

Thailand Utilities

กระแสนิยม รถยนต์ไฟฟ้า (EV) เริ่มมาให้เห็น

- GWM โอบกอดนโยบาย EV ใหม่ของรัฐบาลไทย ยอมลดราคาขาย EV ORA Good Cat 3 รุ่น
- ปัจจุบันประเทศไทยมี EV ประเภทรถโดยสาร 22 รุ่นพร้อมขายในปี 2022 โดยยี่ห้อชั้นนำส่วนมากมาจากจีน
- เรายังมีความมั่นใจใน EA และ NEX

อาจปรับคำแนะนำขึ้นจากมาตรการส่งเสริม EV ใหม่ของรัฐ

เพื่อสนองต่อการอนุมัติมาตรการส่งเสริม EV ของรัฐบาลไทยในปี 2022-23 ที่มีเป้าหมายกระตุ้นความต้องการ EV ในประเทศไทยก่อนการไหลเข้าของของผู้ผลิต EV ที่คาดว่าจะเกิดขึ้นตั้งแต่ปี 2024 เป็นต้นไป Great Wall Motors (Thailand) (GWM) หนึ่งในผู้ผลิต EV ชั้นนำของจีนได้ประกาศลดราคารถ ORA Good Cat 3 รุ่นเป็นจำนวน 160,500-160,780 บาทต่อคัน การลดราคาดังกล่าวเป็นไปในทิศทางเดียวกันกับเงินอุดหนุน EV ของรัฐจำนวน 75,000-150,000 บาทต่อคัน รวมถึงการปรับลดภาษีนำเข้าและภาษีสรรพสามิต

ได้เวลาระโดดเข้าร่วมขบวนแห่ EV ของไทย

จากข้อมูลของสมาคมยานยนต์ไฟฟ้าไทย (EVAT) ปัจจุบันประเทศไทยมี EV ประเภทรถโดยสาร 22 รุ่นพร้อมขายในปี 2022 โดยยี่ห้อชั้นนำส่วนมากมาจากจีนประกอบด้วย ORA ของ GWM, ZS EV และ EP Wagon EV ของ MG, และ e6, M3, และ T3 ของ BYD นอกจากนี้ผู้ผลิตรายอื่นจากยุโรป เกาหลีใต้และญี่ปุ่นยังได้เริ่มนำเสนอ EV ของตนเองอีกด้วย แต่ในราคาที่สูงกว่าจากภาษีนำเข้าที่สูงกว่า จากข้อมูลของ นสพ. ประชาชาติออนไลน์ EV 37 ยี่ห้อจะเข้าร่วมงาน Bangkok International Motor Show 43 (BIMS) ในช่วงวันที่ 23 มี.ค. 22 ถึง 3 เม.ย. 22 โดย EV ที่เข้าร่วมในงาน BIMS ประกอบด้วย Audi etron; BMW iX, iX3, i4; Mercedes EQS; MG EP plus; Mini Cooper SE; Nissan Leaf; ORA Good Cat; Porsche; Volvo XZ40, Z40; Lexus UX 300e; และ bZ (beyond Zero) model 4x ซึ่งเป็น EV ยี่ห้อใหม่ของ Toyota

GWM เป็นรายแรกที่ปรับลดราคา 13-16% เพื่อรับประโยชน์จากเงินอุดหนุนของรัฐ

เมื่อวันที่ 21 มี.ค. 22 GWM ประกาศว่าบริษัท ได้ตกลงที่จะร่วมมือกับมาตรการส่งเสริม EV ของรัฐบาลไทยโดยจะลดราคาขายสำหรับรถ ORA Good Cat 3 รุ่นในประเทศไทยลง 13-16% ราคาที่ปรับลง 160,500-160,780 บาทต่อคันสูงกว่าที่เราคาดไว้ที่ 45,000 บาทต่อคัน โดยน่าจะเกิดจากอัตราแลกเปลี่ยนที่ลดลงของค่าเงินบาทเมื่อเทียบกับเงินสกุลอื่น ราคาที่ลดลงประกอบด้วย 2 ส่วน: 150,000 บาทจากมาตรการเงินอุดหนุนของรัฐและอีก 10,500-10,780 บาทจากการลดภาษีสรรพสามิต

EA และ NEX ยังยืนเด่นเป็นผู้นำในตลาด EV เกิดใหม่ของไทย

เรายังมีความมั่นใจใน EA และ NEX ซึ่งเป็น 2 บริษัทชั้นนำในตลาดแบตเตอรี่และ EV ของไทย เราคาดว่าราคาหุ้นของทั้งสองบริษัทจะปรับตัวดีกว่าตลาดในปี 2022 จากแนวโน้มการเติบโตของกำไรสุทธิที่ดีในปี 2022-24 จากข้อได้เปรียบในการเป็นบริษัทแรกและการมีธุรกิจครบวงจรเหนือคู่แข่ง ซึ่งทำให้บริษัททั้งสองสามารถเจาะตลาดและเพิ่มยอดขาย EV ในตลาดรถโดยสารและรถบรรทุกไฟฟ้าเชิงพาณิชย์ รวมถึงอาจได้ประโยชน์จากกระแสความนิยม EV ที่กำลังเริ่มต้นของไทย



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บทวิเคราะห์ฉบับนี้แปลมาจากบทวิเคราะห์ของ FSSIA ฉบับวันที่ 22 มีนาคม 2022

EV bandwagon’s batteries charged up and ready to go

In response to the Thai government’s approval of the 2022-23 EV promotional package aimed at stimulating demand for electric vehicles (EVs) in Thailand ahead of an expected influx of EV manufacturers in 2024 onward, GWM, one of China’s leading EV producers, has announced price cuts for three ORA Good Cat models of THB160,500-160,780 per unit. The price reductions are in line with the government’s subsidies of THB75,000-150,000 per EV and the cuts in import and excise taxes.

Under the Thailand-China free trade agreement, imported EVs from China are not subject to import tax. However, the zero-import tax rule only applies to four-wheel vehicles, not EV buses, trucks, and boats, which are still subject to a 40% import tax. The recently approved EV package only applies to electric passenger cars, light trucks, and motorcycles, and include cuts in import and excise taxes. We think this could enhance the selling price competitiveness of local EV producers as imported e-truck and e-bus prices remain high with the 40% import tax rate.

We believe the incentive package will lead to a demand boom for EVs in Thailand, particularly for imported passenger EVs from China and Europe thanks to potential price cuts by up to 20-40%. The government’s plan lowers EV import taxes from 80% to 40% on EVs imported from Europe, 40% to 0% from South Korea, 20% to 0% from Japan, and no change at 0% from China.

Meanwhile, the subsidy of THB70,000 per EV with a battery capacity under 30kWh and THB150,000 per EV with a battery capacity of over 30kWh, applies to EVs with retail selling prices below THB2m. In our view, this should quickly put demand growth for EVs in Thailand on track to achieving the government’s zero-emissions vehicle (ZEV) target.

Exhibit 1: EV promotion plan for passenger BEVs and e-motorbikes with retail selling prices under THB2m

	Policy	Beneficiary	Amount	Effective promotion duration
1	Subsidy from energy fund	Consumers/EV buyers	THB70,000 per EV under 30KWh	1-3 years
			THB150,000 per EV over 30KWh	
2	Excise tax reduction	Producers/EV buyers	From 8% to 2%	2-3 years
3	Import duty tax reduction	Producers/EV buyers	From 20-80% to 0-40%	2-3 years
	Conditions for eligibility			
1	Must be domestic manufacturers			
2	Must produce EVs at 1.0x to 1.5x the number of imported and subsidised EVs during the promotion’s duration			
3	Must produce and use a domestically produced battery (from cell level) for EVs produced domestically			
4	Must produce the same models as the imported models			

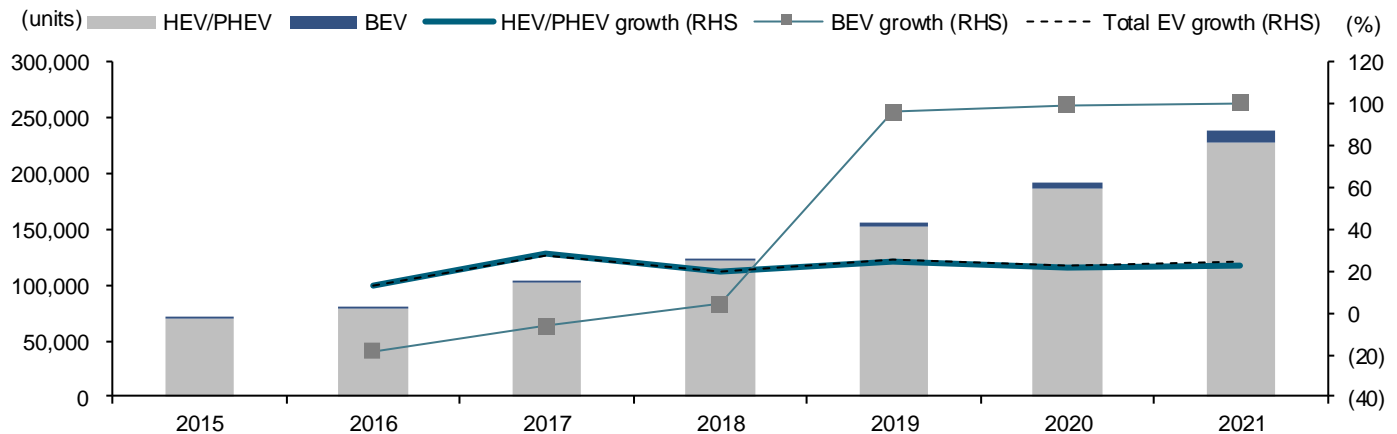
Source: Bangkok Post

EV package is poised to stimulate BEV demand growth in Thailand

With its recent move to approve the comprehensive EV promotion plan proposed by the National Electric Vehicle Policy Committee (NEVPC), the Thai government has clearly signalled that Thailand is committed to fully transforming the country's existing internal combustion engine (ICE)-based automotive industry into an EV industry.

Thailand has set a clear net-zero emissions target. The 30/30 pledge set by the government aims to increase ZEV production to 30% of the total vehicles produced by 2030 (725k units), and 50% of the vehicles in use (440k) by 2030, supported by 13k fast-charging stations. We think this should be highly achievable, given the recently announced regulations by the Provincial Electricity Authority of Thailand (PEA).

Exhibit 2: Number of accumulated EV registrations and growth

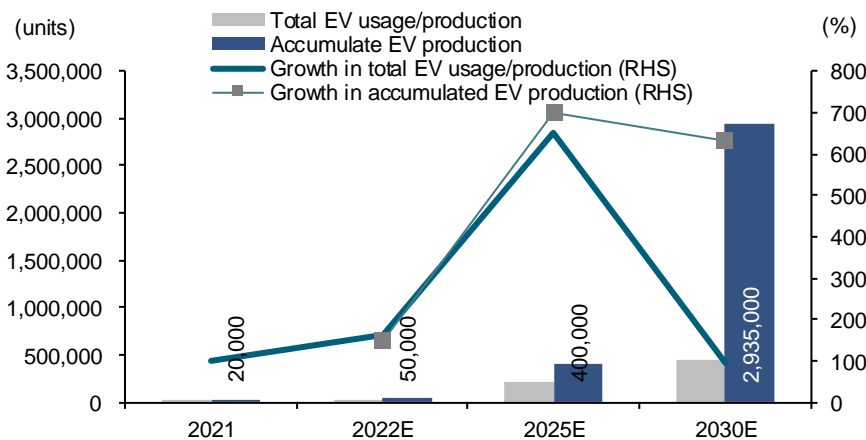


Sources: EVAT; NEVPC

Under the Thai government's ZEV target, we estimate that battery-electric vehicle (BEV) usage will grow from a mere 11.4k at the end of 2021 to 30k in 2022, 225k in 2025, and 440k in 2030 – almost 40x growth within the next 10 years.

Meanwhile, the NEVPC projects accumulated domestic EV production to grow from a mere 20k in 2021 to 50k in 2022, 400k in 2025, and 2.94m in 2030. This implies that the Thai government aims to fully replace the current ICE vehicle production in Thailand of around 2m units annually with EVs by 2030.

Exhibit 3: BEV growth projections and targets by NEVPC



Sources: EVAT; NEVPC

Great Wall Motors' ORA Good Cat EV leads the pack in Thailand

According to EVAT, Thailand currently has 22 passenger EV models available for sale in 2022, with the leading brands mostly from China, including GWM's ORA, MG's ZS EV and EP Wagon EV, and BYD's e6, M3, and T3. Other producers from Europe, South Korea, and Japan have also started to offer their EVs but at higher selling prices due to the higher import taxes.

Exhibit 4: BEV models in Thailand

BEV 2022											
	e-tron 55 quattro	BMW i3s	BMW iX	BMW iX3	BMW i4	e6	M3, T3	ONE	ORA Good Cat	KONA Electric	IDION Electric
ประเภทแบตเตอรี่ Socler Type	AC Type 2 & CCS2	AC Type 2 & CCS2	AC Type 2 & CCS2	AC Type 2 & CCS2	AC Type 2 & CCS2	AC Type 2	AC Type 2	AC Type 2	AC Type 2 & CCS2	AC Type 2 & CCS2	AC Type 2 & CCS2
ระยะทางวิ่งสูงสุด EV Range (km)	417	280	630	460	590	400	300	160	400 [TECH] 400 [PRO] 500 [ULTRA]	312 [SE] 482 [SEL]	280
ขนาดแบตเตอรี่ Battery Size (KWh)	95	33	111.5	80	83.9	80	50.3	11.8	47.8 [TECH] 47.8 [PRO] 63.1 [ULTRA]	39.2 [SE] 64 [SEL]	28
ประเทศต้นทาง Country of Origin											
ภาษีนำเข้า Import Tax	80%	80%	80%	80%	80%	0%	0%	-	0%	40%	40%
ภาษีสรรพสามิต Excise Tax	8%	8%	8%	8%	8%	8%	8%	0%	8%	8%	8%
ราคาขาย Retail Price (Baht)	5,099,000	2,230,000	5,999,000	3,399,000	4,499,000	1,400,000	1,089,000 [M3] 1,059,000 [T3] 5Seat 999,000 [T3] 2Seat	664,000	989,000 [TECH] 1,059,000 [PRO] 1,199,000 [ULTRA]	1,849,000 [SE] 2,259,000 [SEL]	1,749,000
ดูข้อมูลเพิ่มเติม More Info											

BEV 2022											
	I-PACE	All-New Soul EV	UX 300e	EP Wagon EV	ZS EV	MINI Cooper SE	LEAF	TAYCAN	TTE 500	Model 3	XC40 Recharge
ประเภทแบตเตอรี่ Socler Type	AC Type 2 & CCS2	AC Type 1 & CCS1	AC Type 2 & DC CHAdeMO	AC Type 2 & CCS2	AC Type 2 & CCS2	AC Type 2 & CCS2	AC Type 1 & DC CHAdeMO	AC Type 2 & CCS2	AC Type 2 & CCS2	AC Type 2 & CCS2	AC Type 2 & CCS2
ระยะทางวิ่งสูงสุด EV Range (km)	470	452	380	380	337	217	311	407 [4S] 447 [Turbo] 412 [Turbo S]	100	386	418
ขนาดแบตเตอรี่ Battery Size (KWh)	90	64	54	50.3	44.5	32.6	40	79 [4S] 93 [Turbo&Turbo S]	11	62	78
ประเทศต้นทาง Country of Origin											
ภาษีนำเข้า Import Tax	80%	40%	20%	0%	0%	80%	20%	80%	-	80%	0%
ภาษีสรรพสามิต Excise Tax	8%	8%	8%	8%	8%	8%	8%	8%	0%	8%	8%
ราคาขาย Retail Price (Baht)	5,499,000 [S] 6,299,000 [SE] 6,999,000 [HSE]	2,387,000	3,490,000	988,000	1,190,000	2,290,000	1,490,000	7,100,000 [4S] 9,900,000 [Turbo] 11,700,000 [Turbo S]	438,000	2,990,000	2,590,000
ดูข้อมูลเพิ่มเติม More Info											

Source: EVAT

On 21 Mar-22, GWM announced its support for the Thai government's EV package by effectively lowering the prices of three ORA Good Cat EV models sold in Thailand. Prior to the government's EV promotion, EV prices in Thailand were much higher than the original prices in China due to the multiple taxes levied, including excise tax (8%), municipal tax (10%), and VAT (7%).

While the ORA Good Cat 400 model costs RMB110,000 (THB550,000) in China, it costs around THB989,000 in Thailand – almost double. Similarly, the ORA Good Cat model 500 costs RMB143,900 (THB660,000) in China vs THB1,199,000 in Thailand, almost 2x the price in China.

Exhibit 5: ORA Good Cat passenger BEV models imported from China



Source: beartai.com

The new prices for GWM's three ORA Good Cat passenger BEV 2021 models:

ORA Good Cat 400 TECH sells for THB828,500, down from THB989,280 (-16.3% or THB160,780). It offers a 47.788kWh lithium-ion-based, LFP-type battery with a range of 400km. It can be DC charged within 46 minutes or AC charged within 8 hours from 0-80% battery capacity.

ORA Good Cat 400 PRO sells for THB898,500, down from THB1,059,000 (-15.2% or THB160,500). It uses the same battery size and type as the "400 Tech" model.

ORA Good Cat 500 ULTRA sells for THB1,038,500, down from THB1,199,000 (-13.4% or THB160,500). Its 63.139kWh lithium-ion-based, NMC-type battery with a range of 500km can be DC charged within 60 minutes and AC charged within 10 hours from 0-80% battery capacity.

Exhibit 6: Price reductions for ORA Good Cat models

	Original	New	Price reduction	% reduction
	(THB m)	(THB m)	(THB m)	(%)
ORA Good Cat 400 Tech	989,280	828,500	(160,780)	(16.3)
ORA Good Cat 400 Pro	1,059,000	898,500	(160,500)	(15.2)
ORA Good Cat 500 Ultra	1,199,000	1,038,500	(160,500)	(13.4)

Source: Brand Inside

All models are imported from China, and the new pricing comes into effect in Mar-22. Since its first EV deliveries to buyers began in Nov-21, GWM has already sold 1,108 EVs (Nov-21 to Feb-22), making it the leader in EV sales in Thailand, according to Brand Inside. The cars come with a factory warranty & roadside assistance covering five years or 150,000km and a battery warranty for eight years or 180,000km.

GWM has stated that all ORA Good Cat EVs sold prior to 20 Mar-22 – the day that GWM signed its agreement with the Excise Tax Department to receive the EV package benefit – will be eligible for THB25,000 in special benefits, including: 1) 100,000 GWM points worth THB10,000 to be reimbursed for services and rewards on GWM applications; and 2) a THB15,000 credit for EV charging fees at GWM's charging stations nationwide.

GWM plans to install 55 charging stations in 2022. Thailand had 2,285 charging stations nationwide as of 22 Sep-21, according to EVAT, with 1,511 normal chargers (AC) and 774 fast chargers (DC).

Exhibit 7: GWM's ORA Good Cat promotional campaign

GWM

5 YEARS 180,000km
6 YEARS 240,000km

PREMIERE DEAL

มูลค่ารวมกว่า **136,000** บาท

GREAT WALL GREAT DEAL

ข้อเสนอพิเศษต้อนรับ Motor Show

ดอกเบี้ยพิเศษ นาน **1.79% 48 เดือน**

ฟรี GWM ประกันภัยรถยนต์
ฟรี บริการซ่อมฟรี 1 ปี³
ฟรี บริการส่งมอบรถทั่วประเทศ⁴

ตั้งแต่วันที่ 1 มีนาคม 2565 ถึง 3 เมษายน 2565

ฟรี 5 ปี¹ **ฟรี** 4 ปี² **ฟรี** 5 ปี³ **ฟรี** 15,000 POINT **ฟรี** 1,640 บาท

Source: [GWM](#)

According to the [Prachachat online newspaper](#), there will be 37 brands on display at the Bangkok International Motor Show 43 (BIMS), from 23 Mar to 3 Apr-22. The EV brands participating in the BIMS include: Audi etron; BMW iX, iX3, i4; Mercedes EQS; MG EP plus; Mini Cooper SE; Nissan Leaf; ORA Good Cat; Porsche; Volvo XZ40, Z40; Lexus UX 300e; and Toyota's new EV brand bZ (beyond Zero) model 4x.

Exhibit 8: EV brands and models available at Thailand's Bangkok International Motor Show 43



Source: [Prachachat](#)

Exhibit 9: Promotional campaigns for EVs at the Bangkok International Motor Show 43

**โปรโมชั่น+ข้อเสนอพิเศษรถยนต์ไฟฟ้า
ช่วงงานมอเตอร์โชว์ 2022**

Nissan Leaf
ราคาพิเศษ 1.499 ล้านบาท
รับประกันแบตเตอรี่ 8 ปี/160,000 กม.
ฟรีประกันระบบไฟฟ้า 5 ปี/100,000 กม.
ฟรี EV Charger
ฟรีช่วยเหลือฉุกเฉิน

ORA Good Cat
ฟรีโอนชาร์จ/ฟรีประกันภัยขึ้น 1
ฟรีค่าแรงอะไหล่ 5 ปี
ฟรีช่วยเหลือฉุกเฉิน
รับประกันแบตเตอรี่ 8 ปี/180,000 กม.
ดอกเบี้ย 0.99% และ 1.79%

MG EP/ZS EV
รับประกันแบตเตอรี่ 8 ปี/180,000 กม.
ดอกเบี้ย 1.89%
ประกันขึ้น 1+พ.ร.บ.นาบ 1 ปี
ฟรี EV Charger+ค่าติดตั้ง

Volvo XC40 (EV) C40 (EV)
รับประกันคุณภาพ 5 ปี/100,000 กม.
ฟรีประกันภัยขึ้น 1 3 ปี
ฟรีชาร์จไฟฟ้าจาก EA Anywhere
มูลค่า 25,000 บาท

Toyota bZ4X
โชว์สินค้า

BMW iX, iX3, i4
N.A.

Mercedes EQS
N.A.

ที่มา : ประชาชาติธุรกิจรวบรวม

Source: [Prachachat](#)

ORA EV price cuts. The ORA Good Cat price discounts of THB160,500-THB160,780 per unit are 13.4-16.3% lower than before the government's EV promotional package was announced, but larger than our projection of THB45,000 per EV.

Our analysis indicates that a major factor behind the ORA Good Cat discounts is the lower excise tax rate, which has fallen from 8% to 2%, given that the import tax rate remains zero for EVs imported from China to Thailand under the two countries' Free Trade Agreement.

The price cuts come from two components: THB150,000 from the Thai government's subsidy and THB10,500-THB10,780 from the excise tax cuts. However, we think GWM could lower the selling price by an additional THB45,000 per EV under our assumptions.

If BEVs are imported from European countries, the reductions in selling prices will be smaller given that the taxes imposed are higher. With the EV package, the import tax rate for BEVs from EU producers is now 40% (down from the previous 80%), and zero for South Korea (40%), Japan (20%), and China (0%).

Exhibit 10: Price structure analysis of ORA Good Cat 400 Tech before and after the EV package

ORA Good Cat Muse Edition (400 model)	Prices, margins, and taxes			Unit
Original price in China (RMB110,000)	550,000			THB
Freight	16,000			THB
Total cost before taxes and margin	566,000			THB
Assume margin	25			%
Price before tax	707,500			THB
Taxes	Without package	With package	% change	
Import tax	0	0	-	%
Excise tax	8	2	(6)	%
Price after excise and import taxes	764,100	721,650	(42,450)	THB
Municipal tax	10	10	-	%
Price after municipal tax	840,510	793,815	(46,695)	THB
VAT	7	7	-	%
Price after VAT	899,346	849,382	(49,964)	THB
Retail margin mark-up	10	10	-	%
Final retail price	989,280	934,320	(54,960)	THB
Total margins	231,434.57	226,438.21	(4,996)	THB
Total taxes	191,846	141,882	(49,964)	THB
Margins as % of retail price	23.4	24.2	0.8	%
Taxes as % of retail price	21.3	16.7	(4.6)	%

Sources: GWM; FSSIA estimates

However, in terms of absolute price cuts, we estimate that the selling prices for other non-Chinese imported EVs will be higher given their higher prices before the impact of the tax cut.

Exhibit 11: Price structure analysis of ORA Good Cat 400 Tech

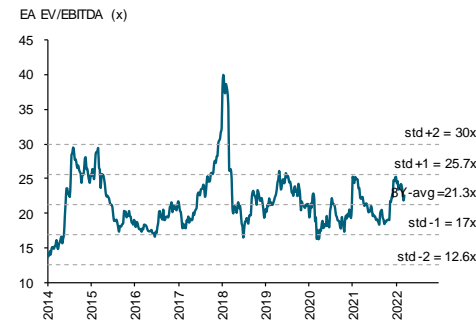
ORA Good Cat (400 Tech model)	Prices, margins, and taxes	Unit
Original price in China (RMB110,000)	550,000	THB
Freight	16,000	THB
Total cost before taxes and margin	566,000	THB
Assumed margin	25	%
Price before tax	707,500	THB
Taxes		
1 Import tax	0	%
2 Excise tax	8	%
Price after excise and import taxes	764,100	THB
3 Municipal tax	10	%
Price after municipal tax	840,510	THB
4 VAT	7	%
Price after VAT	899,346	THB
5 Retail margin mark-up	10	%
Final retail price	989,280	THB
Total margin	231,435	THB
Total tax	191,846	THB
Margin as % of retail price	23.4	%
Tax as % of retail price	21.3	%

Sources: GWM; FSSIA estimates

EA and NEX: Two EV picks in Thailand

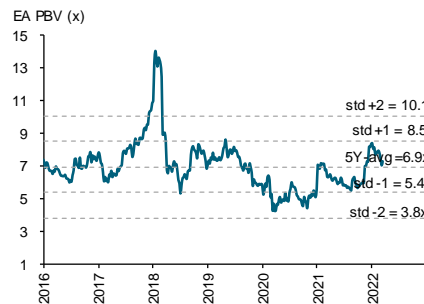
We remain positive on EA and NEX – Thailand's two leading players in the battery and EV businesses – and expect their share prices to outperform in 2022, driven by strong net profit growth momentum in 2022-24 due to their fully integrated, first-mover advantage over competitors that has allowed them to penetrate and grow EV sales in the commercial e-bus and e-truck segment, and potentially benefit from Thailand's nascent EV boom from 2022 onward.

Exhibit 12: EA's EV/EBITDA band



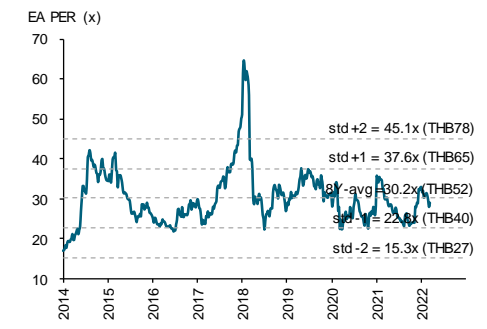
Source: EA, Bloomberg, FSSIA estimates

Exhibit 13: EA's P/BV band



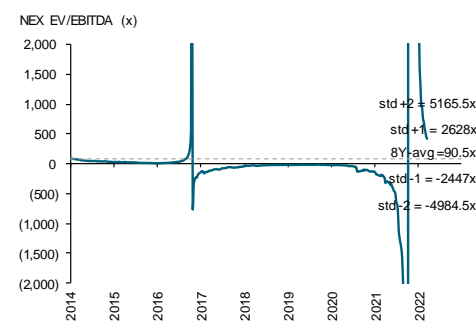
Source: EA, Bloomberg, FSSIA estimates

Exhibit 14: EA's P/E band



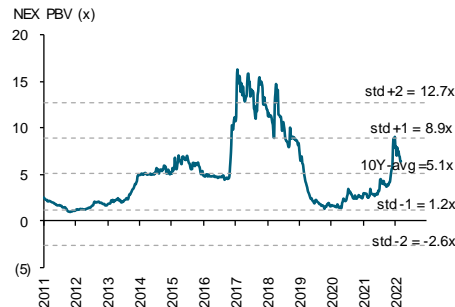
Source: EA, Bloomberg, FSSIA estimates

Exhibit 15: NEX's EV/EBITDA band



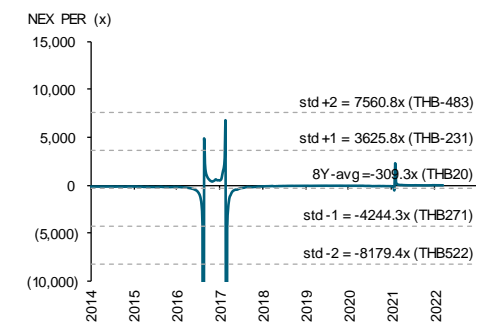
Source: NEX, Bloomberg, FSSIA estimates

Exhibit 16: NEX's P/BV band



Source: NEX, Bloomberg, FSSIA estimates

Exhibit 17: NEX's P/E band



Source: NEX, Bloomberg, FSSIA estimates

Exhibit 18: Peer comparisons

Company	BBG code	Rec	Share Price	Target price	Up side	Market Cap	3Y EPS CAGR	PE		ROE		PBV		EV / EBITDA	
								22E	23E	22E	23E	22E	23E	22E	23E
			(LCY)	(LCY)	(%)	(USD m)	(%)	(x)	(x)	(%)	(%)	(x)	(x)	(x)	(x)
THAILAND															
Energy Absolute	EA TB	BUY	89.75	122	36	9,985	35.7	31.4	24.7	28.7	28.8	8.0	6.4	24.1	18.6
BANPU	BANPU TB	BUY	11	18.8	71	2,220	(10.0)	2.8	3.3	30.4	24.0	0.7	0.7	3.4	3.7
Banpu Power	BPP TB	BUY	16.8	20	19	1,527	29.1	9.4	9.1	11.5	11.2	1.0	1.0	35.7	26.7
Nex Point	NEX TB	BUY	17.9	26	45	894	nm	28.1	17.1	30.6	36.2	7.3	5.4	1,886.0	99.5
Global Power	GPSC TB	BUY	71	90	27	5,972	20.4	28.2	18.7	6.5	9.4	1.8	1.7	18.1	14.8
Thailand avg						20,598	22.8	25.6	19.2	21.3	21.7	4.9	4.0	101.8	20.0
US															
Tesla Inc	TSLA US	NA	921.16	NA	NA	952,026	51.3	87.6	67.0	28.1	29.9	23.4	16.7	49.9	36.4
Nio Inc - Adr	NIO US	NA	20.26	NA	NA	33,814	nm	nm	88.4	(9.3)	5.6	8.5	7.7	6,398.9	34.6
Nikola Corp	NKLA US	NA	8.85	NA	NA	3,694	nm	nm	nm	(88.5)	(77.7)	6.3	4.3	nm	nm
Workhorse	WKHS US	NA	4.26	NA	NA	646	nm	nm	nm	(46.8)	(25.3)	4.6	4.5	nm	nm
US avg						990,181	51.3	84.2	67.4	26.4	28.6	22.8	16.3	266.4	36.1
Alternative energy under coverage															
Average (all)						1,010,779	51.1	83.0	66.4	26.3	28.5	22.4	16.1	263.1	35.8

Share price as of 21 March 2022
Sources: Bloomberg, 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	PCSGH	PDJ	PG	PHOL	PLANB	PLANET
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	SEOIL	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	AMANA	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	MITSI	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	AMANA	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	SEAOL	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, CFA, FRM, ERP FSS International Investment Advisory Securities Co., Ltd

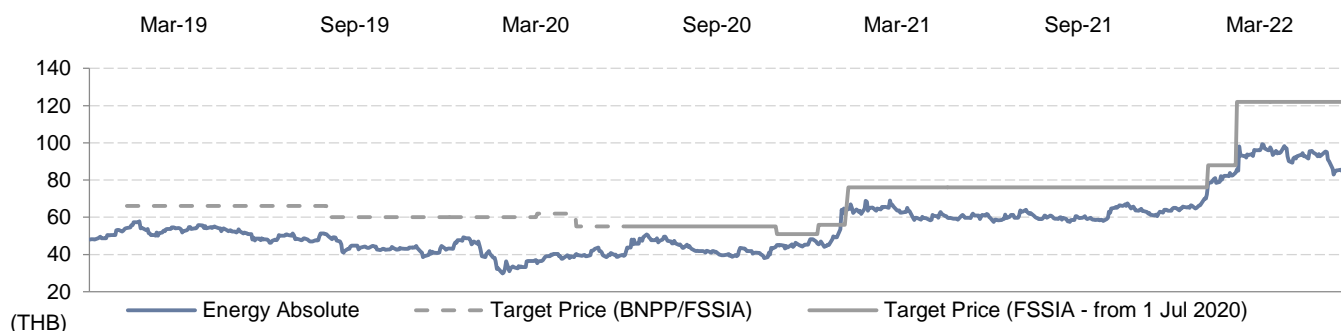
The individual(s) identified above certify(ies) that (i) all views expressed in this report accurately reflect the personal view of the analyst(s) with regard to any and all of the subject securities, companies or issuers mentioned in this report; and (ii) no part of the compensation of the analyst(s)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

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History of change in investment rating and/or target price

Energy Absolute (EA TB)



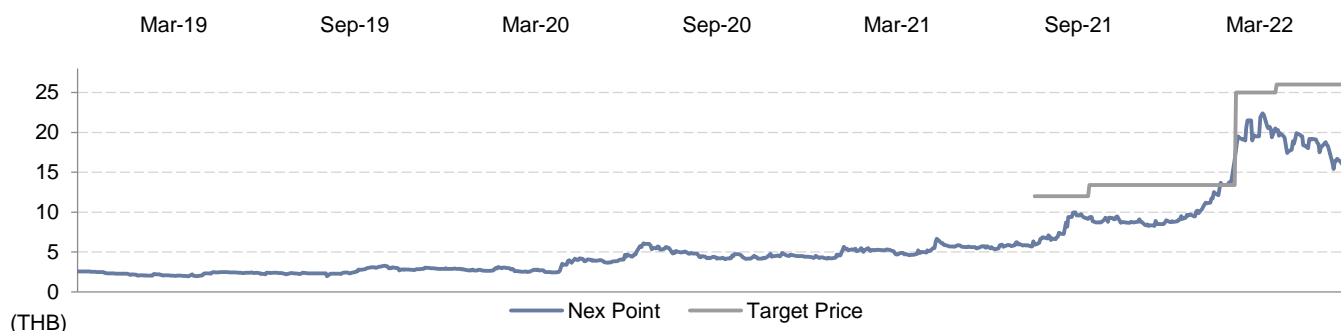
Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
26-Apr-2019	BUY	66.00	20-May-2020	BUY	55.00	08-Jan-2021	BUY	76.00
17-Oct-2019	BUY	60.00	09-Nov-2020	BUY	51.00	18-Nov-2021	BUY	88.00
16-Apr-2020	BUY	62.00	15-Dec-2020	BUY	56.00	13-Dec-2021	BUY	122.00

Suwat Sinsadok, CFA, FRM, ERP started covering this stock from 09-Jul-2020

Price and TP are in local currency

Source: FSSIA estimates

Nex Point (NEX TB)

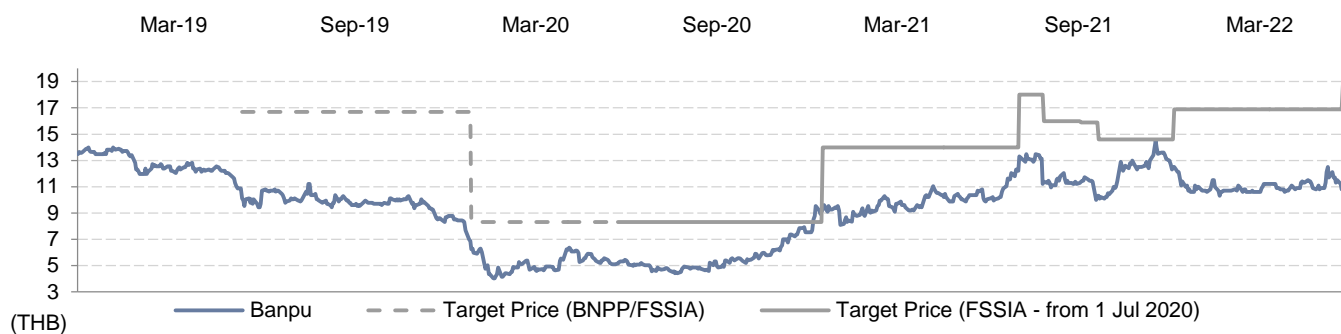


Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
23-Jun-2021	BUY	12.00	13-Dec-2021	BUY	25.00	-	-	-
09-Aug-2021	BUY	13.40	17-Jan-2022	BUY	26.00			

Suwat Sinsadok, CFA, FRM, ERP started covering this stock from 23-Jun-2021

Price and TP are in local currency

Source: FSSIA estimates

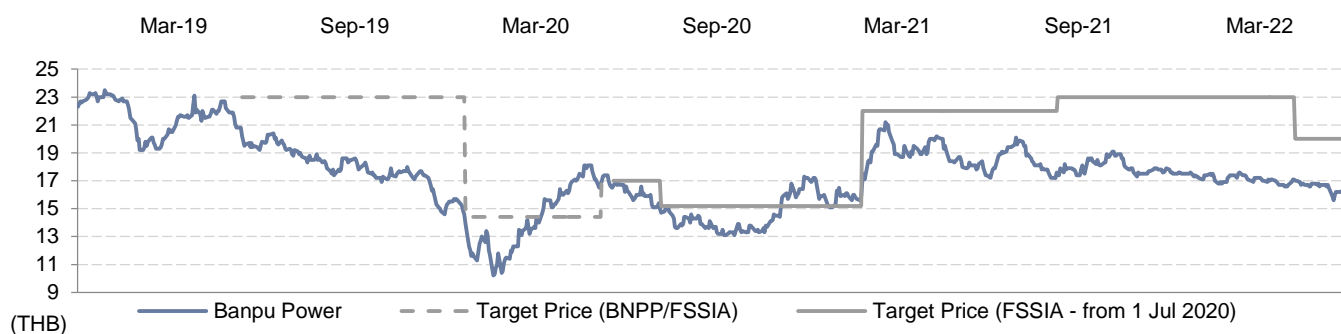
Banpu (BANPU TB)

Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
13-Aug-2019	BUY	16.70	10-Jun-2021	BUY	18.00	21-Oct-2021	BUY	16.90
26-Feb-2020	HOLD	8.30	01-Jul-2021	HOLD	16.00	15-Mar-2022	BUY	18.80
09-Oct-2020	BUY	8.30	02-Aug-2021	BUY	15.90			
23-Dec-2020	BUY	14.00	17-Aug-2021	BUY	14.60			

Suwat Sinsadok, CFA, FRM, ERP started covering this stock from 26-Feb-2020

Price and TP are in local currency

Source: FSSIA estimates

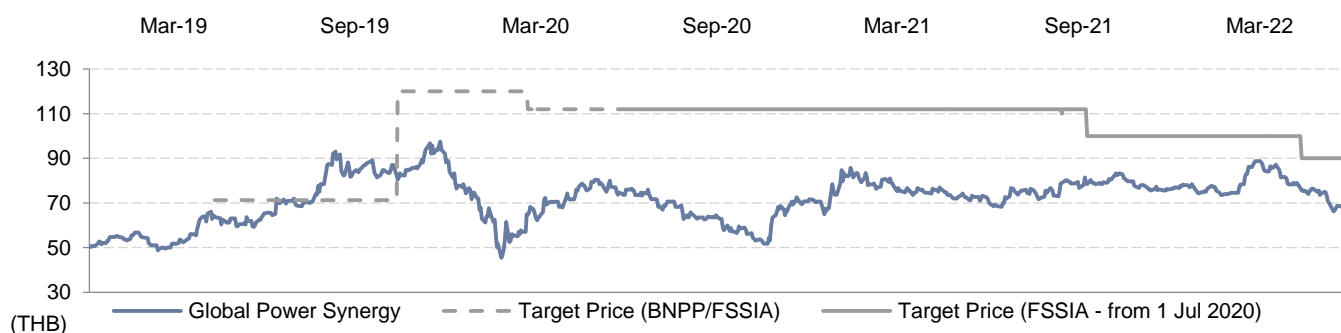
Banpu Power (BPP TB)

Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
13-Aug-2019	HOLD	23.00	06-Aug-2020	HOLD	15.20	02-Feb-2022	BUY	20.00
21-Feb-2020	HOLD	14.40	26-Jan-2021	BUY	22.00			
17-Jun-2020	HOLD	17.00	13-Jul-2021	BUY	23.00			

Suwat Sinsadok, CFA, FRM, ERP started covering this stock from 17-Jun-2020

Price and TP are in local currency

Source: FSSIA estimates

Global Power Synergy (GPSC TB)

Date	Rating	Target price	Date	Rating	Target price	Date	Rating	Target price
11-Jul-2019	BUY	71.27	14-Jul-2021	BUY	110.00	07-Feb-2022	BUY	90.00
17-Dec-2019	BUY	120.00	15-Jul-2021	BUY	112.00			
08-Apr-2020	BUY	112.00	05-Aug-2021	BUY	100.00			

Suwat Sinsadok, CFA, FRM, ERP started covering this stock from 08-May-2020

Price and TP are in local currency

Source: FSSIA estimates

Company	Ticker	Price	Rating	Valuation & Risks
Energy Absolute	EA TB	THB 89.75	BUY	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.
Nex Point	NEX TB	THB 17.90	BUY	Downside risks to our SOTP-based TP include: 1) a lower-than-expected bus sales volume; 2) delays in bus deliveries; and 3) risk from regulatory changes.
Banpu	BANPU TB	THB 11.00	BUY	We see downside risks to our SoTP-based TP from lower coal prices, higher diesel costs and any unplanned shutdowns of its power plants.
Banpu Power	BPP TB	THB 16.80	BUY	Downside risks to our SOTP valuation are the start-up delays of its new projects and government intervention in the electricity tariff.
Global Power Synergy	GPSC TB	THB 71.00	BUY	The downside risks to our SoTP-based TP on GPSC include 1) lower-than-expected demand for electricity in Thailand; 2) a lower crude price; and 3) lower-than-expected demand from industrial users.

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 21-Mar-2022 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.