



**Management Discussion and Analysis
for operating results of the 3rd quarter and the
9-month periods ended 30 September 2020**

We, Energy Absolute Public Company Limited (“EA”) would like to report the result of the company and subsidiaries (all together as the “Company”) for the third quarter and the nine-month period ended 30 September 2020 which has been approved by the meeting of the Board of Directors No 4/2020 held on 13 November 2020. The details are as follows:-

Overview of operating results for the third quarter and the nine-month period ended 30 September 2020

Operating Results	Year 2020		Year 2019		Change			
	3 rd Quarter	9-Month Period	3 rd Quarter	9-Month Period	3 rd Quarter		9-Month Period	
	Baht Million	Baht Million	Baht Million	Baht Million	Baht Million	%	Baht Million	%
Revenue from sales and services	3,773.47	12,633.65	4,103.43	10,803.76	(329.96)	(8.04)	1,829.89	16.94
Other Income	27.83	104.36	14.52	42.77	13.31	91.67	61.59	144.00
Total Revenue	3,801.30	12,738.01	4,117.95	10,846.53	(316.65)	(7.69)	1,891.48	17.44
Profit Attributable to Owners of the Parent	1,119.00	3,720.48	1,678.73	4,331.89	(559.73)	(33.34)	(611.41)	(14.11)
Basic Earnings per share (Baht per share)	0.30	1.00	0.45	1.16	(0.15)	(33.33)	(0.16)	(13.79)

Net Profit

For the third quarter ended 30 September 2020, the Company earned the net profit of Baht 1,119.00 million, which decreased by Baht 559.73 million (or decreased by 33.34%) as compared to the same period of last year, which incurred the total net profit of Baht 1,678.73 million. For the nine-month period ended 30 September 2020, the Company earned the net profit of Baht 3,720.48, which decreased by Baht 611.41 million (or decreased by 14.11%) as compared to the same period of last year, which incurred the total net profit of Baht 4,331.89 million.

The major cause of decrease in net profit for the third quarter was the performance of wind power plants which resulted from weaker wind current compared with the same period of last year due to time shift of storm season.

Project	Average Wind Speed 3rd Quarter 2020 (Metre/Second)	Average Wind Speed 3rd Quarter 2019 (Metre/Second)	Increase (Decrease) In (Metre/Second)	Increase (Decrease) In %
Hadkunghan	4.76	5.82	(1.06)	(18.21)
Hanuman	4.55	6.12	(1.57)	(25.65)

However, the profit of Manufacturing and Distributing Biodiesel has increased from domestic B100 market situation and generating electricity solar business has shown favorable.

It is expected that performance of wind power plants will improve in the next reporting period due to the stronger wind current trend in October 2020

Project	Average Wind Speed October 2020 (Metre/Second)	Average Wind Speed October 2019 (Metre/Second)	Increase (Decrease) In (Metre/Second)	Increase (Decrease) In %
Hadkunghan	5.43	3.50	1.93	55.14
Hanuman	4.67	4.78	(0.11)	(2.30)

Revenue

For the third quarter ended 30 September 2020, the Company earned the total revenue of Baht 3,801.30 million, which decreased by Baht 316.65 million (or decreased by 7.69%) as compared to the same period of last year which incurred the total revenue of Baht 4,117.95 million. For the nine-month period ended 30 September 2020, the Company earned the total revenue of Baht 12,738.01 million, which increased by Baht 1,891.48 million (or increased by 17.44%) as compared to the same period of last year which incurred the total revenue of Baht 10,846.53 million as summarized below

1. Manufacturing and Distributing Biodiesel and by Products

For the third quarter and the nine-month period ended 30 September 2020 amount Baht 1,277.70 million and Baht 4,638.73 million respectively, which increased by Baht 356.41 million and Baht 1,942.87 million, or increased by 38.69% and 72.07% respectively as compared to the same period of last year which incurred the revenue of Baht 921.29 million and Baht 2,695.86 million respectively.

1.1 For the third quarter and the nine-month period ended 30 September 2020, Biodiesel business earned the total revenue of Baht 969.63 million and Baht 3,849.66 million increased by 12.47% and 53.67% respectively, as compared to the same period of last year. The main factor was the price factor which increased by 24.61% and 61.57% respectively due to higher demand of CPO from the government measurement announcing B10 to be used as regular diesel and B100 specification change to mono glyceride content at 0.4%.

Details	3rd Quarter			9-Month Period		
	Year 2020	Year 2019	% Change	Year 2020	Year 2019	% Change
Revenue from Biodiesel (Mil. Baht)	969.63	862.15	12.47	3,849.66	2,505.10	53.67
- Volume (Mil. Litre)	44.85	49.70	(9.76)	142.83	150.15	(4.88)
- Average Selling Price (Baht/Litre)	21.62	17.35	24.61	26.95	16.68	61.57

1.2 For the third quarter and the nine-month period ended 30 September 2020, the Glycerin business earned the total revenue of Baht 63.92 million and Baht 208.32 million increased by 35.74% and 19.44% respectively, as compared to the same period of last year. The main factor was the price factor which increased by 23.81% and 9.41% respectively due to higher regional reference price.

Details	3rd Quarter			9-Month Period		
	Year 2020	Year 2019	% Change	Year 2020	Year 2019	% Change
Revenue from Glycerin (Mil. Baht)	63.92	47.09	35.74	208.32	174.42	19.44
- Volume (Mil. Litre)	3.77	3.44	9.59	11.86	10.87	9.11
- Average Selling Price (Baht/Litre)	16.95	13.69	23.81	17.56	16.05	9.41

1.3 Revenue from by-products, for the third quarter and the nine-month period ended 30 September 2020 was Baht 15.05 million and Baht 36.60 million respectively.

1.4 Moreover, the Company has purchased crude palm oil business in 2020 which generated revenue from crude palm oil, for the third quarter and the nine-month period ended 30 September 2020, amount Baht 229.10 million and Baht 544.15 million respectively.

2. Generating and Distributing Electricity

Generating electricity business unit generated the revenue for the third quarter and the nine-month period ended 30 September 2020 amount Baht 2,419.00 million and Baht 7,795.29 million respectively, which decreased by Baht 699.25 million and Baht 132.33 million, or decreased by 22.42% and 1.67% respectively as compared to the same period of last year which incurred the revenue of Baht 3,118.25 million and Baht 7,927.62 million respectively

Revenue from solar power plants, for the third quarter and the nine-month period ended 30 September 2020, increased by 4.90% and 2.61% due to increasing solar radiation.

Details	3rd Quarter			9-Month Period		
	Year 2020	Year 2019	% Change	Year 2020	Year 2019	% Change
Revenue from Solar Power Plants (Mil. Baht)	1,447.61	1,380.00	4.90	4,680.49	4,561.31	2.61
- Volume (GWh)	148.95	140.13	6.29	478.70	465.13	2.92
- Average Price (Baht/kWh)	9.72	9.85	(1.32)	9.78	9.81	(0.31)

Revenue from wind power plants, for the third quarter and the nine-month period ended 30 September 2020, decreased by 44.32% and 7.58% respectively due to weaker wind current.

Detail	3rd Quarter			9-Month Period		
	Year 2020	Year 2019	% Change	Year 2020	Year 2019	% Change
Revenue from Wind Power Plants (Mil. Baht)	967.85	1,738.25	(44.32)	3,111.26	3,366.31	(7.58)
- Volume (GWh)	157.33	274.21	(42.62)	501.94	534.49	(6.09)
- Average Price (Baht/kWh)	6.15	6.34	(3.00)	6.20	6.30	(1.59)
<u>Hadkunghan Wind Power 126-MW Plant</u>						
- Volume (GWh)	57.56	90.88	(36.66)	181.00	221.45	(18.27)
- Average Price (Baht/kWh)	6.20	6.38	(2.82)	6.31	6.34	(0.47)
<u>Hanuman Wind Power 260-MW Plant</u>						
- Volume (GWh)	99.77	183.34	(45.58)	320.94	313.04	2.52
- Average Price (Baht/kWh)	6.12	6.32	(3.16)	6.14	6.27	(2.07)

Moreover, during the third quarter of 2020, the Company purchased biogas power plant business which generated revenue of Baht 3.54 million for the third quarter and the nine-month period ended 30 September 2020.

3. Revenue from other businesses

For the third quarter and the nine-month period ended 30 September 2020, was Baht 76.75 million and Baht 199.62 million, respectively, mainly from revenue from the sales of battery amount Baht 156.94 million.

4. Other revenue

For the third quarter and the nine-month period ended 30 September 2020, was Baht 27.83 million and Baht 104.36 million, respectively, mainly from claims on impaired equipment amount Baht 31.58 million, interest income amount Baht 47.99 million and revenue from disposal of unused assets amount Baht 10.00 million.

Cost of Sales and Services

For the third quarter and the nine-month period ended 30 September 2020, cost of sales and services was Baht 2,043.87 million and Baht 6,956.34 million, which increased by Baht 229.55 million (or increased by 12.65%) and increased by Baht 1,996.40 million (or increased by 40.25%), respectively, as compared to the same period of last year which incurred the cost of sales and services of Baht 1,814.32 million and Baht 4,959.97 million, respectively. as summarized below;

1. Manufacturing and Distributing Biodiesel and by Products

For the third quarter and the nine-month period ended 30 September 2020, the cost of sales and services of manufacturing and distributing biodiesel and by products business unit increased by Baht 172.90 million and Baht 1,606.76 million (or increased by 17.92% and 59.25%), respectively, as compared to the same period of last year from higher price of crude palm oil, which is the raw material.

2. Generating and Distributing Electricity

For the third quarter and the nine-month period ended 30 September 2020, the cost of sales and services of generating electricity business unit increased by Baht 41.82 million and Baht 337.37 million (or increased by 6.06% and 18.38%), respectively, as compared to the same period of last year, mainly from increasing depreciation, administrative and maintenance expenses.

Selling Expense

Selling expense, for the third quarter and nine-month period ended 30 September 2020, was Baht 18.62 million and Baht 61.70 million, respectively which decreased by Baht 3.17 million and Baht 3.84 million (or decreased by 14.55% and 5.86%) as compared to the same period of last year which incurred the selling expense of Baht 21.79 million and Baht 65.54 million, respectively. This was due to slight decrease in sales volume of biodiesel products.

Administrative Expense

Administrative expense, for the third quarter and nine-month period ended 30 September 2020, was Baht 248.99 million and Baht 886.69 million, respectively which increased by Baht 81.57 million and Baht 237.75 million, respectively (or increased by 48.72 % and 36.64 %), as compared to the same period of last year which incurred the administrative expense of Baht 167.42 million and Baht 648.94 million, respectively. The main reasons of the third quarter incremental are summarized below;

- Personnel expense increased Baht 26.38 million in accordance with new hiring of employees and executives following the business expansion plan.
- Depreciation and amortization increased Baht 17.55 million mainly due to realizing loss from sales of unused equipment amount THB 22.13 million.

Finance Cost

Financial cost, for the third quarter and nine-month period ended 30 September 2020, was Baht 421.42 million and Baht 1,261.81 million which increased by Baht 38.90 million and Baht 275.70 million (or increased by 10.17% and 27.96%) as compared to the same period of last year which incurred the financial cost of Baht 382.52 million and Baht 986.11 million, respectively. This was due to drawdown of loan from financial institutions and issuance of green bonds in order to repay some part of supplier credits and investment in Hanuman wind power plant project which were due.

Financial Status

Total Asset

The total asset of the Company as of 30 September 2020, was Baht 77,249.46 million, representing an increase of Baht 7,029.77 million or increased by 10.01% as compared to the last year. This was mainly from the following determinants;

- **Cash and Cash Equivalents** was Baht 3,565.60 million, representing a decrease of Baht 6,463.35 million or decreased by 64.45% mainly from investment.
- **General Investment** was Baht 5,896.58 million as the company invested in Land Prosperity Holding Company Limited.
- **Investment in associates** was Baht 1,532.73 million as the Company invested in NEX Point Public Company Limited amount Baht 1,468.22 million.
- **Property, plant and equipment** as of 30 September 2020 and 31 December 2019 were Baht 55,029.39 million and Baht 51,371.10 million, respectively. The increase was Baht 3,658.29 million or by 7.12% mainly from investment in new projects of the Company Group such as EV project, Battery project, green diesel project and PCM project.
- **Right-of-Use Assets** were Baht 1,642.49 million from adoption of TFRS 16.

Total Liabilities

As of 30 September 2020, the total liabilities of the Company were Baht 48,782.04 million, representing an increase of Baht 3,428.80 million or 7.56% from the last year. The increase was mainly from the adoption of TFRS 16.

Total Equity

As of 30 September 2020, the total shareholders' equity of the Company, was Baht 28,467.42 million, representing an increase of Baht 3,600.96 million or increased by 14.48% from the last year due to the result of net profit for the nine-month for the year 2020.

Major Investment Projects Progress Update

The Lithium-ion battery plant project

On 24 August 2020, EA and Amita Technologies (Thailand) Co., Ltd. (“**Amita-TH**”), a subsidiary company operating the lithium-ion battery plant project in Thailand, has signed a Memorandum of Understanding (MOU) with Chulalongkorn University to jointly research the recycling of lithium-ion batteries. Amita-TH will allocate its experts and resources to develop prototype of discharge system and lithium-ion battery cell separator at the batteries’ end-of-life including study the recycling process of precious metals from batteries in order to further develop a fully integrated battery recycling pilot plant. 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.

Recently on 22 September 2020, 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) such as supercapacitor, zinc-ion battery, lithium-sulfur battery, activated carbon production from agricultural products (palm shell), the development of production and synthesis of graphene which is a two-dimensional carbon material that improves batteries and capacitors more efficient than those on the market 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.

The 1st phase of construction Amita Thailand project, a 1 GWh Lithium-ion battery plant, is currently under construction for the factory building which is almost 90% completion, and then the large machinery for battery production will be installed for 2 months as well as commissioning before starting commercial production which is expected to begin the 1st phase operation by early of 2021. After that, it will gradually increase production capacity to serve with market demands.

In the meantime, the Company has imported batteries from Amita Technologies Inc. (Taiwan) for assembly in electric cars, electric buses, and electric ferries to achieve the Corporate's plans.

EV Charging Station Project

As of 2 November 2020, the installation of 405 stations has been completed, 107 stations are under construction, and the total number of chargers has exceeded 2,000 chargers. The total chargers consist of Quick Charge 40% and Normal Charge 60% 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.

Electric Vehicle Project

The Company has invested construction of an EV assembly plant under MINE Mobility Corporation (MMC), while it is currently testing some machinery, preparing painting room, and decorating inside and outside the factory. It is expected to be completed by the end of this year and will start producing electric cars for commercial distribution from 2021 onwards.

For the production and delivery plan of the MINE SPA1 EV to the Suvarnabhumi Pattana Credit Union Cooperative, a taxi service provider, that has signed an MOU to deliver MINE SPA1 electric vehicles 3,500 units, there was the negotiation to shift the gradual delivery plan to start from 2021 onwards, since the impacts of the COVID-19 epidemic situation and real market demands. Also, EA group keeps developing EV features continuously.

Electric Ferry Project

The Company conducts an electric ferry business under MINE SMART FERRY. On 30 July 2020, it was registered as the country's first electric ferry which has passed the verification of design, system testing, navigation standards, and safety. MINE SMART FERRY, the electric boat, is designed by EA Group. It is produced by 100% Thai company and installed 800 kWh lithium-ion battery which can be fully charged only 15-20 minutes and equipped with air-conditioning, air purifiers, and life jackets. It can accommodate more than 200 passengers to provide travel services along the Chao Phraya River from Phra Nangklao Bridge Pier to Wat Ratcha Singkhon, Sathorn Pier, over the 20 kilometers route. This water transportation will connect with public land transportation as well, with low and affordable fares to facilitate the public. 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.

At present, after the two electric ferries were completed, they are under testing to prepare for the launching service in late this year. The remaining ferries are producing and assembling to enable full-service from the beginning of 2021 as planned.

Electric Bus Project

On 1 May 2020, the Company established a subsidiary, “Absolute Assembly Co., Ltd.” (“AAB”), to operate manufacturing and assembling all types of electric vehicles which EA Mobility Holding Co., Ltd. (“EMH”) (a 100% subsidiary of EA) holds 55% of the total shares.

Subsequently, in July 2020, the Company allowed EMH to acquire 670,000,000 newly issued ordinary shares of Next Point Public Company Limited (“NEX”), representing 40.01% of NEX's total issued and paid-up shares at the price of 2.20 baht per share; the total investment value is of 1,474 million THB. 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. EA 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 AAB plant is located in Chachoengsao province, close to EA's EV 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. The construction project value is approximately 1,750 million THB, consisting of factory construction, equipment, and machinery costs. AAB will import some parts from abroad to assemble but the important parts are designed and manufactured domestically with its the automated manufacturing process as well as having a drive test facility. Expectedly, the commercial operation will start in early 2021, whereby the Company will report the progress update consequently.

Green Diesel and PCM Project

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. EA established a subsidiary company, EA Bio Innovation Company Limited, 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) Bio-PCM (Bio Phase Change Material) to be used in temperature control, such as construction materials components, fibers, etc. to help in absorbing, storing, controlling and releasing heat to maintain temperature. Bio-PCM is popular and in high demand in weather variability countries.

At present, the Green Diesel and Bio-PCM plant located at Rayong province has a total investment value of 1,100 million THB. It had successfully completed machinery installation and commissioning testing. The 1st phase commercial operation has been started mainly for Bio-PCM products and it will gradually increase production capacity to the fullest of 65 tons per day and then the next phase of 65 tons per day will start later on. In the meantime, the Company research and develop continuously to expand the market opportunity to use Bio-PCM in other industries to further expand added value.

For more information, please contact Investor Relations Tel. 0 2248 2488-92 or ir@energyabsolute.co.th