

10 JUNE 2020

THAILAND / ELECTRIC UTILITIES

# ENERGY ABSOLUTE EA TB

**BUY**  
UNCHANGED

TARGET PRICE	THB55.00
CLOSE	THB41.75
UP/DOWNSIDE	+31.7%
PRIOR TP	THB55.00
CHANGE IN TP	UNCHANGED

## Twin growth engines: PCM and EV

### Net profit growth to accelerate in 2H20

We expect EA's net profit to almost double by 2022 to THB11b and to triple to THB19b by 2024, from THB6b in 2019, when EA's second phase battery plant starts its commercial operation date (COD). After a 3–6-month delay of its new S-curve projects caused by COVID-19, we expect EA to see a net profit of THB6.8b in 2020, up from THB6.1b in 2019, driven by 1) THB0.6b net profit from biodiesel due to higher product margins; 2) THB0.6b net profit from EA's multiple S-curve projects; and 3) THB0.7b net profit from EA's existing power plants and lower losses from its associates.

### Ready to ride CPO-based growth ventures

EA is one of Thailand's leading producers of crude palm oil (CPO)-based products, including biodiesel B100, or methyl ester (ME), phase change materials (PCM), and refined glycerine. Over the past few years, CPO-based products have suffered losses due to chronic oversupply. In 2020, we think EA will see net profit growth from not only its existing B100 unit but also its new PCM unit thanks to the innovative technology EA has used to develop CPO-based PCM.

### No capital increase risk despite higher capex in 2020

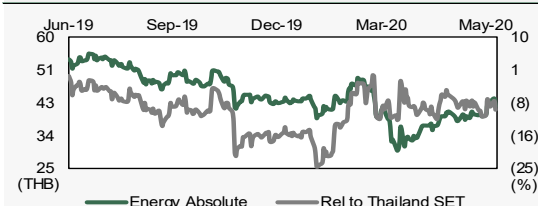
We believe EA is unlikely to exercise a capital increase in 2020-22, despite its higher capex of THB17.2b in 2020E, up from its previous THB7.4b projection, given 1) EA's solid cash at the beginning of 2020 totalling THB10b; 2) our projected operating cash flow of THB8.4b in 2020; and 3) EA's new THB15b debenture to be issued in 2020. The higher capex in 2020E comprises THB5.1b for its acquisition of a 19% stake in a property development company, THB0.5b for the acquisition of 2–3 refined CPO plants, and THB2b capex for the acquisition of a 40% stake in NEX and its E-bus production.

### Growth to double in 2022

We maintain our positive view on EA's net profit growth outlook in 2020-22 and believe its net profit trajectory is now at a turning point, driven upward by its multiple new S-curve projects. We believe EA's proven track record of success in the power business during 2015-20 is now shifting to the potential successes of its new ventures in the electric vehicle (EV) and CPO value chains, which will likely take off in 2021 to drive its net profit growth up by 2-3x by 2024.

## KEY STOCK DATA

YE Dec (THB m)	2019A	2020E	2021E	2022E
Revenue	14,887	17,652	32,253	38,844
Rec. net profit	6,082	6,848	8,152	10,981
Recurring EPS (THB)	1.63	1.84	2.19	2.94
Prior rec. EPS (THB)	1.63	1.84	2.19	2.94
Chg. In EPS est. (%)	-	0.0	0.0	0.0
EPS growth (%)	55.8	12.6	19.0	34.7
Recurring P/E (x)	25.6	22.7	19.1	14.2
Dividend yield (%)	1.4	1.9	2.4	3.6
EV/EBITDA (x)	19.5	17.0	13.4	10.9
Price/book (x)	6.7	5.6	4.7	3.9
Net debt/Equity (%)	128.4	110.4	80.6	53.0
ROE (%)	29.3	26.7	26.7	29.9



Share price performance	1 Month	3 Month	12 Month
Absolute (%)	10.6	9.2	(22.7)
Relative to country (%)	(0.6)	(2.7)	(9.2)
Next Results	August 2020		
Mkt cap (USD m)	4,967		
3m avg daily turnover (USD m)	12.3		
Free float (%)	40		
Major shareholder	Mr. Somphote Ahunai (23%)		
12m high/low (THB)	55.75/29.75		
3m historic vol. (%)	62.6		
ADR ticker	-		
ADR closing price (USD)	-		
Issued shares (m)	3,730		

Sources: FactSet Estimates; FSSIA estimates



Suwat Sinsadok \*

\*Not an employee of BNP Paribas. For all matters and queries relating to this report, please contact your BNP Paribas representative. Our research is available on Thomson Reuters, Bloomberg, S&P Global, FactSet, RSRCHXchange and ONEaccess.

### Investment thesis

EA is Thailand's largest green energy player, operating through its three business segments of solar, wind and biodiesel; all touted to be the key pillars of Thailand's energy growth over the next 10 years. A biodiesel producer since 2012 with an 800k litre-per-day (lpd) capacity, EA later ventured into the solar and wind businesses. We believe EA's solar farms will be key earnings growth drivers, as they stand to gain from: 1) a high-margin THB6.5/kwh adder; and 2) a 40% decline in the cost of solar panels since 2010.

EA has evolved from being a pure biodiesel player to emerge as one of Thailand's key players in renewable energy. While its biodiesel segment has been struggling at a mere 50% utilisation rate due to the country's oversupply, EA's solar and wind farm businesses have benefited from high-margin electricity tariffs and the declining cost of solar panels.

### Catalyst

Higher utilisation rates of power plants and rising demand for electricity in Thailand are key growth drivers.

### Risk to our call

Downside risks to our SOTP-based TP include: 1) lower-than-expected demand for electricity in Thailand; 2) lower crude prices; and 3) lower-than-expected demand for batteries.

## Company background

Energy Absolute (EA) is a leading green energy company in Thailand with business interests in biodiesel, solar and wind energy. EA has expanded into the battery storage and electricity vehicle (EV) businesses, which should be key earnings growth drivers post 2019E.

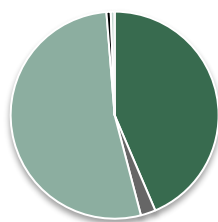
### Key executives

	Age	Joined	Title
Mr. Somphote Ahunai	50	2009	Chief Executive Officer
Mr. Amorn Saphaweekul	43	2012	Chief Financial Officer

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

### Principal activities (revenue, 2019)

- Methyl ester Biodiesel products - 44.1%
- Pure glycerine products - 2.4%
- Electricity from solar and wind power - 53.4%
- Head office and others - 0.7%
- Project consultation regarding alternative electric energy - -0.6%
- Battery and EV - 0.0%



Source: Energy Absolute

### Event calendar

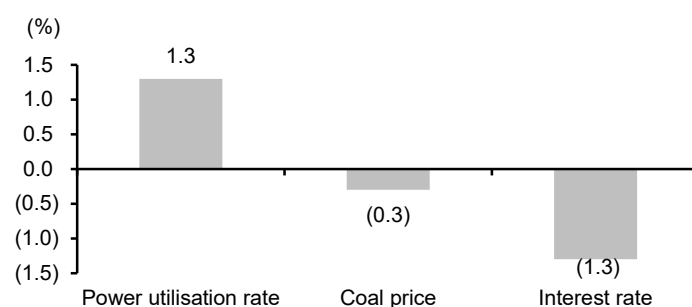
Date	Event
Aug 2020	1Q20 results announcement

## Key assumptions

	2020E	2021E	2022E
Dispatched power (GWh)	9,715	9,715	9,715
Capacity factor - wind farms (%)	26	26	26
Battery sales volume (GWh)	0.2	2.7	4.6
EV car sales (cars)	1,000	5,000	5,500
EV boat sales (boats)	25	50	50
EV charging stations (stations)	320	1,000	1,000
Green diesel & PCM (tpd)	26	124	124

Sources: Energy Absolute; FSSIA estimates

### Earnings sensitivity



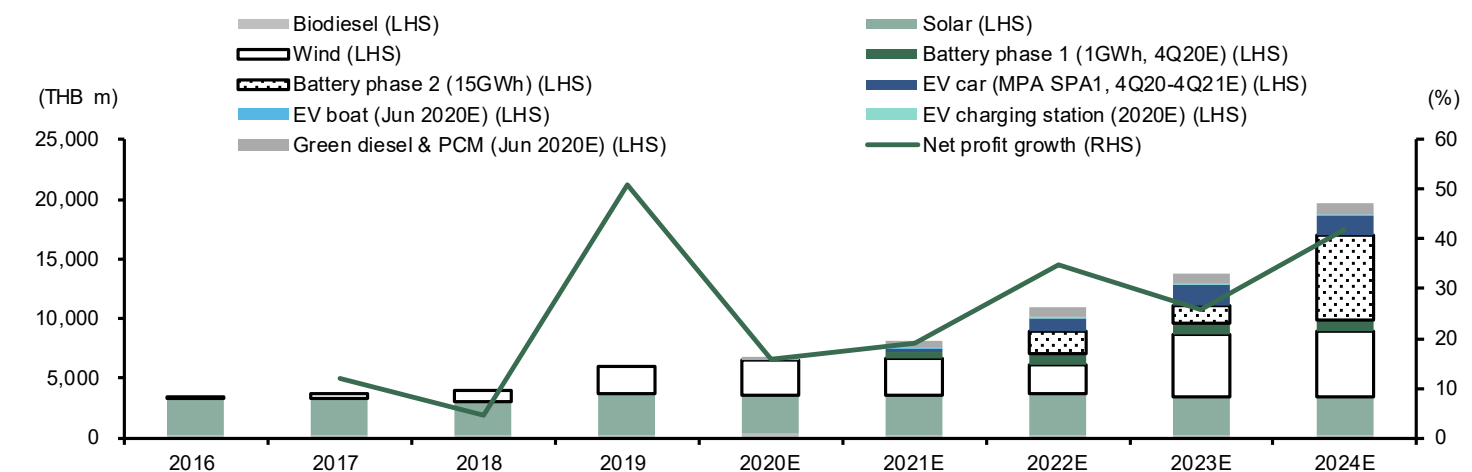
Sources: Energy Absolute; FSSIA estimates

- For every 1% increase in utilisation rate, we estimate earnings would rise by 1.3%, and vice versa, all else being equal.
- For every 1% increase in interest rate, we estimate earnings would decline by 1.3%, and vice versa, all else being equal.

## Twin growth engines: PCM and EV

We believe that EA remains one of Thailand's most attractive power plays, based on its strong net profit growth outlook in 2020-22. The key drivers are EA's multiple S-curve growth projects, including a CPO-based PCM plant, and four businesses in the EV chain, including EV cars, E-ferries, EV charging stations, and battery plants.

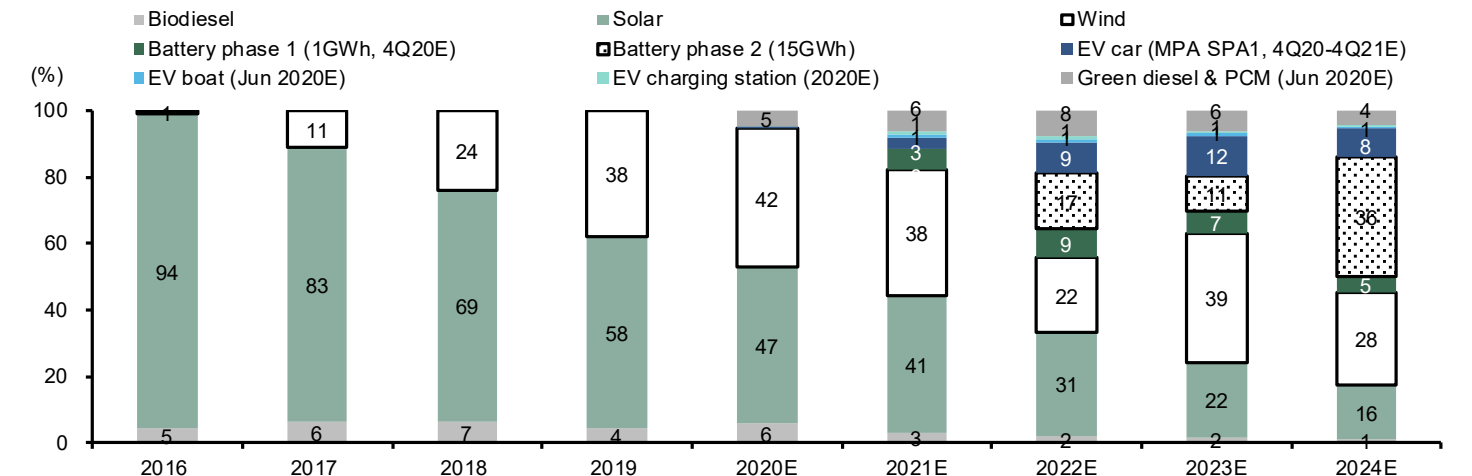
### Exhibit 1: Net profit and net profit growth



Sources: Company, FSSIA estimates

Starting in 2020, we project EA's net profit growth to be driven by the earnings from its new projects, which are projected to start their CODs in 2020. We expect EA's net profit to almost double by 2022 to THB11b and to triple to THB19b by 2024, from THB6b in 2019, when EA's second phase battery plant starts its COD.

### Exhibit 2: Net profit breakdown (%)



Sources: Company, FSSIA estimates

After a 3–6-month delay of its new S-curve projects caused by COVID-19, we expect EA to see a net profit of THB8.1b in 2020, up from THB6.1b in 2019, driven by 1) THB0.6b net profit from biodiesel due to higher product margins; 2) THB0.6b net profit from EA's multiple S-curve projects; and 3) THB0.7b net profit from EA's existing power plants and lower losses from its associates.

## Exhibit 3: Committed growth net profit

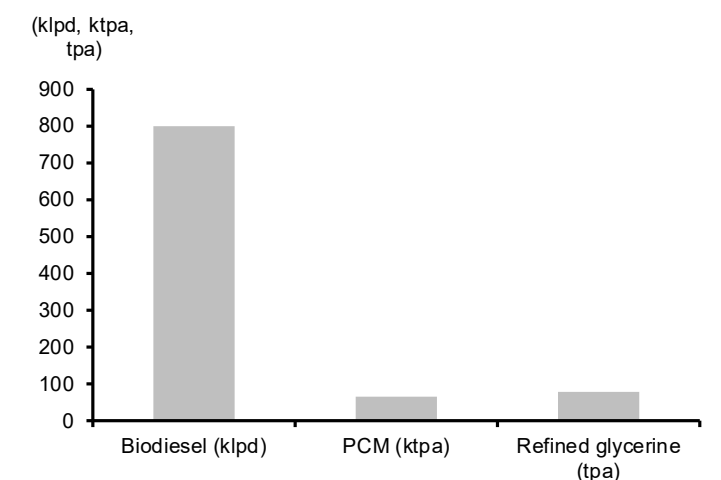
Net profit	Stake	EIRR	2019	2020E	2021E	2022E	2023E	2024E	Investment
	(%)	(%)	(THB m)	(THB m)	(THB m)	(THB m)	(THB m)	(THB m)	(THB b)
Battery phase 1	100	27	0	27	959	956	953	950	5.0
Battery phase 2 (15GW)	50	31	0	0	264	2,793	4,930	14,193	15.0
EV car (MPA SPA1, 2020E)	100	4	0	111	927	1,030	1,646	1,651	1.2
EV boat (2020E)	100	16	0	10	78	78	81	84	1.4
EV charging station (2020E)	100	19	0	(4)	112	112	115	118	1.0
Green diesel & PCM (Jun 2020E)	100	32	(85)	408	844	844	844	844	0.9
<b>Total</b>			<b>(85)</b>	<b>553</b>	<b>3,183</b>	<b>5,813</b>	<b>8,569</b>	<b>17,840</b>	<b>24.5</b>

Sources: Company; FSSIA estimates

## Strong net profit growth from CPO-based ventures

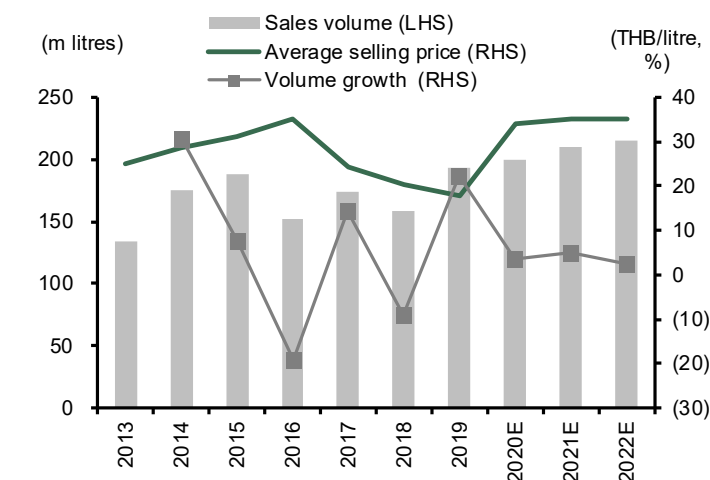
EA is one of Thailand's leading producers of CPO-based products, including biodiesel B100, or ME, PCM, and refined glycerine. Over the past few years, CPO-based products have suffered losses due to chronic oversupply. In 2020, we think EA will see net profit growth from not only its existing B100 unit but also its new PCM unit thanks to the innovative technology EA has used to develop CPO-based PCM.

## Exhibit 4: EA's CPO-based production capacity



Source: EA

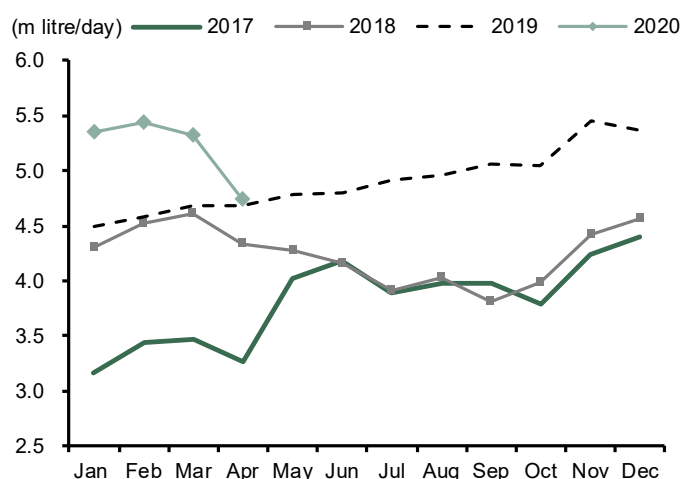
## Exhibit 5: EA's projected B100 sales volume, margin, and volume growth



Sources: EA, FSSIA estimates

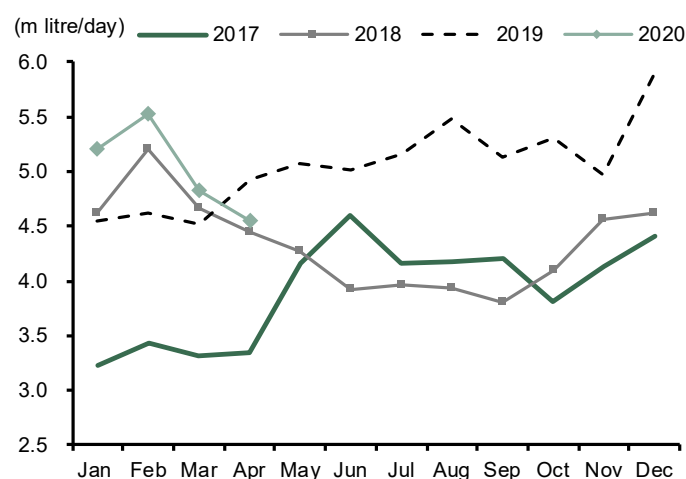
Since Jan 2020, the Thai government has been promoting B10 (10% ME and 90% diesel) as a key diesel fuel to replace the current B7. While biodiesel demand dropped in Apr-May due to Thailand's economic lockdown to fight against COVID-19, we think demand for biodiesel will rebound quickly to 5.5mlpd by Jul after the government fully reopens economic activities in phase 4 of its lockdown easing plan.

Exhibit 6: Domestic biodiesel consumption



Source: Department of Alternative Energy Development and Efficiency (DEDE)

Exhibit 7: Domestic biodiesel production

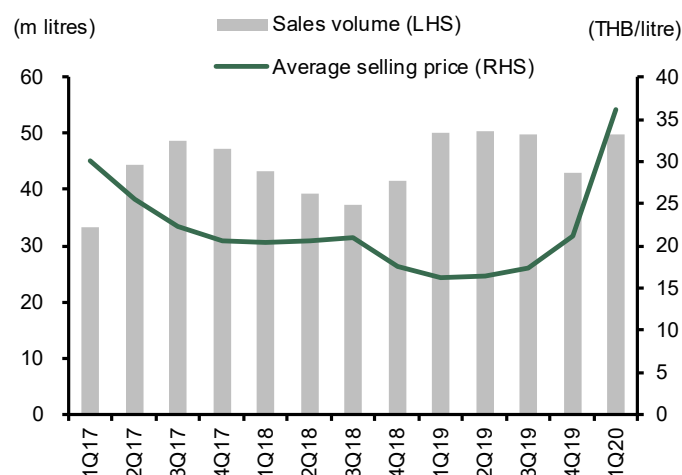


Source: DEDE

As a result, we project EA to see a stronger net profit of THB0.6b from its B100 unit in 2020, up from THB0.1b in 2019, based on our estimate. We project EA's B100 sales volume to rise to 52m litres per quarter in 2Q-4Q20, up from 50m litres in 1Q20. Meanwhile, we think the net margin of B100 will rise from THB0.3/litre in 2019 to THB2-3/litre in 2020 due to higher demand, resulting in a more balanced B100 demand and supply.

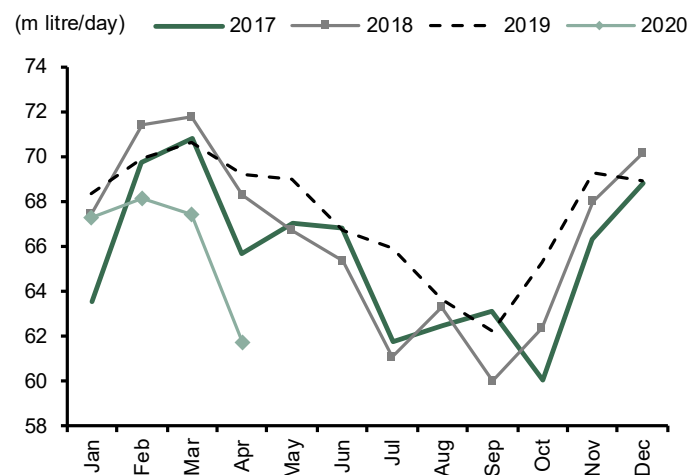
Thailand's diesel sales volume dropped to 61mlpd in Apr, down from 67mlpd in Mar due to the nation's lockdown. We however expect Thailand's diesel demand to recover to its seasonally normal level by Jul after the country's full easing of the lockdown.

Exhibit 8: EA's B100 sales volume and average selling price



Source: EA

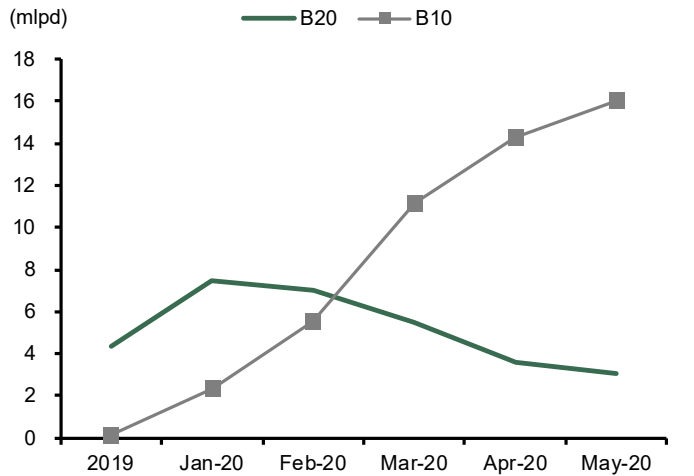
Exhibit 9: Thailand's sales volume - Diesel



Source: DEDE

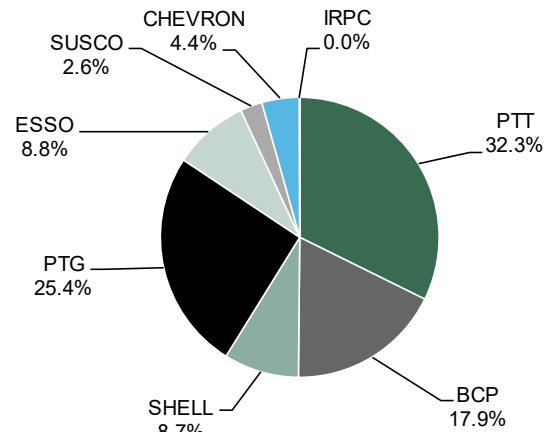
Since the enforcement of B10 to gradually replace B7 in Jan 2020, the number of oil stations serving B10 has surged markedly from zero in 2019 to 5,909 stations at end-May 2020, according to the Department of Energy Business (DOEB). All key oil station operators have ramped up their B10 service stations to gain a market share of B10 sales. PTT (PTT TB, Buy) remains the largest provider of B10 stations (1,907 stations, or 32.3% of total B10 stations nationwide) as of end-May, followed by PTG Energy (PTG TB, not rated; 1,503, 25.4%), Bangchak Corp (BCP TB, Buy; 1,056, 17.9%) and Esso Thailand (ESSO TB, Buy; 517, 8.8%).

Exhibit 10: B10 and B20 sales volume



Source: DOE

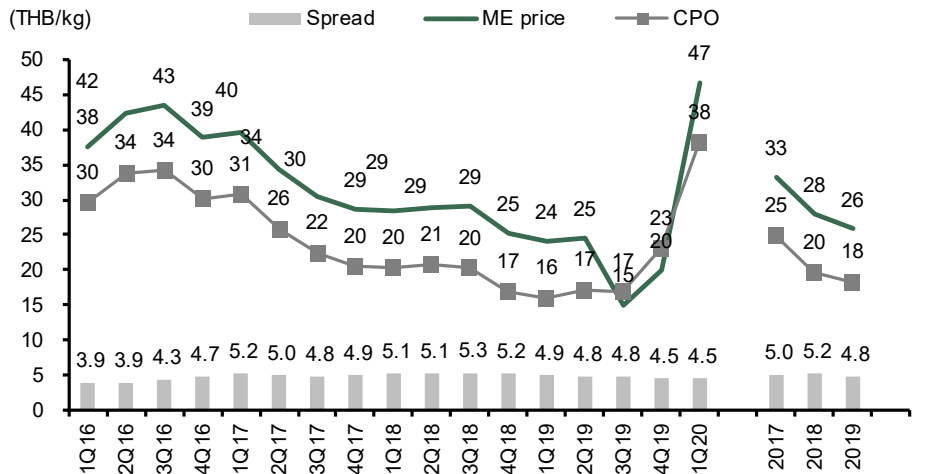
Exhibit 11: Oil stations with B10 sales breakdown by brand



Source: DOE

With the rising ME-CPO margin to THB2-3/litre in 2020E, up from THB0.3-0.5/litre in 2019 vs the THB4.5/litre benchmark product margin, we think EA will see strong net profit growth momentum from its 0.8mlpd B100 capacity in 2020.

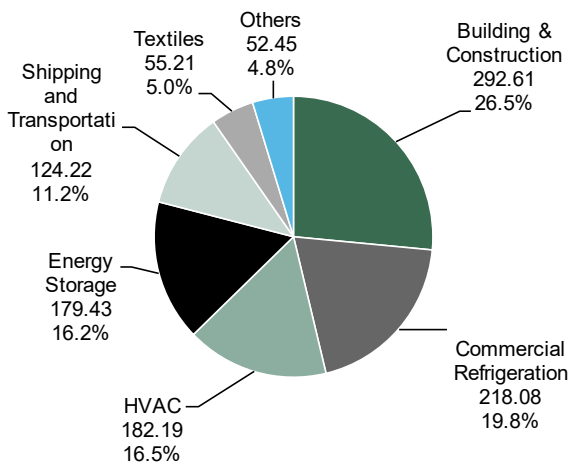
Exhibit 12: CPO price, ME price, and ME-CPO spread



Source: Global Green Chemicals (GGC)

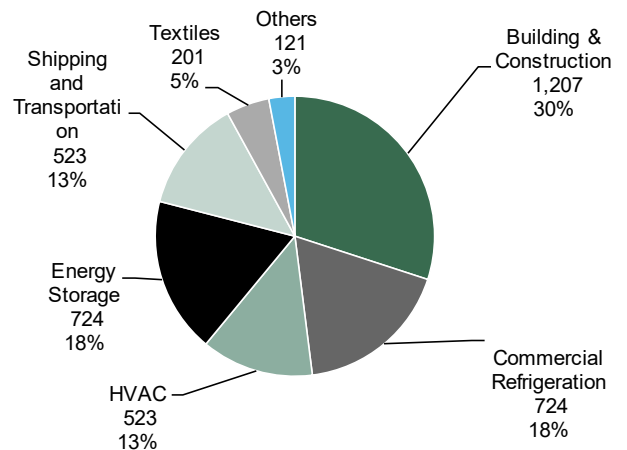
We project EA's PCM to generate THB0.4b net profit in 2020, as its 65tpd PCM plant COD is set for Jul 2020. EA is likely to sell 7-10kt of PCM in 2020, and should increase to 20kt in 2021 when the plant fully operates for a year.

Exhibit 13: PCM market size as of 2018 (USD1b)



Sources: EA; FSSIA estimates

Exhibit 14: PCM market size as of 2025E (USD4b)



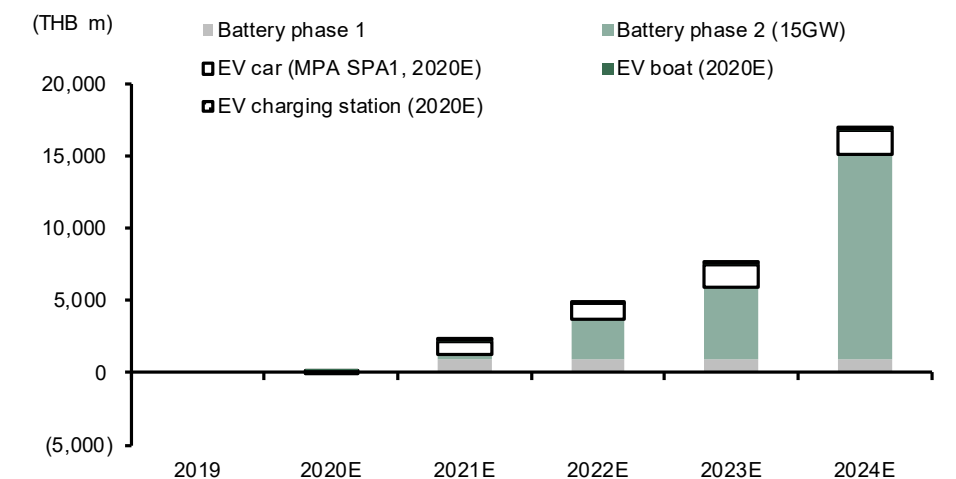
Sources: EA; FSSIA estimates

## Promising net profit growth from EV ventures

EA is now poised to see strong net profit growth from its EV chain businesses, and we project net profit growth for EA to come mainly from the new businesses in its EV value chain.

In 2020, we project that the main earnings drivers will come from 1) the sales of PCM, which we estimate to earn THB0.4b net profit in 2020; and 2) the sale of 180 EV cars in 4Q20, which should rise to THB0.9b in 2021 when EA plans to deliver 4,820 EV cars to its buyers.

### Exhibit 15: Net profit projections for EA's EV businesses



Sources: EA, FSSIA estimates

In 2021, we expect the key earnings growth drivers to come from 1) the 4,820 EV cars to be delivered, generating THB0.9b net profit; 2) the 1GWh battery phase 1 plant, scheduled to start its COD in 4Q20 and deliver up to 1GWh battery capacity to clients – we project the battery phase 1 plant to generate THB1b net profit in 2021; and 3) THB0.8b net profit from PCM.

### Exhibit 16: Estimated battery usage in EA's EV, E-buses, and E-ferries in 2020-21

	Battery capacity (KWh)	Estimated sales volume (unit)	Est. battery demand (GWh)
SPA1	35	5,000	0.18
E-ferry	800	42	0.03
E-bus	300	1,000	0.30
<b>Total</b>		<b>6,042</b>	<b>0.51</b>

Sources: EA, FSSIA estimates

We believe the demand risk for EA's battery phase 1 plant is low, as we estimate that EA will consume up to 0.51GWh out of 1GWh battery production from EA's three EV businesses, including 1) its SPA1 model EV cars, using a total of 0.18GWh battery demand based on the 35KWh battery needed for each SPA1 car and the estimated 5,000 EV car sales; 2) E-ferries using 0.03GWh battery demand, based on the 800KWh battery needed for each E-ferry and the 42 estimated E-ferry sales in 2020-21; and 3) E-buses using 0.3GWh battery demand, based on the 300KWh battery needed for each E-bus, with a total of 1,000 estimated EV bus sales in 2021, based on our estimate.

**Acquisition of NEX to propel E-bus growth.** Note that our E-bus sales projection is based on EA's recent acquisition of Nex Point (NEX TB, not rated) on 16 May 2020. The THB1.5b acquisition of a 40% stake in NEX was done via private placement (PP) at THB2.2/share for a total of 670m shares. NEX is a producer of high precision automotive, electronics, and camera parts, and recently diversified into EV buses with an assembly plant. According to management, the NEX acquisition is to allow EA to integrate the EV bus venture into part of its EV enterprise and leverage EA's THB1.2b assembly plant to achieve a 20,000 EV capacity.



### Low excise tax for EV cars in Thailand to favour EA's EV cars and E-buses.

Since 2016, Thailand has changed its excise tax structure from an engine power-based (cc-based) to a carbon dioxide (CO<sub>2</sub>) emission-based tax scheme. EV cars have benefitted the most from the excise tax changes, with the excise tax dropping from 10% to 8% for EV cars, and 2% for EV cars produced in Thailand at plants with Board of Investment Privilege (BOI). EA falls into the 2% excise tax bracket for its SPA1 cars and E-buses. Hence, we expect lower price tags for EA's E-buses and SPA1 cars, at THB1-1.2m per car, to be one of the key reasons for EA's sales volume growth in 2020 onward.

### Exhibit 17: Thailand's automotive tax structure

Old based on engine size Tax structure before 1 Jan 2016			New based on carbon dioxide emissions Tax structure implement from 1 Jan 2016					Adjusted rate based on carbon dioxide emissions Tax structure according to recommended retail price		
Auto type	Engine (litre)	Tax rate (%)	Auto type	Co <sub>2</sub> (g/gm)	Tax rate			Tax rate		
					E10/E20	E85/NGV	Hybrid	E10/E20	E85/NGV	Hybrid (BoI)
Passenger car (below 10)	2.5 - 3.0	40	Passenger car (below 10)	≤ 100	30*	25*	10	25*	20*	8* / 4*
	2.0 - 2.5	35		101 - 150			20			16 / 8
	< 2.0	30		150 - 200	35	30	25	30	25	21 / 10.5
	> 3.0	50		> 200	40	35	30	35	30	26 / 13
				> 3,000 CC	50	50	50	40	40	40
PPV		20	PPV DC Space Cab Pick-up	≤ 100 (HV)	23* / 10			18* / 8		
Eco car		17		≤ 200	25* / 12 / 5 / 3, 18			20* / 10 / 4 / 2.5, 15		
Electric hybrid		10		> 200	30 / 15 / 7 / 5, 18			25 / 13 / 6 / 4, 17		
E20		(5)		> 3,250 CC	50			40		
			Electric vehicle Fuel Cell/ EV (BoI)	≤ 100	14* / 12*			12* / 10*		
				101 - 120	17			14		
			Electric vehicle Fuel Cell/ EV (BoI)			10 / 2			8 / 2	

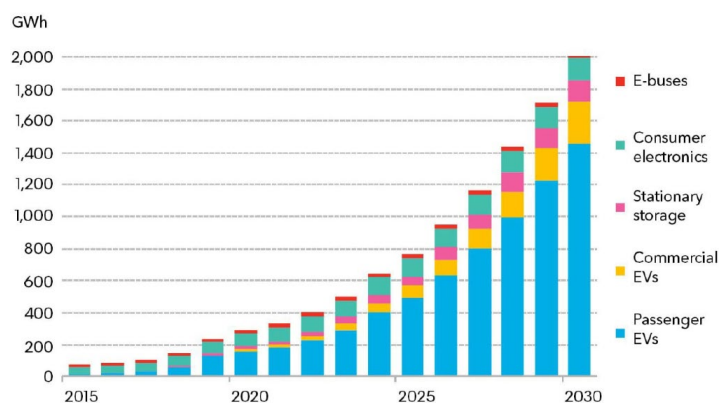
\*Active safety for passenger car of below 10 passengers with CO<sub>2</sub> ≤ 150g/km / PPV with CO<sub>2</sub> ≤ 200g/km / Eco car with CO<sub>2</sub> ≤ 100g/km

Sources: Excise Tax Department; Fiscal Policy Office

**EEC-promoted investment campaign.** The EV industry, including EV cars, E-buses, and battery plants, is one of the 12 focused industries under Thailand's current Eastern Economic Corridor (EEC) investment campaign. We think the tax privileges, plant zoning, and favourable regulations for EV car sales in Thailand will help accelerate the sales of EA's EV cars and E-buses.

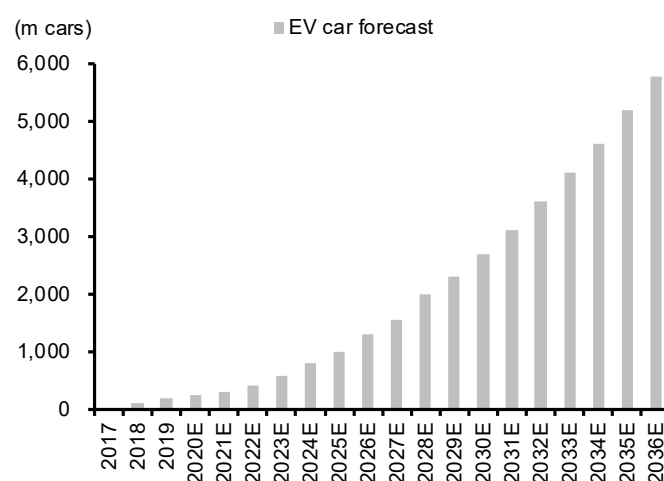
**Solid industry demand growth.** According to Bloomberg, global EV car sales could rise substantially during 2020-30, growing tenfold within 10 years. In Thailand, according to the Power Development Plan 2018, the country aims to grow its EV car sales to almost 3m cars by 2030, up from a mere 100 cars in 2018.

### Exhibit 18: Annual global lithium-ion battery demand



Source: BloombergNEF

### Exhibit 19: EV car projections under PDP 2018



Source: Power Development Plan 2018 (PDP 2018)



EA is a first mover into the EV value chain in Thailand. EA is Thailand's only integrated company in the E-value chain business, with an upstream battery plant, mid-stream EV manufacturing plants for EV cars, E-buses and E-ferries, and a downstream EV charging station business.

**Exhibit 20: Skywell EV bus offered free service during 11-26 May 2020**



Source: [BangkokBusClub](#)

**Exhibit 21: EA's SPA1 model**



Source: EA

While EA's SPA1 model is one of the most competitive EV cars among the major brands, we think EA's entry into E-buses will allow the company to timely capture the strong E-bus demand growth, and simultaneously lower demand risk for its battery plant.

We think EA's THB1.2b manufacturing plant for EV cars and E-buses (COD in 4Q20), its position as a first mover in the EV market, and the government's favourable investment tax privileges (EEC and BOI) and low excise tax will allow EA to compete with other EV operators, both locally (Thailand-based, Japanese FOMM EV producer) and overseas, with import EV cars.

**Exhibit 22: EA's SPA1 compared to other major EV brands**

Brand	MINE	FOMM	Audi	Tesla	Nissan	Hyundai	MG	Kia	BYD
Model	SPA1	FOMM ONE	e-tron 55 Quattro	Model 3	Leaf	KONA Electric	Zs EV	Soul EV	e6
Type	MPV	L 7e	SUV	Sedan	Compact car	SUV	SUV	SUV	MPV
Country	Thailand	Japan	Germany	United States	Japan	Korea	China	Korea	China
Battery	kWh	30	95	75	40	64	44.5	30.5	61
Distance	km/hr	200	160	414	500	311	320	335	250
Price tag (Domestic)	THB m	-			0.9	1.1	0.5	1.2	1.4
Price tag (Thailand)	THB m	1.2	0.7	2.4	1.5	1.2	1.8	1.5	2.3
Cost/km	THB/km	0.7							
Speed max	km/hr	140	80	200	225	150	167	150	145
Horsepower (HP)	kW/HP	95	13.4	402	283	148	204	150	110
Normal charging time	hours	3	6	9	7.1	12			
Super charging time	mins	12	NA	36	55	6			
Battery warranty		5 years /180k km	Unlimited	8 years /160k km	4 years /120k km	8 years /160k km			

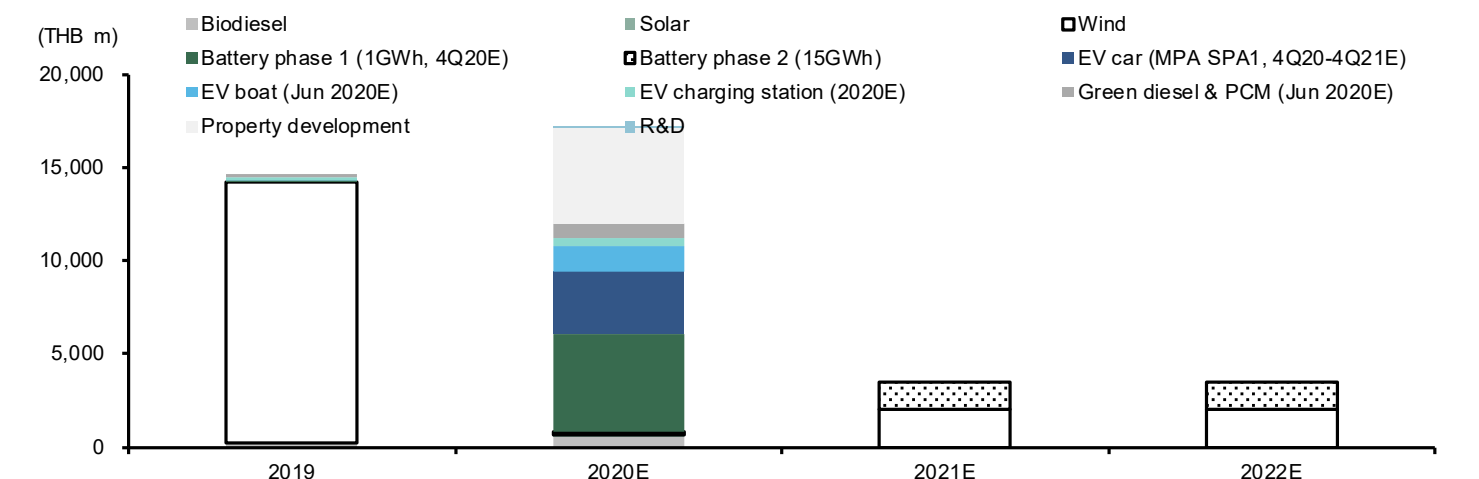
Source: Companies

### No capital increase risk despite higher capex for more growth in 2020

We believe EA is unlikely to exercise a capital increase in 2020-22, despite its higher capex of THB17.2b in 2020E, up from its previous THB7.4b projection for 2020, given 1) EA's solid cash at the beginning of 2020 totalling THB10b; 2) our projected operating cash flow of THB8.4b in 2020; and 3) EA's new THB15b debenture to be issued in 2020.

The higher capex in 2020E comprises THB5.1b for EA's acquisition of a 19% stake in a property development company to develop the industrial estate where EA's battery plants will be located; 2) THB0.5b for the acquisition of 2–3 refined CPO plants, adding to EA's two current refined CPO plants that it acquired in 4Q19; and 3) additional THB2b capex for the acquisition of a 40% stake in NEX and its E-bus production.

### Exhibit 23: EA's capex



Sources: EA; FSSIA estimates

## Valuation

We maintain our positive view on EA's net profit growth outlook in 2020-22 and believe its net profit trajectory is now at a turning point, driven upward by its multiple new S-curve projects. We believe EA's proven track record of success in the power business during 2015-20 is now shifting to the potential successes of its new ventures in the EV and CPO value chains, which will likely take off in 2021 to drive its net profit growth up by 2-3x by 2024.

### Exhibit 24: EA's SOTP, DCF-based valuation

Cost of equity assumptions		(%)	Cost of debt assumptions		(%)
Risk free rate		2.3	Pre-tax cost of debt		4.6
Market risk premium		8.5	Marginal tax rate		20.0
Stock beta		0.40			
DCF assumptions					
Cost of equity, Ke		5.7	Net cost of debt, Kd		3.4
Weight applied		25.0	Weight applied		75.0
WACC		4.0			

SOTP valuation estimate	(THB m)	(THB/share)	Valuation methodology
<b>Biodiesel</b>	<b>3,891</b>	<b>1.0</b>	DCF with WACC 4.0%, Risk free rate 2.3%, Risk premium 8.5%
<b>Solar</b>			
Lopburi	1,331	0.4	DCF with WACC 4.0%, Risk free rate 2.3%, Risk premium 8.5%
Nakornsawun	12,119	3.2	DCF with WACC 4.0%, Risk free rate 2.3%, Risk premium 8.5%
Lumpang	20,085	6.1	DCF with WACC 4.0%, Risk free rate 2.3%, Risk premium 8.5%
Pitsanulok	22,035	5.9	DCF with WACC 4.0%, Risk free rate 2.3%, Risk premium 8.5%
<b>Total solar</b>	<b>55,570</b>	<b>15.6</b>	
<b>Wind</b>			
<b>Southern (COD 2017)</b>			
Had Gunghun 1	4,175	1.1	DCF with WACC 4.0%, Risk free rate 2.3%, Risk premium 8.5%
Had Gunghun 2	5,087	1.4	DCF with WACC 4.0%, Risk free rate 2.3%, Risk premium 8.5%
Had Gunghun 3	5,103	1.4	DCF with WACC 4.0%, Risk free rate 2.3%, Risk premium 8.5%
Had Gunghun 4	6,301	1.7	DCF with WACC 4.0%, Risk free rate 2.3%, Risk premium 8.5%
<b>Total wind farms - Southern</b>	<b>14,365</b>	<b>5.5</b>	
<b>Northeastern (COD 2018-19)</b>			
Hanuman 1	8,207	2.2	DCF with WACC 4.0%, Risk free rate 2.3%, Risk premium 8.5%
Hanuman 5	8,732	2.3	DCF with WACC 4.0%, Risk free rate 2.3%, Risk premium 8.5%
Hanuman 8	8,186	2.2	DCF with WACC 4.0%, Risk free rate 2.3%, Risk premium 8.5%
Hanuman 9	7,641	2.0	DCF with WACC 4.0%, Risk free rate 2.3%, Risk premium 8.5%
Hanuman 10	14,591	3.9	DCF with WACC 4.0%, Risk free rate 2.3%, Risk premium 8.5%
<b>Total wind farms - Northeastern</b>	<b>47,358</b>	<b>12.7</b>	
Battery phase 1 (1GWh)	8,640	2.3	DCF with WACC 7%, Risk free rate 5.3%, Risk premium 8.5%
Battery phase 2 (15GWh)	76,850	20.6	DCF with WACC 7%, Risk free rate 5.3%, Risk premium 8.5%
EV cars (MPA SPA1, 2020E)	1,332	0.7	2020E P/E at 12x
EV boats (2020E)	99	0.0	2020E P/E at 12x
EV charging stations (2020E)	1,135	0.3	DCF with WACC 4.0%, Risk free rate 2.3%, Risk premium 8.5%
<b>Total EV and battery</b>	<b>88,056</b>	<b>23.9</b>	
Green diesel & PCM (Jan 2020E)	6,127	1.6	2020E P/E at 15x
Net debt	(32,881)	(10.5)	
Minorities	15,498	5.1	
<b>Residual ordinary equity</b>	<b>197,984</b>	<b>55.0</b>	

Sources: EA; FSSIA estimates

## Financial statements

## Energy Absolute

Profit and Loss (THB m) Year Ending Dec	2018A	2019A	2020E	2021E	2022E
Revenue	11,552	14,887	17,652	32,253	38,844
Cost of goods sold	(3,835)	(4,235)	(5,226)	(16,141)	(19,528)
<b>Gross profit</b>	<b>7,717</b>	<b>10,652</b>	<b>12,426</b>	<b>16,112</b>	<b>19,315</b>
Other operating income	-	-	-	-	-
Operating costs	(805)	(946)	(1,236)	(2,258)	(2,719)
<b>Operating EBITDA</b>	<b>6,912</b>	<b>9,706</b>	<b>11,190</b>	<b>13,854</b>	<b>16,596</b>
Depreciation	(1,833)	(2,517)	(2,494)	(3,694)	(3,694)
Goodwill amortisation	0	0	0	0	0
<b>Operating EBIT</b>	<b>5,079</b>	<b>7,189</b>	<b>8,696</b>	<b>10,160</b>	<b>12,902</b>
Net financing costs	(920)	(1,226)	(1,631)	(1,743)	(1,645)
Associates	(6)	(14)	0	0	0
Recurring non operating income	(140)	53	100	101	101
Non recurring items	1,072	0	0	0	0
<b>Profit before tax</b>	<b>5,091</b>	<b>6,016</b>	<b>7,165</b>	<b>8,518</b>	<b>11,358</b>
Tax	(29)	11	(6)	(46)	(48)
<b>Profit after tax</b>	<b>5,061</b>	<b>6,027</b>	<b>7,159</b>	<b>8,472</b>	<b>11,310</b>
Minority interests	(86)	55	(311)	(320)	(330)
Preferred dividends	0	0	0	0	0
Other items	-	-	-	-	-
<b>Reported net profit</b>	<b>4,975</b>	<b>6,082</b>	<b>6,848</b>	<b>8,152</b>	<b>10,981</b>
<b>Non recurring items &amp; goodwill (net)</b>	<b>(1,072)</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Recurring net profit</b>	<b>3,904</b>	<b>6,082</b>	<b>6,848</b>	<b>8,152</b>	<b>10,981</b>
<b>Per share (THB)</b>					
Recurring EPS *	1.05	1.63	1.84	2.19	2.94
Reported EPS	1.33	1.63	1.84	2.19	2.94
DPS	0.40	0.60	0.80	1.00	1.50
Diluted shares (used to calculate per share data)	3,730	3,730	3,730	3,730	3,730
<b>Growth</b>					
Revenue (%)	(0.2)	28.9	18.6	82.7	20.4
Operating EBITDA (%)	8.1	40.4	15.3	23.8	19.8
Operating EBIT (%)	4.4	41.5	21.0	16.8	27.0
Recurring EPS (%)	2.3	55.8	12.6	19.0	34.7
Reported EPS (%)	30.3	22.2	12.6	19.0	34.7
<b>Operating performance</b>					
Gross margin (%)	66.8	71.6	70.4	50.0	49.7
Operating EBITDA margin (%)	59.8	65.2	63.4	43.0	42.7
Operating EBIT margin (%)	44.0	48.3	49.3	31.5	33.2
Net margin (%)	33.8	40.9	38.8	25.3	28.3
Effective tax rate (%)	0.6	(0.2)	0.1	0.5	0.4
Dividend payout on recurring profit (%)	38.2	36.8	43.6	45.8	51.0
Interest cover (x)	5.4	5.9	5.4	5.9	7.9
Inventory days	21.8	46.9	59.1	43.2	59.6
Debtor days	74.0	67.1	76.4	58.5	68.4
Creditor days	56.8	70.3	79.7	58.2	80.4
Operating ROIC (%)	10.5	12.1	12.2	n/a	n/a
ROIC (%)	9.5	11.2	11.3	n/a	n/a
ROE (%)	23.8	29.3	26.7	26.7	29.9
ROA (%)	9.1	10.8	11.6	9.9	12.5
*Pre exceptional pre-goodwill and fully diluted					
<b>Revenue By Division (THB m)</b>					
Methyl ester Biodiesel products	3,213	6,570	6,570	6,570	6,570
Pure glycerine products	298	350	360	361	361
Electricity from solar and wind power	7,692	7,957	7,843	15,116	21,107
Head office and others	341	100	100	101	101
Project consultation regarding alternative electric energy	50	(90)	(90)	(89)	(89)
Battery and EV	(42)	0	2,869	10,194	10,794

Sources: Energy Absolute; FSSIA estimates

## Financial statements

## Energy Absolute

Cash Flow (THB m) Year Ending Dec	2018A	2019A	2020E	2021E	2022E
Recurring net profit	3,904	6,082	6,848	8,152	10,981
Depreciation	1,833	2,517	2,494	3,694	3,694
Associates & minorities	(6)	(14)	0	0	0
Other non-cash items	-	-	-	-	-
Change in working capital	7,992	(9,651)	(980)	(1,219)	(2,082)
<b>Cash flow from operations</b>	<b>13,722</b>	<b>(1,067)</b>	<b>8,362</b>	<b>10,627</b>	<b>12,593</b>
Capex - maintenance	(1,833)	(2,517)	(2,494)	(3,694)	(3,694)
Capex - new investment	(12,368)	(3,784)	(4,906)	(194)	(194)
Net acquisitions & disposals	922	(68)	0	0	0
Other investments (net)	(984)	(49)	0	0	0
<b>Cash flow from Investing</b>	<b>(14,263)</b>	<b>(6,418)</b>	<b>(7,400)</b>	<b>(3,888)</b>	<b>(3,888)</b>
Dividends paid	(746)	(746)	(2,238)	(2,984)	(3,730)
Equity finance	0	0	0	0	0
Debt finance	1,525	12,725	(180)	5,946	(10,990)
Other financing cash flows	734	56	311	709	718
<b>Cash flow from Financing</b>	<b>1,513</b>	<b>12,035</b>	<b>(2,107)</b>	<b>3,671</b>	<b>(14,002)</b>
Non recurring cash flows	-	-	-	-	-
Other adjustments	0	0	0	0	0
<b>Net other adjustments</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Movement in cash</b>	<b>972</b>	<b>4,550</b>	<b>(1,145)</b>	<b>10,410</b>	<b>(5,298)</b>
Free cash flow to firm (FCFF)	545.96	(6,098.64)	2,592.58	8,481.86	10,349.30
Free cash flow to equity (FCFE)	1,718.50	5,296.19	1,093.25	13,393.73	(1,567.87)

Per share (THB)					
FCFF per share	0.15	(1.64)	0.70	2.27	2.77
FCFE per share	0.46	1.42	0.29	3.59	(0.42)
Recurring cash flow per share	1.54	2.30	2.50	3.18	3.93

Balance Sheet (THB m) Year Ending Dec	2018A	2019A	2020E	2021E	2022E
Tangible fixed assets (gross)	53,646	59,819	67,219	70,719	74,219
Less: Accumulated depreciation	(6,059)	(8,448)	(10,942)	(14,637)	(18,331)
<b>Tangible fixed assets (Net)</b>	<b>47,587</b>	<b>51,371</b>	<b>56,277</b>	<b>56,083</b>	<b>55,888</b>
<b>Intangible fixed assets (Net)</b>	<b>937</b>	<b>3,683</b>	<b>3,683</b>	<b>3,683</b>	<b>3,683</b>
Long-term financial assets	-	-	-	-	-
Invest. in associates & subsidiaries	33	100	100	100	100
Cash & equivalents	5,479	10,029	8,884	19,294	13,996
A/C receivable	2,295	3,175	4,219	6,126	8,424
Inventories	330	758	935	2,888	3,494
Other current assets	47	71	84	154	185
<b>Current assets</b>	<b>8,150</b>	<b>14,033</b>	<b>14,123</b>	<b>28,462</b>	<b>26,099</b>
Other assets	2,501	1,033	1,033	1,033	1,033
<b>Total assets</b>	<b>59,208</b>	<b>70,220</b>	<b>75,215</b>	<b>89,360</b>	<b>86,803</b>
Common equity	18,139	23,365	27,975	33,142	40,393
Minorities etc	1,379	1,502	1,813	2,133	2,463
<b>Total Shareholders' equity</b>	<b>19,518</b>	<b>24,866</b>	<b>29,788</b>	<b>35,276</b>	<b>42,856</b>
Long term debt	26,139	36,977	36,798	42,744	31,753
Other long-term liabilities	1,049	2,306	2,306	2,306	2,306
<b>Long-term liabilities</b>	<b>27,187</b>	<b>39,283</b>	<b>39,103</b>	<b>45,049</b>	<b>34,059</b>
A/C payable	611	1,021	1,260	3,892	4,708
Short term debt	3,081	4,968	4,968	4,968	4,968
Other current liabilities	8,810	81	96	176	211
<b>Current liabilities</b>	<b>12,503</b>	<b>6,070</b>	<b>6,324</b>	<b>9,035</b>	<b>9,888</b>
<b>Total liabilities and shareholders' equity</b>	<b>59,208</b>	<b>70,220</b>	<b>75,215</b>	<b>89,360</b>	<b>86,803</b>
Net working capital	(6,750)	2,902	3,882	5,101	7,183
Invested capital	44,308	59,089	64,975	65,999	67,887

\* includes convertibles and preferred stock which is being treated as debt

Per share (THB)					
Book value per share	4.86	6.26	7.50	8.89	10.83
Tangible book value per share	4.61	5.28	6.51	7.90	9.84
<b>Financial strength</b>					
Net debt/Equity (%)	121.6	128.4	110.4	80.6	53.0
Net debt/total assets (%)	40.1	45.5	43.7	31.8	26.2
Current ratio (x)	0.7	2.3	2.2	3.2	2.6
CF interest cover (x)	16.3	8.4	4.7	8.8	0.2

Valuation	2018A	2019A	2020E	2021E	2022E
Recurring P/E (x) *	39.9	25.6	22.7	19.1	14.2
Recurring P/E @ target price (x) *	52.6	33.7	30.0	25.2	18.7
Reported P/E (x)	31.3	25.6	22.7	19.1	14.2
Dividend yield (%)	1.0	1.4	1.9	2.4	3.6
P/CF (x)	27.2	18.1	16.7	13.1	10.6
P/FCF (x)	90.6	29.4	n/a	11.6	n/a
Price/book (x)	8.6	6.7	5.6	4.7	3.9
Price/tangible book (x)	9.1	7.9	6.4	5.3	4.2
EV/EBITDA (x) **	26.2	19.5	17.0	13.4	10.9
EV/EBITDA @ target price (x) **	33.3	24.6	21.4	17.0	13.9
EV/invested capital (x)	4.1	3.2	2.9	2.8	2.7

\* Pre exceptional & pre-goodwill and fully diluted

\*\* EBITDA includes associate income and recurring non operating income

Sources: Energy Absolute; FSSIA estimates

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### APPENDIX

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Suwat Sinsadok, FSS International Investment Advisory Securities Co., Ltd

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Company	Ticker	Disclosure (as applicable)
Bangchak Corp	BCP TB	2, 3, 4

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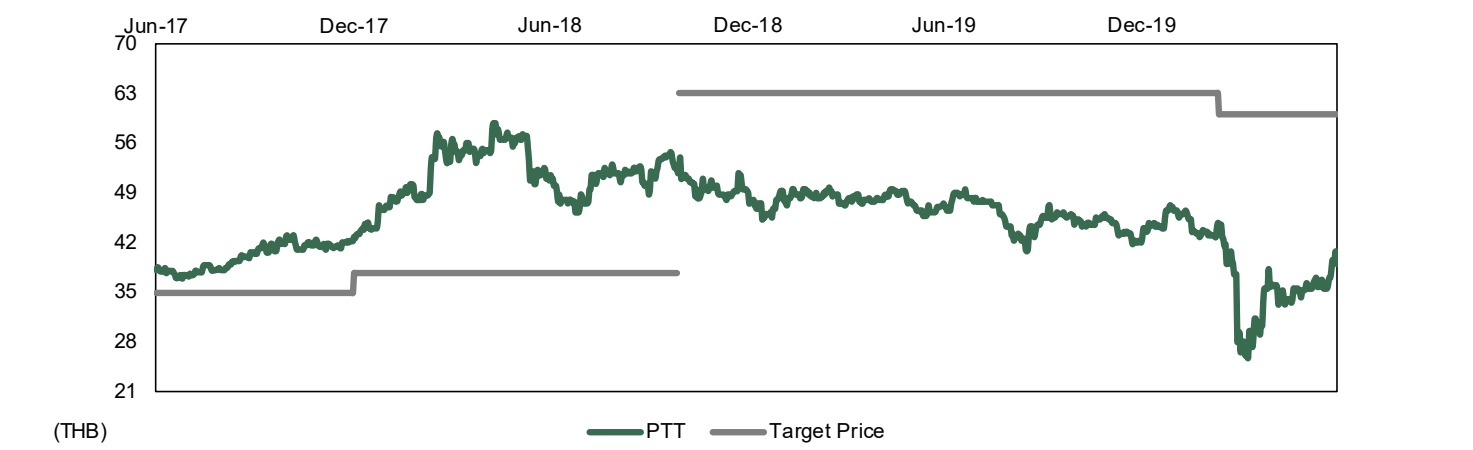
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N/A	N/A	N/A	N/A

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  - 3) Individual stock future, stock option, and warrants that use the stocks specified in Item 1) as underlying.

History of change in investment rating and/or target price

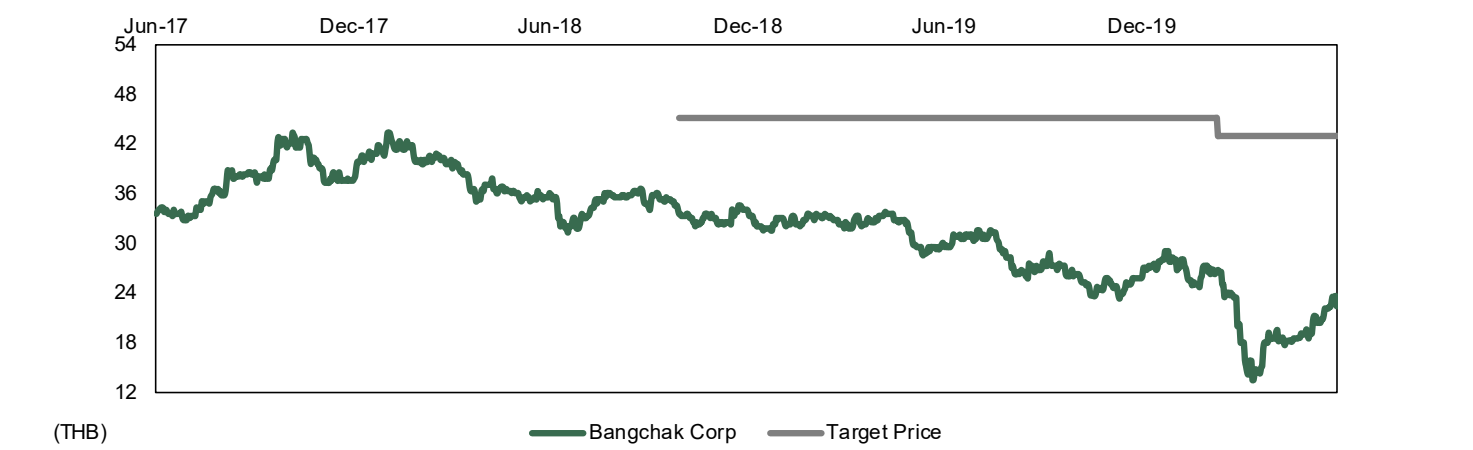
PTT (PTT TB)



Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
09-Jun-17	Reduce	34.80	08-Oct-18	Not Rated	63.00	21-Feb-20	Buy	60.00
12-Dec-17	Reduce	37.60	09-Oct-18	Buy	63.00			

Suwat Sinsadok started covering this stock from 09 Oct 2018  
Price and TP are in local currency  
Sources: FactSet; BNP Paribas

Bangchak Corp (BCP TB)

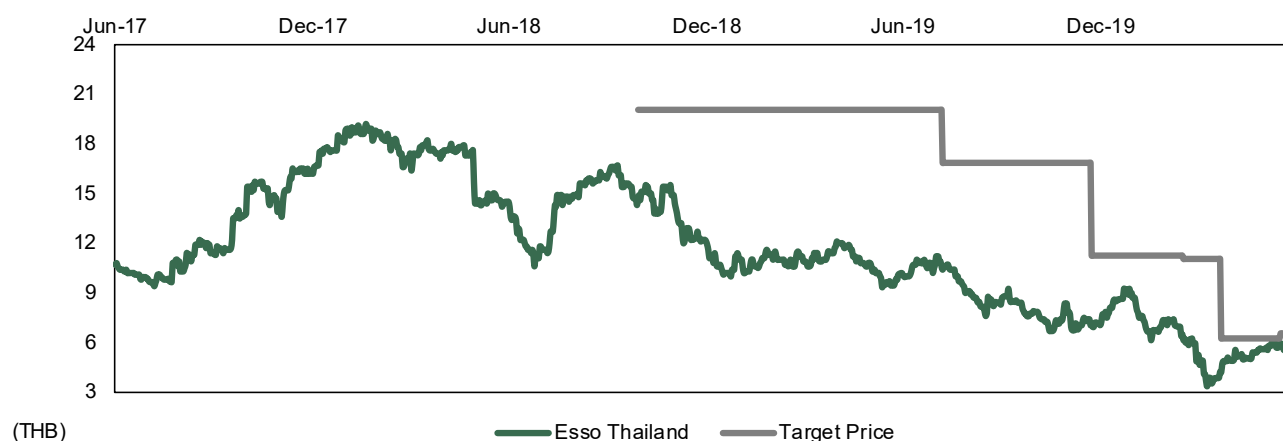


Date	Rating	Target price
09-Oct-18	Buy	45.00

Suwat Sinsadok started covering this stock from 09 Oct 2018  
Price and TP are in local currency  
Sources: FactSet; BNP Paribas



## Esso Thailand (ESSO TB)



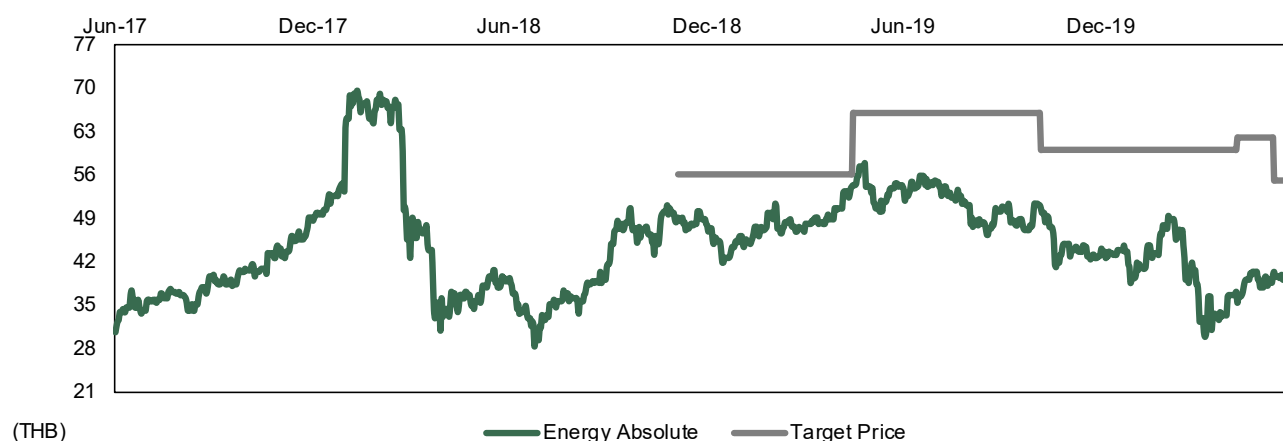
Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
09-Oct-18	Buy	20.00	03-Dec-19	Buy	11.20	01-Apr-20	Buy	6.20
18-Jul-19	Buy	16.80	26-Feb-20	Buy	11.00	26-May-20	Buy	6.50

Suwat Sinsadok started covering this stock from 26 May 2020

Price and TP are in local currency

Sources: FactSet; BNP Paribas

## Energy Absolute (EA TB)



Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
15-Nov-18	Buy	56.00	17-Oct-19	Buy	60.00	20-May-20	Buy	55.00
26-Apr-19	Buy	66.00	16-Apr-20	Buy	62.00			

Suwat Sinsadok started covering this stock from 15 Nov 2018

Price and TP are in local currency

Sources: FactSet; BNP Paribas

Company	Ticker	Price	Rating	Valuation & Risks
Bangchak Corp	BCP TB	THB 22.40	Buy	The downside risks to our SoTP TP include: 1) lower-than-expected demand for petroleum products, 2) higher crude premium, and 3) unplanned shutdowns of the company's refinery plants.
Energy Absolute	EA TB	THB 41.75	Buy	Downside risks to our SoTP-based TP include: 1) lower-than-expected demand for electricity in Thailand; 2) lower crude price; and 3) lower-than-expected demand for batteries.
Esso Thailand	ESSO TB	THB 7.20	Buy	The downside risks to our SoTP-based TP on ESSO include 1) lower-than-expected demand for petroleum products, 2) a higher crude premium, and 3) unplanned shutdowns of its refinery and petrochemical plants.
PTT	PTT TB	THB 39.00	Buy	Risks to our SoTP-based valuation are the oil price and potential earnings downside from government intervention.

Sources: Factset, BNP Paribas

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