

# Energy Absolute Public Company Limited

---

## Management Discussion and Analysis For Operating Results

of the fourth quarter and year ended 31 December 2022



No. EA6602/027LT

24 February 2023

Subject Management Discussion and Analysis of Financial Statements for the fourth quarter and year ended 31 December 2022

To The President of the Stock Exchange of Thailand

We, Energy Absolute Public Company Limited (“EA”) would like to report the operating results of EA and its subsidiaries (all together as the “Company”) for the fourth quarter and year ended 31 December 2022 which has been approved by the Board of Directors Meeting No. 1/2023 held on 24 February 2023. The details are as follows:

## Overview of operating results for the fourth quarter and for the year ended 31 December 2022

Operating Results	Fourth quarter				Year			
	2022 Baht Million	2021 Baht Million	Increase (Decrease)		2022 Baht Million	2021 Baht Million	Increase (Decrease)	
			Baht Million	%			Baht Million	%
Total Revenue	9,669.38	5,738.15	3,931.23	68.51	27,546.81	20,558.10	6,988.71	33.99
Profit attributable to Owners of the parent	2,172.25	1,881.31	290.94	15.46	7,604.29	6,100.07	1,504.22	24.66
Basic earnings per share (Baht per share)	0.58	0.51	0.07	13.73	2.04	1.64	0.40	24.39

### Net Profit

For the fourth quarter ended 31 December 2022, the Company reported the consolidated net profit of Baht 2,172.25 million, increased by Baht 290.94 million or 15.46% compared to the same period last year which incurred the consolidated net profit of Baht 1,881.31 million. For the year ended 31 December 2022, the Company reported the consolidated net profit of Baht 7,604.29 million, increased by Baht 1,504.22 million or 24.66% compared to the same period last year which incurred the consolidated net profit of Baht 6,100.07 million. These were mainly from the better operating results of electric vehicle business and mass transport, which significantly increased in revenue about income 10 times, including the power business.

## Revenue

For the fourth quarter ended 31 December 2022, the Company reported the total revenue of Baht 9,669.38 million, increased by Baht 3,931.23 million or 68.51% compared to the same period last year which incurred the total revenue of Baht 5,738.15 million. For the year ended 31 December 2022, the Company reported the total revenue of Baht 27,546.81 million, increase by Baht 6,988.71 million or 33.99% compared to the same period last year which incurred the total revenue of Baht 20,558.10 million, as summarized below.

Total Revenue	Fourth quarter				Year			
	2022 Baht Million	2021 Baht Million	Increase (Decrease)		2022 Baht Million	2021 Baht Million	Increase (Decrease)	
			Baht Million	%			Baht Million	%
Biodiesel Business	1,368.67	2,333.65	(964.98)	(41.35)	7,422.27	8,225.75	(803.48)	(9.77)
Power Business	3,040.05	2,860.56	179.49	6.27	11,181.66	10,933.38	248.28	2.27
Electric Vehicle and Mass Transport Business	5,072.26	496.62	4,575.64	921.36	8,626.71	1,782.55	6,844.16	383.95
Battery Business	1,839.38	121.94	1,717.44	1,408.43	2,748.97	568.75	2,180.22	383.34
Other Businesses	57.03	23.14	33.89	146.46	304.26	200.55	103.71	51.71
Less: Inter-segment revenue	(1,851.00)	(327.92)	(1,523.08)	464.47	(3,091.35)	(1,537.17)	(1,554.18)	101.11
Revenue from Operations	9,526.39	5,507.99	4,018.40	72.96	27,192.52	20,173.81	7,018.71	34.79
Other Income/Accounting gain	142.99	230.16	(87.17)	(37.87)	354.29	384.29	(30.00)	(7.81)
<b>Total Revenue</b>	<b>9,669.38</b>	<b>5,738.15</b>	<b>3,931.23</b>	<b>68.51</b>	<b>27,546.81</b>	<b>20,558.10</b>	<b>6,988.71</b>	<b>33.99</b>

In this regard, the revenue from operations for the fourth quarter ended 31 December 2022 was Baht 9,526.39 million, increased by Baht 4,018.40 million or 72.96% over the prior year. This is mainly due to the growth in the electric vehicle and mass transport businesses, lithium-ion battery which are summarized as follows:

### 1. Biodiesel Business:

For the fourth quarter ended 31 December 2022, the revenue from the Biodiesel business decreased by Baht 964.98 million or 41.35%. For the year period ended 31 December 2022, the revenue from the Biodiesel business decreased by Baht 803.48 million or 9.77% compared to the same period last year, due to the following.

**1.1 Manufacturing and distributing Biodiesel Products:** For the fourth quarter ended 31 December 2022, the revenue decreased by Baht 856.79 million or 52.97%. For the year period ended 31 December 2022, the revenue decreased by Baht 1,362.58 million or 23.60%. This was mainly due to both factors of selling price and sale volume declining. For the sale volume factor, this was a result of the government policy to adjustment of biodiesel mandatory in high speed diesel fuel from B5 to B7 from October 10, 2022 until March 31, 2023. The government adjusted this to support the CPO (Crude Palm Oil) price, which decreased in line with the global prices in order 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 was declined, for selling price factor this was decreased in the fourth quarter ended of year 2022, due to crude palm oil selling price has continued decline, as a result, the selling price of biodiesel was decreased.

Items	Fourth quarter				Year			
	2022 Baht Million	2021 Baht Million	Increase (Decrease)		2022 Baht Million	2021 Baht Million	Increase (Decrease)	
			Baht Million	%			Baht Million	%
Revenue from Biodiesel	760.85	1,617.64	(856.79)	(52.97)	4,410.42	5,773.00	(1,362.58)	(23.60)
- Sales volume (Million liter)	24.75	37.90	(13.15)	(34.70)	107.41	155.35	(47.94)	(30.86)
- Average Selling Price (Baht/liter)	30.74	42.68	(11.94)	(27.98)	41.06	37.16	3.90	10.50
- Biodiesel Mandates	B5,B7	B7,B10, B20			B5,B7	B7,B10, B20		

**1.2 Manufacturing and distributing Pure Glycerin Product:** For the fourth quarter ended 31 December 2022, the revenue decreased by Baht 84.10 million or 62.24%. This was mainly from the market price has continued decline in the fourth quarter of the year 2022, as a result, the glycerin selling price was decreased. For the year ended 31 December 2022 the revenue increased by Baht 42.57 million or 11.68%. The main factor an increase of selling price compared to the same period last year. There is 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.

Items	Fourth quarter				Year			
	2022 Baht Million	2021 Baht Million	Increase (Decrease)		2022 Baht Million	2021 Baht Million	Increase (Decrease)	
			Baht Million	%			Baht Million	%
Revenue from Pure Glycerin	51.02	135.12	(84.10)	(62.24)	406.99	364.42	42.57	11.68
- Sales volume (Million Kg)	1.86	2.84	(0.98)	(34.51)	9.03	12.04	(3.01)	(25.00)
- Average Selling Price (Baht/Kg)	27.40	47.66	(20.26)	(42.51)	45.09	30.26	14.83	49.01

**1.3 Manufacturing and distributing CPO (Crude Palm Oil) Product:** For the fourth quarter ended 31 December 2022, the revenue decreased by Baht 103.09 million or 20.90%. For the year ended 31 December 2022, the revenue increased by Baht 326.85 million or 18.67%. The increase can be attributed to a higher selling price, thanks to Indonesia's palm oil export ban in late April, leading to greater demand than supply. Indonesia is the world's largest producer and exporter of palm oil. As a result, palm oil prices have been steadily rising. For the year 2022 palm oil selling price was reported by 41.39 Baht/Kg an increased by 6.08 Baht/Kg compared to the same period last year, until the end of May. A surplus of palm oil in the country caused Indonesia to rescind the policy of banning exports and adding export support policies to reduce domestic palm oil stocks, causing the relaxed palm supply in the world market, as a result in the fourth quarter of the year 2022 the palm oil prices was declined compared to the same period last year.

Items	Fourth quarter				Year			
	2022 Baht Million	2021 Baht Million	Increase (Decrease)		2022 Baht Million	2021 Baht Million	Increase (Decrease)	
			Baht Million	%			Baht Million	%
Revenue from CPO (crude palm oil)	390.13	493.22	(103.09)	(20.90)	2,077.46	1,750.61	326.85	18.67
- Sales volume (Million Kg)	12.21	10.10	2.11	20.89	50.19	49.58	0.61	1.23
- Average Selling Price (Baht/Kg)	31.95	48.83	(16.88)	(34.57)	41.39	35.31	6.08	17.22

**1.4 Manufacturing and distributing PCM Product:** For the fourth quarter ended 31 December 2022, the revenue increased by Baht 14.50 million or 243.70%. For the year ended 31 December 2022, an increase by Baht 59.21 million or 131.58%. The main factor was from increased sales volume and expanding the PCM market to be used in the textile industry. As a result, the revenue was increased compared to the same period last year.

Items	Fourth quarter				Year			
	2022 Baht Million	2021 Baht Million	Increase (Decrease)		2022 Baht Million	2021 Baht Million	Increase (Decrease)	
			Baht Million	%			Baht Million	%
Revenue from PCM	20.45	5.95	14.50	243.70	104.21	45.00	59.21	131.58
- Sales volume (Million Kg)	0.15	0.05	0.10	200.00	0.91	0.39	0.52	131.33
- Average Selling Price (Baht/Kg)	136.33	119.00	17.33	14.56	114.52	115.38	(0.86)	0.75

**1.5 Manufacturing and distributing Green Diesel Product:** 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.

Items	Fourth quarter				Year			
	2022 Baht Million	2021 Baht Million	Increase (Decrease)		2022 Baht Million	2021 Baht Million	Increase (Decrease)	
			Baht Million	%			Baht Million	%
Revenue from Green Diesel (GD)	75.61	0.00	75.61	100.00	75.61	0.00	75.61	100.00
- Sales volume (Million Kg)	1.15	0.00	1.15	100.00	1.15	0.00	1.15	100.00
- Average Selling Price (Baht/Kg)	65.75	0.00	65.75	100.00	65.75	0.00	65.75	100.00

**1.6 Byproducts:** For the fourth quarter ended 31 December 2022, the revenue decreased by Baht 11.11 million or 13.60%. For the year period ended 31 December 2022 increased by Baht 54.86 million or 18.74% The main factor was increased of palm kernel selling prices in align with increased of palm prices (Palm Kernel is byproducts of crude palm oil production).

Items	Fourth quarter				Year			
	2022	2021	Increase (Decrease)		2022	2021	Increase (Decrease)	
	Baht Million	Baht Million	Baht Million	%	Baht Million	Baht Million	Baht Million	%
Revenue from byproducts	70.61	81.72	(11.11)	(13.60)	347.58	292.72	54.86	18.74

## 2. Generating and distributing Electricity:

For the fourth quarter ended 31 December 2022, The Company reported the revenue of Baht 3,040.05 million, an increase by Baht 179.49 million or 6.27% compared to the same period last year which incurred the revenue Baht 2,860.56 million. For the year period ended 31 December 2022 the Company reported the total revenue of Baht 11,181.66 million, an increase of 248.28 million or 2.27% compared to the same period last year which incurred the revenue Baht 10,933.38 million. The reasons are summarized as follows:

Items	Fourth quarter				Year			
	2022	2021	Increase (Decrease)		2022	2021	Increase (Decrease)	
	Baht Million	Baht Million	Baht Million	%	Baht Million	Baht Million	Baht Million	%
<b>Revenue from Solar power plants</b>	1,707.66	1,512.49	195.17	12.90	6,732.57	6,070.88	661.69	10.90
- Sales volume (GWh)	160.33	155.96	4.37	2.80	659.70	629.06	30.64	4.87
- Average Selling Price (Baht/Unit)	10.65	9.70	0.95	9.79	10.21	9.65	0.56	5.80
<b>Describes below:</b>								
The revenue increased due to the 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), which helps to increase the efficiency of the electricity generating. In addition, in the first half year of 2022, there was a higher intensity of light compared to the same period last year. While the average selling price was increased following the wholesale FT price that increased.								
<b>Revenue from Wind power plants</b>	1,327.93	1,342.91	(14.98)	(1.12)	4,432.03	4,838.04	(406.01)	(8.39)
- Sales volume (GWh)	183.67	218.91	(35.24)	(16.10)	659.51	793.52	(134.01)	(16.89)
- Average Selling Price (Baht/Unit)	7.23	6.13	1.10	17.94	6.72	6.10	0.62	10.16

Items	Fourth quarter				Year			
	2022 Baht Million	2021 Baht Million	Increase (Decrease)		2022 Baht Million	2021 Baht Million	Increase (Decrease)	
			Baht Million	%			Baht Million	%
<b>Describes below:</b>								
The revenue was decreased due to declined speed of wind in the both location of Hanuman power plant at Chaiyaphum province and Hadkanghan power plant at Songkhla and Nakhon Sri Thammarat province. While the average selling price was increased following the wholesale FT price that increased.								
<b>Hanuman wind power 260-MW Project</b>								
- Sales volume (GWh)	138.25	151.94	(13.69)	(9.01)	433.02	504.97	(71.95)	(14.25)
- Average Selling Price (Baht/Unit)	7.19	6.09	1.10	18.06	6.69	6.03	0.66	10.95
<b>Hadkanghan wind power 126-MW Project</b>								
- Sales volume (GWh)	45.42	66.97	(21.55)	(32.18)	226.49	288.55	(62.06)	(21.51)
- Average Selling Price (Baht/Unit)	7.34	6.24	1.10	17.63	6.77	6.22	0.55	8.84
<b>Revenue from Biogas power</b>	<b>4.46</b>	<b>5.16</b>	<b>(0.70)</b>	<b>(13.57)</b>	<b>17.06</b>	<b>24.46</b>	<b>(7.40)</b>	<b>(30.25)</b>
- Sales volume (GWh)	0.97	1.28	(0.31)	(24.22)	4.07	6.72	(2.65)	(39.43)
- Average Selling Price (Baht/Unit)	4.58	4.04	0.54	13.37	4.19	3.64	0.55	15.11

### 3. Manufacturing and distributing electric vehicle and mass transport:

For the fourth quarter ended 31 December 2022, the revenue was reported at Baht 5,072.26 million, an increase by Baht 4,575.64 million. For the year ended 31 December 2022, the revenue was Baht 8,626.71 million, an increase by Baht 6,844.16 million. This was due to sales of electric vehicles by 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. Manufacturing and distributing lithium-ion battery:

For the fourth quarter ended 31 December 2022, the revenue was reported at Baht 1,839.38 million, an increase by Baht 1,717.44 million. For the year ended 31 December 2022, the revenue was Baht 2,748.97 million, an increase by Baht 2,180.22 million. The Company has been manufacturing and distributing the lithium-ion battery for EV assembly during the third and fourth



quarter ended of the year 2022. The Company expects that in year 2023, the Company will be able to increase the production capacity to support electric vehicle expansion.

## 5. Revenue from other businesses:

For the fourth quarter ended 31 December 2022, the revenue was reported at Baht 57.03 million, an increase by Baht 33.89 million. For the year ended 31 December 2022, the revenue was Baht 304.26 million, an increase by Baht 103.71 million. 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.

## 6. Other income:

For the fourth quarter ended 31 December 2022 the other income was reported at Baht 142.99 million, decreased by Baht 87.17 million. For the year ended 31 December 2022 other income was Baht 354.29 million, decreased by Baht 30 million.

## Cost of sales and services

For the fourth quarter and the year ended 31 December 2022, cost of sales was reported at Baht 6,655.48 million, an increase by Baht 3,321.93 million or 99.65% and by Baht 17,394.11 million, an increase by Baht 5,500.76 million or 46.25% as compared to the same period of last year which was incurred the total cost of sales by Baht 3,333.55 million and by Baht 11,893.35 million respectively. The reasons are summarized as follows:

- 1. Manufacturing and distributing Biodiesel:** For the fourth quarter and the year ended 31 December 2022, the cost of sales decreased by Baht 832.93 million or 37.06% and decreased by Baht 284.18 million or 3.58% respectively as compared to the same period of last year, the main factor was the decrease of palm fruit price which is the main raw material for biodiesel.
- 2. Generating and distributing Electricity:** For the fourth quarter and the year ended 31 December 2022, the cost of sales increased by Baht 104.59 million or 14.93% and increased by Baht 262.57 million or 9.22% respectively, as compared to the same period last year. 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 to increasing the efficiency of the electricity generating.

3. **Manufacturing and distributing electric vehicle and mass transport:** For the fourth quarter and the year ended 31 December 2022, cost of sales increased by Baht 3,975.56 million and increased by Baht 4,165.49 million respectively as compared to the same period last year. They correspond to the increased of sales volume electric vehicle.
4. **Manufacturing and distributing lithium-ion battery:** For the fourth quarter and the year ended 31 December 2022, cost of sales increased by Baht 1,604.84 million and increased by Baht 2,127.61 million respectively as compared to the same period last year. This was mainly from increased sales volume of lithium-ion batteries and the cost of depreciation during start-up initial operation (Ramp up).
5. **Other businesses:** For the fourth quarter and the year ended 31 December 2022, the cost of sales increased by Baht 23.91 million and increased by Baht 66.19 million respectively as compared to the same period last year. This aligned with the expansion of the charging station business for electric vehicles.

## Selling Expense

For the fourth quarter and the year ended 31 December 2022, the selling expense was Baht 14.54 million, decreased by Baht 4.06 million or 21.84% and Baht 60.58 million, decreased by Baht 11.26 million or 15.67% respectively as compared to the same period for last year, which incurred the selling expense. This aligns with the decrease in sales volume of biodiesel products.

## Administrative Expense

For the fourth quarter ended 31 December 2022, the administrative expense was Baht 359.89 million, decreased by Baht 15.04 million or 4.01%. For the year ended 31 December 2022 was Baht 1,366.19 million, an increased by Baht 0.70 million or 0.05% due to the normal operation.

## Finance cost

For the fourth quarter ended 31 December 2022, the finance cost was Baht 398.74 million, an increase of Baht 103.71 million or 35.15%. For the year ended 31 December 2022 was Baht 1,412.78 million, an increased by Baht 25.24 million or 1.82%. This was mainly from an increase in 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 Bank of Thailand.

## Financial Status

### Total Asset

The total asset of the Company as of 31 December 2022 was Baht 103,364.34 million, increased by Baht 17,888.09 million from the year end of 2021. This was mainly from the following determinants:

- Cash and cash equivalents

Cash and cash equivalents as of 31 December 2022 was reported at Baht 3,210.73 million, representing an increase of Baht 283.76 million from the year end of 2021. This is due to the normal operating results.

- Trade accounts receivable and other receivable net

Trade accounts receivable and other receivable net as of 31 December 2022 was reported at Baht 14,462.34 million, representing an increase of Baht 7,449.24 million from the year end of 2021. This was mainly from finance lease receivables and trade accounts receivable of sales electric vehicle.

- Inventory

Inventory as of 31 December 2022 was reported at Baht 5,516.42 million, representing an increased by Baht 4,033.27 million from the year end of 2021, due to the raw materials in preparation for lithium-ion battery production for Amita Technology (Thailand) Co., Ltd. and electric vehicle factory.

- Investments in Associates

Investments in Associates as of 31 December 2022 was reported at Bath 8,550.91 million, an increase by Baht 7,037.94 million from the end of year 2021. This was from the subsidiary acquired newly issued ordinary shares of Beyond Securities Public Company Limited in equivalent to 23.63% of the issued and paid-up ordinary shares.

- Property, plant and equipment

Property, plant and equipment net as of 31 December 2022 was reported at Baht 54,221.39 million, decreased by Baht 4,199.25 million from the end of year 2021. This was from solar

panels classified as non-current assets held for sale of power plants in the Phitsanulok power plant project, Lopburi power plant project and Lampang power plant project.

- Non-current assets held for sale

Non-current assets held for sale as of 31 December 2022 increased by Baht 3,204.73 million from the end of year 2021, due to the solar panels of the Phitsanulok power plant project, Lopburi power plant project and Lampang power plant project.

## Total Liabilities

As of 31 December 2022, the total liabilities of the Company were Baht 62,059.99 million, representing an increase of Baht 11,685.46 million from the end of year 2021. This was mainly from increasing of short-term loans from financial institutions and issuing the new bonds by Baht 5,100 million for repayment the maturity of old bonds and supporting the expansion of lithium-ion battery and electric vehicle assembly plants.

## Total Equity

As of 31 December 2022, the total shareholders' equity of the Company were Baht 41,304.36 million, representing an increase of Baht 6,202.64 million from the end of year 2021, due to net profit the ended of the year 2022.

## The process of major investment projects

- **EV charging stations: EA Anywhere - Energy Mahanakhon Co., Ltd. (EMN)**

The Company has developed and installed 512 electric charging stations (DC charger station and AC charger station) to date across Thailand with 132 stations approved for the low priority energy price. The low priority energy price will give the competitive advantage to the Company and will help penetrate the ultra fast charge platform of the group. This year, the Company shifts its focus into the large scale Megawatts charging stations for the group commercial electric vehicles products. The Company successfully installed the Megawatts electric charging stations for large-scale commercial electric vehicles for 64 stations: 43 stations in operation and 21 stations in the installation process.

Not only for the Land Transport, the Company also completed the development of Megawatts scale charging stations for the electric ferry in the total of 3 stations locating at; 1) Wat Salaree Station 10

units (20 connectors), 2) Public Warehouse Organization (PWO) Station 10 units (20 connectors) and 3) Saima Station 14 units (28 connectors).

Currently the Company dominates the charging stations in Thailand; especially the large scale Megawatts charging stations. Incorporated with the E@ group, the Company continued to research and develop the charging technology to be able to charge the Electric Locomotive train with the capacity of 3 MW charging station to make the statement as the leading EV ecosystem company in Thailand.

## ▪ Li-ion Battery Plant – Amita Technology (Thailand) Co., Ltd.

Amita Technology (Thailand) Co., Ltd. is the first company in ASEAN that successfully established the Gigawatt lithium-ion batteries factory. In the 4<sup>th</sup> quarter of this year, the battery production has reached the full capacity (1 Gigawatt hours per year) and the Company is able to send most of its products to E@ group to support the production of the electric buses. The Company is in the process of the expansion of the production, which will reach 2 Gigawatt hours per year in 2023, and 4 Gigawatt hours per year in 2024. The expansions will support the strong growth from demands of Electric Vehicles in Thailand ranging from the commercial vehicles produced by E@ group to various types of electric vehicles produced by the prospective auto assemblers expansion in the EV industry in Thailand.

To ensure the quality of the battery, the Company has established Battery Testing Center, Electric Vehicle and Electronic Products Company Limited (BEV) to provide battery testing and quality assurance services for E@ group and the future market. The facility of BEV has the capacity to provide research and development services of electric vehicles and electronic equipment to meet international standards.

Research and Development of the new technology of the battery is not the only area the Company is focused on. The Company also focusing on reusing old batteries and the ability to recycle them to ensure long term sustainability of the Company. This would enable the Company to reduce the amount of waste as a result of battery production and to make the world a better place to live.

## ▪ Electric Bus Project and Commercial Vehicles – Absolute Assembly Company Limited (AAB)

Absolute Assembly Co., Ltd (AAB), the manufacturer of commercial vehicles of E@ group, currently has a maximum production capacity of 9,000 units per year with the ability to make the various types of electric vehicle. The flexibility and the adaptability of the machineries enable AAB to be able to make all types of electric commercial vehicles including but not limited to electric buses both

high-floor and low-floor, electric minibuses and electric trucks. During the 4<sup>th</sup> quarter of this year, the Company has successfully utilized the maximum production for 1 shift or 3,000 units per year. The production of the electric vehicles by AAB using the majority of the materials locally qualifies the AAB's electric vehicles as "Product of Thailand". As the result of this, all of AAB products and its import materials are receiving the import tax waiver to Thailand Market. Another competitive advantages of AAB is the location of the facility. The AAB facility is located in the free trade zone, which enhance the AAB's ability to export its EV products to countries which Thailand have FTA (Free Trade Agreement); such as Malaysia, with the same import tax waiver into Thailand market. In the year 2023, the Company has a plan to deliver 2,000 electric buses to the bus operator services the metro city of Bangkok and outer regions. In addition to the electric bus delivery, the Company expects to deliver 2,000 electric trucks and other vehicles to various logistic providers.

#### - Mine Mobility Corporation Company Limited (MMC)

Mine Mobility Corporation Company Limited (MMC) has started production and assembly of electric pickup trucks using the latest in-house technology and innovation. The Company has registered the first Thailand electric mini truck under the name "MINE MT30" and launched it on 18 October 2022. During early of December 2022, MMC has received the first orders for the mini truck from the Motor Expo 2022 and will begin delivering the electric mini trucks in March and April of 2023. Customers are mainly from logistics and delivery companies who give importance to the Net Zero goal. The additional prospective customers are currently testing out the Company's mini truck products to ensure the quality of the product to make the additional purchasing order.

#### - Mine Mobility Research Company Limited (MMR)

Mine Mobility Research Co., Ltd. (MMR) is the flagship R&D of Electric Vehicles of EA group. MMR enhances the capability of EA group by inventing the key components for Electric Vehicle production; such as, Electric Ferry, Mine MT30, Various of Battery Packs Technology etc. The latest invention of MMR with the collaboration with CRRC Dalian, a major railway manufacturer from China, is the first Thailand Electric Locomotive Train. With the extent collaboration and cooperation with the Ministry of Transport, State Railway of Thailand (SRT), King Mongkut's Institute of technology Ladkrabang (KMITL), MMR has successfully launched the prototype of EV locomotive in January 2023. In the first phase, the Company has begun to test the shunting system at Krung Thep Aphiwat Central Terminal starting in January 2023. Through testing, EV trains or MINE locomotives are able to run 300 kilometers with a single charge. The Ultra-Fast Charge technology from EA group using EA Anywhere's Megawatt charging station reduced the

charging time of the EV locomotive being fully charged in 1 hour. EV locomotive is not only reducing the carbon emission but also saving the energy cost by more than 50% when compared traditional diesel engines.

## - EA Mobility Holding Company Limited (EMH)

On September 26 2022, the Company signed a Head of Agreement (HOA) to collaborate with Computer Forms (Malaysia) Bread (CFM) in order to establish a joint venture to invest in electric vehicles and an EV ecosystem in Malaysia. The HOA has been signed to provide 200 buses to Gemilang International (GML) and install Ultra-fast charging stations with the charging time of 15-20 minutes to serve the needs of electric mass transport vehicles. The Company's fast charging time is a perfect fit for the transportation industry, which requires fast charging to continue services. The Company has a plan to set up the Joint Venture Company to expand the EV products in Malaysia Market by the first quarter of 2023 offering in Malaysia.

## ■ Green Diesel and Bio-PCM Project

The Company has continued its biodiesel business to continue building upon existing products which use palm oil, with a substrate which has been patented. Our Green Diesel product is mainly sent to customers in Europe, and Bio-PCM has customers in Japan, South Korea and China. Meanwhile, the Company has continuously funded research and development to expand Bio-PCMs' uses beyond its current state, to add value to our product. The Company believes this business will continuously grow in the future.