

11 OCTOBER 2021

THAILAND / UTILITIES - RENEWABLES

ABSOLUTE CLEAN ENERGY ACE TB

BUY
UNCHANGED

TARGET PRICE	THB5.20
CLOSE	THB3.66
UP/DOWNSIDE	+42.1%
PRIOR TP	THB4.80
CHANGE IN TP	+8.3%
TP vs CONSENSUS	+17.4%

5 ความเข้าใจผิดเกี่ยวกับ ACE

ตลาดยังประเมินการเติบโตในธุรกิจชีวมวลและก๊าซชีวภาพของ ACE ไว้ต่ำเกินไป

เราเชื่อว่าตลาดประเมินประสิทธิภาพในการดำเนินงานและการเติบโตของกำลังการผลิตของ ACE ไว้ต่ำเกินไป รวมถึงสถานะตลาดที่เป็นบวกอย่างยิ่งของโรงไฟฟ้าชีวมวลและก๊าซชีวภาพ ภายใต้เป้าหมายของรัฐบาลที่ต้องการให้กำลังการผลิตไฟฟ้าจากพลังงานหมุนเวียนมีถึง 50% ของกำลังการผลิตไฟฟ้ารวมของประเทศในอีก 20 ปีข้างหน้า เราคิดว่ามีความเข้าใจผิด 5 ประการที่กดดันราคาหุ้นของ ACE ไปเมื่อเร็ว ๆ นี้ ซึ่งไม่เพียงแต่ไม่เป็นภัยตามที่ตลาดได้คาดไว้แต่ยังเป็นบวกต่อ ACE ในฐานะผู้ดำเนินงานโรงไฟฟ้าชีวมวลและก๊าซชีวภาพที่มีประสิทธิภาพสูงสุดและมีขนาดใหญ่ที่สุดของไทย

ปัจจัยบวกที่ตรงกันข้ามกับ 5 ความเชื่อที่ผิดของนักลงทุน

เราคิดว่าความเชื่อที่ผิดทั้ง 5 ประการเกี่ยวกับ ACE กลับเป็นบวกต่อบริษัท โดยมีรายละเอียดดังต่อไปนี้: 1) ต้นทุนวัตถุดิบของโรงไฟฟ้าชีวมวลที่ดำเนินงานอยู่ในปัจจุบันน่าจะถูกลงไม่ใช่สูงขึ้น; 2) มีเพียงโครงการชีวมวลขนาด 8MW เพียงแห่งเดียวที่ประสบปัญหาความไม่แน่นอนเกี่ยวกับสัญญาซื้อขายไฟฟ้าที่ถูกเลื่อนออกไป ในขณะที่โครงการโรงไฟฟ้าที่เหลืออีก 13 แห่งที่คณะอนุญาโตตุลาการตัดสินให้บริษัท เป็นผู้ชนะ ไม่มีความเสี่ยงที่จะถูกยกเลิกและมีความเสี่ยงที่จะถูกเลื่อนจำกัด; 3) เราคาดว่าโครงการโรงไฟฟ้าก๊าซชีวภาพ 18 แห่งกำลังการผลิตรวม 50MW ที่บริษัท พังชนะประมูลภายใต้โครงการโรงไฟฟ้าชุมชน (PPC) จะให้ EIRR ที่ 20% ซึ่งสูงกว่าที่ตลาดคาดไว้ที่ 10-12% อยู่มาก; 4) เราเห็นว่าโครงสร้างอัตราค่าไฟฟ้าของ PPC ยังมีความน่าสนใจ ซึ่งตรงกันข้ามกับตลาดที่คิดว่าโครงการดังกล่าวให้ประโยชน์น้อย; และ 5) ภายใต้เป้าหมายของรัฐบาลที่ต้องการให้กำลังการผลิตจากพลังงานหมุนเวียนที่ 50% เติบโตของโรงไฟฟ้าชีวมวลและก๊าซชีวภาพน่าจะเอื้อประโยชน์ให้มากขึ้นไม่ใช่ลดลง

ฐานะการเงินที่ดีอาจช่วยรองรับการเติบโตที่เพิ่มขึ้น

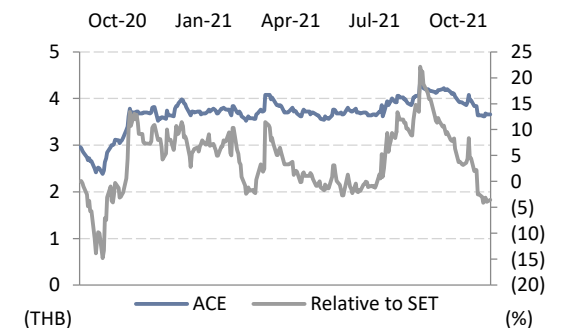
ณ สิ้นไตรมาส 2Q21 ฐานะการเงินของ ACE ยังคงดีด้วยสัดส่วนหนี้ต่อส่วนผู้ถือหุ้น (D/E) สุทธิที่เพียง 0.33x และค่า D/E ที่ 0.38x เทียบกับเพดานหนี้ของบริษัทที่ 3x ของค่า D/E ถ้าสมมติว่าค่า D/E ที่ให้ประโยชน์สูงสุดของ ACE อยู่ที่ 2x เราคาดว่าบริษัท จะสามารถสร้างหนี้ได้มากถึง 8 พัน ลบ. เพื่อใช้เป็นทุนสำหรับโครงการเพื่อการเติบโตใหม่หรือการซื้อและควบรวมกิจการโดย ACE อาจออกหนี้ระยะยาวเช่น หุ้นกู้หรือตราสารหนี้เพื่อสิ่งแวดล้อม ซึ่งจะได้รับการสนับสนุนจากแนวโน้มกำไรสุทธิที่แน่นอนและอยู่ในระดับสูงจากโรงไฟฟ้าชีวมวลและก๊าซชีวภาพ โดยจะมีอัตราดอกเบี้ยอยู่ในช่วง 2-3% ซึ่งต่ำกว่าอัตราดอกเบี้ยที่ 3.1% ของบริษัท ณ สิ้นปี 2020

คงคำแนะนำซื้อหลังปรับราคาเป้าหมายเป็น 5.2 บาท

เราคงคำแนะนำซื้อหลังปรับราคาเป้าหมายจาก 4.8 เป็น 5.2 บาท (SoTP) เพื่อสะท้อนการปรับประมาณการกำไรต่อหุ้นและมูลค่า 0.42 บาทสำหรับโครงการโรงไฟฟ้าก๊าซชีวภาพอีก 18 แห่ง เราปรับประมาณการกำไรต่อหุ้นปี 2021-23 อีก 24.2% ถึง 56% เพื่อสะท้อนราคาพาร์ที่เปลี่ยนจาก 1 บาท/หุ้นเป็น 0.5 บาท/หุ้น อัตราการใช้กำลังการผลิตที่เปลี่ยนไปและราคาก๊าซที่สูงขึ้น

KEY STOCK DATA

YE Dec (THB m)	2020	2021E	2022E	2023E
Revenue	5,858	7,559	11,294	11,453
Net profit	1,507	1,892	2,161	3,051
EPS (THB)	0.15	0.19	0.21	0.30
vs Consensus (%)	-	11.8	(27.6)	(13.8)
EBITDA	1,814	2,661	3,742	4,921
Core net profit	1,357	1,892	2,161	3,051
Core EPS (THB)	0.13	0.19	0.21	0.30
Chg. In EPS est. (%)	(50.0)	(24.2)	(56.2)	(42.3)
EPS growth (%)	53.9	39.4	14.2	41.1
Core P/E (x)	27.4	19.7	17.2	12.2
Dividend yield (%)	0.4	2.2	5.5	5.5
EV/EBITDA (x)	22.4	15.7	12.3	10.0
Price/book (x)	3.1	2.8	2.8	2.6
Net debt/Equity (%)	28.7	34.7	66.5	82.4
ROE (%)	11.9	15.1	16.5	22.3



Share price performance	1 Month	3 Month	12 Month
Absolute (%)	(11.2)	1.1	26.2
Relative to country (%)	(11.1)	(4.8)	(1.9)
Mkt cap (USD m)	1,100		
3m avg. daily turnover (USD m)	13.9		
Free float (%)	57		
Major shareholder	Mr. Wirachai Songmetta (22%)		
12m high/low (THB)	4.60/2.38		
Issued shares (m)	10,176.00		

Sources: Bloomberg consensus; FSSIA estimates



Suwat Sinsadok

suwat.sin@fssia.com
+66 2611 3558

Siriluck Ponthusoonthorn

siriluck.pin@fssia.com
+66 2611 3562

PREPARED BY FSS INTERNATIONAL INVESTMENT ADVISORY SECURITIES CO LTD (FSSIA). ANALYST CERTIFICATION AND IMPORTANT DISCLOSURES CAN BE FOUND AT THE END OF THIS REPORT

บทวิเคราะห์ฉบับนี้แปลมาจากบทวิเคราะห์ของ FSSIA ฉบับวันที่ 11 ตุลาคม 2021

Investment thesis

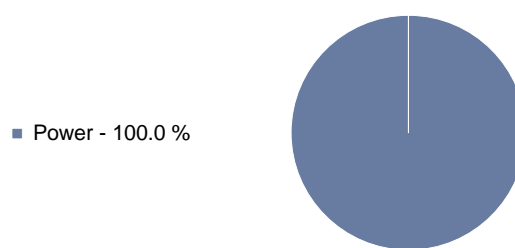
We project ACE's net profit to grow at a 37.8% CAGR from 2019-22, driven by 1) new capacity growth, from 240MW at end-2020 to 470MW by end-2022 – the majority of the new capacity would come from committed biomass power plants, including 88MW from very small power producers (VSPPs) and 80MW from small power producers (SPPs) from 15 biomass projects – one is under construction and 13 were recently ruled in favour of to regain their power purchase agreements (PPAs) from the Provincial Electricity Authority following the judgement by arbitration; 2) inorganic growth from M&A, which we project to add 50-100MW to ACE's power plant portfolio; and 3) winning 50MW out of 150MW-worth of capacity from biomass, biogas, hybrid SPP biomass/biogas plants, and solar farms under the PPC scheme.

Company profile

ACE is a leading biomass power plant producer and is expanding into waste-to-energy power plant.

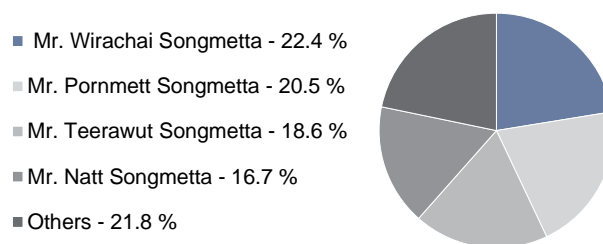
www.ace-energy.co.th

Principal activities (revenue, 2020)



Source: Absolute Clean Energy

Major shareholders



Source: Absolute Clean Energy

Catalysts

We see two key catalysts for ACE's net profit in 2021-22: 1) 1.9x capacity growth from 240MW in 2020 to 470MW in 2022; and 2) a margin expansion on lower feedstock costs.

Risks to our call

The downside risks to our SoTP-based TP include 1) lower-than-expected demand for electricity in Thailand, 2) a lower crude price, and 3) higher costs of biomass feedstock.

Event calendar

Date	Event
Nov 2021	3Q21 results announcement

Key assumptions

	2021E	2022E	2023E
Utilisation rate (%)	90	95	90
Gas price (THB/mmbtu)	226	210	195

Source: FSSIA estimates

Earnings sensitivity

- For every 1% increase in gas price, we estimate 2021 earnings would decline 1.2%, and vice versa, all else being equal.
- For every 1% increase in utilisation rate, we estimate 2021 earnings would increase 1.7%, and vice versa, all else being equal.

Source: FSSIA estimates

Five misconceptions about ACE's biomass and biogas power

We believe the market underestimates ACE's operational efficiency and capacity growth, along with the highly favorable environment for biomass and biogas power plants under the government's ambitious target to reach 50% renewable capacity out of the country's total power generating capacity in the next 20 years.

We think there are five misconceptions that have recently pressured ACE's share price that are not only not detrimental as the market expects, but are also positive for ACE as Thailand's largest and most efficient operator of biomass and biogas power plants.

Misconception #1: ACE's existing biomass power plants will face higher feedstock costs. Unlike other biomass and biogas power plant operators whose plants are mostly concentrated in only one part of Thailand, ACE's currently operating 22 power plants are located nationwide. This allows ACE to secure up to over 60 types of biomass feedstock types, far higher than other competitors which have a limited number of feedstock types, generally in the range of 5-10 types.

ACE's feedstock cost competitiveness has been made possible by 1) the support from its parent company which has a long-established business in Thailand's agricultural industry, resulting in a much wider variety of feedstock choices; and 2) ACE's proven and long experience in developing and operating biomass power plants, with the first development going back to over 30 years ago, based on management's guidance.

Exhibit 1: Power plant portfolio



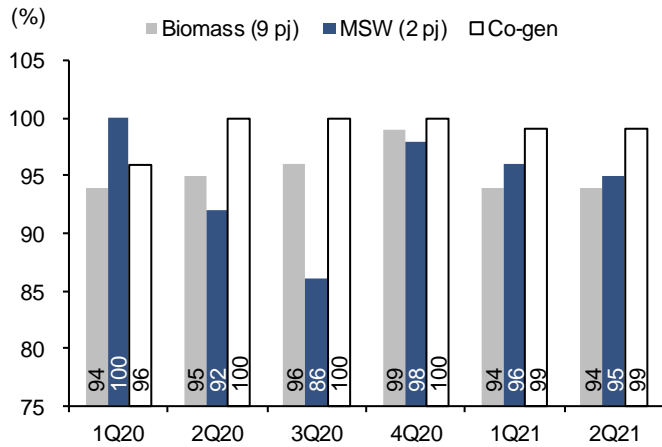
Source: ACE

According to management, ACE has developed the optimal technology to consume a wide variety of feedstocks in Thailand, depending on the availability of each type of feedstock in different regions. All of its biomass feedstocks consist of agricultural waste and their availability and prices vary from season to season based on the weather and the demand-supply balance.

ACE has operated its nine greenfield biomass projects at high availability factors (AFs) and capacity factors (CFs) thanks to the reliably available feedstocks (a mix of over 60 types of feedstocks) and its operational efficiency, resulting in high CFs of over 95% in the past three years.

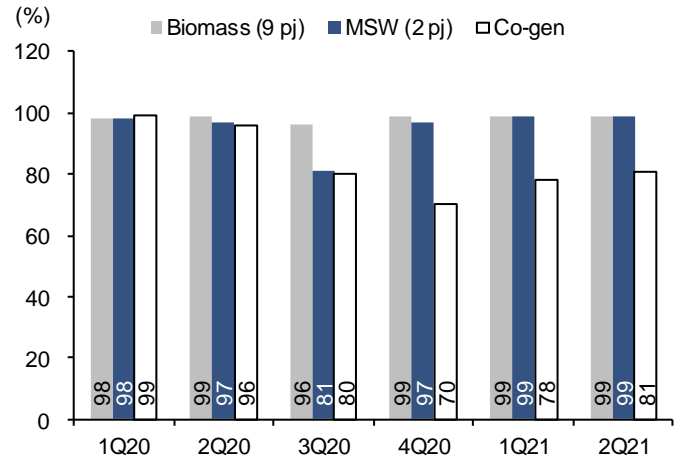
Similarly, for its municipal solid waste (MSW) waste-to-energy (WTE) power plant, ACE has been able to achieve a higher AF of over 85% and a CF of over 80% on average, despite the challenges over feedstock procurement and price controls. This reflects that ACE is one of Thailand's most efficient operators of renewable biomass, biogas, and WTE power plants, in our view.

Exhibit 2: Availability factor breakdown by plant type



Source: ACE

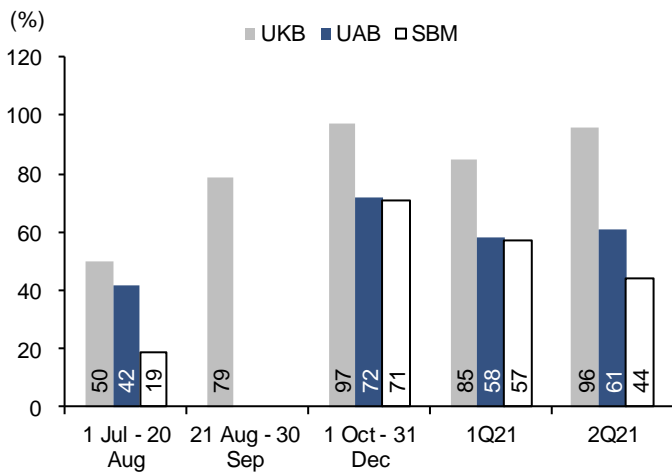
Exhibit 3: Capacity factor by plant type



Source: ACE

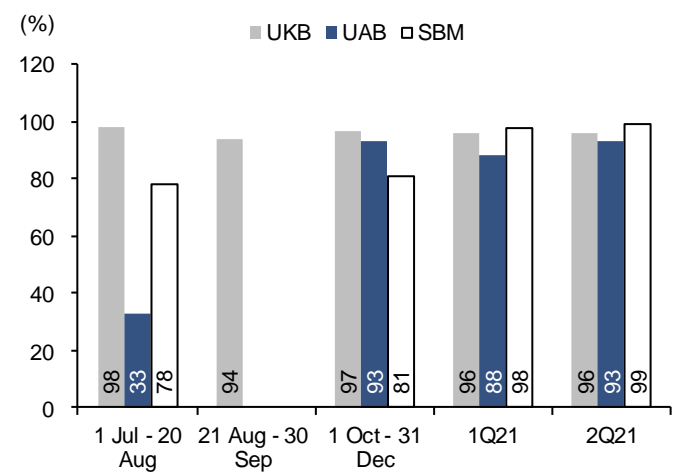
Even for the three sub-optimally running biomass power plants acquired in 2020, ACE has successfully improved the AFs and CFs of these subpar plants, improving the AFs to over 70% and sustaining the CFs at 93-99% in 2Q21 after only three quarters of implementing its operational improvements. The low AF and CF for the SBM power plant is due to the planned shutdown in 2Q21, and we think that ACE should be able to improve the CF and AF of SBM to be on par with the UKB and UAB plants by end-2021.

Exhibit 4: Availability factors – UKB, UAB, SBM



Source: ACE

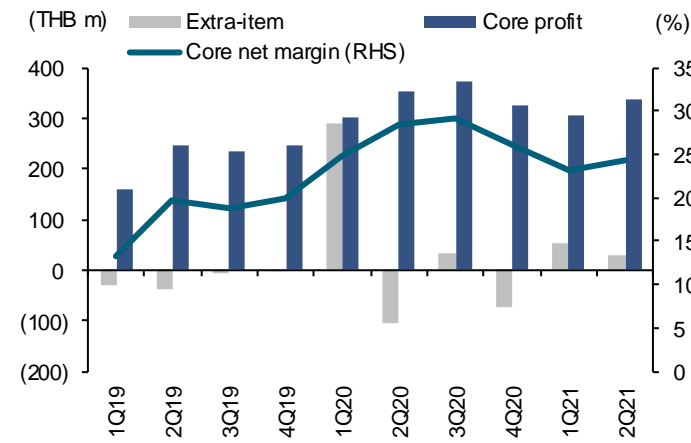
Exhibit 5: Capacity factors – UKB, UAB, SBM



Source: ACE

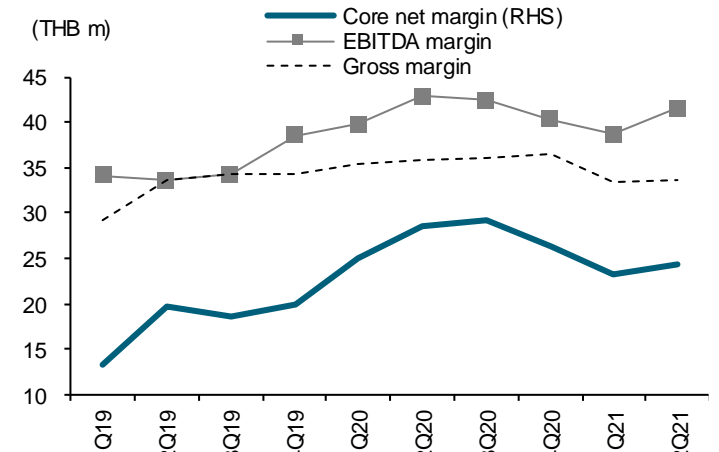
Due to its high operational efficiency and ability to turn around and improve subpar assets via acquisitions, ACE has seen a quarterly gross margin of over 33%, and its quarterly EBITDA and core net profit margins have been in an uptrend since 2019 when ACE started its operational improvement strategy to increase the profitability of its power plants.

Exhibit 6: Quarterly core net profit and core net margin



Source: ACE

Exhibit 7: Core net margin, EBITDA margin, gross margin

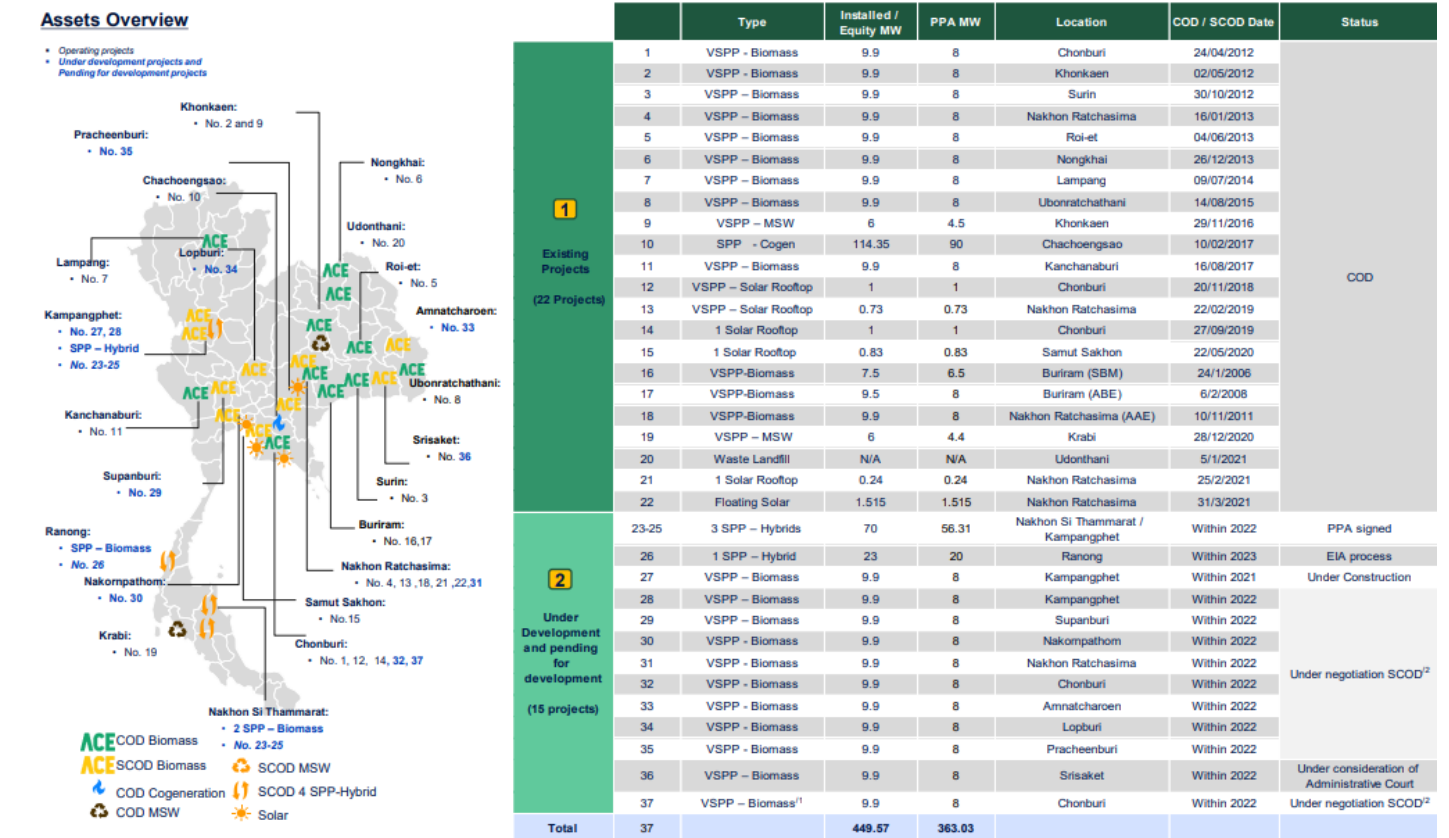


Source: ACE

Misconception #2: Rising risk for the remaining arbitration-winning power plant projects. Management confirmed that out of ACE's 10 pending very small power producer (VSPP) biomass and four hybrid small power producer (SPP) projects, only one biomass power plant in Srisaket province with a contract capacity of 8MW remains highly uncertain, as it is still under the consideration of the Administrative Court.

The nine other biomass power plants with a total contract capacity of 72MW have already won arbitration verdicts and are now waiting for the signing of new power purchase agreements (PPAs) with the Provincial Electricity Authority of Thailand (PEA). The Covid-19 pandemic has effectively delayed the PPA signing but management is confident that there is no risk of cancellation or revision for these nine projects.

Exhibit 8: Power plant locations are diversified nationwide



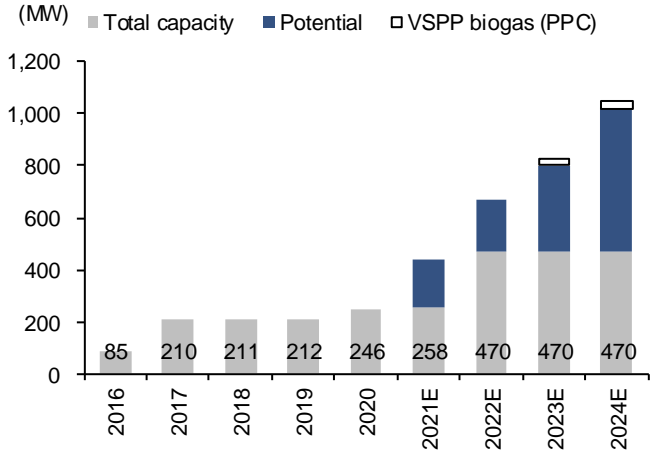
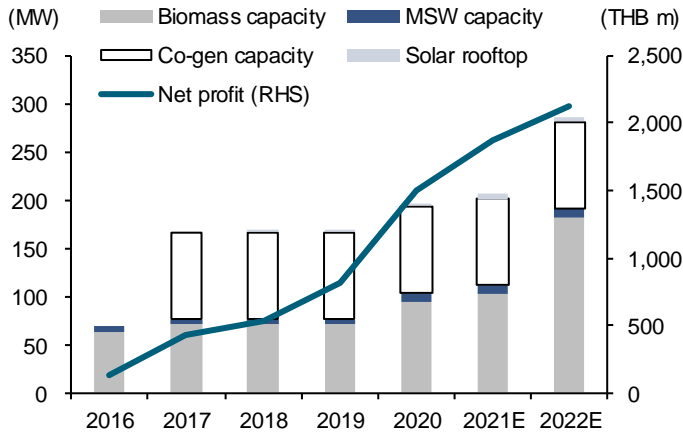
Source: ACE

For its four hybrid SPPs, ACE has already secured PPAs for three SPPs and has been granted an environmental impact assessment (EIA) and is ready to proceed with the PEA's consideration for the last PPA signing.

Hence, we think that out of 166MW (80MW VSPP and 86MW SPP), only 8MW of VSPP capacity may be at high risk for a prolonged court battle. We expect that ACE should be able to sign PPAs for all of its VSPPs (including the one currently under construction) and the remaining SPP within 2022, allowing it to commence the commercial operation dates (CODs) of these 15 plants by end-2024.

Exhibit 9: Equity capacity projections vs net profit

Exhibit 10: Installed capacity growth projection breakdown



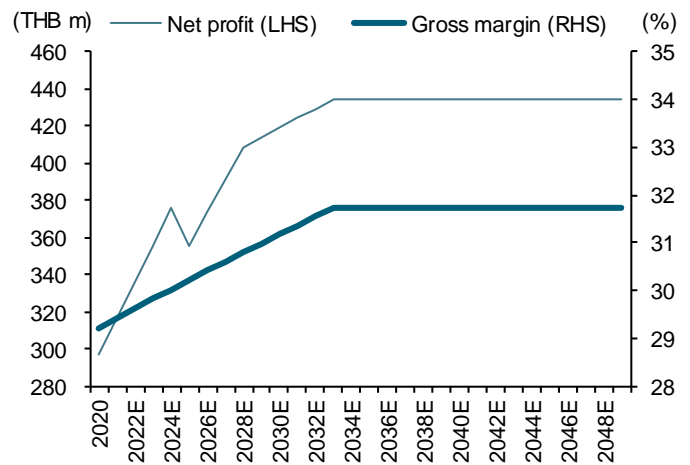
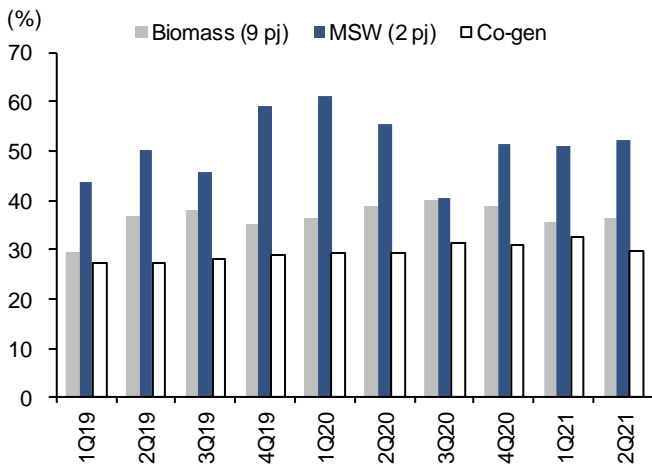
Sources: ACE; FSSIA estimates

Sources: ACE; FSSIA estimates

Misconception #3: ACE's 18 winning biogas power plant projects under PPC are low-return projects. After winning 18 projects with a total capacity of 50MW under the PPC scheme announced by the Energy Regulatory Commission (ERC) on 23 Sep-21, ACE's share price has declined sharply, which we think is due to investor's misconception that ACE's winning projects under PPC are truly a "winners' curse".

Exhibit 11: Gross profit margin by plant type

Exhibit 12: ACE's net profit vs gross margin



Source: ACE

Source: FSSIA estimates

We disagree and believe that ACE's 50MW won via 18 biogas projects will be value-accretive. We estimate that ACE could add up to THB0.4b in annual net profit, translating into a THB0.42/share value to ACE, based on three reasons.

First, ACE has high cost competitiveness and operational efficiency, which, in our estimation, should allow it to generate a 20% EIRR based on the 50MW of biogas capacity. This is thanks to the long research and development and trial and error experiments that ACE has conducted over the past 20 years, successfully resulting in a formula for a high yield and an efficient fermentation process to generate methane gas as a key energy source for biogas power plants, based on management's guidance.

Second, the cost of engineering, procurement, and construction (EPC) for the 18 biogas projects under the PPC scheme should be 10-20% lower than competitors' costs, given that the 18 plants are located not only in just four provinces, but also that most of them are clustered around and located adjacent to each other. This location proximity should enable ACE to save on the costs of EPC, infrastructure (roads, warehouses, and other facilities), and feedstocks, as ACE will be able to aggregate and procure the feedstocks en masse at a more competitive cost.

Third, ACE could leverage its expertise in developing biomass and biogas power plants to achieve economies of scale to reduce the costs of spare parts, EPC, and feedstocks. Out of the total 42 projects under PPC bidding, consisting of a total 150MW capacity, ACE won a total of 18 projects (50MW), while other competitors won only a few projects, such as Clover Power (CV TB, BUY, TP THB5.5), which won three projects (18MW). Meanwhile, TPC Power Holding (TPCH TB, BUY, TP THB14) won no projects due to its lower cost competitiveness.

Exhibit 13: FiT structure for renewable WTE and biomass power plants under PDP Revision 1

Capacity (MW)	FIT (THB/kWh)			Time period	FIT premium (THB/kWh)	
	Fixed rate	Variable rate	Total		Bio-energy project (first 8 years)	Projects in southern part of Thailand (project life)
Waste-to-energy						
Less than 1 MW	3.13	3.27	6.34	20 years	0.7	0.5
1 - 3 MW	2.61	3.27	5.82	20 years	0.7	0.5
More than 3 MW	2.39	2.74	5.08	20 years	0.7	0.7
Waste-to-energy (Landfill)	5.6	-	5.6	10 years	-	0.5
Biomass						
Less than 1 MW	3.16	2.25	5.34	20 years	0.5	0.5
1 - 3 MW	2.61	2.25	4.82	20 years	0.4	0.5
More than 3 MW	2.39	1.89	4.24	20 years	0.3	0.5
Biogas (wastewater)	3.76	-	3.76	20 years	0.5	0.5
Biogas (energy crops)	2.79	2.6	5.34	20 years	0.5	0.5

Sources: PDP 2018 Rev 1; FSSIA estimates

Misconception #4: PPC's tariff structure is much less favourable. We think the new fixed plus variable feed-in-tariff (FiT2) structure for biogas and biomass power plants under PPC is comparable, not less, attractive for operators than the tariff structure of the previous fixed FiT system (FiT1), which we believe could generate an EIRR of 15-20% under the circumstance that the developers can achieve competitive costs for EPC, feedstocks, and operations.

Financial return comparison of the previous and current tariff and share of profit schemes for biomass and biogas power plants. Essentially, the previous fixed FiT but variable share of profits to the community (FiT1) system will be revised to a variable FiT (discount to fixed FiT plus variable FiT) and a fixed 10% ownership for the community (FiT2).

Under the FiT1 system, the government requires the operators of biomass and biogas power plants to distribute their electricity incomes to the community in the form of variable revenues, such as to offset the tax imposed on the community where the power plants are located.

However, under the new fixed plus variable FiT system (FiT2), the share of profits from the power plants to the community is fixed via a minimum 10% ownership by the community as required by the regulator, while the variable part will depend on the bidding discount on the fixed FiT.

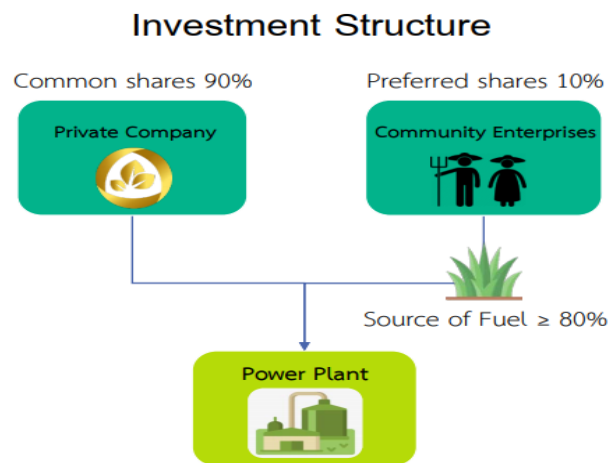
We estimate that the EIRR under the previous fixed FiT & variable share of profits to the community vs the PPC's current variable FiT & fixed 10% stake for the community would yield similar EIRRs, as the final profits for the developers and operators of the power plants would not be wildly different. Hence, we think that ACE's 18 winning projects with a total capacity of 50MW will still yield an EIRR of 20%, based on management's guidance.

Exhibit 14: Power Plant for Community value chain

Exhibit 15: Shareholding structure of PPC



Source: Green Network



Source: TPCH

According to the Energy Policy and Planning Office (EPPO), under PPC, the winners and operators of power plants will have mandates, including 1) to contribute a minimum of THB0.25/kWh for every one kWh of electricity produced to the community where the power plants are located; 2) the minimum stake owned by the community will be in the range of 10-40%, with at least 10% preferred shares owned by the community; and 3) the awarded PPA projects will have to commence their CODs within three years after the PPA signing date.

Exhibit 16: Shareholder structure and tariff contribution to communities under PPC

Joint ventures of power plants	Involved participants	(%)	Comment
Project management	Private company/operator	60-90	
Share of profits of more than THB0.25/kWh	Community enterprise	10-40	Must be more than 10% preferred stock

Source: Ministry of Energy

Feedstock benefit to the community under PPC. One key requirement for the developers of the winning projects under PPC (FiT2) is that they guarantee that at least 80% of the feedstock consumption for their biogas power plants is procured from agricultural waste and crops. This 80% feedstock condition not only favours the community as growers for the power plants but should also reduce the feedstock availability risk for the power plant operators.

In contrast, under FiT1, there is no such 80% feedstock condition for the developers and operators of the power plants, thereby resulting in a smaller benefit for the community. Hence, the regulator revised the conditions under PPC in order to ensure that the benefits from the subsidy tariff for biogas and biomass power plants would be distributed to the community.

Misconception #5: Less favourable government policies for renewables – biomass and biogas power plants in particular. We believe this is the most controversial and probably the most misunderstood point for ACE's and Thailand's renewable energy sources in general. Under Thailand's current PDP 2018 Revision 1 (PDPR1), Thailand aims to achieve a 20% renewable capacity proportion out of its total generating capacity by 2036.

Indeed, under the soon-to-be-announced PDP 2022, Thailand aims to have a higher renewable capacity proportion of up to 50% of the total generating capacity, led by solar and wind farms and biomass, biogas, and WTE power plants. Under the most recent PDPR1, the Thai government has largely aimed to develop and expand electricity production from SPPs, independent power producers (IPPs), and renewable energy sources, mainly from solar farms and biomass and biogas under the PPC scheme.

Exhibit 17: Renewable capacity breakdown under PDP 2018 Rev.1

Projects (MW)	PDP2018	PDP2018 Rev.1
Projects under government-supportive policy		
- WTE-community waste	400	400
- Biomass (Pracharat) for four southernmost provinces	120	120
- Community power for grassroots economy or PPC	-	1,933
Subtotal	520	2,453
Projects under AEDP2018		
Solar	10,000	8,740
Biomass	3,375	2,780
Biogas	546	400
Solar floating	2,725	2,725
Wind	1,485	1,485
WTE-industrial	44	44
Small hydro	-	69
Subtotal	18,175	16,243
Total	18,695	18,696

Source: Ministry of Energy

Biomass/biogas PPC and WTE should be key for renewable growth in PDP 2022.

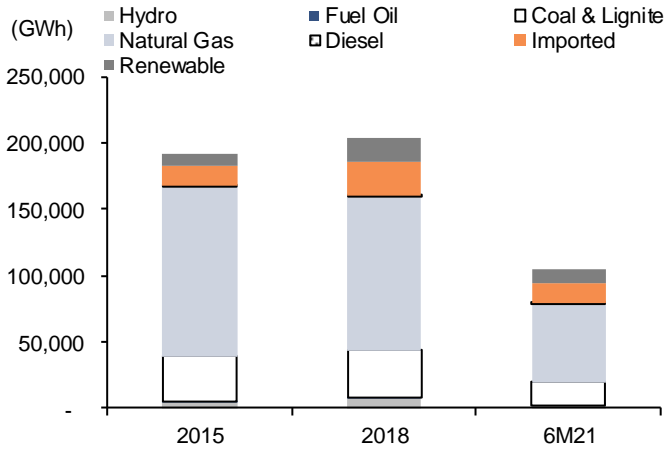
While the target to reach 20% renewable capacity for the country's total capacity by 2036 has been somewhat successful, as the renewable capacity proportion has risen from 7% in 2015 to 11% in 1H21, the government is still below its renewable capacity growth target due to the delays in the biomass/biogas PPC capacity bidding scheme, which was originally planned to launch with a lump sum of 1.9GW.

The new energy minister eventually decided to reduce the bidding capacity size down to only 150MW. We think that in PDP 2022, the bidding for the remaining PPC capacity should be accelerated along with the WTE capacity bidding of 400MW, which is largely under the final process of conditional settlement after more than a two-year delay.

Thanks to the country's abundant agricultural waste that includes sugar, rubber and palm, as well as municipal and industrial garbage, we think the WTE and biomass/biogas PPC capacity should remain a key growth factor for renewable energy for Thailand in PDP 2022, eventually replacing the less efficient coal-fired and gas-fired power plants.

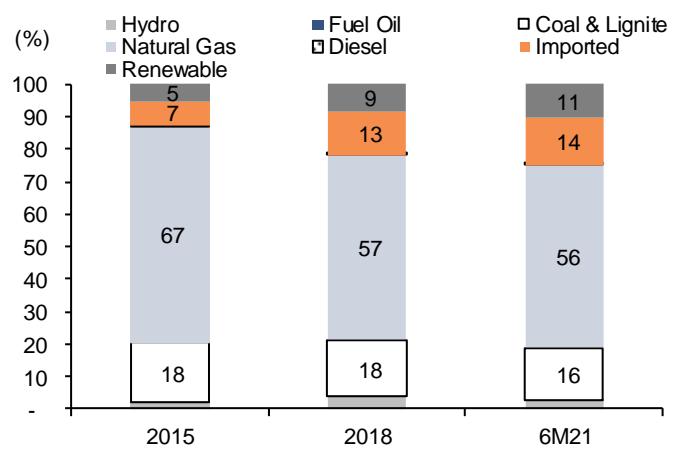
From the past three PDPs – PDP 2015, PDP 2018, and PDPR1 – Thailand has successfully raised its power generating capacity from renewables from 5% of the total capacity in 2015 under PDP 2015 to 9% in 2018 under PDP 2018 and 11% in 1H21 under PDPR1.

Exhibit 18: Thailand’s electricity capacity breakdown by energy type



Source: EPPO

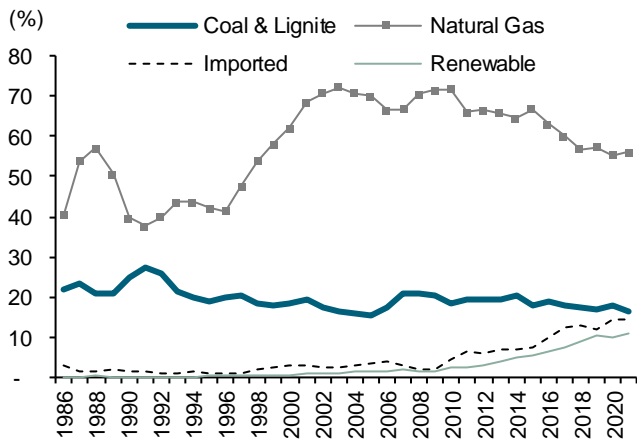
Exhibit 19: Thailand’s electricity capacity breakdown by energy type – PDP 2015, PDP 2018, and PDP 2018 Revision 1



Source: EPPO

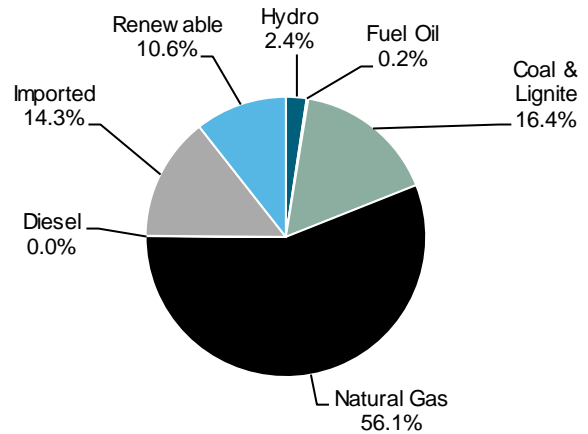
Meanwhile, the country has achieved its target to gradually reduce the capacity proportion of coal-fired power plants, which has declined from 18% in 2015 to 16% in 1H21, thanks in part to higher renewable and gas-fired power plant capacities. The higher power supply contribution from renewables and imports has doubled from 7% in 2015 to 14% in 1H21, mainly from the COD commencement of the 1.2GW Xaiyaburi hydropower plant since Oct-19.

Exhibit 20: Thailand’s four key electricity capacity types



Source: EPPO

Exhibit 21: Thailand’s power capacity breakdown by energy type in 6M21



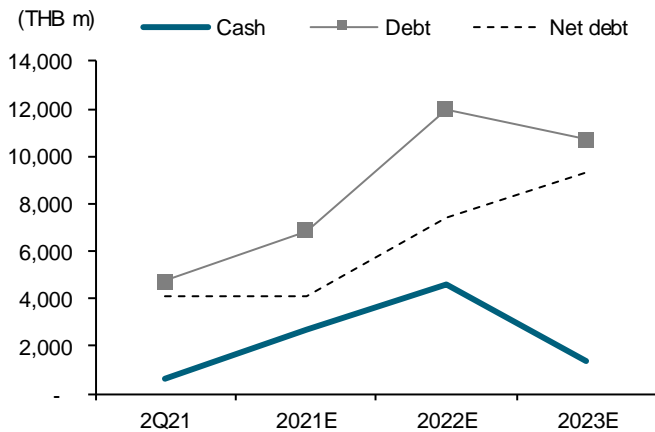
Source: EPPO

Strong balance sheet could accommodate more growth and M&A

As of 2Q21, ACE's balance sheet remains strong with only 0.33x net D/E and a 0.38x D/E ratio vs its loan covenant of 3x D/E. Assuming that ACE's optimum D/E is 2x, we estimate that it could raise debt of up to THB8b to fund its new growth projects or M&A.

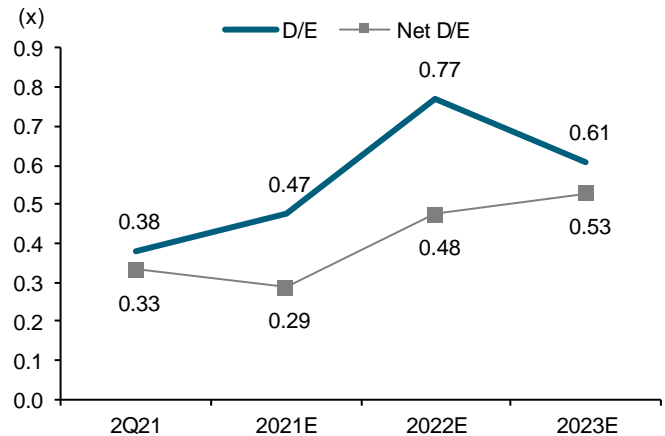
With ACE's favourable credit rating outlook based on its current D/E and net D/E, plus the strong cash flow from operations and free cash flow that we project for the company, we think ACE could raise long-term debt, possibly via issuing debentures or green bonds, thanks to the earnings generated by its biomass and biogas power plants, at an interest rate in the 2-3% range, below its 3.1% interest rate at end-2020.

Exhibit 22: Cash, debt, and net debt



Sources: ACE; FSSIA estimates

Exhibit 23: D/E and net D/E ratios



Sources: ACE; FSSIA estimates

EPS and target price revisions

We revise our EPS forecasts for 2021-23 by +50.4%/-13.6%/+16% to reflect:

- Our changes in the par value from THB1.0/share to THB0.5/share
- Our changes in assumptions for its power plant utilisation rates, as we are more positive on the three acquired biomass power plants that ACE has successfully improved the utilisation rates for at a faster pace than we had previously forecast. In 2022, we lower our utilisation rate assumption slightly to 95% as we think the new power plants could face a longer ramp-up period.
- We expect higher gas prices in 2021-22 to reflect the currently high oil and gas prices, which could impact the gross margin of ACE's SPP.

Exhibit 24: Key changes in assumptions

	Current			Previous			Change		
	2021E	2022E	2023E	2021E	2022E	2023E	2021E	2022E	2023E
	(THB m)	(THB m)	(THB m)	(THB m)	(THB m)	(THB m)	(%)	(%)	(%)
Revenue	7,559	11,294	11,453	6,394	10,117	10,264	18.2	11.6	11.6
Gross profit	3,720	4,984	5,494	2,854	5,207	4,854	30.3	(4.3)	13.2
Operating profit	2,058	2,447	3,506	1,420	2,799	3,046	45.0	(12.6)	15.1
Net profit	1,892	2,161	3,051	1,248	2,467	2,643	51.6	(12.4)	15.4
EPS (THB/share)	0.19	0.21	0.30	0.25	0.48	0.52	(24.2)	(56.2)	(42.3)
Key assumptions									
Utilisation rate (%)	90	95	90	85	95	88	4.5	(0.5)	1.5
Gas price (THB/mmbtu)	226	210	195	248	220	190	9.7	4.7	(2.8)

Note: Change of items in percentage terms are represented in ppt change

Source: FSSIA estimates

We raise our SOTP-based target price from THB4.8 to THB5.2 to reflect our EPS revisions and the incorporation of a THB0.42/share value for the 18 biogas power plant projects (50MW) recently won under the PPC scheme.

Exhibit 25: SOTP valuation

Cost of equity assumptions		(%)	Cost of debt assumptions		(%)
Risk-free rate		2.3	Pretax cost of debt		6.5
Market risk premium		8.5	Marginal tax rate		20.0
Stock beta		0.8			
Cost of equity, Ke		8.7	Net cost of debt, Kd		5.0
Weight applied		30.0	Weight applied		70.0
WACC (%)		6.1			
Sum-of-part valuation estimate		THB m	THB/share	Comments	
Operating power plants (A)			3.27		
ACP1 (Biomass, 24 Apr 2012)	1,688	0.17	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
ACP2 (Biomass, 4 Jun 2013)	1,689	0.17	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
ACP3 (Biomass, 16 Aug 2017)	1,671	0.16	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
ALCP1 (Biomass, 26 Dec 2013)	1,687	0.17	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
ALCP2 (Biomass, 14 Aug 2015)	1,710	0.17	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
AAPP1 (Biomass, 30 Oct 2012)	2,533	0.25	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
AAPP2 (Biomass, 16 Jan 2013)	1,403	0.14	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
AAP1 (Biomass, 2 May 2012)	1,026	0.10	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
ABA1 (Biomass, 9 Jul 2014)	1,980	0.19	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
MSW Khonkaen (WTE, 29 Nov 2016)	1,193	0.12	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
AAA1 (10 Feb 2017) - SPP	14,061	1.38	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
ACE SOLAR3 (20 Sep 2018) -Solar rooftop	50	0.00	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
ACE SOLAR3 (28 Nov 2019) -Solar rooftop	50	0.00	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
Solar (22 Feb 2019) -Solar rooftop	29	0.00	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
Solar (May 2020) -Solar rooftop	33	0.00	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
SBM (Biomass, 24 Jan 2006)	426	0.04	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
UAB (Biomass, 6 Feb 2008)	515	0.05	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
UKB (Biomass, 11 Oct 2011)	531	0.05	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
MSW Krabi (4Q20)	977	0.10	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
Under construction (B)			0.35		
Kampangphet (Biomass, 2021)	1,638	0.16	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
BPP3 (SPP Hybrid, 2022)	1,921	0.19	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
Under EIA approval process (C)			0.63		
BPP2 (SPP Hybrid, 2022)	2,401	0.24	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
ACE solar 1 (SPP Hybrid, 2022)	1,795	0.18	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
ACE solar 2 (SPP Hybrid, 2022)	2,209	0.22	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
Under negotiation with PEA (D)			1.43		
Kampangphet (Biomass, 2022)	1,632	0.16	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
Supanburi (Biomass, 2022)	1,632	0.16	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
Nakornpathom (Biomass, 2022)	1,632	0.16	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
Nakhorn Ratchaima (Biomass, 2022)	1,362	0.13	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
Chonburi (Biomass, 2022)	1,362	0.13	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
Amnatcharoen (Biomass, 2022)	1,362	0.13	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
Lopburi (Biomass, 2022)	1,362	0.13	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
Pracheenburi (Biomass, 2022)	1,362	0.13	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
Srisaket (Biomass, 2022)	1,362	0.13	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
Chonburi (Biomass, 2022)	1,362	0.13	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
Solar (1Q21) - Floating solar	74	0.01	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
Solar (4Q20) - Solar rooftop	12	0.00	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
Under Power Plant for Community (E)			0.42		
VSPB biogas (COD 2023-24)	4,245	0.42	DCF WACC 6.1%, Risk free rate 2.3%, Risk premium 8.5%		
Value of secured projects			3.6	Including operating & committed projects (A+B)	
Value of secured and EIA-approved waiting projects			4.2	Including operating, committed, and EIA-waiting projects (A+B+C)	
Value of PPC projects			0.4	50MW for 18 projects	
Value of all projects			6.1	Including the projects under negotiation with PEA (A+B+C+D)	
Net debt	(8,782)		(0.9)	At end-2022E	

Residual ordinary equity	53,195	5.2	
---------------------------------	---------------	------------	--

Source: FSSIA estimates

Financial Statements

Absolute Clean Energy

Profit and Loss (THB m) Year Ending Dec	2019	2020	2021E	2022E	2023E
Revenue	5,055	5,858	7,559	11,294	11,453
Cost of goods sold	(2,893)	(3,722)	(3,840)	(6,310)	(5,959)
Gross profit	2,162	2,137	3,720	4,984	5,494
Other operating income	-	-	-	-	-
Operating costs	(330)	(322)	(1,058)	(1,242)	(573)
Operating EBITDA	1,832	1,814	2,661	3,742	4,921
Depreciation	(469)	(495)	(603)	(1,295)	(1,415)
Goodwill amortisation	0	0	0	0	0
Operating EBIT	1,362	1,320	2,058	2,447	3,506
Net financing costs	(516)	(88)	(150)	(259)	(364)
Associates	0	0	0	0	0
Recurring non-operating income	33	168	30	30	30
Non-recurring items	(67)	149	0	0	0
Profit before tax	812	1,549	1,938	2,218	3,172
Tax	3	(43)	(46)	(57)	(88)
Profit after tax	815	1,507	1,892	2,161	3,084
Minority interests	0	0	0	0	(33)
Preferred dividends	0	0	0	0	0
Other items	-	-	-	-	-
Reported net profit	815	1,507	1,892	2,161	3,051
Non-recurring items & goodwill (net)	67	(149)	0	0	0
Recurring net profit	882	1,357	1,892	2,161	3,051
Per share (THB)					
Recurring EPS *	0.09	0.13	0.19	0.21	0.30
Reported EPS	0.08	0.15	0.19	0.21	0.30
DPS	0.03	0.01	0.08	0.20	0.20
Diluted shares (used to calculate per share data)	10,176	10,176	10,176	10,176	10,176
Growth					
Revenue (%)	4.6	15.9	29.0	49.4	1.4
Operating EBITDA (%)	21.6	(0.9)	46.7	40.6	31.5
Operating EBIT (%)	31.1	(3.1)	56.0	18.9	43.3
Recurring EPS (%)	45.2	53.9	39.4	14.2	41.1
Reported EPS (%)	35.8	84.8	25.6	14.2	41.1
Operating performance					
Gross margin inc. depreciation (%)	33.5	28.0	41.2	32.7	35.6
Gross margin of key business (%)	-	-	-	-	-
Operating EBITDA margin (%)	36.2	31.0	35.2	33.1	43.0
Operating EBIT margin (%)	26.9	22.5	27.2	21.7	30.6
Net margin (%)	17.4	23.2	25.0	19.1	26.6
Effective tax rate (%)	-0.4	2.7	2.4	2.6	2.8
Dividend payout on recurring profit (%)	34.6	9.7	43.0	94.2	66.7
Interest cover (X)	2.7	17.0	13.9	9.6	9.7
Inventory days	17.7	28.8	39.7	33.0	42.3
Debtor days	59.5	51.4	41.9	31.1	34.3
Creditor days	41.7	25.4	26.5	22.1	28.3
Operating ROIC (%)	12.3	11.0	14.7	13.6	15.1
ROIC (%)	8.2	8.1	10.0	9.9	11.7
ROE (%)	10.8	11.9	15.1	16.5	22.3
ROA (%)	9.2	9.3	11.2	10.7	12.8
* Pre-exceptional, pre-goodwill and fully diluted					
Revenue by Division (THB m)					
Power	5,055	5,858	7,559	11,294	11,453

Sources: Absolute Clean Energy; FSSIA estimates

Financial Statements

Absolute Clean Energy

Cash Flow (THB m) Year Ending Dec	2019	2020	2021E	2022E	2023E
Recurring net profit	882	1,357	1,892	2,161	3,051
Depreciation	469	495	603	1,295	1,415
Associates & minorities	0	0	0	0	0
Other non-cash items	-	-	-	-	-
Change in working capital	(554)	87	(93)	(220)	(102)
Cash flow from operations	797	1,939	2,403	3,236	4,364
Capex - maintenance	(469)	(495)	(603)	(851)	(1,101)
Capex - new investment	(70)	(1,036)	(2,084)	(4,593)	(4,213)
Net acquisitions & disposals	0	0	0	0	0
Other investments (net)	3,410	8,348	0	0	0
Cash flow from investing	2,871	6,817	(2,687)	(5,444)	(5,314)
Dividends paid	(4,854)	(9,433)	(814)	(2,035)	(2,035)
Equity finance	4,405	0	0	0	0
Debt finance	(3,326)	928	1,923	5,132	1,732
Other financing cash flows	73	160	0	0	33
Cash flow from financing	(3,701)	(8,345)	1,109	3,096	(270)
Non-recurring cash flows	-	-	-	-	-
Other adjustments	0	0	0	0	0
Net other adjustments	0	0	0	0	0
Movement in cash	(33)	411	824	888	(1,220)
Free cash flow to firm (FCFF)	4,080.91	8,862.22	(134.40)	(1,949.57)	(586.45)
Free cash flow to equity (FCFE)	415.75	9,843.49	1,638.49	2,923.40	814.74
Per share (THB)					
FCFF per share	0.40	0.87	(0.01)	(0.19)	(0.06)
FCFE per share	0.04	0.97	0.16	0.29	0.08
Recurring cash flow per share	0.13	0.18	0.25	0.34	0.44
Balance Sheet (THB m) Year Ending Dec					
Tangible fixed assets (gross)	10,424	11,904	14,591	19,591	24,591
Less: Accumulated depreciation	(2,364)	(2,809)	(3,411)	(4,262)	(5,363)
Tangible fixed assets (net)	8,059	9,095	11,180	15,329	19,228
Intangible fixed assets (net)	48	50	50	50	50
Long-term financial assets	-	-	-	-	-
Invest. in associates & subsidiaries	0	0	0	0	0
Cash & equivalents	72	483	1,307	2,196	976
A/C receivable	820	829	905	1,018	1,132
Inventories	185	402	432	710	671
Other current assets	357	127	164	245	249
Current assets	1,435	1,841	2,808	4,169	3,027
Other assets	4,603	5,444	5,444	5,444	5,444
Total assets	14,145	16,430	19,481	24,991	27,748
Common equity	10,793	11,993	13,071	13,197	14,213
Minorities etc.	0	0	0	0	33
Total shareholders' equity	10,793	11,993	13,071	13,197	14,246
Long term debt	1,911	3,082	4,345	8,977	10,710
Other long-term liabilities	68	142	142	142	142
Long-term liabilities	1,979	3,224	4,488	9,120	10,852
A/C payable	249	269	289	475	449
Short term debt	1,084	841	1,500	2,000	2,000
Other current liabilities	40	103	133	199	202
Current liabilities	1,373	1,213	1,922	2,674	2,650
Total liabilities and shareholders' equity	14,145	16,430	19,481	24,991	27,748
Net working capital	1,073	986	1,079	1,299	1,401
Invested capital	13,784	15,575	17,752	22,121	26,122
* Includes convertibles and preferred stock which is being treated as debt					
Per share (THB)					
Book value per share	1.06	1.18	1.28	1.30	1.40
Tangible book value per share	1.06	1.17	1.28	1.29	1.39
Financial strength					
Net debt/equity (%)	27.1	28.7	34.7	66.5	82.4
Net debt/total assets (%)	20.7	20.9	23.3	35.1	42.3
Current ratio (x)	1.0	1.5	1.5	1.6	1.1
CF interest cover (x)	1.9	125.3	25.8	30.1	14.8
Valuation					
Recurring P/E (x) *	42.2	27.4	19.7	17.2	12.2
Recurring P/E @ target price (x) *	60.0	39.0	28.0	24.5	17.3
Reported P/E (x)	45.7	24.7	19.7	17.2	12.2
Dividend yield (%)	0.8	0.4	2.2	5.5	5.5
Price/book (x)	3.5	3.1	2.8	2.8	2.6
Price/tangible book (x)	3.5	3.1	2.9	2.8	2.6
EV/EBITDA (x) **	21.9	22.4	15.7	12.3	10.0
EV/EBITDA @ target price (x) **	30.5	31.1	21.6	16.5	13.1
EV/invested capital (x)	2.9	2.6	2.4	2.1	1.9
* Pre-exceptional, pre-goodwill and fully diluted ** EBITDA includes associate income and recurring non-operating income					

Sources: Absolute Clean Energy; FSSIA estimates

Corporate Governance report of Thai listed companies 2020

EXCELLENT LEVEL										
AAV	ADVANC	AF	AIRA	AKP	AKR	ALT	AMA	AMATA	AMATAV	ANAN
AOT	AP	ARIP	ARROW	ASP	BAFS	BANPU	BAY	BCP	BCPG	BDMS
BEC	BEM	BGRIM	BIZ	BKI	BLA	BOL	BPP	BRR	BTS	BWG
CENTEL	CFRESH	CHEWA	CHO	CIMBT	CK	CKP	CM	CNT	COL	COMAN
COTTO	CPALL	CPF	CPI	CPN	CSS	DELTA	DEMCO	DRT	DTAC	DTC
DV8	EA	EASTW	ECF	ECL	EGCO	EPG	ETE	FNS	FPI	FPT
FSMART	GBX	GC	GCAP	GEL	GFPT	GGC	GPSC	GRAMMY	GUNKUL	HANA
HARN	HMPRO	ICC	ICHI	III	ILINK	INTUCH	IRPC	IVL	JKN	JSP
JWD	K	KBANK	KCE	KKP	KSL	KTB	KTC	LANNA	LH	LHFG
LIT	LPN	MAKRO	MALEE	MBK	MBKET	MC	MCOT	METCO	MFEC	MINT
MONO	MOONG	MSC	MTC	NCH	NCL	NEP	NKI	NOBLE	NSI	NVD
NYT	OISHI	ORI	OTO	PAP	PAP	PCSGH	PDJ	PG	PHOL	PLANB
PLAT	PORT	PPS	PR9	PREB	PRG	PRM	PSH	PSL	PTG	PTT
PTTEP	PTTGC	PYLON	Q-CON	QH	QTC	RATCH	RS	S	S & J	SAAM
SABINA	SAMART	SAMTEL	SAT	SC	SCB	SCC	SCCC	SCG	SCN	SDC
SEAFCO	SEAOIL	SE-ED	SELIC	SENA	SIRI	SIS	SITHAI	SMK	SMPC	SNC
SONIC	SORKON	SPALI	SPI	SPRC	SPVI	SSSC	SST	STA	SUSCO	SUTHA
SVI	SYMC	SYNTEC	TACC	TASCO	TCAP	TFMAMA	THANA	THANI	THCOM	THG
THIP	THRE	THREL	TIP	TIPCO	TISCO	TK	TKT	TTB	TMILL	TNDT
TNL	TOA	TOP	TPBI	TQM	TRC	TSC	TSR	TSTE	TSTH	TTA
TTCL	TTW	TU	TVD	TVI	TVO	TWPC	U	UAC	UBIS	UV
VGI	VIH	WACOAL	WAVE	WHA	WHAUP	WICE	WINNER	TRUE		

VERY GOOD LEVEL										
2S	ABM	ACE	ACG	ADB	AEC	AEONTS	AGE	AH	AHC	AIT
ALLA	AMANAHA	AMARIN	APCO	APCS	APURE	AQUA	ASAP	ASEFA	ASIA	ASIAN
ASIMAR	ASK	ASN	ATP30	AUCT	AWC	AYUD	B	BA	BAM	BBL
BFIT	BGC	BJC	BJCHI	BROOK	BTW	CBG	CEN	CGH	CHARAN	CHAYO
CHG	CHOTI	CHOW	CI	CIG	CMC	COLOR	COM7	CPL	CRC	CRD
CSC	CSP	CWT	DCC	DCON	DDD	DOD	DOHOME	EASON	EE	ERW
ESTAR	FE	FLOYD	FN	FORTH	FSS	FTE	FVC	GENCO	GJS	GL
GLAND	GLOBAL	GLOCON	GPI	GULF	GYT	HPT	HTC	ICN	IFS	ILM
IMH	INET	INSURE	IRC	IRCP	IT	ITD	ITEL	J	JAS	JCK
JCKH	JMART	JMT	KBS	KCAR	KGI	KIAT	KOOL	KTIS	KWC	KWM
L&E	LALIN	LDC	LHK	LOXLEY	LPH	LRH	LST	M	MACO	MAJOR
MBAX	MEGA	META	MFC	MGT	MILL	MITSIB	MK	MODERN	MTI	MVP
NETBAY	NEX	NINE	NTV	NWR	OCC	OGC	OSP	PATO	PB	PDG
PDI	PICO	PIMO	PJW	PL	PM	PPP	PRIN	PRINC	PSTC	PT
QLT	RCL	RICHY	RML	RPC	RWI	S11	SALEE	SAMCO	SANKO	SAPPE
SAWAD	SCI	SCP	SE	SEG	SFP	SGF	SHR	SIAM	SINGER	SKE
SKR	SKY	SMIT	SMT	SNP	SPA	SPC	SPCG	SR	SRICHA	SSC
SSF	STANLY	STI	STPI	SUC	SUN	SYNEX	T	TAE	TAKUNI	TBSP
TCC	TCMC	TEAM	TEAMG	TFG	TIGER	TITLE	TKN	TKS	TM	TMC
TMD	TMI	TMT	TNITY	TNP	TNR	TOG	TPA	TPAC	TPCORP	TPOLY
TPS	TRITN	TRT	TRU	TSE	TVT	TWP	UEC	UMI	UOBKH	UP
UPF	UPOIC	UT	UTP	UWC	VL	VNT	VPO	WIJK	WP	XO
YUASA	ZEN	ZIGA	ZMICO							

GOOD LEVEL										
7UP	A	ABICO	AJ	ALL	ALUCON	AMC	APP	ARIN	AS	AU
B52	BC	BCH	BEAUTY	BGT	BH	BIG	BKD	BLAND	BM	BR
BROCK	BSBM	BSM	BTNC	CAZ	CCP	CGD	CITY	CMAN	CMO	CMR
CPT	CPW	CRANE	CSR	D	EKH	EP	ESSO	FMT	GIFT	GREEN
GSC	GTB	HTECH	HUMAN	IHL	INOX	INSET	IP	JTS	JUBILE	KASET
KCM	KKC	KUMWEL	KUN	KWG	KYE	LEE	MATCH	MATI	M-CHAI	MCS
MDX	MJD	MM	MORE	NC	NDR	NER	NFC	NNCL	NPK	NUSA
OCEAN	PAF	PF	PK	PLE	PMTA	POST	PPM	PRAKIT	PRECHA	PRIME
PROUD	PTL	RBF	RCI	RJH	ROJNA	RP	RPH	RSP	SF	SFLEX
SGP	SISB	SKN	SLP	SMART	SOLAR	SPG	SQ	SSP	STARK	STC
SUPER	SVOA	TC	TCCC	THMUI	TIW	TNH	TOPP	TPCH	TIPIP	TPLAS
TTI	TYCN	UKEM	UMS	VCOM	VRANDA	WIN	WORK	WPH		

Description

Score Range

Excellent

90-100

Very Good

80-89

Good

70-79

Disclaimer:

The disclosure of the survey results of the Thai Institute of Directors Association ("IOD") regarding corporate governance is made pursuant to the policy of the Office of the Securities and Exchange Commission. The survey of the IOD is based on the information of a company listed on the Stock Exchange of Thailand and the Market for Alternative Investment disclosed to the public and able to be accessed by a general public investor. The result, therefore, is from the perspective of a third party. It is not an evaluation of operation and is not based on inside information.

The survey result is as of the date appearing in the Corporate Governance Report of Thai Listed Companies. As a result, the survey results may be changed after that date. FSS International Investment Advisory Company Limited does not confirm nor certify the accuracy of such survey results.

* CGR scoring should be considered with news regarding wrong doing of the company or director or executive of the company such unfair practice on securities trading, fraud, and corruption SEC imposed a civil sanction against insider trading of director and executive; ** delisted

Source: Thai Institute of Directors Association (IOD); FSSIA's compilation

Anti-corruption Progress Indicator 2020

CERTIFIED										
2S	ADVANC	AI	AIE	AIRA	AKP	AMA	AMANAHA	AP	AQUA	ARROW
ASK	ASP	AYUD	B	BAFS	BANPU	BAY	BBL	BCH	BCP	BCPG
BGC	BGRIM	BJCHI	BKI	BLA	BPP	BROOK	BRR	BSBM	BTS	BWG
CEN	CENTEL	CFRESH	CGH	CHEWA	CHOTI	CHOW	CIG	CIMBT	CM	CMC
COL	COM7	CPALL	CPF	CPI	CPN	CSC	DCC	DELTA	DEMCO	DIMET
DRT	DTAC	DTC	EASTW	ECL	EGCO	FE	FNS	FPI	FPT	FSS
FTE	GBX	GC	GCAP	GEL	GFPT	GGC	GJS	GPSC	GSTEEL	GUNKUL
HANA	HARN	HMPRO	HTC	ICC	ICHI	IFS	INET	INSURE	INTUCH	IRPC
ITEL	IVL	K	KASET	KBANK	KBS	KCAR	KCE	KGI	KKP	KSL
KTB	KTC	KWC	L&E	LANNA	LHFG	LHK	LPN	LRH	M	MAKRO
MALEE	MBAX	MBK	MBKET	MC	MCOT	MFC	MFEC	MINT	MONO	MOONG
MPG	MSC	MTC	MTI	NBC	NEP	NINE	NKI	NMG	NNCL	NSI
NWR	OCC	OCEAN	OGC	ORI	PAP	PATO	PB	PCSGH	PDG	PDI
PDJ	PE	PG	PHOL	PL	PLANB	PLANET	PLAT	PM	PPP	PPPM
PPS	PREB	PRG	PRINC	PRM	PSH	PSL	PSTC	PT	PTG	PTT
PTTEP	PTTGC	PYLON	Q-CON	QH	QLT	QTC	RATCH	RML	RWI	S & J
SABINA	SAT	SC	SCB	SCC	SCCC	SCG	SCN	SEAOIL	SE-ED	SELIC
SENA	SGP	SIRI	SITHAI	SMIT	SMK	SMPC	SNC	SNP	SORKON	SPACK
SPC	SPI	SPRC	SRICHA	SSF	SSSC	SST	STA	SUSCO	SVI	SYNTEC
TAE	TAKUNI	TASCO	TBSP	TCAP	TCMC	TFG	TFI	TFMAMA	THANI	THCOM
THIP	THRE	THREL	TIP	TIPCO	TISCO	TKT	TTB	TMD	TMILL	TMT
TNITY	TNL	TNP	TNR	TOG	TOP	TPA	TPCORP	TPP	TRU	TSC
TSTH	TTCL	TU	TVD	TVI	TVO	TWPC	U	UBIS	UEC	UKEM
UOBKH	UWC	VGI	VIH	VNT	WACOAL	WHA	WHAUP	WICE	WIJK	XO
ZEN	TRUE									
DECLARED										
7UP	ABICO	AF	ALT	AMARIN	AMATA	AMATAV	ANAN	APURE	B52	BKD
BM	BROCK	BUI	CHO	CI	COTTO	DDD	EA	EFORL	EP	ERW
ESTAR	ETE	EVER	FSMART	GPI	ILINK	IRC	J	JKN	JMART	JMT
JSP	JTS	KWG	LDC	MAJOR	META	NCL	NOBLE	NOK	PK	PLE
ROJNA	SAAM	SAPPE	SCI	SE	SHANG	SINGER	SKR	SPALI	SSP	STANLY
SUPER	SYNEX	THAI	TKS	TOPP	TRITN	TTA	UPF	UV	WIN	ZIGA

Level	
Certified	This level indicates practical participation with thoroughly examination in relation to the recommended procedures from the audit committee or the SEC's certified auditor, being a certified member of Thailand's Private Sector Collective Action Coalition Against Corruption programme (Thai CAC) or already passed examination to ensure independence from external parties.
Declared	This level indicates determination to participate in the Thailand's Private Sector Collective Action Coalition Against Corruption programme (Thai CAC)

Disclaimer:

The disclosure of the Anti-Corruption Progress Indicators of a listed company on the Stock Exchange of Thailand, which is assessed by Thaipat Institute, is made in order to comply with the policy and sustainable development plan for the listed companies of the Office of the Securities and Exchange Commission. Thaipat Institute made this assessment based on the information received from the listed company, as stipulated in the form for the assessment of Anti-corruption which refers to the Annual Registration Statement (Form 56-1), Annual Report (Form 56-2), or other relevant documents or reports of such listed company. The assessment result is therefore made from the perspective of Thaipat Institute that is a third party. It is not an assessment of operation and is not based on any inside information. Since this assessment is only the assessment result as of the date appearing in the assessment result, it may be changed after that date or when there is any change to the relevant information. Nevertheless, FSS International Investment Advisory Company Limited does not confirm, verify, or certify the accuracy and completeness of the assessment results.

Note: Companies participating in Thailand's Private Sector Collective Action Coalition Against Corruption programme (Thai CAC) under Thai Institute of Directors (as of June 24, 2019) are categorised into: 1) companies that have declared their intention to join CAC, and; 2) companies certified by CAC.

Source: The Securities and Exchange Commission, Thailand; * FSSIA's compilation

GENERAL DISCLAIMER

ANALYST(S) CERTIFICATION

Suwat Sinsadok FSS International Investment Advisory Securities Co., Ltd

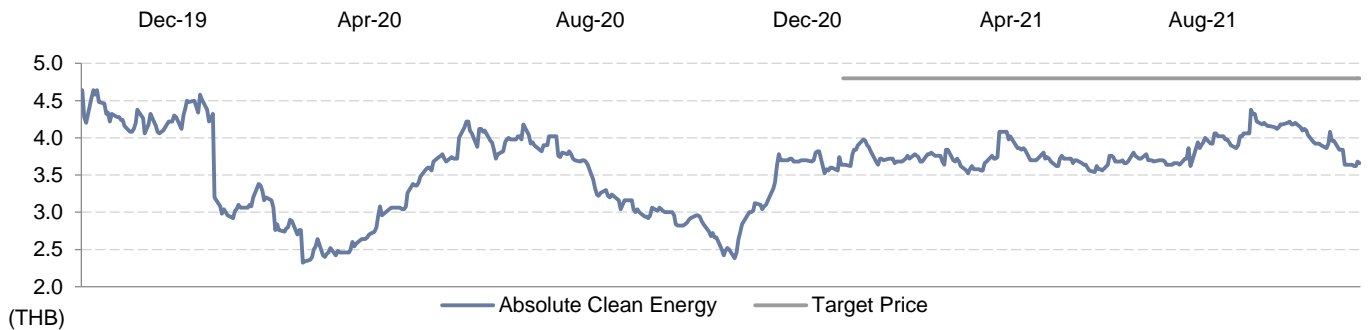
The individual(s) identified above certify(ies) that (i) all views expressed in this report accurately reflect the personal view of the analyst(s) with regard to any and all of the subject securities, companies or issuers mentioned in this report; and (ii) no part of the compensation of the analyst(s) was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed herein.

This report has been prepared by FSS International Investment Advisory Company Limited (FSSIA). The information herein has been obtained from sources believed to be reliable and accurate; however FSS makes no representation as to the accuracy and completeness of such information. Information and opinions expressed herein are subject to change without notice. FSS has no intention to solicit investors to buy or sell any security in this report. In addition, FSS does not guarantee returns nor price of the securities described in the report nor accept any liability for any loss or damage of any kind arising out of the use of such information or opinions in this report. Investors should study this report carefully in making investment decisions. All rights are reserved.

This report may not be reproduced, distributed or published by any person in any manner for any purpose without permission of FSSIA. Investment in securities has risks. Investors are advised to consider carefully before making investment decisions.

History of change in investment rating and/or target price

Absolute Clean Energy (ACE TB)



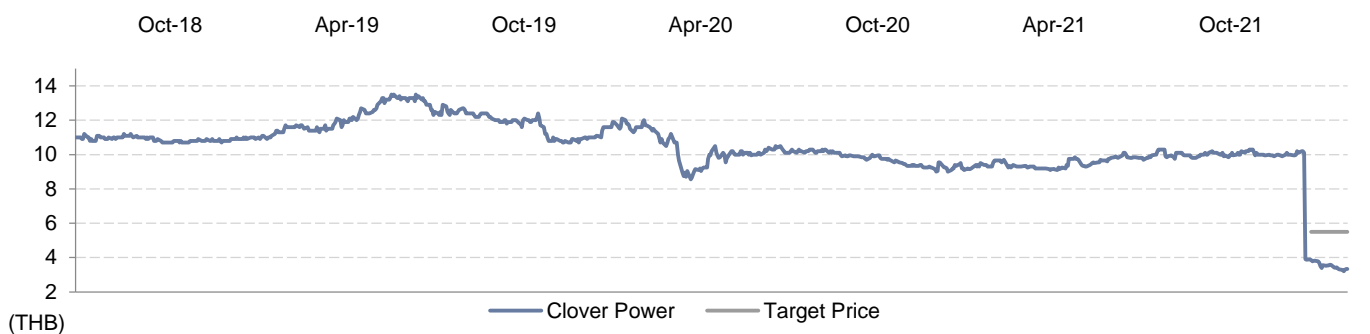
Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
30-Dec-2020	BUY	4.80	-	-	-	-	-	-

Suwat Sinsadok started covering this stock from 30-Dec-2020

Price and TP are in local currency

Source: FSSIA estimates

Clover Power (CV TB)



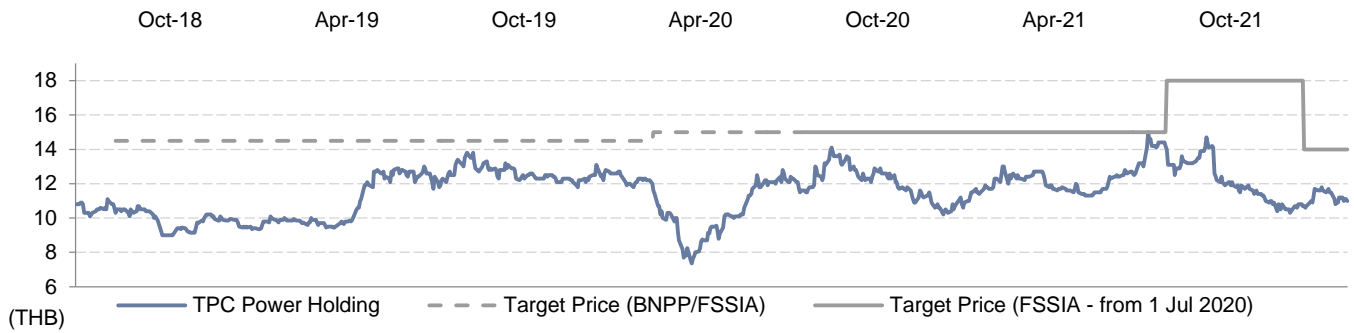
Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
06-Sep-2021	BUY	5.50	-	-	-	-	-	-

Suwat Sinsadok started covering this stock from 06-Sep-2021

Price and TP are in local currency

Source: FSSIA estimates

TPC Power Holding (TPCH TB)



Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
15-Nov-2018	BUY	14.50	08-May-2020	BUY	15.00	05-May-2021	BUY	18.00
20-Feb-2020	BUY	15.00	19-Feb-2021	BUY	15.00	31-Aug-2021	BUY	14.00

Suwat Sinsadok started covering this stock from 15-Nov-2018

Price and TP are in local currency

Source: FSSIA estimates

Company	Ticker	Price	Rating	Valuation & Risks
Absolute Clean Energy	ACE TB	THB 3.66	BUY	The downside risks to our SoTP-based TP include 1) lower-than-expected demand for electricity in Thailand, 2) a lower crude price, and 3) higher costs of biomass feedstock.
Clover Power	CV TB	THB 3.34	BUY	The downside risks to our SoTP-based TP include 1) lower-than-expected demand for electricity in Thailand, 2) a lower crude price, and 3) higher costs of biomass feedstock.
TPC Power Holding	TPCH TB	THB 11.00	BUY	The downside risks to our SoTP-based TP include 1) lower-than-expected demand for electricity in Thailand, 2) a lower crude price, and 3) higher costs of biomass feedstock.

Source: FSSIA estimates

Additional Disclosures

Target price history, stock price charts, valuation and risk details, and equity rating histories applicable to each company rated in this report is available in our most recently published reports. You can contact the analyst named on the front of this note or your representative at Finansia Syrus Securities Public Company Limited

FSSIA may incorporate the recommendations and target prices of companies currently covered by FSS Research into equity research reports, denoted by an 'FSS' before the recommendation. FSS Research is part of Finansia Syrus Securities Public Company Limited, which is the parent company of FSSIA.

All share prices are as at market close on 08-Oct-2021 unless otherwise stated.

RECOMMENDATION STRUCTURE

Stock ratings

Stock ratings are based on absolute upside or downside, which we define as (target price* - current price) / current price.

BUY (B). The upside is 10% or more.

HOLD (H). The upside or downside is less than 10%.

REDUCE (R). The downside is 10% or more.

Unless otherwise specified, these recommendations are set with a 12-month horizon. Thus, it is possible that future price volatility may cause a temporary mismatch between upside/downside for a stock based on market price and the formal recommendation.

* In most cases, the target price will equal the analyst's assessment of the current fair value of the stock. However, if the analyst doesn't think the market will reassess the stock over the specified time horizon due to a lack of events or catalysts, then the target price may differ from fair value. In most cases, therefore, our recommendation is an assessment of the mismatch between current market price and our assessment of current fair value.

Industry Recommendations

Overweight. The analyst expects the fundamental conditions of the sector to be positive over the next 12 months.

Neutral. The analyst expects the fundamental conditions of the sector to be maintained over the next 12 months.

Underweight. The analyst expects the fundamental conditions of the sector to be negative over the next 12 months.

Country (Strategy) Recommendations

Overweight (O). Over the next 12 months, the analyst expects the market to score positively on two or more of the criteria used to determine market recommendations: index returns relative to the regional benchmark, index sharpe ratio relative to the regional benchmark and index returns relative to the market cost of equity.

Neutral (N). Over the next 12 months, the analyst expects the market to score positively on one of the criteria used to determine market recommendations: index returns relative to the regional benchmark, index sharpe ratio relative to the regional benchmark and index returns relative to the market cost of equity.

Underweight (U). Over the next 12 months, the analyst does not expect the market to score positively on any of the criteria used to determine market recommendations: index returns relative to the regional benchmark, index sharpe ratio relative to the regional benchmark and index returns relative to the market cost of equity.