)	(16,213)	(76,332)	(1,698)	(104,268)	(16,538)	-	(259,484)	
Currency translation differences			-	-	-	(558)	-	(63,777)	
Closing net book value	636,901	216,294	1,485,780	25,129	-	66,295	197,952	2,628,351	
As at 31 December 2022									
Cost	857,968	291,695	1,909,028	42,461	-	116,860	197,952	3,415,964	
Less Accumulated amortisation	(221,067)	(75,401)	(423,248)	(17,332)	-	(50,565)	-	(787,613)	
Net book value	636,901	216,294	1,485,780	25,129	-	66,295	197,952	2,628,351	

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	Separate financial statements Computer software Baht'000
As at 1 January 2021	
Cost	19,500
<u>Less</u> Accumulated amortisation	<u>(7,940)</u>
Net book value	<u>11,560</u>
For the year ended 31 December 2021	
Opening net book value	11,560
Additions	3,223
Write off, net	(1,286)
Amortisation	<u>(1,830)</u>
Closing net book value	<u>11,667</u>
As at 31 December 2021	
Cost	21,436
<u>Less</u> Accumulated amortisation	<u>(9,769)</u>
Net book value	<u>11,667</u>
For the year ended 31 December 2022	
Opening net book value	11,667
Additions	2,805
Amortisation	<u>(2,586)</u>
Closing net book value	<u>11,886</u>
As at 31 December 2022	
Cost	24,241
<u>Less</u> Accumulated amortisation	<u>(12,355)</u>
Net book value	<u>11,886</u>

23 Deferred income taxes

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

	Consolidated financial statements		Separate financial statements	
	2022 Baht'000	2021 Baht'000	2022 Baht'000	2021 Baht'000
Deferred tax assets	510,668	516,132	74,929	99,798
Deferred tax liabilities	(574,543)	(591,848)	(56,234)	(60,843)
Deferred income taxes, net	(63,875)	(75,716)	18,695	38,955

The movement of the deferred income tax account is as follows:

	Consolidated financial statements		Separate financial statements	
	2022 Baht'000	2021 Baht'000	2022 Baht'000	2021 Baht'000
At 1 January	(75,716)	(185,057)	38,955	(57,637)
Tax (charged) credited to profit or loss	31,122	35,376	9,996	(5,647)
Tax (charged) credited to other comprehensive income	(28,232)	102,032	(30,256)	102,239
Increase from business acquisition	(287,603)	-	-	-
Increase from fair value remeasurement of net identifiable assets and allocation of cost of business acquisition	-	(4,477)	-	-
Decrease from disposal of investments in subsidiaries	284,100	-	-	-
Currency translation differences	12,454	(23,590)	-	-
At 31 December	(63,875)	(75,716)	18,695	38,955

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Consolidated financial statements										
Financial assets										
Allowance for decrease in value of inventories	Financial assets measured at fair value through other comprehensive income	Retirement obligations	Property, plant and equipment	Right to use transmission line	Fair value from business acquisition	Provision for decommissioning costs	Lease liabilities	Total		
Baht'000	Baht'000	Baht'000	Baht'000	Baht'000	Baht'000	Baht'000	Baht'000	Baht'000	Baht'000	Baht'000
Deferred tax assets										
As at 1 January 2021	1,278	-	8,271	69	10,299	71,194	208,291	324,147		
Tax credited to profit or loss	-	-	697	-	-	24,413	136,678	162,010		
Tax credited to other comprehensive income	-	33,189	-	-	-	-	-	33,189		
Reclassification	-	-	-	-	(10,299)	-	-	-		
Currency translation differences	-	-	-	-	-	-	(3,214)	(3,214)		
As at 31 December 2021	1,278	33,189	8,968	69	-	95,607	341,755	516,132		
As at 1 January 2022	1,278	33,189	8,968	69	-	95,607	341,755	516,132		
Tax (charged) credited to profit or loss	(953)	-	6,889	-	-	22,709	3,326	31,107		
Tax credited to other comprehensive income	-	(30,257)	-	-	-	-	-	(30,257)		
Decrease from disposal of investments in subsidiaries	-	-	-	-	-	-	(8,059)	(8,059)		
Currency translation differences	-	-	-	-	-	-	1,745	1,745		
As at 31 December 2022	325	2,932	15,857	69	-	118,316	338,767	510,668		

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		Consolidated financial statements						
		Financial assets measured at fair value through other comprehensive income						
		Patents Baht'000	Brand Baht'000	comprehensive income Baht'000	Property, Plant and Equipment Baht'000	Fair value from business acquisition Baht'000	Lease receivable Baht'000	Right of use asset Baht'000
								Total Baht'000
Deferred tax liabilities								
As at 1 January 2021		135,090	46,586	72,777	-	45,961	-	509,204
Tax charged (credited) to profit or loss		(8,531)	(2,942)	-	1,135	-	-	126,634
Tax credited to other comprehensive income		-	-	(68,843)	-	-	-	(68,843)
Reclassification		-	-	-	45,961	(45,961)	-	-
Increase from fair value measurement of net identifiable assets and allocation of cost of business acquisition		-	-	-	4,477	-	-	4,477
Currency translation differences		17,127	5,906	526	-	-	-	20,376
As at 31 December 2021		143,686	49,550	4,460	51,573	-	-	591,848
As at 1 January 2022		143,686	49,550	4,460	51,573	-	-	591,848
Tax charged (credited) to profit or loss		(8,840)	(3,048)	-	(4,029)	(8,319)	30,745	(15)
Tax credited to other comprehensive income		-	-	(2,025)	-	-	-	(2,025)
Increase from business combination (Note 17.1)		-	-	-	-	287,603	-	287,603
Decrease from disposal of investments in subsidiaries		-	-	-	(1,266)	(279,284)	-	(292,159)
Currency translation differences		(9,770)	(3,243)	(215)	210	-	-	(10,709)
As at 31 December 2022		125,076	43,259	2,220	46,488	-	30,745	574,543

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	Separate financial statements				
	Allowance for decrease in value of inventories Baht'000	Financial assets measured at fair value through other comprehensive income Baht'000	Retirement benefit obligations Baht'000	Lease liabilities Baht'000	Total Baht'000
Deferred tax assets					
As at 1 January 2021	1,278	-	7,823	63,068	72,169
Tax charged to profit or loss	-	-	-	(5,560)	(5,560)
Tax credited to other comprehensive income	-	33,189	-	-	33,189
As at 31 December 2021	1,278	33,189	7,823	57,508	99,798
As at 1 January 2022	1,278	33,189	7,823	57,508	99,798
Tax (charged) credited to profit or loss	(953)	-	6,620	(280)	5,387
Tax credited to other comprehensive income	-	(30,256)	-	-	(30,256)
As at 31 December 2022	325	2,933	14,443	57,228	74,929

	Separate financial statements		
	Financial assets measured at fair value through other comprehensive income Baht'000	Right of use assets Baht'000	Total Baht'000
Deferred tax liabilities			
As at 1 January 2021	69,050	60,756	129,806
Tax charged to profit or loss	-	87	87
Tax credited to other comprehensive income	(69,050)	-	(69,050)
As at 31 December 2021	-	60,843	60,843
As at 1 January 2022	-	60,843	60,843
Tax credited to profit or loss	-	(4,609)	(4,609)
As at 31 December 2022	-	56,234	56,234

Deferred tax assets are recognised for tax loss and carry forwards only to the extent that realisation of the related tax benefit through the future taxable profits is probable.

As at 31 December 2022, the Group did not recognise deferred income tax assets of Baht 962 million (2021: Baht 673 million) in respect of losses amounting to Baht 4,811 million (2021: Baht 3,365 million) that can be carried forward against future taxable income. Losses amounting to Baht 1,026 million will be expired for tax benefit in 2023 (2021: Baht 716 million already expired in 2022).

As at 31 December 2022, the Company did not recognise deferred income tax assets of Baht 408 million (2021: Baht 498 million) in respect of losses amounting to Baht 2,041 million (2021: Baht 2,489 million) that can be carried forward against future taxable income. Losses amounting to Baht 1,019 million will be expired for tax benefit in 2023 (2021: Baht 716 million already expired in 2022).

24 Other non-current assets, net

As at 31 December	Consolidated financial statements		Separate financial statements	
	2022 Baht'000	2021 Baht'000	2022 Baht'000	2021 Baht'000
Withholding tax	73,738	101,655	30,054	37,702
Advance payment for equipment and assets purchase	1,786,792	1,691,961	1,011,317	954,843
Deposits	22,306	22,306	22,306	22,306
Long-term deposits	94,947	51,290	43,729	2,945
Others	9,807	14,349	1,363	1,337
<u>Less</u> Allowance for impairment of assets	(31,216)	(31,544)	(31,216)	(31,216)
Total other non-current assets, net	1,956,374	1,850,017	1,077,553	987,917

Allowance for an impairment of assets amounting to Baht 31 million is an allowance for advance payment for purchase of raw materials paid to a particular supplier who could not deliver raw materials or return such advance payment to the Company amounting to Baht 9 million and an allowance for deposit in an overseas project which the Company does not expect to receive such deposit back amounting to Baht 22 million.

25 Short-term loans from financial institutions, net

The short-term loans from financial institutions are as follows:

As at 31 December	Consolidated financial statements		Separate financial statements	
	2022 Baht'000	2021 Baht'000	2022 Baht'000	2021 Baht'000
Bank overdraft	-	5,095	-	-
Promissory note	4,738,125	937,000	1,300,000	300,000
Bill of exchange, net	4,739,356	-	4,739,356	-
Trust receipts	1,227,153	642,757	794,610	583,989
Letter of credit	101,372	33,208	-	-
Total short-term loans from financial institutions, net	10,806,006	1,618,060	6,833,966	883,989

The movement of short-term loans from financial institutions can be analysed as follows:

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2022 Baht'000	2021 Baht'000	2022 Baht'000	2021 Baht'000
Opening net book value	1,618,060	2,640,315	883,989	362,177
Cash flows:				
Additional loans during the year	22,854,060	5,154,290	18,048,285	3,317,897
Loan repayments during the year	(13,672,621)	(6,143,629)	(12,128,364)	(2,803,949)
Other non-cash movements:				
Bill of exchange amortisation	30,056	7,864	30,056	7,864
Currency translation differences	(23,549)	(40,780)	-	-
Closing net book value	10,806,006	1,618,060	6,833,966	883,989

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As at 31 December, short-term loans from financial institutions of the Company and subsidiaries are as follows:

Loans of the Company

31 December 2022		
Type	Balance	
	Million Baht	Interest rate
Promissory notes	1,300	Fixed interest rate at 2.25% per annum
Bill of exchange, net	4,739	Fixed interest rate between 1.40% and 1.80% per annum
Trust receipts	795	Fixed interest rate at 2.23% per annum
Total	6,834	

31 December 2021		
Type	Balance	
	Million Baht	Interest rate
Promissory notes	300	Fixed interest rate at 1.20% per annum
Trust receipts	584	Fixed interest rate at 1.21% per annum
Total	884	

The Company's loans are unsecured loans.

Loans of subsidiaries

31 December 2022			
Type	Balance		Interest rate
	Million Taiwan Dollar	Million Baht	
Promissory notes	-	3,438	Fixed interest rate between 1.65% and 1.95% per annum and variable interest rate between MLR less fixed discount and MLR per annum
Trust receipts	-	432	Fixed interest rate at 2.00% to 2.30% per annum
Letter of credit	90	-	Fixed interest rate at 1.69% to 2.39% per annum
Total	90	3,870	

31 December 2021			
Type	Balance		Interest rate
	Million Taiwan Dollar	Million Baht	
Bank overdraft	-	5	Floating interest rate between MOR less fixed discount and MOR per annum
Promissory notes	-	637	Fixed interest rate between 1.71% and 1.75% per annum and variable interest rate between MLR less fixed discount and MLR per annum
Trust receipts	-	59	Fixed interest rate at 1.21% per annum
Letter of credit	28	-	Fixed interest rate at 1.55% to 2.11% per annum
Total	28	701	

The loans of subsidiaries are secured by the overseas subsidiaries' fixed deposits, land, buildings, machines, and some equipment of the Group. The Group must comply with certain terms and conditions as specified in the short-term loan agreements with financial institutions: for example, by maintaining the debt to equity ratio and the debt service coverage ratio at the specified level, etc.

Credit facilities for short-term loans

As at 31 December 2022, the Group had the available credit facilities from short-term loans from financial institutions amounting to Baht 4,306 million and Taiwan Dollar 30 million in which an available credit facilities for the Company amounting to Baht 2,400 million (As at 31 December 2021: the Group had the available credit facilities from short-term loans from financial institutions amounting to Baht 8,211 million and Taiwan Dollar 12 million in which an available credit facilities for the Company amounting to Baht 4,186 million).

26 Other accounts payable

As at 31 December	Consolidated financial statements		Separate financial statements	
	2022 Baht'000	2021 Baht'000	2022 Baht'000	2021 Baht'000
Other accounts payable	274,261	252,460	44,236	44,299
- third parties				
- related parties (Note 40.3)	9,126	1,169	147,860	162,693
Undue output VAT	167,261	180,327	7,507	7,419
Revenue department payable	107,027	97,023	18,169	48,858
Accrued expenses	236,569	165,366	9,858	8,569
Interest payable	287,272	156,541	183,334	144,387
Deferred revenue	53,614	29,013	57,021	57,021
Others	1,103	7,050	17	24
Total other accounts payable	1,136,233	888,949	468,002	473,270

27 Long-term loans from financial institutions, net

27.1 The long-term loans from financial institutions are as follows:

As at 31 December	Consolidated financial statements		Separate financial statements	
	2022 Baht'000	2021 Baht'000	2022 Baht'000	2021 Baht'000
Long-term loans from financial institutions	24,493,553	29,197,851	5,250,000	5,390,000
<u>Less</u> Deferred financing fee	(46,990)	(34,628)	(6,335)	(10,428)
	24,446,563	29,163,223	5,243,665	5,379,572
<u>Less</u> Current portion of long-term loans from financial institutions, net	(7,322,063)	(5,581,640)	(1,270,614)	(935,619)
Total long-term loans from financial institutions, net	17,124,500	23,581,583	3,973,051	4,443,953

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The movement of long-term loans from financial institutions can be analysed as follows:

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2022	2021	2022	2021
	Baht'000	Baht'000	Baht'000	Baht'000
Opening net book value	29,163,223	24,239,956	5,379,572	5,421,993
Cash flows:				
Additional loans during the year	1,129,263	29,224,166	1,000,000	3,500,000
Loan repayments during the year	(5,833,042)	(24,433,158)	(1,140,000)	(3,540,000)
Payment for deferred financing fee during the year	(55,834)	(38,965)	(1,000)	(9,500)
Other non-cash movements:				
Amortisation of deferred financing fee ^(a)	43,472	189,536	5,093	7,079
Reclassification of deferred financing fee	-	(13,500)	-	-
Currency translation differences	(519)	(4,812)	-	-
	24,446,563	29,163,223	5,243,665	5,379,572
<u>Less</u> Current portion of long-term loans from financial institutions, net	<u>(7,322,063)</u>	<u>(5,581,640)</u>	<u>(1,270,614)</u>	<u>(935,619)</u>
Closing net book value	17,124,500	23,581,583	3,973,051	4,443,953

^(a) During the year ended 31 December 2021, amortisations of deferred financing fee of the Group amounting to Baht 134 million were the result of early repayment of the existing loan agreements of four subsidiaries.

As at 31 December, long-term loans from financial institutions of the Company and subsidiaries are as follows:

Loans of the Company

Number	Balance		Interest rate	Principal repayment term	Interest payment period
	2022 Million Baht	2021 Million Baht			
1	1,350	1,890	Fixed interest rate per annum between 2.55% and 3.80%	Repayment every six months from December 2020	Payment every six months
2	2,400	2,000	BIBOR six-month plus a certain margin per annum	Repayment every six months from January 2022	Payment every six months
3	1,500	1,500	Fixed interest rate per annum between 2.31% and 2.44%	Repayment within three years since the agreement date	Payment every six months
Total	5,250	5,390			

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Loans of subsidiaries denominated in Thai Baht

Number	Balance		Interest rate	Principal repayment term	Interest payment period
	2022 Million Baht	2021 Million Baht			
1	332	499	MLR interest rate less a certain discount per annum (2021: Fixed interest rate per annum at 3.55%)	Repayment every three months from September 2020	Payment every three months
2	741	847	MLR interest rate less a certain discount per annum	Repayment every three months from December 2020	Payment every three months
3	179	228	MLR interest rate less a certain discount per annum	Repayment every month from October 2020	Payment every month
4	2,012 ^(a)	2,552	THBFIX six-month plus a certain margin per annum	Repayment every six months from December 2021	Payment every six months
5	15,952 ^{(a) (b)}	19,619	THBFIX six-month plus a certain margin per annum	Repayment every three months from September 2021	Payment every three months
Total	19,216	23,745			

- (a) As at 31 December 2022, the Group's management is in the process of negotiating with the counterparties to change the reference rates due to the impact of IBOR reform (Note 5.1.1 b)).
- (b) During 2022, three subsidiaries entered into the amendments to the loan agreements with financial institutions for loans amounting to Baht 11,934 million to change of the reference rate from THBFIX six-month plus a certain margin per annum to MLR less a certain discount per annum. Such changes will be effective from 1 January 2023 onwards.

Loan of subsidiaries in denominated in Taiwan Dollar

Number	Balance		Interest rate	Principal repayment term	Interest payment period
	2022 Million Taiwan Dollar	2021 Million Taiwan Dollar			
1	16	43	Fixed interest rate per annum at 4.94%	Repayment every month from January 2021	Payment every month
2	9	12	Two-year deposit interest rate plus fixed margin per annum	Repayment every month from October 2021	Payment every month
Total	25	55			

As at 31 December 2022, long-term loan denominated in Thai Baht of the subsidiaries of Baht 17,204 million, no. 1, 2, 3 and 5 and long-term loan denominated in Taiwan Dollar of the subsidiary of Taiwan Dollar 16 million or equivalent to Baht 18 million, no. 1 (As at 31 December 2021, long-term loan denominated in Thai Baht of the subsidiaries of Baht 21,193 million, no. 1, 2, 3 and 5 and long-term loan denominated in Taiwan Dollar of the subsidiary of Taiwan Dollar 43 million or equivalent to Baht 52 million, no. 1) were secured with the deposits at a financial institution, land, factory building, machinery and equipment used by the Group, right to collect proceeds from land and factory building rental contract of the Group, pledging the subsidiaries' ordinary shares (Note 17.2) and assignment of insurance contracts. These loans were secured by the Company. The subsidiaries must comply with certain terms and conditions as specified in the long-term loan agreement with financial institutions; for example, by maintaining the debt-to-equity ratio and the debt service coverage ratio at the specified level.

As at 31 December 2022, long-term loan denominated in Thai Baht of the Company of Baht 5,250 million, long-term loan denominated in Thai Baht of the subsidiaries of Baht 2,012 million, no. 4, and long-term loan denominated in Taiwan Dollar of the subsidiary of Taiwan Dollar 9 million or equivalent to Baht 10 million, no. 2 (As at 31 December 2021, long-term loan denominated in Thai Baht of the Company of Baht 5,390 million, long-term loan denominated in Thai Baht of the subsidiaries of Baht 2,552 million, no. 4, and long-term loan denominated in Taiwan Dollar of the subsidiary of Taiwan Dollar 12 million or equivalent to Baht 14 million, no. 2) were unsecured loans. The Group is required to comply with certain terms and conditions as specified in long-term loans agreement with financial institutions; for example, maintaining debt to equity ratio and debt service coverage ratio at the specified level.

Credit facilities for long-term loans

As at 31 December 2022, the Group has undrawn credit lines of long-term loans from financial institutions amounting to Baht 2,350 million (as of 31 December 2021, the Group has long-term borrowings in the amount of Baht 1,217 million, of which the company's credit line is Baht 1,000 million).

27.2 Terms of maturity of long-term loans from financial institutions are as follows:

	Consolidated financial statements		Separate financial statements	
	2022	2021	2022	2021
	Baht'000	Baht'000	Baht'000	Baht'000
Within 1 year	7,317,816	5,577,633	1,275,000	940,000
Later than 1 year to 5 years	13,114,774	18,587,962	3,975,000	4,450,000
Later than 5 years	4,060,963	5,032,257	-	-
Total long-term loans from financial institutions	24,493,553	29,197,852	5,250,000	5,390,000

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28 Debentures, net

The details of debentures can be analysed as follows:

As at 31 December	Consolidated financial statements		Separate financial statements	
	2022 Baht'000	2021 Baht'000	2022 Baht'000	2021 Baht'000
Debentures	15,300,000	12,200,000	15,300,000	12,200,000
<u>Less</u> Deferred financing fee	(8,768)	(5,651)	(8,768)	(5,651)
	15,291,232	12,194,349	15,291,232	12,194,349
<u>Less</u> Current portion of debentures, net	(998,435)	(1,998,849)	(998,435)	(1,998,849)
Debentures, net	14,292,797	10,195,500	14,292,797	10,195,500

The movement of debentures can be analysed as follows:

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2022 Baht'000	2021 Baht'000	2022 Baht'000	2021 Baht'000
Opening net book value	12,194,349	16,191,767	12,194,349	16,191,767
Cash flows:				
Issuance of debentures during the year ^(a)	5,100,000	-	5,100,000	-
Repayment of debenture during the year	(2,000,000)	(4,000,000)	(2,000,000)	(4,000,000)
Payment for deferred financing fee during the year	(5,100)	-	(5,100)	-
Other non-cash movements:				
Amortisation of deferred financing fee	1,983	2,582	1,983	2,582
	15,291,232	12,194,349	15,291,232	12,194,349
<u>Less</u> Current portion of debentures, net	(998,435)	(1,998,849)	(998,435)	(1,998,849)
Closing net book value	14,292,797	10,195,500	14,292,797	10,195,500

(a) The debentures are name-registered, unsubordinated, and unsecured with a debenture holders' representative. The objectives of issuing debentures were to repay the Company's existing debentures and to be used in the general operations of the Company and its affiliates. The issuance was approved in the resolution of the Annual General Shareholders' Meeting on 22 April 2022, which granted the Company the right to issue up to Baht 20,000 million of secured or unsecured debentures with terms of up to ten years, the available credit is Baht 14,900 million (2021: Baht 20,000 million). The said debenture facilities have been approved by the Annual General Meeting of Shareholder for the year 2021).

Debentures of Baht 15,300 million (2021: Baht 12,200 million) are unsecured. The Company is required to comply with certain specified terms and conditions; for example, maintaining debt to equity ratio.

The effective interest rates of the fixed interest rate of the Company's debentures were between 2.74% and 4.19% per annum (2021: between 2.35% and 3.15% per annum).

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Maturity terms of debentures are as follows:

	Consolidated financial statements		Separate financial statements	
	2022	2021	2022	2021
	Baht'000	Baht'000	Baht'000	Baht'000
Maturity less than 1 year	1,000,000	2,000,000	1,000,000	2,000,000
Maturity more than 1 to 5 years	7,200,000	6,200,000	7,200,000	6,200,000
Maturity more than 5 years	7,100,000	4,000,000	7,100,000	4,000,000
Total debentures	15,300,000	12,200,000	15,300,000	12,200,000

29 Provision for decommissioning costs

	Consolidated financial statements		Separate financial statements	
As at 31 December	2022	2021	2022	2021
	Baht'000	Baht'000	Baht'000	Baht'000
Opening balance	1,740,989	2,073,683	1,593	1,593
Increase in provision	212,385	3,768	-	-
Decrease in provision	(12,529)	(375,170)	-	-
Payments for decommissioning cost	-	(351)	-	-
Finance costs	48,759	39,059	-	-
Closing balance	1,989,604	1,740,989	1,593	1,593

30 Legal reserve

Under the Public Companies Act B.E. 2535, the Company is required to set aside as a legal reserve at least 5% of its net profit after accumulated deficit brought forward (if any) until the reserve is not less than 10% of the registered capital. The legal reserve is non-distributable.

31 Revenue from sales and services

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2022 Baht'000	2021 Baht'000	2022 Baht'000	2021 Baht'000
Sales of crude palm oil and biodiesel	6,409,963	7,699,230	4,410,415	5,772,997
Sales of glycerine	406,986	364,422	406,986	364,422
Sales of by-products	347,585	102,173	7,114	4,362
Sales of electricity ^(a)	4,590,250	4,045,922	-	-
Sales of battery	263,965	203,444	-	-
Sales of electricity vehicles (Note 40.1)	6,310,021	806,207	-	-
Sales and service of charging station and others	434,861	64,950	-	-
Total revenue from sales and services	18,763,631	13,286,348	4,824,515	6,141,781

- (a) The Group has entered into 11 and 2 power purchase agreements with Electricity Generating Authority of Thailand (EGAT) and Provincial Electricity Authority (PEA), respectively. The agreements are effective for a period of 5 years commencing from agreement effective date and the Group has the right to extend the term for consecutive periods of 5 years each. Such agreement will be effective until the Group notifies the termination of sales of electricity by voluntary termination or any party did not comply with the agreements. The sales quantity and its price must be complied with the agreements.

32 Revenue from subsidy for adders

Revenue from subsidy for adders represented income received from Provincial Electricity Authority from sales of solar electricity at Baht 8 per kilowatt-hour and Electricity Generating Authority of Thailand from sales of solar electricity and wind power at Baht 6.5 per kilowatt-hour and Baht 3.5 per kilowatt-hour, respective for the period of 10 years since commercial operation date. The Group recognised such adders as revenue at whole amount according to the actual electricity production.

33 Other income

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2022 Baht'000	2021 Baht'000	2022 Baht'000	2021 Baht'000
Land rental income	20,651	-	57,780	57,743
Interest income	34,902	32,847	423,357	366,207
Commission from sale of an asset	-	-	-	92,700
Insurance claim income	795	9,426	-	-
Income from disposal of investments (Note 17.1)	1,846,823	-	-	-
Income from sales of assets, net ^(a)	247,939	318,763	-	-
Others	41,090	23,250	27,037	29,793
Total other income	2,192,200	384,286	508,174	546,443

- (a) During the year ended 31 December 2022, the Group recognised profit from sales of solar panels amounting to Baht 236 million (2021: Baht 185 million).

34 Finance costs

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2022 Baht'000	2021 Baht'000	2022 Baht'000	2021 Baht'000
Interest paid - third parties	1,292,307	1,264,404	644,305	586,994
- related parties	7,957	1,169	101,389	60,253
Deferred interest of lease liabilities amortisation	22,717	39,561	9,530	9,557
Letter guarantee fee amortisation	20,147	26,969	9,962	26,969
Other finance costs	69,650	55,435	7,080	7,645
Total finance costs	1,412,778	1,387,538	772,266	691,418

35 Expense by nature

The following expenditure items have been charged in arriving at net profit:

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2022 Baht'000	2021 Baht'000	2022 Baht'000	2021 Baht'000
Changes in inventories of finished goods and work in process	2,404,893	252,162	24,135	(67,879)
Raw materials and consumables used	9,884,380	6,095,556	4,762,423	5,396,483
Staff costs	573,532	738,063	248,518	266,018
Directors and management compensation	225,439	185,037	200,936	160,584
Depreciation	3,388,221	2,620,916	91,892	95,091
Amortisation	259,484	147,056	2,586	1,830
(Reversal of) provision for inventories	(3,373)	25,239	(7,034)	-
Finance costs	1,412,778	1,387,538	772,266	691,418
Delivery and export expenses	41,823	53,286	30,363	45,654

36 Income tax

The Group calculated income tax for the year ended 31 December from net taxable profit of which not includes share from investments in associates and joint ventures by using tax rate as follows:

	2022	2021
Thailand	20%	20%
Republic of China (Taiwan)	20%	20%
Republic of Singapore	17%	17%

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2022 Baht'000	2021 Baht'000	2022 Baht'000	2021 Baht'000
Current tax	176,441	38,721	-	-
Deferred tax	(31,122)	(35,376)	(9,996)	5,647
Total income tax	145,319	3,345	(9,996)	5,647

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The tax on the Group's profit before tax differs from the theoretical amount that would arise using the basic tax rate of the home country of the parent company as follows:

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2022 Baht'000	2021 Baht'000	2022 Baht'000	2021 Baht'000
Profit before tax	7,551,788	5,932,698	2,061,237	2,676,642
Tax calculated at a tax rate of 20% (2021: 20%)				
The result of the accounting profit multiplied by the income tax rate	1,510,358	1,186,540	412,247	535,328
Tax effect of :				
Share of profit from associates and joint ventures, net of tax	(43,529)	(2,709)	-	-
Income not subject to tax	(1,506,789)	(1,315,221)	(548,831)	(571,214)
Expenses not deductible for tax purpose	30,480	69,173	12,140	6,885
Tax losses for the year for which no deferred income tax assets was recognised	209,773	91,454	114,447	34,648
Revenues that are granted income tax exemption or expenses that are deductible at a greater amount	(54,974)	(25,892)	-	-
Income tax	145,319	3,345	(9,997)	5,647

The weighted average applicable tax rate for the Group and the Company were 1.92% and 0.49%, respectively (2021: 0.05% and 0.21%, respectively).

37 Earnings per share

Basic earnings per share is calculated by dividing the net profit attributable to shareholders of the Company by the weighted average number of ordinary shares.

	Consolidated financial statements		Separate financial statements	
	2022	2021	2022	2021
Basic earnings per share				
Net profit attributable to ordinary shareholders of the parent (Million Baht)	7,604	6,100	2,071	2,671
Weighted average number of ordinary shares outstanding (Million Shares)	3,730	3,730	3,730	3,730
Basic earnings per share (Baht per share)	2.04	1.64	0.56	0.72

There are no dilutive potential ordinary shares in issue during the periods presented, so no diluted earnings per share are presented.

38 Dividend

On 22 April 2022, at the Annual General Shareholders' Meeting, the shareholders approved annual dividend payments from non-BOI retained earnings as at 31 December 2021 at Baht 0.30 per share, totalling Baht 1,119 million. The Company paid the dividend to shareholders in May 2022.

On 23 April 2021, at the Annual General Shareholders' Meeting, the shareholders approved annual dividend payments from non-BOI retained earnings as at 31 December 2020 at Baht 0.30 per share, totalling Baht 1,119 million. The Company paid the dividend to shareholders in May 2021.

39 Promotional privileges

The Group has been granted promotional privileges by the Office of the Board of Investment under promotion certificates in respect of manufacturing of biodiesel, oil and fat produced from plant or animal, electricity, manufacturing and assembling of battery, and manufacturing and assembling of electric bus. The Company and fourteen subsidiaries have been granted exemption from certain taxes and duties as detailed in the certificates including exemption from corporate income tax for a period of eight years from the date of first revenue. As promoted entities, these subsidiaries are required to comply with the terms and conditions specified in the promotion certificates.

40 Related party transactions

As at 31 December 2022, the major shareholders of the Company are UBS AG Singapore Branch and Mr. Somphote Ahunai who held ordinary shares portion of 32.89% and 11.05%, respectively. The remaining portion of ordinary shares were held by others.

Details of subsidiaries are disclosed in Note 17.

The following material transactions are carried out with related parties:

40.1 Revenue from services

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2022	2021	2022	2021
	Baht'000	Baht'000	Baht'000	Baht'000
Revenue from sales				
- Associates	5,617,325	-	-	-
Revenue from management fees				
- Subsidiaries	-	-	23,896	116,971
Revenue from rental				
- Subsidiaries	-	-	57,780	57,743

40.2 Other income

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2022	2021	2022	2021
	Baht'000	Baht'000	Baht'000	Baht'000
Interest income				
- Subsidiaries	-	-	420,213	480,541
- Associates	10,589	-	-	-

40.3 Receivables from and payables to related parties

As at 31 December	Consolidated financial statements		Separate financial statements	
	2022	2021	2022	2021
	Baht'000	Baht'000	Baht'000	Baht'000
Accounts receivable				
- Associates	3,451,941	-	-	-
Other receivables (including interest receivable (Note 40.5))				
- Subsidiaries	-	-	759,694	522,880
- Associates	84,593	-	-	-
Instalment receivables ^(a)				
- Associates	524,912	-	-	-
Accounts payable				
- Associates	3,072,452	-	-	-
Other payables (including interest payable (Note 40.5))				
- Subsidiaries	-	-	147,860	162,693
- Associates	9,126	1,169	-	-

^(a) During 2022, the Group entered into electric bus instalment sale contracts with an associate company. The total value of these contracts are Baht 619 million. The contract term are 4 years and interest rates are between 3.50% and 3.75% per annum. The payment schedules are made on a monthly basis.

40.4 Other non-current assets

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2022	2021	2022	2021
	Baht'000	Baht'000	Baht'000	Baht'000
Advance payment for equipment and assets purchase				
- Associates	169,984	-	-	-

40.5 Short-term loans and long-term loans to related parties and related interests

Short-term loans

As at 31 December 2022, the Group issued promissory notes to related parties amounting to Baht 61 million. The promissory notes bore fixed interest between 2.10% and 6.50% per annum. (As at 31 December 2021: Nil). The terms of principal repayment and interest repayment are specific schedules and at call. The said promissory notes are unsecured.

As at 31 December 2022, the Company issued promissory notes to related parties amounting to Baht 10,817 million. The promissory notes bore fixed interest between 2.20% and 3.02% per annum. (As at 31 December 2021: Baht 3,745 million. The promissory notes bore fixed interest between 2.20% and 3.01% per annum). The terms of principal repayment and interest repayment are specific schedules and at call. The said promissory notes are unsecured.

The movement of short-term loans to related parties can be analysed as follows:

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2022	2021	2022	2021
	Baht'000	Baht'000	Baht'000	Baht'000
Opening balance, net	-	-	3,744,907	1,830,544
Cash flows:				
Additions during the year	60,800	-	11,466,398	2,191,634
Repayments during the year	(7,350)	-	(4,420,159)	(100,000)
Other non-cash movements:				
Increase from business				
Combination (Note 17.1.1)	7,350	-	-	-
Gain from reversal of				
allowance impairment loss	-	-	3,000	-
Unrealised gain on				
exchange rate	-	-	22,478	32,729
Reclassify to long-terms loans	-	-	-	(210,000)
Closing balance, net	60,800	-	10,816,624	3,744,907

Long-term loans

As at 31 December 2022, the Company had long-term loans to related parties amounting to Baht 6,400 million with fixed interest between 2.72% and 6.55% per annum and Baht 1,036 million with floating interest at 6M THBFIX plus a certain margin per annum^(a) (31 December 2021: Baht 5,508 million with fixed interest between 2.72% and 4.00% per annum and amounting to Baht 2,737 million with floating interest at 6M THBFIX plus a certain margin per annum). The terms of principal repayment and interest repayment are specific schedule. The said long-term loans are unsecured.

^(a) As at 31 December 2022, the Group's management is in the process of negotiating with the counterparties to change the reference rates due to the impact of IBOR reform (Note 5.1.1 b)).

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The movement of long-term loans to related parties can be analysed as follows:

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2022 Baht'000	2021 Baht'000	2022 Baht'000	2021 Baht'000
Opening balance	-	-	8,245,402	10,386,000
Cash flows:				
Additions during the year	-	-	1,760,000	359,511
Repayments during the year	-	-	(2,574,000)	(2,737,000)
Other non-cash movements:				
Unrealised gain on exchange rate	-	-	5,676	26,891
Reclassify from short-term loans	-	-	-	210,000
			7,437,078	8,245,402
<u>Less</u> Current portion of long-term loans to related parties	-	-	(628,606)	(332,471)
Closing balance	-	-	6,808,472	7,912,931

As at 31 December	Consolidated financial statements		Separate financial statements	
	2022 Baht'000	2021 Baht'000	2022 Baht'000	2021 Baht'000
Interest receivable				
- Subsidiaries	-	-	597,481	414,999
- Associates	336	-	-	-
	336	-	597,481	414,999

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2022 Baht'000	2021 Baht'000	2022 Baht'000	2021 Baht'000
Interest income				
- Subsidiaries	-	-	420,213	363,569
- Associates	1,317	-	-	-
	1,317	-	420,213	363,569

40.6 Short-term loans and long-term loans from related parties and related interests

Short-term loans

As at 31 December 2022, the Group had short-term loans from an associate amounting to Baht 385 million. The short-term loans bore fixed interest between 2.51% and 3.11% per annum (31 December 2021: the Group had short-term loans from an associate amounting to Baht 225 million. The short-term loans bore fixed interest between 2.51% and 3.11% per annum), and the Company had short-term loans from related parties amounting to Baht 6,233 million. The short-term loans bore fixed interest between 0.35% and 0.45% per annum. (31 December 2021 Baht 5,273 million with fixed interest between 0.40% and 1.25% per annum). The terms of principle repayment of all loans are at call. The said short-term loans are unsecured.

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The movement of short-term loans from related parties can be analysed as follows:

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2022	2021	2022	2021
	Baht'000	Baht'000	Baht'000	Baht'000
Opening balance	225,000	-	5,272,710	4,779,904
Cash flows:				
Additions during the year	160,000	225,000	1,246,500	580,000
Repayments during the year	-	-	(286,500)	(87,194)
Closing balance	385,000	225,000	6,232,710	5,272,710

Long-term loans

As at 31 December 2022, the Company had a long-term loan from a related party amounting to Baht 3,028 million (31 December 2021: Baht 3,232 million). The long-term loan bore floating interest rate plus fixed margin per annum. The terms of principal repayment and interest repayment are specific schedule. The said long-term loan is unsecured.

The movement of the long-term loan from a related party can be analysed as follows:

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2022	2021	2022	2021
	Baht'000	Baht'000	Baht'000	Baht'000
Opening balance	-	-	3,232,000	-
Cash flows:				
Additions during the year	-	-	-	4,000,000
Repayments during the year	-	-	(204,000)	(768,000)
	-	-	3,028,000	3,232,000
<u>Less</u> Current portion of long-term loans from a related party	-	-	(1,424,800)	(816,000)
Closing balance	-	-	1,603,200	2,416,000

As at 31 December	Consolidated financial statements		Separate financial statements	
	2022	2021	2022	2021
	Baht'000	Baht'000	Baht'000	Baht'000
Interest payables				
- Subsidiaries	-	-	146,899	162,407
- Associates	9,126	1,169	-	-
	9,126	1,169	146,899	162,407

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For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2022	2021	2022	2021
	Baht'000	Baht'000	Baht'000	Baht'000
Interest expenses				
- Subsidiaries	-	-	101,389	60,253
- Associates	7,957	1,169	-	-
	7,957	1,169	101,389	60,253

40.7 Advance receipts for land rental from related parties

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2022	2021	2022	2021
	Baht'000	Baht'000	Baht'000	Baht'000
Opening balance	-	-	862,381	826,580
Increase during the year	-	-	110,349	93,544
Decrease during the year	-	-	(57,780)	(57,743)
	-	-	914,950	862,381
<u>Less</u> Current portion of advance receipts for land rental from related parties	-	-	(57,021)	(57,021)
Closing balance	-	-	857,929	805,360

40.8 Dividend income

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2022	2021	2022	2021
	Baht'000	Baht'000	Baht'000	Baht'000
Dividend income from subsidiaries	-	-	2,856,188	2,816,357
	-	-	2,856,188	2,816,357

40.9 Key management compensation

For the years ended 31 December	Consolidated financial statements		Separate financial statements	
	2022	2021	2022	2021
	Baht'000	Baht'000	Baht'000	Baht'000
Short-term employee benefits	215,974	179,931	196,344	156,339
Post-retirement benefits	9,465	5,106	4,592	4,245
Total key management compensation	225,439	185,037	200,936	160,584

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41 Commitments and contingent liabilities

41.1 Capital expenditure obligations

Capital expenditure contracted as at the statement of financial position date but not recognised in the financial statements are as follows:

	Consolidated financial statements									
	2022					2021				
	Million Chinese Yuan	Million Japanese Yen	Million Taiwan Dollar	Million US Dollar	Million Baht	Million Chinese Yuan	Million Japanese Yen	Million Taiwan Dollar	Million US Dollar	Million Baht
Building and machine under installation	54	147	30	162	508	67	147	12	122	724
Project design consultant and other service fees	-	-	-	-	15	-	-	-	-	44
Research and development consultant fee	-	-	-	-	-	-	-	-	-	1
	54	147	30	162	523	67	147	12	122	769

Machine under installation

Separate financial statements	
2022	2021
Million Baht	Million Baht
27	13

41.2 Service agreements commitments

The Group and the Company have non-cancellable service agreements as follows:

Consolidated financial statements								
2022				2021				
Million Euro	Million Taiwan Dollar	Million US Dollar	Million Baht	Million Euro	Million Taiwan Dollar	Million US Dollar	Million Baht	
Payable within:								
Less than 1 year	-	2	5	123	2	2	5	118
More than 1 to 5 years	-	7	3	247	-	7	7	18
More than 5 years	-	26	-	17	-	28	-	19
	-	35	8	387	2	37	12	155
Separate financial statements								
2022				2021				
Million Taiwan Dollar	Million US Dollar	Million Baht	Million Taiwan Dollar	Million US Dollar	Million Baht			
Payable within:								
Less than 1 year	2	-	50	2	1	10		
More than 1 to 5 years	7	-	11	6	-	11		
More than 5 years	26	-	17	28	-	19		
	35	-	78	36	1	40		

41.3 Electric vehicle sales agreements

As at 31 December 2022, the Group has commitments from the sale agreements with an associate. The Group has not delivered 824 electric vehicles, totalling Baht 4,101 million. (2021: 87 electric vehicles, totalling Baht 265 million). The Group has obligated to deliver electric vehicles in accordance with the agreements.

41.4 Bank guarantee

As at 31 December 2022, the Group and the Company have outstanding letters of guarantee issued by government sector and private sector of Baht 508 million and Baht 4,064 million, respectively. (2021: Baht 460 million and Baht 4,065 million, respectively).

42 Events after the reporting period

42.1 On 20 January 2023, the Company issued debentures of Baht 7,000 million in four tranches as follows:

- a) Tranche 1: The Company's unsecured debentures of Baht 1,150 million, term of debentures 3 years, maturity in 2026, fixed interest rate 3.05% per annum with semi-annual interest payment.
- b) Tranche 2: The Company's unsecured debentures of Baht 2,000 million, term of debentures 5 years, maturity in 2028, fixed interest rate 3.51% per annum with semi-annual interest payment.
- c) Tranche 3: The Company's unsecured debentures of Baht 1,000 million, term of debentures 7 years, maturity in 2030, fixed interest rate 3.93% per annum with semi-annual interest payment.
- d) Tranche 4: The Company's unsecured debentures of Baht 2,850 million, term of debentures 10 years, maturity in 2033, fixed interest rate 4.25% per annum with semi-annual interest payment.

The objectives of issuing debentures were to repay the Company's existing debentures and to be used in the general operations of the Company and its affiliates. The issuance was approved in the resolution of the Annual General Shareholders' Meeting on 22 April 2022, which granted the Company the right to issue up to Baht 20,000 million of secured or unsecured debentures with terms of up to ten years.

42.2 On 21 February 2023, the electric ferry of the Group under construction and awaiting delivery to the customers was damaged by a fire incident. The Group is still investigating the cause and assessing the damage. The Group will assess and record the impairment loss on such assets within the first quarter of 2023.



Energy Absolute

Energy Absolute Public Company Limited
16th Floor, AIA Capital Center Building
89 Ratchadaphisek Road, Dindaeng Bangkok 10400

Tel : 0-2248-2488-92, 0-2002-3667-9
www.EnergyAbsolute.co.th