EQUITY RESEARCH - INITIATION REPORT

FINANSIA
FSS INTERNATIONAL INVESTMENT ADVISORY

6 SEPTEMBER 2021

THAILAND / UTILITIES - RENEWABLES

CLOVER POWER CV TB

BUY

TARGET PRICE	THB5.50
CLOSE	THB3.88
UP/DOWNSIDE	+41.8%
TP vs CONSENSUS	-

การเติบโตจากธุรกิจก่อสร้างสู่ธุรกิจผลิตไฟฟ้า

จากข้อได้เปรียบในด้านธุรกิจออกแบบจัดหาพร้อมติดตั้ง (EPC) ต้นน้ำสู่การเติบโตจากธุรกิจพลังงานหมุนเวียนปลายน้ำ

เรามอง CV ในฐานะที่เป็นหนึ่งในบริษัท EPC ชั้นนำของไทยด้วยการเติบโตของกำลังการผลิตที่ผูกมัดแล้ว (Committed Capacity) ในระดับสูงจากโรงไฟฟ้าชีวมวลและโรงไฟฟ้าจากขยะทั้งในและต่างประเทศ จากโรงไฟฟ้าที่กำลังดำเนินงาน 4 แห่ง โรงไฟฟ้าจากขยะแปรรูป 1 แห่ง และโครงการเพื่อสร้างการเติบโต 2 โครงการภายใต้แผนการพัฒนาและซื้อกิจการของ CV เราคาดว่ากำไรสุทธิจะโตในอัตรา 11.87% CAGR ในปี 2020-23 โดยจะเพิ่มขึ้นจาก 94 ลบ. ในปี 2020 เป็น 177 ลบ. ในปี 2023

3 ปัจจัยผลักดันสำคัญ: การเติบโตของกำลังการผลิต การขยายอัตรากำไร และโรงไฟฟ้าชุมชน (PPC)

มีปัจจัยบวก 3 ประการที่เราเชื่อว่าจะไม่เพียงแต่ทำให้กำไรสุทธิของ CV โตได้แต่ยังจะช่วยรักษาและปรับปรุงอัตรากำไรสุทธิจากที่เคยต่ำกว่า 5% ในปี 2019-20 เป็น 13-14% ในปี 2022-23 ประกอบด้วย: 1) การเพิ่มกำลังการผลิตอีก 3.6x จาก 17MW ใน 1Q21 เป็น 59MW ภายในสิ้นปี 2023 จากการขยายตลาดทั้งภายในและภายนอก; 2) การเพิ่มอัตรากำไรสุทธิจาก 3.8% ในปี 2020 เป็น 8.4% ในปี 2021, 11.8% ในปี 2022, และ 12% ในปี 2023 โดยจะได้ปัจจัยผลักดันจากการดำเนินงานที่ดีขึ้นของโรงไฟฟ้าที่กำลังดำเนินงานในปัจจุบันทั้ง 4 แห่ง การดำเนินงานเต็มปีของโรงไฟฟ้าจากขยะ CPX ต้นทุนวัตถุดิบที่ลดลงของ CPX และอัตรากำไรขั้นต้นที่สูงขึ้นของธุรกิจ EPC; และ 3) โครงการเพื่อการเติบโตที่อาจเกิดขึ้นผ่านการประมูลโครงการ PPC สำหรับโรงไฟฟ้าชีวมวลและก๊าซชีวภาพ

จุดแข็งในธุรกิจ EPC จะนำมาซึ่งค่า IRR โครงการและความสามารถในการกำไรที่สูงขึ้น

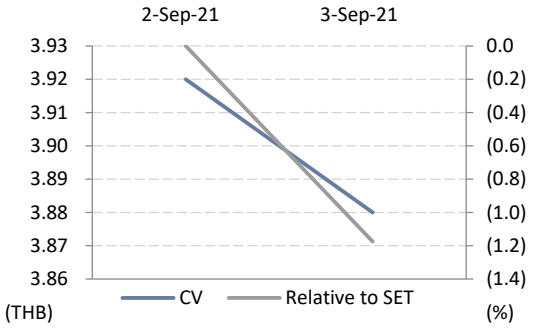
เราเชื่อว่าจุดแข็งในธุรกิจ EPC อันเป็นเอกลักษณ์ของ CV ที่ต้องการให้ได้ต้นทุน EPC สำหรับโรงไฟฟ้าชีวมวลและโรงไฟฟ้าจากขยะที่ลดลง 20-30% จากค่าเฉลี่ยอุตสาหกรรมจะช่วยให้บริษัทฯ ได้ค่า IRR โครงการและความสามารถในการทำกำไรที่สูงขึ้น เราเห็นโอกาสที่กำลังการผลิตจะเพิ่มขึ้นไม่เกิน 45MW สำหรับ 8 โครงการที่บริษัทฯ จะประมูลภายใต้โครงการ PPC เนื่องจาก CV วางแผนประมูลโรงไฟฟ้าชีวมวลขนาด 6MW ไม่เกิน 7 แห่งและโรงไฟฟ้าชีวมวลขนาด 3MW อีก 1 แห่ง เราคาดว่าความเสี่ยงขาขึ้นรวมจากทั้ง 8 โครงการที่มีกำลังการผลิตรวม 45MW อาจเพิ่มมูลค่า 0.36 บาท/หุ้นให้แก่ราคาเป้าหมายที่ 5.50 บาท (SoTP) ของเรา

CV มีมูลค่า 5.50 บาท/หุ้นจากการประเมินมูลค่าด้วยวิธี SoTP

เราเริ่มรายงาน CV ที่ราคาเป้าหมาย 5.50 บาท (SoTP) ซึ่งได้มาจาก
1) 1.05 บาท/หุ้นสำหรับ 4 โรงไฟฟ้าที่กำลังดำเนินงานในปัจจุบัน (DCF);
2) 0.11 บาท/หุ้นสำหรับโรงไฟฟ้าจากขยะแปรรูป (DCF);
3) 0.70 บาท/หุ้นสำหรับธุรกิจ EPC มูลค่าดังกล่าวคิดจาก 14x ของค่า 2021E P/E ซึ่งมีส่วนลดเมื่อเทียบกับค่าเฉลี่ยของกลุ่ม EPC ในประเทศไทยจากความเสี่ยงในด้านความต้องการและอัตรากำไรที่อยู่ในระดับสูง;
4) 0.18 บาท/หุ้นสำหรับโรงไฟฟ้าขนาดเล็กที่กำลังจะซื้อใน 4Q21 (DCF); และ
5) 2.93 บาท/หุ้นสำหรับโรงไฟฟ้าชีวมวล Oita ขนาด 35.8MW (DCF)

KEY STOCK DATA

YE Dec (THB m)	2020	2021E	2022E	2023E
Revenue	2,492	1,725	1,477	1,483
Net profit	94	144	174	177
EPS (THB)	0.10	0.14	0.14	0.14
vs Consensus (%)	-	-	-	-
EBITDA	322	286	305	292
Core net profit	94	144	174	177
Core EPS (THB)	0.10	0.14	0.14	0.14
Chg. In EPS est. (%)	nm	nm	nm	nm
EPS growth (%)	35.5	41.8	(2.3)	2.2
Core P/E (x)	39.6	28.0	28.6	28.0
Dividend yield (%)	-	1.2	1.4	1.4
EV/EBITDA (x)	13.2	15.4	14.7	15.8
Price/book (x)	6.2	2.4	2.3	2.2
Net debt/Equity (%)	85.9	(30.9)	(28.8)	(26.6)
ROE (%)	24.1	10.7	8.1	7.9



Share price performance	1 Month	3 Month	12 Month
Absolute (%)	n/a	n/a	n/a
Relative to country (%)	n/a	n/a	n/a

Mkt cap (USD m)	152
3m avg. daily turnover (USD m)	n/a
Free float (%)	57
Major shareholder	Saksithisereekul family (28%)
12m high/low (THB)	n/a
Issued shares (m)	1,280.00

Sources: Bloomberg consensus; FSSIA estimates
CV listed 2 September 2021

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บทวิเคราะห์ฉบับนี้แปลมาจากบทวิเคราะห์ของ FSSIA ฉบับวันที่ 6 กันยายน 2021

Investment thesis

CV currently has three main businesses: 1) a power business – operating three biomass power plants and one waste to energy (WTE) power plant with a total installed capacity of 26.2MW, commercial operation dates (CODs) in 2016-20; 2) an engineering, procurement and construction (EPC) business to provide construction services for power plant projects for its affiliates and outside customers; and 3) a renewable energy supporting business to provide operation and maintenance services for power plants.

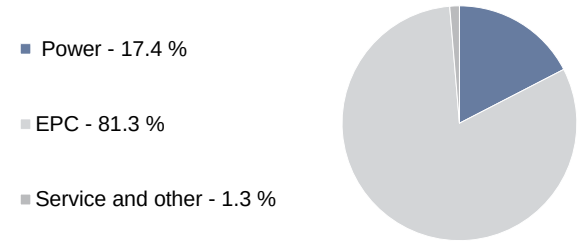
Based on CV's four operating power plants, one refuse-derived fuel (RDF) plant under construction and two major growth projects under development and acquisition, we project net profit growth at a 11.87% CAGR from 2020-23, rising from THB94m in 2020 to THB177m in 2023.

Company profile

CV is a leading EPC and biomass power plant and waste-to-energy power plant producer.

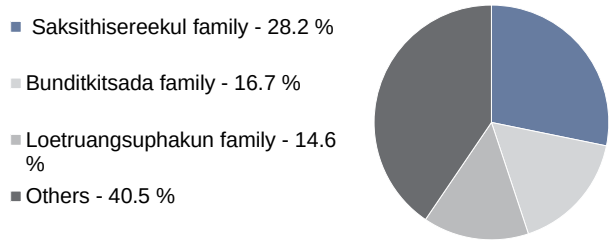
www.cloverpower.co.th

Principal activities (revenue, 2020)



Source: Clover Power

Major shareholders



Source: Clover Power

Catalysts

Potential re-rating catalysts are the start of new power plants, higher utilisation rates, and 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 (%)	93	93	93
Gas price (THB/mmbtu)	226	210	195

Source: FSSIA estimates

Earnings sensitivity

- For every 1% increase in utilisation rate, we estimate 2021 earnings would rise by 3%, and vice versa, all else being equal.
- For every 1% increase in feedstock cost, we estimate 2021 earnings would decline by 1.5%, and vice versa, all else being equal.

Source: FSSIA estimates

Leveraging EPC edge to increase power capacity growth base

Founded in 2013, Clover Power (CV) started its operations as an engineering, procurement, and construction (EPC) company to construct and operate biomass and waste-to-energy (WTE) power plants. In 2020, CV commenced the operation of its first WTE power plant, CPX, and plans to reduce its industrial waste feedstock cost by operating its own refuse-derived fuel (RDF) plant in 4Q21.

CV currently has three main businesses: 1) a power business – operating three biomass power plants and one WTE power plant with a total installed capacity of 26.2MW, commercial operation dates (CODs) in 2016-20; 2) an EPC business to provide construction services for power plant projects for its affiliates and outside customers; and 3) a renewable energy supporting business to provide services for operations and maintenance for power plants.

We see CV as one of Thailand's leading EPC companies with strong committed capacity growth in biomass and WTE power plants in both domestic and overseas markets. Based on CV's existing four operating power plants, one RDF plant under construction, and two major growth projects under development and acquisition, we project net profit growth at an 11.87% CAGR from 2020-23, rising from THB94m in 2020 to THB177m in 2023.

There are three catalysts that we believe will not only drive CV's net profit growth but also help sustain and improve its net margin from below 5% in 2019-20 to 13-14% in 2022-23.

We project the three catalysts to be: 1) capacity growth by 3.6x from 17MW in 1Q21 to 59MW by end-2023, from both organic and inorganic growth expansions; 2) a net margin expansion from 3.8% in 2020 to 8.4% in 2021, 11.8% in 2022, and 12% in 2023, driven by improving operations of its four existing power plants, a full-year of operations at its CPX WTE power plant, a lower industrial waste (IW) feedstock cost for CPX, and a higher gross margin for its EPC business; and 3) potential growth projects via the bidding for the PPC scheme for biomass and biogas power plants.

On top of our projected drivers for CV's margin improvement in 2021-23, we believe CV has a unique strength in EPC via its two subsidiaries, Sbang Corporation (not listed) and Sbang Engineering (not listed). According to management, CV has successfully won many projects for biomass and WTE power plants, via both its own bidding and as an EPC contractor for other operators.

We see up to a 45MW capacity growth potential for eight projects for bidding under PPC, as CV plans to bid on up to seven 6MW biomass plants and one 3MW biomass plant. We estimate that the total upside from the eight projects with a combined capacity of 45MW could add up to a 0.36/share value to our SoTP-based target price of THB5.50/share.

We project that the proportion of CV's net profit from the power segment will rise from only 3% in 2020 – mainly due to the restructuring expenses related to its four power plants and the high EPC revenue of over THB2b from the 85MW SPP project – to over 60% in 2023, driven by the net profit growth from its new projects: CPX, CVR, SPP, and Oita.

We project CV's net profit growth to accelerate from THB94m in 2020 to THB177m in 2023, rising at an 11.87% CAGR from 2020-23. However, its gross profit growth may slow down in 2022-23 due to the lower y-y EPC revenue that we estimate, given the unpredictable nature of the business. We forecast CV's net profit to grow in 2022-23, thanks to improving operational efficiency and higher margins on the back of lower feedstock costs.

We derive our SoTP-based target price of THB5.50 from 1) THB1.05/share for four operating power plants (DCF); 2) THB0.11/share for the RDF CVR plant (DCF); 3) THB0.70/share for EPC, based on a 14x 2021E P/E, a discount to Thailand's contractor EPC peers' average of over 20x, as we think CV's EPC still faces high demand and margin risks despite its superior gross margins; 4) THB0.18/share for the soon-to-acquire SPP (DCF); and 5) THB2.93/share for the large-scale Oita biomass power plant using DCF valuation.

Background

In 2013, Clover Power Company Limited (CV) was established as an EPC contractor for the development of biomass power plants. CV's first biomass power plant, named CV, commenced its COD in February 2016.

In 2019, Sbang Corporation (SBC) and Sbang Engineering (SBE), which are subsidiaries of CV, signed EPC contracts for an 85MW biomass power plant.

In 2020, CV commenced the COD of its first WTE power plant, CPX, using waste and RDF mainly from IW and converting it into useful energy for a power plant. CV sells its electricity mainly to the Provincial Electricity Authority of Thailand (PEA) through the very small power producer (VSPP) programme (power capacity size below 10MW).

CV now operates four power plants in Prae, Phitsanulok, Songkla and Pijit, with a total capacity of 26.2 MW.

In 2021, CV converted from a private company to a public company. CV issued an IPO for the first time. The common shares of the company were listed and began trading on the SET for the first time in July 2021.

The company adjusted its par value to THB0.5 per share and raised its registered capital by THB160m by issuing a total of 320m new IPO shares, bringing its total registered capital to THB640m post IPO with 1.28b outstanding shares.

Exhibit 1: Key milestones

Year	Major events
2013	Founded Clover Power Company Limited
2016	Started up CV's first 9.4MW biomass power plant in Prae, named CV
	CV acquired a 29.99% stake in Vientiane Waste Management Co. Ltd. (VWM)
2018	Started up a 4.9MW biomass power plant in Phitsanulok, named CPL
	Established and registered Clover Green Energies Ltd. (CGE) in Taiwan, developing a renewable power plant in Taiwan
2019	SBC and SBE signed an EPC contract for an 85MW biomass power plant complex located in Nakhon Sawan
2020	Established and registered SBANG Australia Ltd. (SBA) in Australia, starting a landfill EPC project in Australia
	Restructured its power business
	Started up a 9.9MW biomass power plant in Songkla, named RTB
	Started up CV's first waste-to-energy power plant in Pijit, named CPX
2021	Established CV subsidiaries for bidding on eight Power Plant for Community projects with a total installed capacity of 45MW
	Board meeting approved a share resale of the 29.99% stake in VWM

Source: CV

Business structure

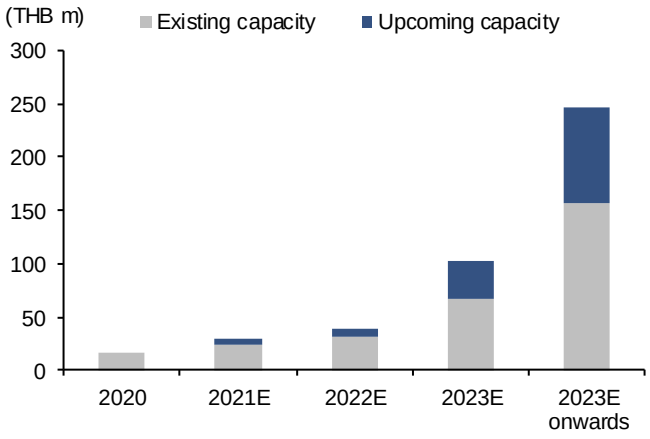
CV currently has three main businesses:

1) Power business: Operating three biomass power plants and one WTE power plant with a total installed capacity of 26.2MW in Prae, Phitsanulok, Songkla and Pijit, with CODs in 2016-20.

2) EPC business: Providing construction services for power plant projects for its affiliates and outside customers.

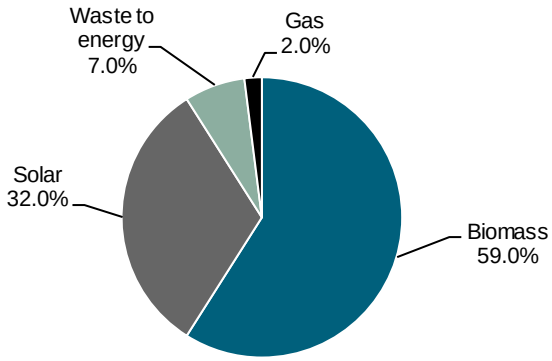
3) Renewable energy supporting business: Providing operation and maintenance services for power plants.

Exhibit 2: Total capacity as of 1Q21



Source: CV

Exhibit 3: Target capacity breakdown by type as of 2023E



Source: CV

Business #1: Power producer. CV owns three biomass power plants and one WTE power plant, located in Prae, Phitsanulok, Songkla and Pijit. The key success factor for its plants is its ability to secure feedstocks, including multiple types of woodchips and RDF. Its plants have a high margin and good growth potential. As of 2020, CV had a total capacity of 16.7MW, with a target to achieve 60MW by 2023.

Exhibit 4: Boiler at CV

Source: CV

Exhibit 5: Fuel yard at CV

Source: CV

Exhibit 6: Water treatment & cooling tower at CV

Source: CV

Exhibit 7: Flue gas cleaning at CV

Source: CV

Exhibit 8: Turbine hall at CV

Source: CV

Exhibit 9: EPS & stack at CV

Source: CV

Exhibit 10: Boiler at CPL

Source: CV

Exhibit 11: Control room & turbine hall at CPL

Source: CV

Exhibit 12: Flue gas cleaning at CPL

Source: CV

Exhibit 13: ESP & stack at CPL

Source: CV

Exhibit 14: Raw water pond at CPL

Source: CV

Exhibit 15: Office at CPL

Source: CV

Exhibit 16: Boiler at RTB

Source: CV

Exhibit 17: Flue gas cleaning at RTB

Source: CV

Exhibit 18: Water treatment at RTB

Source: CV

Exhibit 19: Boiler at CPX

Source: CV

Exhibit 20: Water treatment & cooling tower at CPX

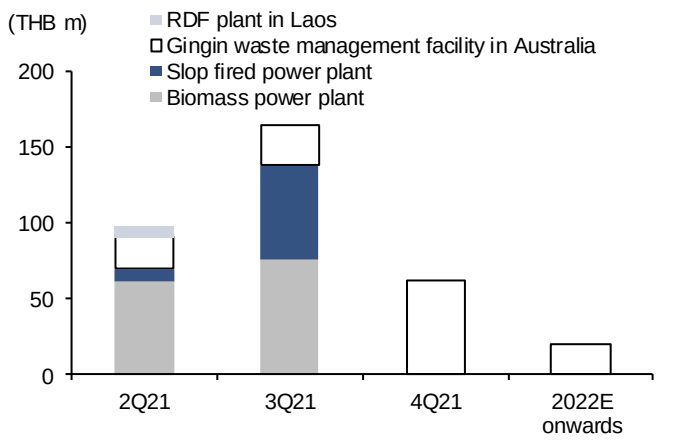
Source: CV

Exhibit 21: Turbine & generator at CPX

Source: CV

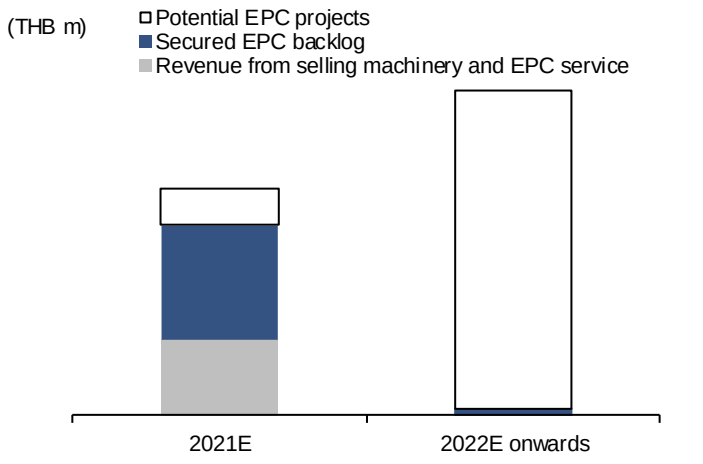
Business #2: EPC business. CV has now secured EPC contracts worth THB325.1m in 2Q-4Q21 and THB20.2m in 2022, comprising THB138m for a biomass power plant, THB70m for a slop fired power plant, THB130m for the Gingin waste management facility in Australia, and THB7.3m for an RDF plant in Laos.

Exhibit 22: Secured EPC backlog



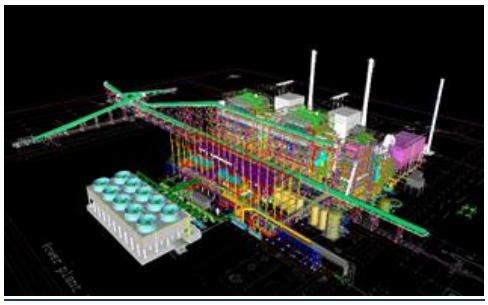
Source: CV

Exhibit 23: Potential EPC projects



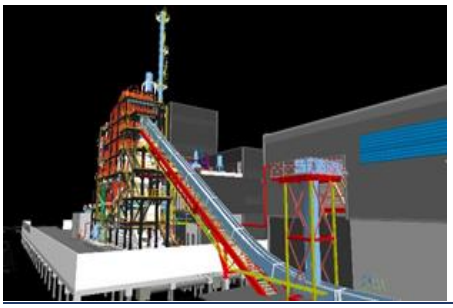
Source: CV

Exhibit 24: Engineering design – plant 3D



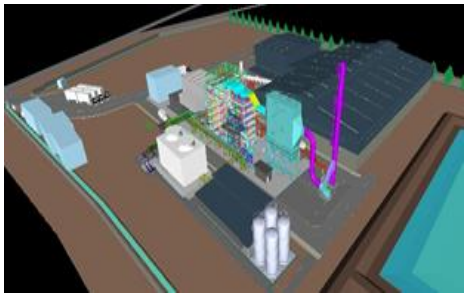
Source: CV

Exhibit 25: Engineering design – plant 3D



Source: CV

Exhibit 26: Engineering design – plant 3D



Source: CV

Business #3: Services. CV provides operation and maintenance services for other power producers, targeting renewable power plants. Moreover, CV also provides supply chain management for biomass feedstock and RDF due to the increasing demand from power producers and industrial users.

Exhibit 27: Steam drum

Source: CV

Exhibit 28: Water wall panels

Source: CV

Exhibit 29: Evaporator

Source: CV

Exhibit 30: Super heater

Source: CV

Exhibit 31: Stoker

Source: CV

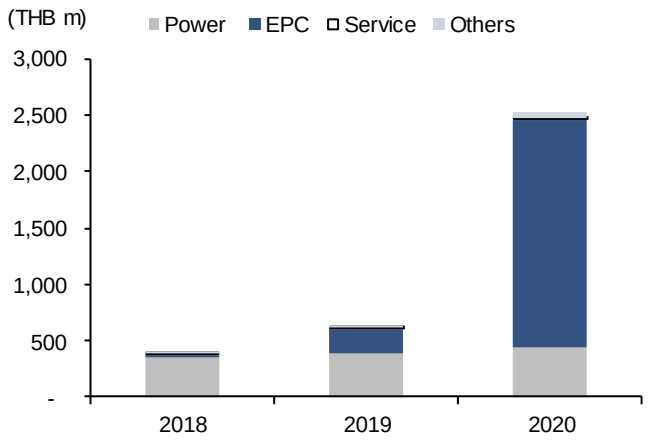
Exhibit 32: Hoppers

Source: CV

Revenue structure

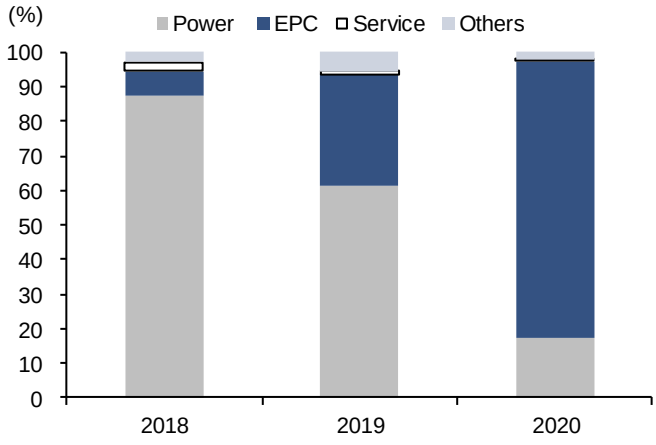
According to management, CV's revenue in 2020 was abnormally high due to the huge EPC revenue from the 85MW biomass project, leading to a sharp increase in the revenue contribution from the EPC business and accounting for more than 80% of CV's revenue in 2020. For CV's revenue in 2019, 60% of the revenue contribution came from the power business, selling electricity to PEA, the Electricity Generating Authority of Thailand (EGAT) and industrial users.

Exhibit 33: Revenue breakdown by business



Source: CV

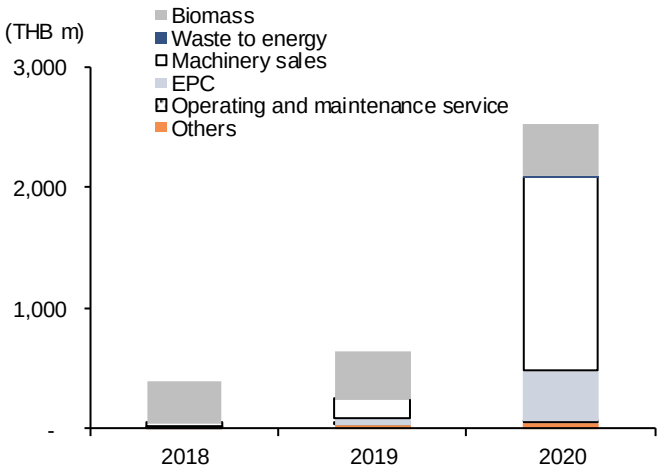
Exhibit 34: Revenue breakdown by business (%)



Source: CV

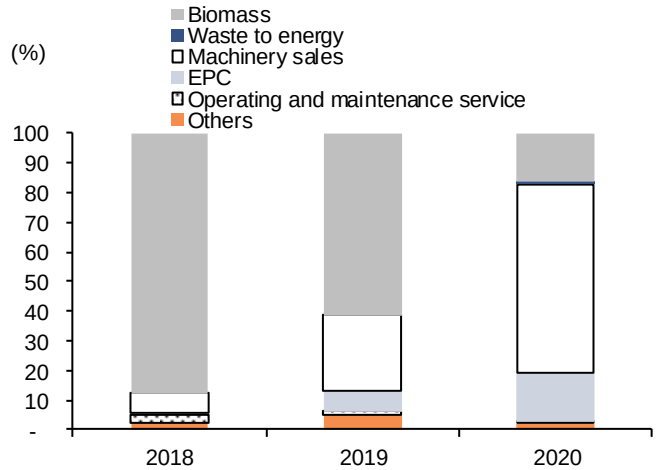
Breaking it down, more than 80% of CV's revenue came from its biomass power plants in 2019, including its 9.4MW CV power plant in Prae, and 4.9MW CPL power plant in Phitsanulok. CV started up its 9.9MW RTB biomass power plant and 2MW CPX WTE power plant in 2020.

Exhibit 35: Revenue breakdown by project



Source: CV

Exhibit 36: Revenue breakdown by project (%)

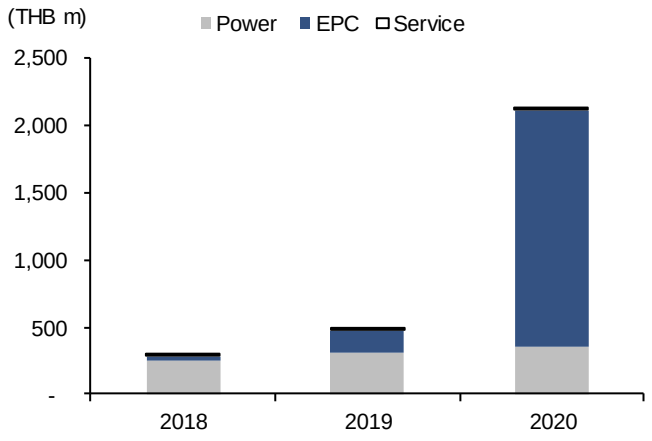


Source: CV

Cost structure

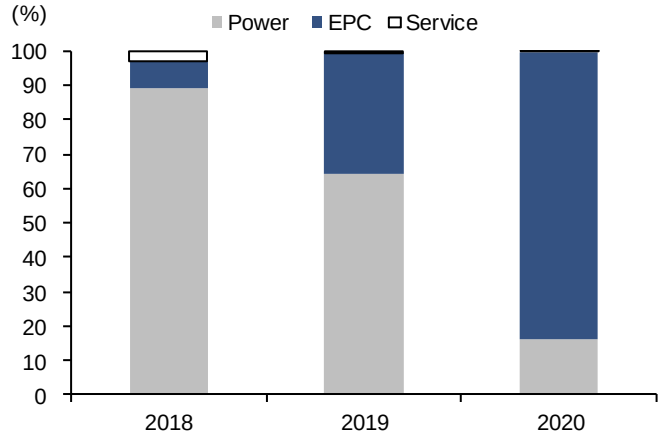
The main cost component for CV came from its EPC business in 2020, accounting for 80% of its total cost. In 2019, the main cost component came from its power business, specifically its feedstocks which can be divided into two types – woodchips and RDF. To diversify its feedstock source and minimise its supply risk, CV plans to commence the COD of its CVR RDF plant to supply 100% of the required IW feedstock from an alternative source of waste to its CPX WTE power plant, though with higher transportation costs, management fees and operation costs.

Exhibit 37: Cost of goods sold breakdown by business



Source: CV

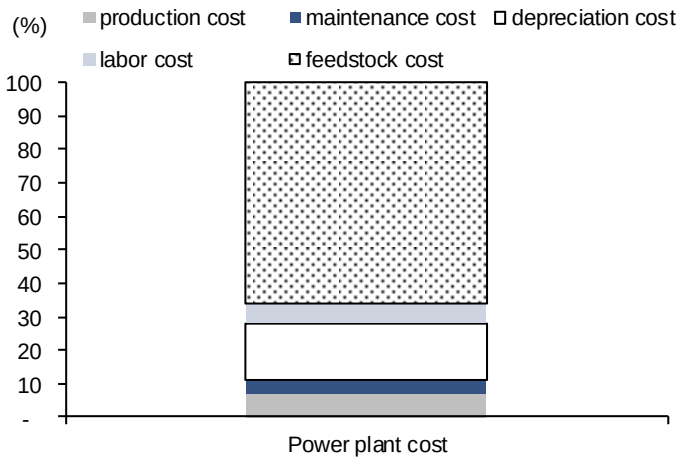
Exhibit 38: Cost of goods sold breakdown by business (%)



Source: CV

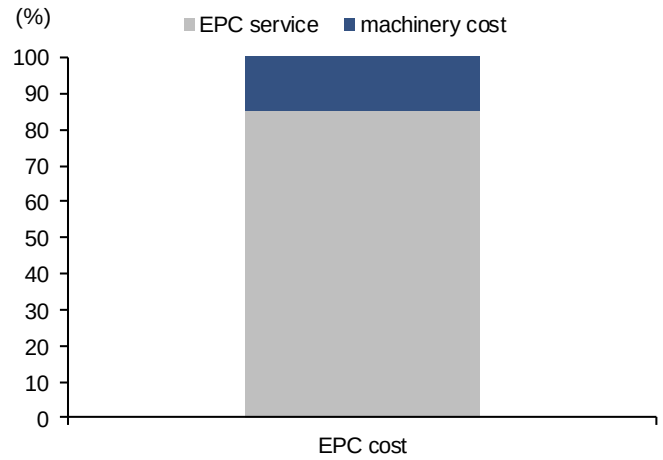
Cost structure (power plant vs EPC). Within CV's two core businesses of power plants and EPC, there are cost structure differences, mostly for production costs which are lower for power plants at 65% vs EPC at 85%. Depreciation costs also differ with 17% of the total cost for power plants and 15% for EPC.

Exhibit 39: % power plant cost (avg 2018-20)



Source: CV

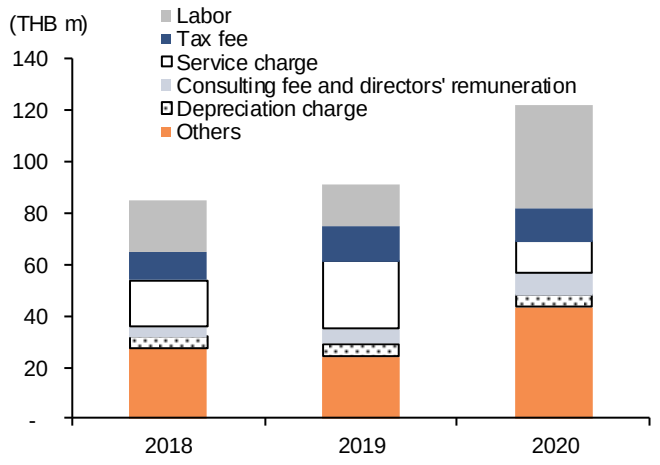
Exhibit 40: % EPC cost (avg 2018-20)



Source: CV

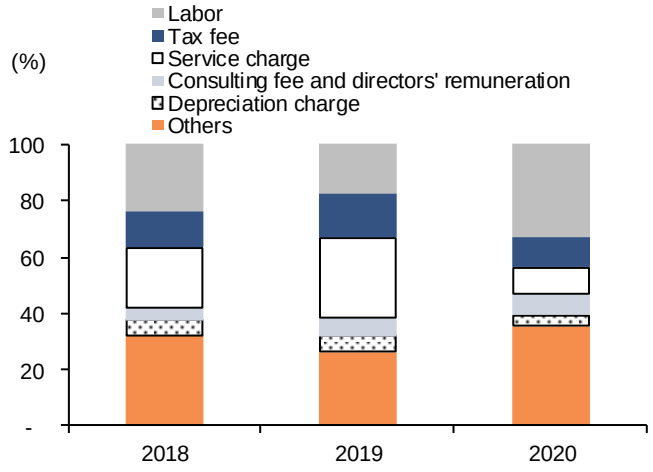
Salary & wages, administration & commissions, and O&M fees contributed most of the remaining costs. Most of these non-raw material costs in 2020 came from the main business, accounting for more than 80% of the total SG&A. Labour is a major cost component for CV, considering its employee expenses and other project management SG&A expenses.

Exhibit 41: SG&A breakdown by business



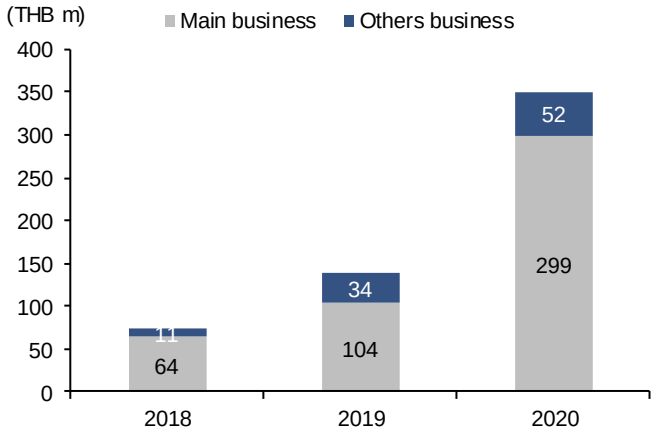
Source: CV

Exhibit 42: SG&A breakdown by business (%)



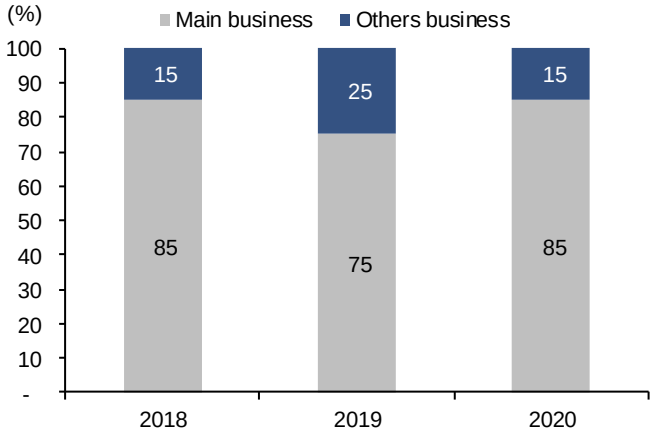
Source: CV

Exhibit 43: SG&A breakdown by business



Source: CV

Exhibit 44: SG&A breakdown by business (%)

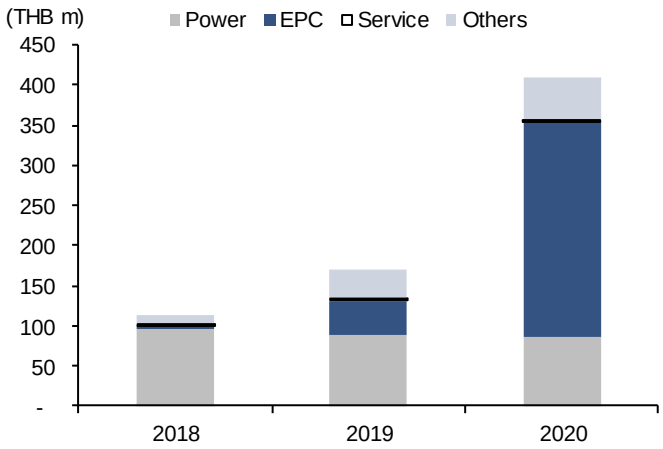


Source: CV

Gross profit, EBITDA, and net profit structure

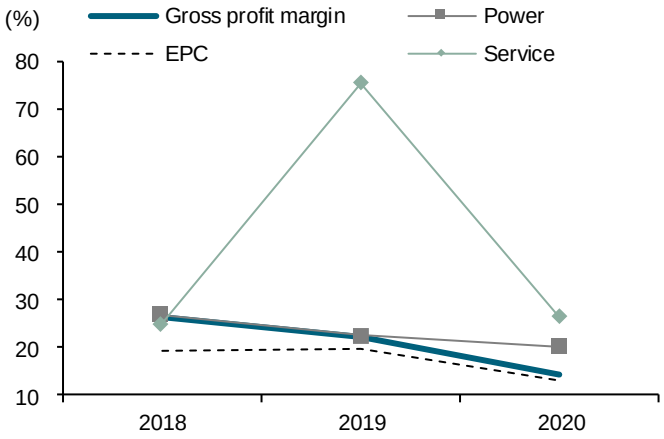
CV generated a higher gross profit of THB444m in 2020, up from THB213m in 2019, however, it had a lower gross profit margin of 17.8% in 2020, down from 33.9% in 2019, given the lower gross margin of EPC revenue from its 85MW biomass complex project.

Exhibit 45: Gross profit breakdown by business



Source: CV

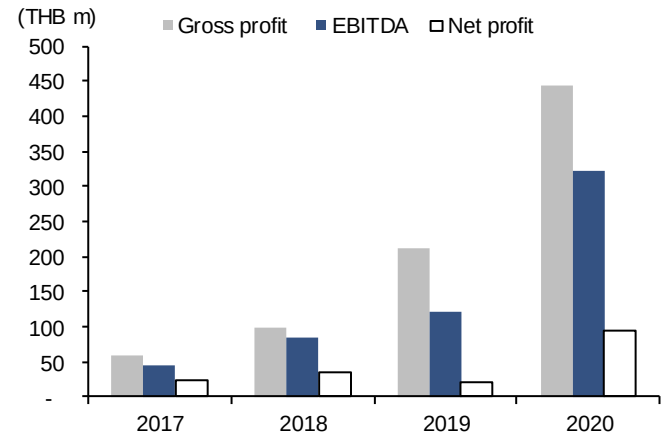
Exhibit 46: Gross profit margin breakdown by business



Source: CV

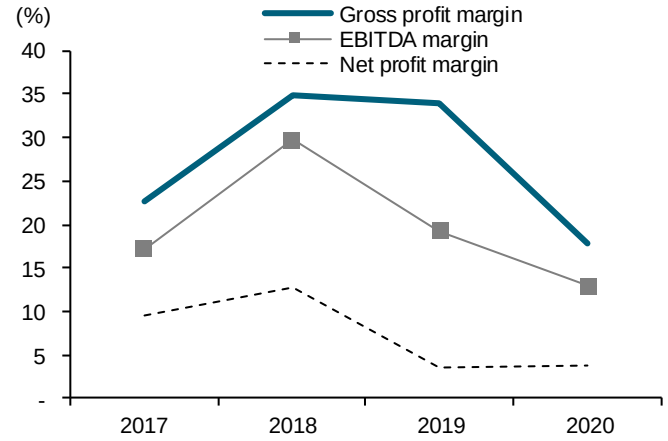
In terms of its margin, CV generated THB322m EBITDA and THB94m net profit in 2020, which accounted for a 3.77% net profit margin, up from 3.45% in 2019, thanks to the improving operational efficiency and the higher margins on the back of lower feedstock costs.

Exhibit 47: Gross profit, EBITDA, net profit



Source: CV

Exhibit 48: Gross profit margin, EBITDA margin, net profit margin



Source: CV

Major shareholders

Pre IPO, the Saksithisereekul family, as the founding family, owned a 37.6% stake in CV, mainly owned by Mr. Setthasiri Saksithisereekul (36.7%). The second largest shareholder of CV, the Bunditkitsada family held a 22.4% stake, followed by the Loetruangsuphakun family (19.5%).

Post IPO, the stakes owned by the founding family declined from 37.6% down to 28.2%, taking into consideration the additional new shares issued for the IPO. The post-IPO outstanding shares increased from 960m to 1.3b shares.

Exhibit 49: Shareholding structure

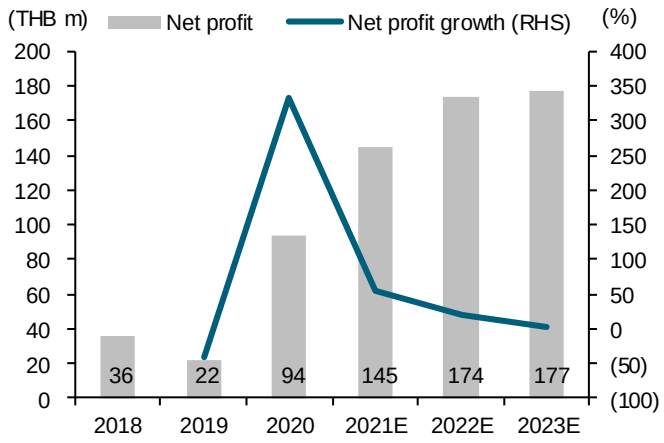
	---------- Pre – IPO ----------		---------- Post – IPO ----------	
	No. of shares	(%)	No. of shares	(%)
Saksithisereekul family	361,008,000	37.6	361,008,000	28.2
Bunditkitsada family	214,028,000	22.4	214,028,000	16.7
Loetruangsuphakun family	187,283,000	19.5	187,283,000	14.6
Ms. Petcharat Kositwattanarerk	58,000,000	6.0	58,000,000	4.5
Mrs. Atitaya Charnvirakul	30,000,000	3.1	30,000,000	2.4
Mr. Vacharin Pongwachirint	28,200,000	2.9	28,200,000	2.2
Ms. Kanokporn Sritaworarat	23,000,000	2.4	23,000,000	1.8
Mrs. Benjamas Thongkwan	14,237,000	1.5	14,237,000	1.1
Mr. Prasert Boonsampan	9,000,000	0.9	9,000,000	0.7
Ms. Penprapa Ruemmaitree	6,000,000	0.6	6,000,000	0.5
Others	29,244,000	3.0	29,244,000	2.3
IPO	-	-	320,000,000	25.0
Total	**960,000,000**	**100**	**1,280,000,000**	**100.0**

Source: CV

From EPC strength to power plant growth

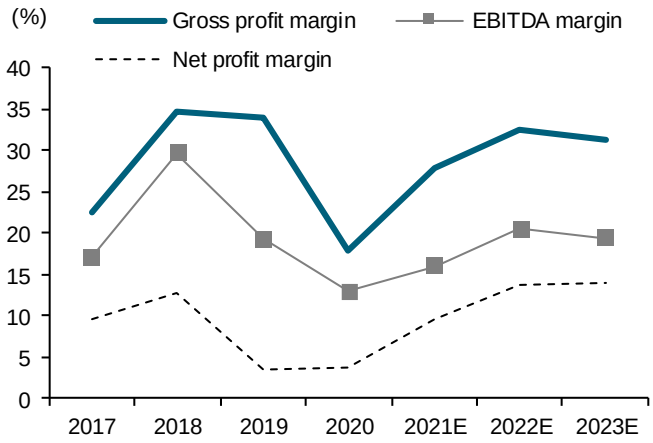
We see CV as one of Thailand's leading EPC companies with strong committed capacity growth in biomass and WTE power plants in both domestic and overseas markets. Based on CV's existing four operating power plants, one RDF plant under construction, and two major growth projects under development and acquisition, we project net profit growth at an 11.87% CAGR from 2020-23, rising from THB94m in 2020 to THB177m in 2023.

Exhibit 50: Net profit and net profit growth



Sources: CV; FSSIA estimates

Exhibit 51: Gross profit margin, EBITDA margin, net profit margin



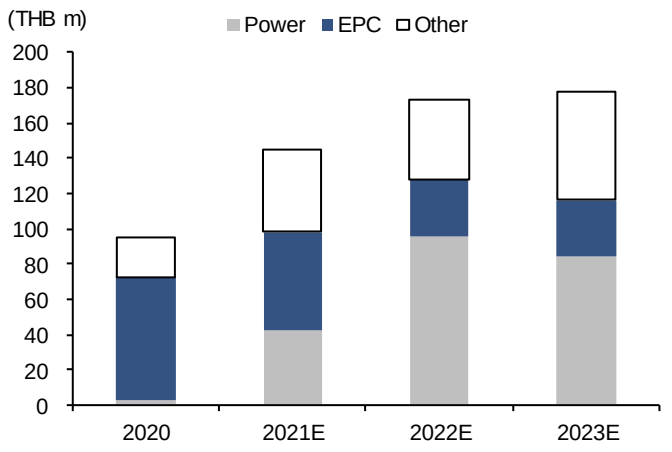
Sources: CV; FSSIA estimates

There are three catalysts that we believe will not only drive CV's net profit growth but also help sustain and improve its net margin from below 5% in 2019-20 to 13-14% in 2022-23.

We project the three catalysts to be: 1) capacity growth from both organic and inorganic growth expansions; 2) a net margin expansion due to lower financial and operating expenses and a higher margin from EPC; and 3) potential growth projects via the bidding for the PPC scheme for biomass and biogas power plants.

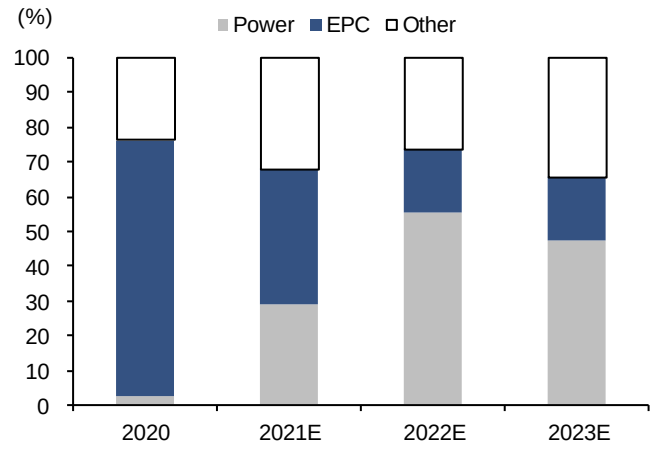
We project that the proportion of CV's net profit from the power segment will rise from only 3% in 2020 – mainly due to the restructuring expenses related to its four power plants and the high EPC revenue of over THB2b from the 85MW SPP project – to over 60% in 2023, driven by the net profit growth from its new projects: CPX, CVR, SPP, and Oita.

Exhibit 52: Net profit breakdown



Sources: CV; FSSIA estimates

Exhibit 53: Net profit breakdown (%)

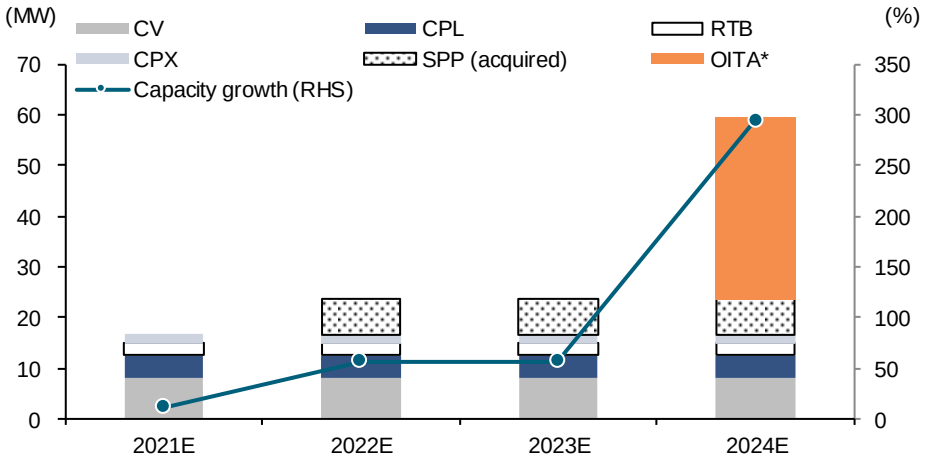


Sources: CV; FSSIA estimates

Catalyst 1: Capacity growth

On top of CV's four operating projects with a total equity capacity of 17MW at end-1Q21, we expect CV's generating capacity to grow to 23MW in 2022 and 59MW by end-2023, adding two new projects: SPP (6.8MW capacity, expected to acquire by 4Q21) and the biomass Oita power plant (35.8MW, COD in 4Q23). This capacity growth driver could increase by 3.6x to 59MW, particularly when we expect CV to commence the COD of its Oita biomass power plant in Japan in 4Q23.

Exhibit 54: Capacity growth



*Upcoming project COD in 4Q23E
Sources: CV; FSSIA estimates

CV has four operating power plants, which include three biomass power plants, CV (9.4MW), CPL (4.9MW), and RTB (9.9MW), and one WTE power plant, CPX (2MW). We think CV's two growth projects, the operating SPP, a 6.8MW gas-fired power plant which is currently under the acquisition process and scheduled to be completed in 4Q21, and the large-scale Oita biomass 35.8MW power plant in Japan will be CV's next net profit growth catalysts in 2022-24.

In particular, CV has already secured two out of the three major licenses for the Oita project that are required to operate any power plant in Japan. In Japan, any operator wanting to build and operate a power plant needs to be granted a grid connection approval first, then a permit from the Ministry of Economy, Trade, and Industry (METI) and receive a public hearing for public acceptance – both of which have already been granted for the Oita project. The only license remaining under the application is the forestry development license, which is scheduled to be completed by end-2021. CV is likely to be able to proceed with the financing and construction of the Oita biomass power plant project in 2022.

Japan's power industry

On top of the Oita project, CV plans to secure additional capacity growth for biomass and other renewable power plant projects in Japan, given the country's significant capacity growth outlook toward renewables and diversification away from nuclear and coal-fired power plants.

Japan has become one of the world's largest renewable energy markets, with considerable long-term growth potential. The focus on renewables intensified following the March 2011 earthquake and tsunami that damaged the Fukushima Daiichi nuclear power plant and caused a re-think on Japan's significant reliance on nuclear power.

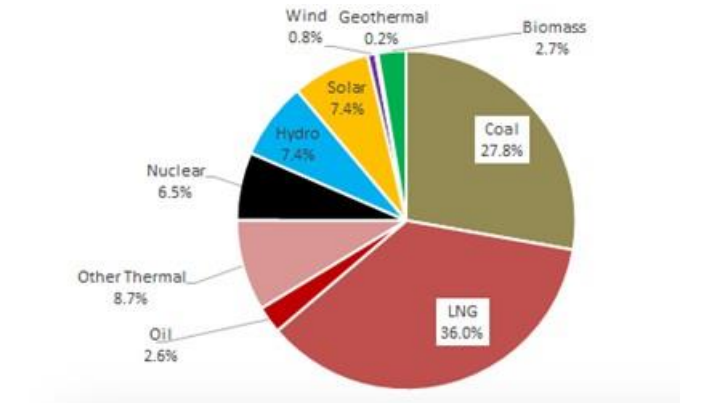
Subsequently, the Japanese government has developed policies aimed to boost the supply of renewables, with a goal to reach 22-24% of the energy mix by 2030 – specifically, hydro (8.8-9.2%), solar (7%), wind (1.7%), biomass (3.7-4.6%), and geothermal (1.0-1.1%), according to METI.

METI is responsible for developing and enforcing renewable energy laws and regulations in Japan, including the feed-in tariff system (FIT), which has been in place since July 2012 to encourage renewable energy deployment. METI re-examines and revises FIT rates annually, applying varying levels, per renewable source.

Recently, METI, which seeks to create a market that is FIT independent, has been leading a comprehensive review of renewable energy regulations. Possible revisions include the prospect of new wheeling charges for power generators and reforming rules on using the power grid to increase renewable energy installations. Given the investment inducements, and the decision to shut down most of Japan's nuclear reactors, renewable energy development has grown steadily.

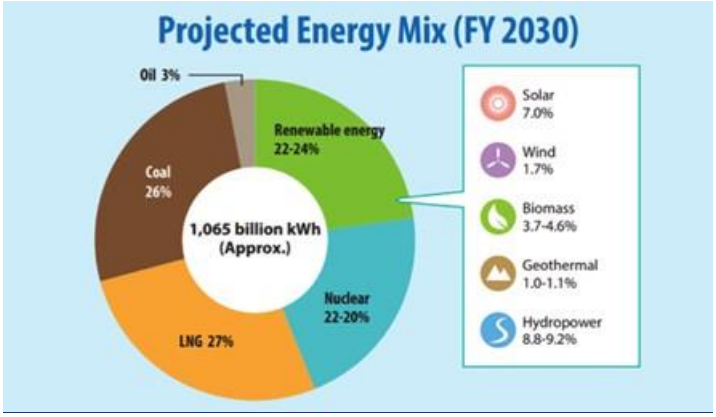
Power market trends in Japan: The drive for renewable energy should lead to capacity growth in Japan in the next 10 years, led by offshore wind farms, solar farms, and biomass power plants that use imported woodchip pellet feedstock to drive up the country's biomass capacity to reach 3.7-4.6% of the total capacity by 2030, based on METI's projection.

Exhibit 55: Japan's power generating capacity breakdown (2019)



Source: isep.or.jp

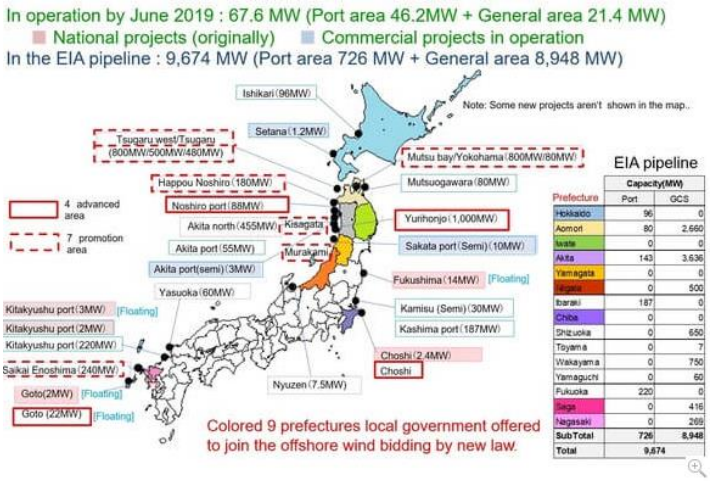
Exhibit 56: Japan's power generating capacity breakdown (2030E)



Source: METI

Offshore wind: Japan has a substantial coastline and has enormous offshore wind potential. Despite having the technological capability, Japan has remained behind many other advanced economies in the installation of domestic offshore wind power generation. The government of Japan has introduced legislation to strengthen the regulatory environment for offshore wind and is committed to work together with the private sector to promote offshore wind power generation in both domestic and international markets.

Exhibit 57: Operating offshore wind farm projects in Japan (2019)



Source: Japan Wind Power Association (JWPA)

Exhibit 58: Japan's JERA coal-fired power plant

Source: Energyworld

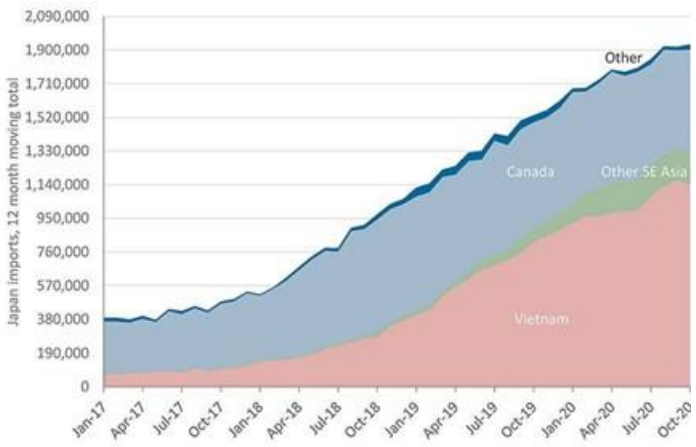
Coal phase-out: Japan has traditionally relied heavily on coal-fired power generation, even more so as nuclear power generation came offline after 2011. But METI has recently announced a roadmap to ultimately phase out coal-fired generation, to reduce carbon emissions and shift toward using more renewable energy.

FIP system: METI announced in February 2020 its intent to begin drafting legislation to introduce a feed-in-premium (FIP) system – likely for large solar and wind projects.

Exhibit 59: Solar farm in Japan

Source: METI

Exhibit 60: Japan's wood pellet imports by origin



Sources: Biomass Magazine

Solar power: In addition to decreasing FIT rates, METI is developing new regulations that require solar power generators to create a mandatory decommissioning cost reserve. Details are expected by 2022.

Biomass fuel (imported biomass wood): Japan plans to build several large-scale biomass power plants, but relies heavily on imported biomass fuels. Japanese government agencies are currently assessing food-feed-fuel competition and lifecycle greenhouse gas emissions. New rules based on this lifecycle analysis are still pending and will undoubtedly affect the market.

While Japanese biomass demand continued to grow strongly in 2020, the upcoming policy changes will likely impact trade flows and supply and demand. Hawkins Wright estimates that Japanese wood pellet demand was at 1.8mt in 2020, up 20% on the year, with little sign of slowing. We forecast Japan's wood pellet demand to grow 33% in 2021 and have identified over 4GW of woody biomass capacity in the pipeline. Japan's METI has approved nearly 8GW of woody biomass capacity under FiT, but many projects are not at an advanced development stage. Not all of the 70-plus projects we have identified are expected to make it online, but approximately half are already under construction or financed.

Aggregation and balancing: To maximise the installation of renewable energy, the industry has shown great interest in market proven aggregation, balancing and remote-control systems and grid-level energy storage.

Battery/storage: As a 10-year plan that had required utilities to purchase surplus electricity from residential solar system owners ends, these half-a-million households may consider finding new ways to benefit from their existing solar systems by adding battery storage.

Carbon recycling: To mitigate climate change, Japan is keen to promote carbon capture, storage and utilisation technologies. In 2109, METI established a Carbon Recycling Advancement Office, part of the Agency for Natural Resources and Energy.

Hydrogen: Japan seeks to commercialise hydrogen power generation as well as international hydrogen supply chains and cut the unit hydrogen power generation cost. R&D has been especially focused in developing a hydrogen vehicle. METI has developed a basic strategy for the development of a hydrogen society.

Catalyst 2: Margin expansion

In 2020, CV's net margin was low at only 3.45% due to mainly to the THB43m restructuring expenses, a higher employee expense to THB49m, up from THB10m in 2019 due to the COD of the RTB power plant, and the high earnings from the low-margin EPC business, mainly for the 85MW biomass complex project.

According to management, in 2021 onward, CV expects to see an improving net margin from 3.8% in 2020 to 8.4% in 2021, 11.8% in 2022, and 12% in 2023. The margin expansion would be driven by 1) improving operations at its four existing power plants; 2) a full-year of operations at its CPX WTE power plant (COD in 4Q20); 3) a lower IW feedstock cost for CPX due to the COD of the CVR RDF plant in 4Q21; and 4) the normalised gross margin of its EPC business to 15%, up from 12%-14% in 2019-20, as CV is scheduled to complete the low-margin 85MW biomass complex project in 2021.

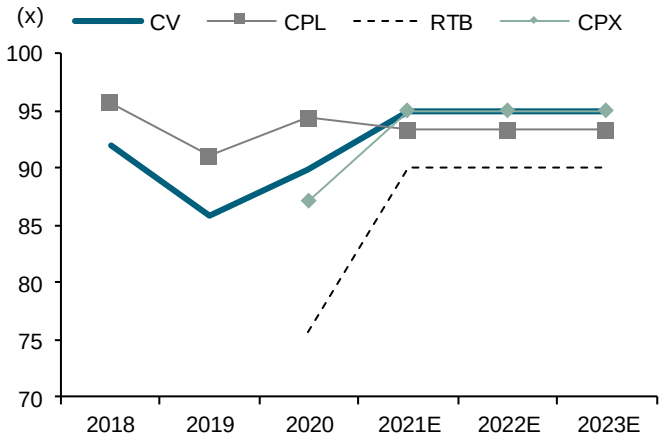
Exhibit 61: Project details

Project	Type	Equity capacity	Estimated IRR	FiT tariff	COD/acquired	Cost per MW	Total cost	Net profit per MW
		(MW)	(%)	(THB/Kwh)		(THB m/MW)	(THB m)	(THB m/MW)
Power plant business								
CV	Biomass	8.0	18.4	4.6	Feb-16	54	430	8.8
CPL	Biomass	4.5	19.7	4.6	Aug-18	56	250	10.3
RTB	Biomass	2.3	22.3	3.2	Jul-19	82	190	11.1
CPX	WTE	1.9	29.5	6.8	Oct-20	128	240	20.1
SPP (acquired)	Gas	6.8	26.5	3.0	4Q21E	14	95	3.0
OITA*	Biomass	35.8	24.0	7.9	4Q23E	42	1,500	8.3
Operating		17	20.5	4.7				
Committed		59	23.3	6.4				
Non-power business								
CVR (RDF type 3, 4Q21) (tpd)	RDF	150.0	14	1,200				
EPC & service (gross margin)	EPC	na	15	na				

*Upcoming project COD in 4Q23E
Sources: CV; FSSIA estimates

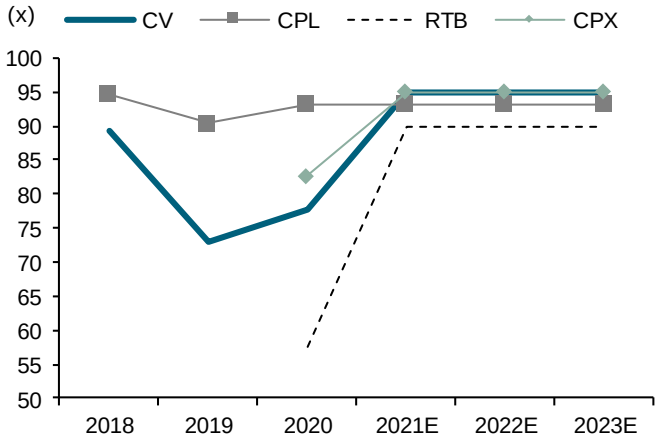
Margin driver #1: Improving utilisation rate. In 2020, CV witnessed subpar utilisation rates for RTB, which had a COD in 4Q20, and for CV, CPL, and CPX in 1H20 due to the water shortage that prohibited the company from operating at high utilisation rates. However, in 2021-23, we think CV will likely improve the capacity factors or utilisation rates of its four power plants to above 90%, given the more sustainable water supply and biomass feedstock and the higher operational efficiency thanks to CV's operational revamp to improve operational performance in 1Q21, according to management.

Exhibit 62: Availability factor of power plants



Sources: CV; FSSIA estimates

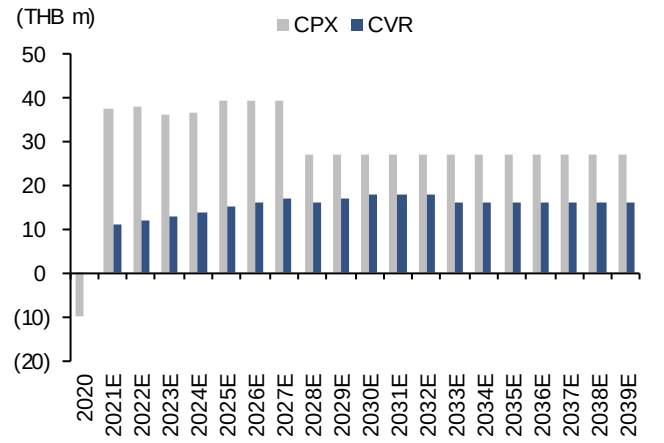
Exhibit 63: Capacity factor of power plants



Sources: CV; FSSIA estimates

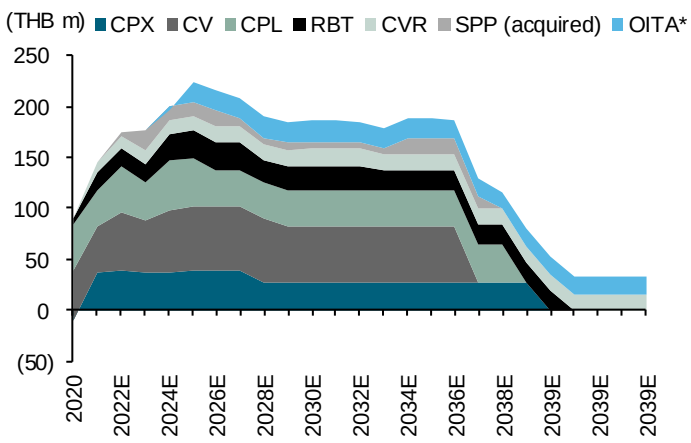
Margin driver #2: The full-year operation of the CPX WTE power plant (COD in 4Q20). We expect the net profit from CPX to rise from a net loss in 2020 to a net profit in 2021 onward, as CPX will ramp up its utilisation rate with the intention of achieving over a 94% utilisation rate in 2021 onward. This alone could boost CV's net profit by THB48m y-y in 2021, based on our estimate.

Exhibit 64: Net profit of CPX to improve due to lower feedstock costs via the CVR RDF plant starting in 2021



Sources: CV; FSSIA estimates

Exhibit 65: Net profit breakdown by project



*COD 4Q23E
Sources: CV; FSSIA estimates

Margin driver #3: The low IW feedstock cost for CPX. Starting in 4Q21, we project that the feedstock cost of the 1.9MW WTE CPX power plant, COD in 4Q20, will be lower by up to 70%, based on the COD of the CVR 150 tonne per day (tpd) RDF plant in 4Q21.

CVR will produce 80tpd of IW RDF and 70tpd of municipal solid waste (MSW) RDF. Of the 80tpd of IW RDF, 50tpd is to be used internally for CPX and 30tpd, together with the 70tpd of MSW RDF, is to be sold to outside customers. Hence, we project that CPX's net profit will rise to 37m-39m annually in 2021-27 and later decline due to the higher taxes paid for the project.

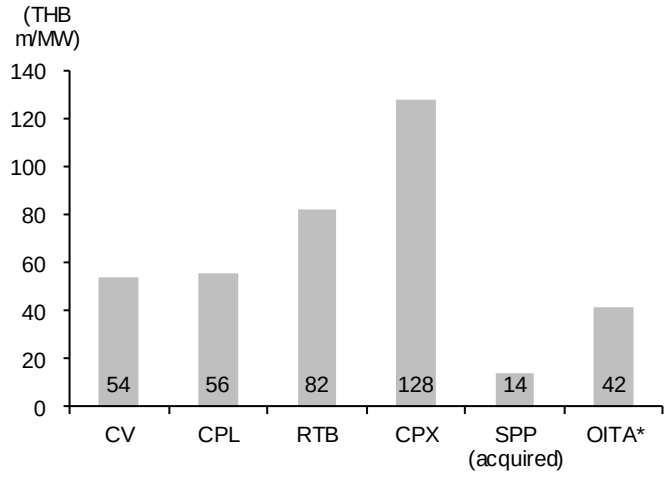
Margin driver #4: The higher gross profit margin for EPC. In 2020-YTD, CV saw its gross margin for EPC drop from around 20% in 2019 down to 12% in 2020-YTD due to the rising EPC revenue from the low-margin 85MW biomass project that is scheduled for completion in 2021.

EPC strength structurally leads to higher IRR and profitability

On top of our projected drivers for CV's margin improvement in 2021-23, we believe CV has a unique strength in EPC via its two subsidiaries, SBC and SBE. According to management, CV has successfully won many projects for biomass and WTE power plants, via both its own bidding and as an EPC contractor for other operators.

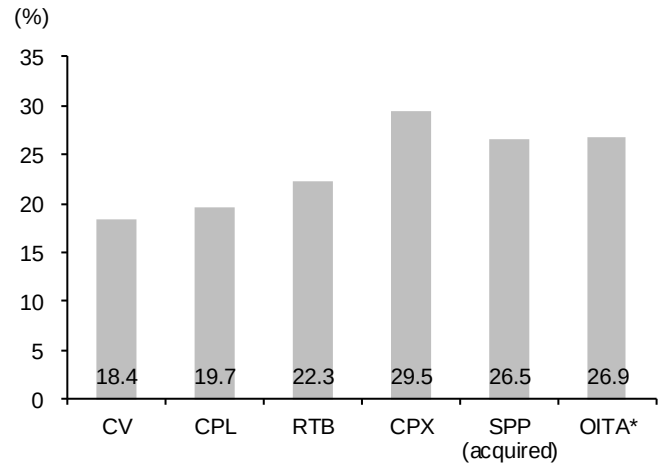
CV's strengths in fully integrated project management and systems development, which includes design, procurement, construction, and repair and maintenance, have been CV's core competencies. This has allowed it to generate a higher IRR than its competitors and increase the possibility to win project bids due to its 20-30% lower cost, based on management's guidance.

Exhibit 66: Cost per MW for power plants built by CV



*COD 4Q23E
Sources: CV; FSSIA estimates

Exhibit 67: Estimated project IRR for CV's power plants

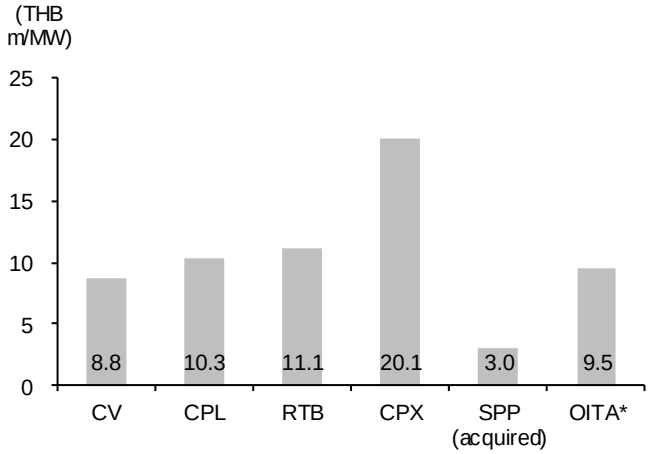


*COD 4Q23E
Sources: CV; FSSIA estimates

20-30% lower EPC cost than competitors. Our analysis indicates that CV's investment cost per MW for its four operating power plants is at a relatively lower cost than the industry average. For example, the investment cost per MW for the biomass power plants, CV (9.4MW installed capacity), CPL (4.9MW), and RTB (9.9MW), are in the range of THB54m-82m, lower than THB60m-80m/MW for other operators. For its WTE power plant, CPX (2MW), the investment cost of THB128m/MW is also lower than the THB150m-200m/MW cost for other WTE power plant developers.

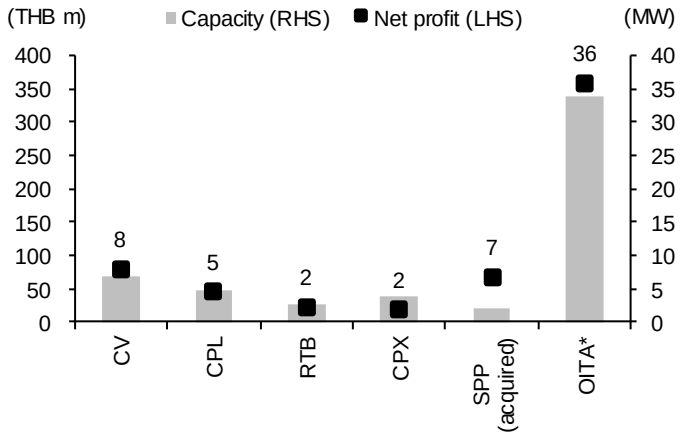
Leading to higher project IRRs. Thanks to the lower EPC investment cost, we estimate that CV has generated a project IRR of between 18.4-22.3% for its biomass power plants and up to a 29.5% IRR for CPX due to the lower investment and feedstock costs. We believe this should give CV cost competitiveness for bidding on biomass and WTE projects both domestically and overseas.

Exhibit 68: Estimated net profit per MW for power plants



*COD 4Q23E
Sources: CV; FSSIA estimates

Exhibit 69: Capacity and net profit by power plant



*COD 4Q23E
Sources: CV; FSSIA estimates

Catalyst 3: Potential upside from Power Plant for Community scheme

Thanks to CV's EPC cost competitiveness and its proven track record of reliable operations for biomass and WTE power plants, we think CV stands as one of Thailand's leading players to win the upcoming PPC bidding.

Up to 45MW for eight projects under PPC bidding. According to management, CV plans to bid on up to seven 6MW biomass plants and one 3MW biomass plant. We estimate that the total upside from the eight projects with a combined capacity of 45MW could add up to a 0.32/share value to our SoTP-based target price of THB5.50/share, based on 1) CV winning all eight projects with total 45MW capacity; 2) a FiT tariff at THB4/kWh; 3) a power purchase agreement (PPA) for 20 years; and 4) an IRR of 17% for an investment cost per MW of THB40m/MW.

Development for Power Plant for Community projects

The following paragraphs are excerpted from "Return of renewable Power Plant for Community", FSSIA's report for Thailand Utilities, dated 10 May 2021.

> After a quarter's delay, the Energy Regulatory Commission (ERC) finally opened the bidding for 150MW under the PPC scheme; approved in Oct-20 for an initial capacity of 1,933MW but later reduced to only 150MW under the new energy minister, Mr. Supattanapong Punmeechaow.
>
> It will roll out as a pilot project, and if it is successful (benefiting the community as targeted by the government), the regulator may decide to proceed with the remaining 1,783MW PPC capacity. Of the 150MW available for bidding, there will be two capacity portions: 1) 75MW will be for biomass with a capacity size of no more than 6MW for each power plant; and 2) 75MW will be for biogas power plants with a capacity size of no more than 3MW.
>
> The first stage will be the technical bidding for the PPC's 150MW during 27-30 Apr-21, and the technical qualification winners will be announced by end-May. The pricing bidding will follow in Sep-Oct 2021, with the final winners to be announced in Nov-21 and the PPA signed by Dec-21.

Exhibit 70: Power Plant for Community scheme under PDP 2018 Revision 1

Source: Greennetwork

Background for the Power Plant for Community scheme

Under PDP 2018 Rev1, Thailand's renewable capacity will remain unchanged at 18.7GW, but the regulator decided to reduce the solar capacity target and change the format of the capacity bidding for biomass and biogas power plants to the PPC program under the concept of the 'Energy for All' scheme. This was done mainly to enable private companies to form joint ventures with local communities to operate renewable power projects in remote areas.

Exhibit 71: Renewable capacity breakdown under PDP 2018 Rev1

Projects (MW)	PDP2018	PDP2018Rev1
Projects under government-supportive policy		
- WTE-community waste	400	400
- Biomass (Pracharat) for four southernmost provinces	120	120
- Community power for grassroots economy	-	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

In Mar-20, the Thai government, through the Ministry of Energy and the ERC, announced the bidding for its PPC project for up to 700MW of capacity within 2020, comprising:

1) 100MW for the 'quick win' biomass and biogas power plants that have already secured PPAs with the buyer, the PEA, since 2018, and are already under construction or close to completion and are able to start their CODs by end-2020;

2) 600MW for new capacity from biomass, biogas, and hybrid solar farms that are scheduled for completion and COD by end-2021. The total capacity under PPC is 1,933MW.

Exhibit 72: Feed-in-tariffs (FiT) for power plants under PPC

Fuel type	Tariff	PPA life	FiT premium for special zone
	(THB/kWh)	(year)	(THB/kWh)
Solar power	2.90	20	0.5
Biomass less than 3MW	4.85	20	0.5
Biomass more than 3MW	4.26	20	0.5
Biogas (waste-to-energy)	3.76	20	0.5
Biogas (energy crops)	5.37	20	0.5
Hybrid (waste-to-energy + energy crops)	4.73	20	0.5

Source: Ministry of Energy

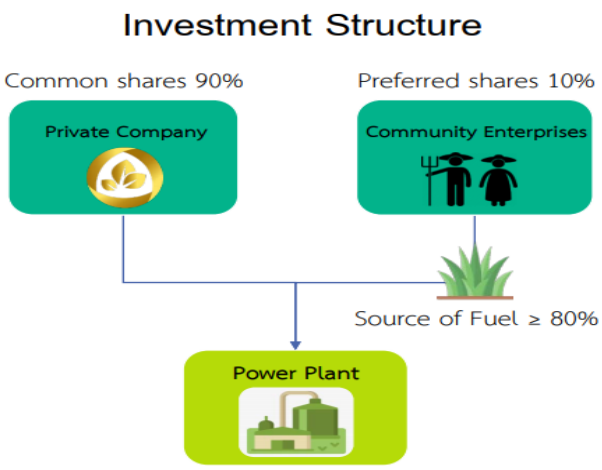
However, under the new energy minister and PDP 2018 Rev1, the PPC capacity will be reduced to only 150MW as a pilot project. If it is successful, the regulator may decide to proceed with the remaining 1,783MW PPC capacity.

Of the 150MW available for bidding, there are two capacity portions: 1) 75MW will be for biomass with a capacity size of no more than 6MW for each power plant; and 2) 75MW will be for biogas power plants with a capacity size of no more than 3MW.

Exhibit 73: Power Plant for Community value chain

Source: Greennetwork

Exhibit 74: Shareholder structure of PPC



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 75: Shareholder structure and tariff contribution to communities under PPC

Joint ventures of power plants	Involved participants	Holding (%)	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

Exhibit 76: PPC power plants

Capacity (MW)	FiT (THB/kWh)			Subsidy period (years)	FiT premium (THB/kWh) under special area
	FiT (fixed rate)	FiT (variable rate)	FiT (total)		
Solar power plant	2.9	-	2.9	20	0.5
Biomass					
less than or equal to 3MW	*2.61*	*2.24*	*4.85*	*20*	*0.5*
more than 3MW	*2.39*	*1.87*	*4.26*	*20*	*0.5*
Biogas (wastewater)	3.76	-	3.76	20	0.5
Biogas (energy crops)	2.79	1.94	4.73	20	0.5

Source: ERC

WTE power plants – a unique growth opportunity

The following paragraphs are excerpted from "Revival of renewable growth in 2021", FSSIA's report for Thailand Utilities, dated 30 December 2020.

> WTE power plants remain one of the top priorities for the government, and it is promoting them with the aim of effectively and simultaneously reducing waste and converting it into a useful fuel for power generation plants. There are two types of WTE power plants – municipal solid waste (MSW) for community waste and industrial waste (IW).

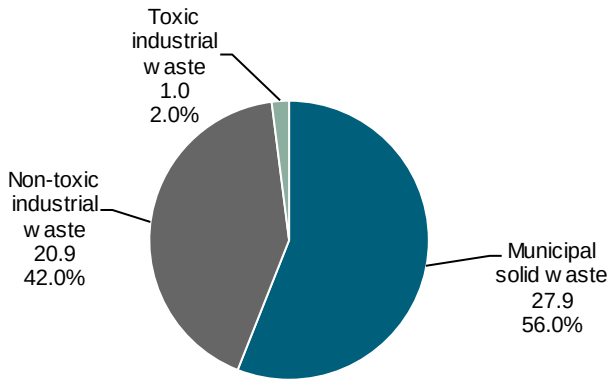
Exhibit 77: Power plant projects under PDP 2018 for WTE, biogas, and biomass power plants

Capacity (MW)	FiT (THB/kWh)			Subsidy period (years)	FiT premium (THB/kWh)	
	FiT (fixed rate)	FiT (variable rate)	FiT (total)		Bio-energy project (first 8 years)	Projects in 4 southernmost provinces of Thailand (all project life)
Waste-to-energy (WTE)						
less than 1 MW	*3.13*	*3.27*	*6.34*	*20*	*0.7*	*0.5*
1 - 3 MW	*2.61*	*3.27*	*5.82*	*20*	*0.7*	*0.5*
more than 3 MW	*2.39*	*2.74*	*5.08*	*20*	*0.7*	*0.7*
Waste-to-energy (Landfill)	5.6	-	5.6	10	-	0.5
Biomass						
less than 1 MW	*3.16*	*2.25*	*5.34*	*20*	*0.5*	*0.5*
1 - 3 MW	*2.61*	*2.25*	*4.82*	*20*	*0.4*	*0.5*
more than 3 MW	*2.39*	*1.89*	*4.24*	*20*	*0.3*	*0.5*
Biogas (wastewater)	3.76	-	3.76	20	0.5	0.5
Biogas (energy crops)	2.79	2.6	5.34	20	0.5	0.5

Source: ERC

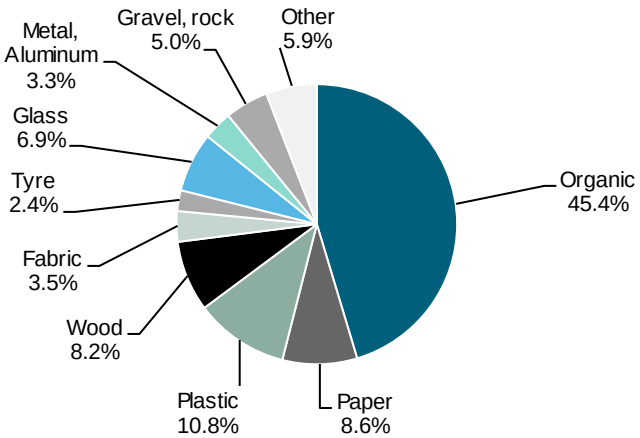
> Under PDP 2018 Rev1, of the 400MW available for WTE capacity within 2022, 356MW will be for MSW WTE power plants and 44MW will be for IW WTE power plants. In 2018, out of the total annual 49.8mt of waste, 27.9mt was MSW and 22mt was IW, comprising 20.9mt of non-toxic IW and 1.0mt of toxic waste.

Exhibit 78: Thailand's waste breakdown (2018)



Source: ETC

Exhibit 79: Municipal solid waste breakdown



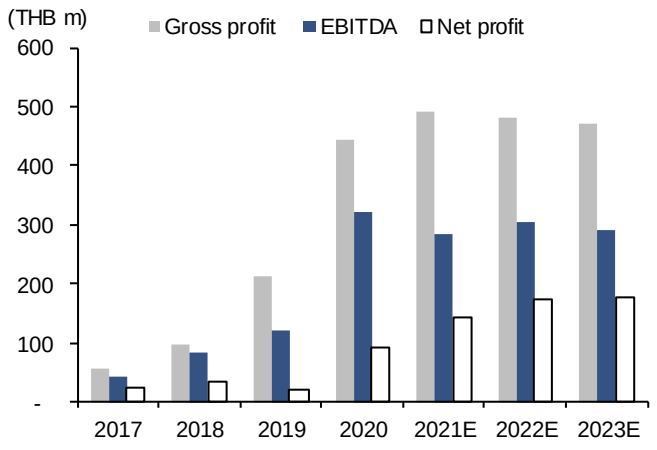
Source: TPIPP

> In Thailand, TPIPP and ETC are the two leading and largest operators in MSW WTE and IW WTE power plants, respectively. TPIPP currently operates four WTE power plants (180MW), solely using MSW as a key fuel, while ETC operates three WTE power plants (20MW).

Financials

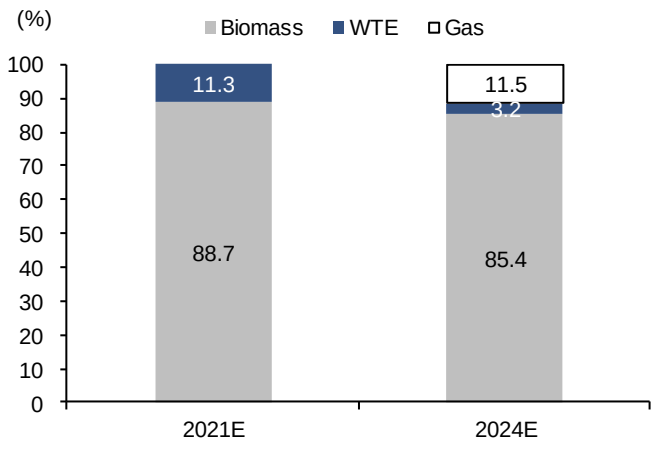
We project CV's net profit growth to accelerate from THB94m in 2020 to THB177m in 2023, rising at an 11.87% CAGR from 2020-23. However, its gross profit growth may slow down in 2022-23 due to the lower y-y EPC revenue that we estimate, given the unpredictable nature of the business. We forecast CV's net profit to grow in 2022-23, thanks to improving operational efficiency and higher margins on the back of lower feedstock costs.

Exhibit 80: Gross profit, EBITDA, and net profit



Sources: CV; FSSIA estimates

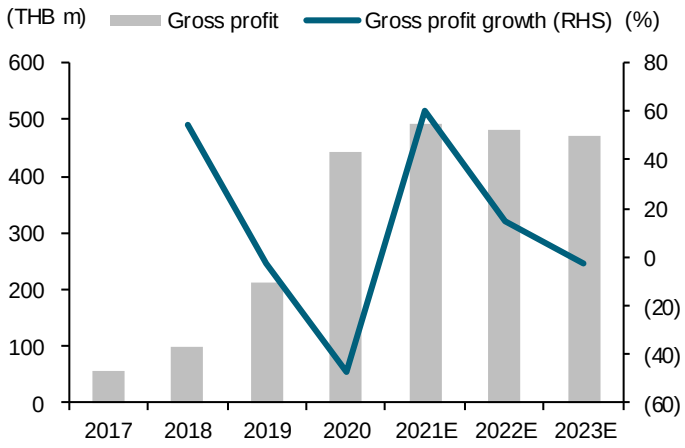
Exhibit 81: Capacity breakdown by power plant type



Sources: CV; FSSIA estimates

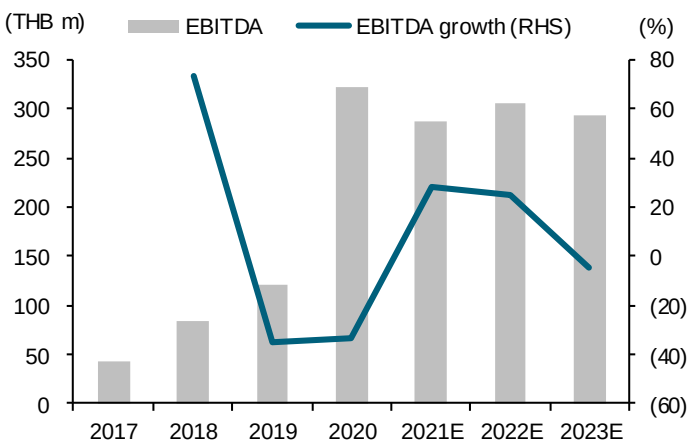
Based on CV's committed and highly likely project growth for SPP and Oita, we estimate that CV's capacity from biomass will slightly decline from 88.7% in 2021 to 85.4% in 2024, based on the additional capacity from the gas-fired SPP (6.8MW) in 4Q21 and the biomass Oita power plant in 4Q23 (35.8MW).

Exhibit 82: Gross profit and gross profit growth



Sources: CV; FSSIA estimates

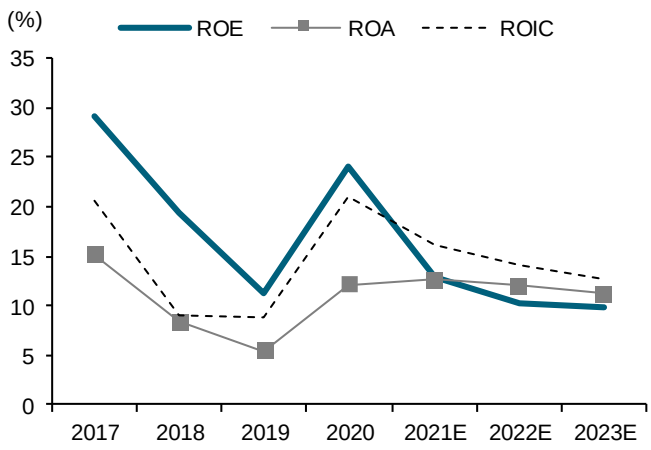
Exhibit 83: EBITDA and EBITDA growth



Sources: CV; FSSIA estimates

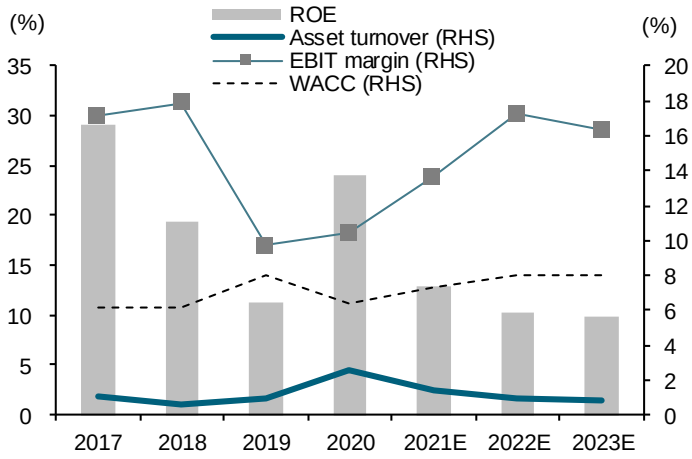
We project that CV's ROE, ROA, and ROIC will decline in 2021-23 due to 1) the higher equity base from its IPO of 320m new shares (25% increase); and 2) lower asset turnover, as we expect its EPC revenue to drop from THB0.7b in 2021 to THB0.5b annually post 2021. However, we think the ROE will be partly offset by higher EBIT margins thanks to the lower feedstock costs and improving operational efficiency of its power plants.

Exhibit 84: ROE, ROA, ROIC



Sources: CV; FSSIA estimates

Exhibit 85: ROE, asset turnover, EBIT margin, WACC



Sources: CV; FSSIA estimates

Risks

We see three key risks to CV's net profit and operations:

First, the feedstock and water shortages that occurred in 2020 may result in lower utilisation rates and profitability if they occur again. However, we think that feedstock and water availability should be manageable, given the company's plan to better cope with future shortages.

Second, the feedstock price volatility due to its seasonality, substitutability, and competition among biomass operators could lead to a margin squeeze for CV's power plants. Nevertheless, we think CV now has a well-crafted plan to procure biomass feedstock from its CVR RDF plant for its CPX WTE power plant, along with long-term contracts for woodchip feedstock with multiple partners.

Third, the unpredictability of the government's policy and timeline to implement and open the bidding for projects (for PPC in Thailand and biomass in Japan) could result in delays for CV's project start-ups, including the acquisition of SPP (4Q21) and Oita (4Q23).

Valuation

We derive our SoTP-based target price of THB5.50 from:

1) THB1.05/share for the four operating power plants (DCF);

2) THB0.11/share for the RDF CVR plant (DCF);

3) THB0.70/share for EPC, based on 14x 2021E P/E, a discount to Thailand's contractor EPC peers' average of over 20x as we think CV's EPC still faces high demand and margin risks despite its superior gross margins;

4) THB0.18/share for the soon-to-acquire SPP (DCF);

5) THB2.93/share for the Oita biomass power plant using a DCF valuation.

We apply a DCF valuation for each power plant using a similar risk-free rate of 2.3%, a risk premium of 8.5%, and a beta of 0.6, which results in a WACC of 4.9%. We think our low beta is justified by CV's low-risk nature in terms of demand, price, and margins.

For the Oita biomass power plant in Japan, we use lower assumptions – a risk-free rate of 1.5%, a risk premium of 4%, and a WACC of 2.4% – to reflect the lower cost of funds and higher debt funding in Japan.

For its CVR RDF, we apply a similar DCF valuation and factors as we think the RDF produced from CVR will have a tight economic link with its captive CPX WTE (50tpa of IW RDF) and outside WTE power plant customers.

Our target price embraces the value of two future projects – a THB0.18/share value for SPP and a THB2.93/share value for Oita – as we think the likelihood that the projects will proceed, complete, and operate on time are high, given that the acquisition process is close to competition for SPP and the forestry license required for the signing of Oita's PPA is the only step remaining.

Exhibit 86: SoTP valuation

Cost of equity assumptions	(%)				Cost of debt assumptions	(%)
Risk-free rate	2.3				Pretax cost of debt	5.0
Market risk premium	8.5				Marginal tax rate	20.0
Stock beta	0.6					
Cost of equity, Ke	7.4				Net cost of debt, Kd	3.9
Weight applied	30.0				Weight applied	70.0
WACC (%)	**4.9**					

Sum-of-parts valuation estimate	% stake	Capacity	Value	THB/share	Comments
Operating and committed projects (A)	**(%)**	**(MW)**	**(THB m)**	**2.39**	
CV (Biomass, 5 Feb 2016)	100	8.0	675	0.53	DCF WACC 4.9%, Risk free rate 2.3%, Risk premium 8.5%
CPL (Biomass, 8 Aug 2018)	100	4.5	245	0.19	DCF WACC 4.9%, Risk free rate 2.3%, Risk premium 8.5%
RTB (Biomass, 15 Jul 2019)	25	2.3	219	0.17	DCF WACC 4.9%, Risk free rate 2.3%, Risk premium 8.5%
CPX (WTE - RDF, 30 Oct 2020)	100	1.9	206	0.16	DCF WACC 4.9%, Risk free rate 2.3%, Risk premium 8.5%
CVR (RDF type 3, 4Q21) (tpd)	100	150.0	135	0.11	DCF WACC 4.9%, Risk free rate 2.3%, Risk premium 8.5%
EPC & service	100	na	893	0.70	At 2021E 14x P/E
Net cash (debt)	na	na	683	0.53	At end-2021E
Under development power plants (B)	**% stake**	**Capacity**	**Value**	**3.11**	
SPP (VSPP - 23 Jan 2020)	100	6.8	237	0.18	Project under acquisition process
OITA (Biomass, 4Q23E)	100	35.8	3,746	2.93	DCF WACC 2.4%, Risk free rate 1.5%, Risk premium 4%
Residual ordinary equity			**6,365**	**5.50**	
Power Plant for Community					
Total 6 projects of 6MW PPC	60	36.0	430	0.34	
One 3MW PPC project	60	3.0	25	0.02	
Total potential upside	**60**	**39.0**	**455**	**0.36**	

Sources: CV; FSSIA estimates

Exhibit 87: Peer comparisons

Company	BBG	Rec	Share Price (THB)	Target price (THB)	Market Cap (USD m)	3Y EPS CAGR (%)	----- PE ----- 21E (x)	22E (x)	----- ROE ------ 21E (%)	22E (%)	----- PBV ----- 21E (x)	22E (x)	-- EV/ EBITDA -- 21E (x)	22E (x)
Clover Power	CV TB	BUY	3.88	5.5	152	12.3	28.0	28.6	10.7	8.1	2.4	2.3	15.4	14.7
BCPG	BCPG TB	BUY	14.6	17	1,214	(6.4)	16.2	16.6	10.8	9.8	1.7	1.6	19.0	18.8
CK Power	CKP TB	BUY	5.45	6.6	1,358	97.0	19.5	13.9	9.1	11.9	1.7	1.6	10.9	12.6
Energy Absolute	EA TB	BUY	66.5	76	7,605	29.3	30.3	25.5	26.1	24.8	7.1	5.7	23.5	18.5
Gunkul Eng'g	GUNKUL TB	BUY	4.8	5.4	1,307	41.4	16.4	13.7	20.2	22.0	3.2	2.9	14.0	12.5
Demco	DEMCO TB	BUY	4.96	5.9	111	64.6	20.1	17.0	3.8	4.4	0.8	0.7	(120.6)	(89.3)
Power Solution Tech	PSTC TB	BUY	2.58	3.7	188	196.7	55.0	17.5	1.9	5.8	1.0	1.0	15.4	20.9
Sermsang	SSP TB	BUY	12.7	20	395	19.5	14.2	11.3	18.7	18.2	2.2	1.9	10.0	8.5
TPC Power	TPCH TB	BUY	10.7	14	132	30.8	19.0	8.9	7.5	15.1	1.4	1.3	12.4	8.1
TPI Polene Power	TPIPP TB	BUY	4.4	5.7	1,133	(3.6)	7.9	8.1	15.7	14.8	1.2	1.2	6.8	6.8
Absolute Clean Ener	ACE TB	BUY	4.2	4.8	1,310	24.8	17.1	8.7	9.7	16.9	1.5	1.4	12.4	6.8
Earth Tech Environ	ETC TB	HOLD	2.62	2.1	180	(100.0)	18.5	17.8	12.6	12.0	2.2	2.1	12.0	11.4
Coverage					**15,086**	**31.1**	**23.7**	**19.2**	**19.5**	**19.8**	**4.5**	**3.7**	**17.1**	**14.4**

Prices as of 3 Sep 2021; *FSSIA's SoTP-based valuation; **Net profit 3Y CAGR
Sources: Bloomberg; FSSIA estimates

Corporate Governance - CV

Board structure

Number of Independent Directors (ID)	4/9
Percentage of IDs on the board	44% (vs SEC guideline of at least 1/3)
ID participation/attendance at board meetings	100% 3/4, 75% 1/4
ID participation in audit/remuneration committees	3/3 in audit committee, and 2/4 in remuneration committees
ID terms (years of service, re-election/replacement procedures)	Not related to company, subsidiary company, joint venture company, major shareholder

Source: CV

Additional comments: None

Audit Practices

Auditor	Deloitte Thailand Limited
Length of service	NA
Reporting incidents	None
Fee track record	THB5.098m Baht in 2020 and THB0.3m in service fees
Policy on change of audit firm	None

Source: CV

Additional comments: None

Compensation and remuneration

Directors' remuneration vs earnings/ROE/share performance	THB11.2m vs 2020 NP of THB94m
Changes/stability in senior management	None
Incidents of termination of senior management	None
Track record on insider sales	None

Source: CV

Additional comments: None

Shareholders' rights

Communication - shareholder participation in AGMs/EGMs	Once a year within 4 months from the last day of the Company’s fiscal year
Related party transactions	In accordance with SEC regulations
Voting issues - policies, incidents of rejected proposals	None

Source: CV

Additional comments: None

Financial Statements

Clover Power

Profit and Loss (THB m) Year Ending Dec	2019	2020	2021E	2022E	2023E
Revenue	628	2,492	1,725	1,477	1,483
Cost of goods sold	(415)	(2,048)	(1,232)	(994)	(1,013)
Gross profit	**213**	**444**	**493**	**483**	**470**
Other operating income	-	-	-	-	-
Operating costs	(92)	(122)	(207)	(177)	(178)
Operating EBITDA	**121**	**322**	**286**	**305**	**292**
Depreciation	(60)	(64)	(51)	(51)	(51)
Goodwill amortisation	0	0	0	0	0
Operating EBIT	**61**	**259**	**235**	**255**	**242**
Net financing costs	(43)	(34)	(17)	(6)	(6)
Associates	0	(6)	25	26	26
Recurring non-operating income	17	21	46	46	61
Non-recurring items	0	0	0	0	0
Profit before tax	**35**	**246**	**265**	**295**	**297**
Tax	0	(31)	(5)	(5)	(5)
Profit after tax	**35**	**215**	**260**	**290**	**293**
Minority interests	(14)	(121)	(115)	(116)	(115)
Preferred dividends	0	0	0	0	0
Other items	-	-	-	-	-
Reported net profit	**22**	**94**	**144**	**174**	**177**
Non-recurring items & goodwill (net)	**0**	**0**	**0**	**0**	**0**
Recurring net profit	**22**	**94**	**144**	**174**	**177**
Per share (THB)					
Recurring EPS *	0.07	0.10	0.14	0.14	0.14
Reported EPS	0.07	0.10	0.14	0.14	0.14
DPS	0.00	0.00	0.05	0.05	0.06
Diluted shares (used to calculate per share data)	300	960	1,040	1,280	1,280
Growth					
Revenue (%)	120.5	297.0	(30.8)	(14.4)	0.4
Operating EBITDA (%)	43.3	166.1	(11.3)	6.8	(4.2)
Operating EBIT (%)	19.9	323.6	(9.1)	8.3	(5.1)
Recurring EPS (%)	(40.2)	35.5	41.8	(2.3)	2.2
Reported EPS (%)	(40.2)	35.5	41.8	(2.3)	2.2
Operating performance					
Gross margin inc. depreciation (%)	24.3	15.3	25.6	29.3	28.3
Gross margin of key business (%)	-	-	-	-	-
Operating EBITDA margin (%)	19.3	12.9	16.6	20.7	19.7
Operating EBIT margin (%)	9.7	10.4	13.6	17.3	16.3
Net margin (%)	3.5	3.8	8.4	11.8	12.0
Effective tax rate (%)	-1.0	12.4	2.2	1.7	1.7
Dividend payout on recurring profit (%)	-	-	32.5	40.0	40.0
Interest cover (X)	1.8	8.2	16.6	51.0	54.6
Inventory days	5.4	1.7	2.9	2.4	2.2
Debtor days	44.8	44.0	107.2	129.1	132.2
Creditor days	340.3	102.1	105.7	88.9	78.7
Operating ROIC (%)	7.2	21.8	15.9	13.7	11.4
ROIC (%)	8.8	21.1	16.5	14.4	12.9
ROE (%)	11.3	24.1	10.7	8.1	7.9
ROA (%)	5.5	12.1	11.3	10.1	9.6

* Pre-exceptional, pre-goodwill and fully diluted

Revenue by Division (THB m)	2019	2020	2021E	2022E	2023E
Power	396	434	942	942	948
EPC	209	2,025	748	500	500
Service and other	23	33	35	35	35

Sources: Clover Power; FSSIA estimates

Financial Statements

Clover Power

Cash Flow (THB m) Year Ending Dec	2019	2020	2021E	2022E	2023E
Recurring net profit	22	94	144	174	177
Depreciation	60	64	51	51	51
Associates & minorities	0	(6)	25	26	26
Other non-cash items	-	-	-	-	-
Change in working capital	140	6	(258)	(87)	(10)
Cash flow from operations	**222**	**158**	**(38)**	**163**	**244**
Capex - maintenance	(60)	(64)	(51)	(83)	(96)
Capex - new investment	(629)	(70)	(149)	(84)	(159)
Net acquisitions & disposals	0	(109)	0	0	0
Other investments (net)	81	316	25	26	26
Cash flow from investing	**(608)**	**74**	**(175)**	**(142)**	**(229)**
Dividends paid	(159)	(309)	(58)	(69)	(71)
Equity finance	0	331	1,408	0	0
Debt finance	385	(71)	(432)	(12)	(2)
Other financing cash flows	255	(240)	64	65	63
Cash flow from financing	**481**	**(289)**	**983**	**(16)**	**(10)**
Non-recurring cash flows	-	-	-	-	-
Other adjustments	0	0	0	0	0
Net other adjustments	**0**	**0**	**0**	**0**	**0**
Movement in cash	**94**	**(58)**	**770**	**4**	**5**
Free cash flow to firm (FCFF)	(343.58)	265.45	(195.62)	26.64	20.04
Free cash flow to equity (FCFE)	253.27	(79.82)	(580.21)	73.92	75.59
Per share (THB)					
FCFF per share	(0.27)	0.21	(0.15)	0.02	0.02
FCFE per share	0.20	(0.06)	(0.45)	0.06	0.06
Recurring cash flow per share	0.27	0.16	0.21	0.20	0.20

Balance Sheet (THB m) Year Ending Dec	2019	2020	2021E	2022E	2023E
Tangible fixed assets (gross)	1,272	1,391	1,591	1,791	2,091
Less: Accumulated depreciation	(201)	(250)	(301)	(384)	(479)
Tangible fixed assets (net)	**1,071**	**1,141**	**1,291**	**1,407**	**1,612**
Intangible fixed assets (net)	**0**	**3**	**3**	**3**	**3**
Long-term financial assets	-	-	-	-	-
Invest. in associates & subsidiaries	0	109	109	109	109
Cash & equivalents	95	37	807	812	817
A/C receivable	103	498	515	530	545
Inventories	7	12	7	6	6
Other current assets	703	89	62	53	53
Current assets	**908**	**637**	**1,392**	**1,400**	**1,421**
Other assets	51	66	66	66	66
Total assets	**2,029**	**1,955**	**2,859**	**2,985**	**3,209**
Common equity	176	604	2,098	2,202	2,309
Minorities etc.	255	0	116	232	347
Total shareholders' equity	**431**	**604**	**2,214**	**2,434**	**2,656**
Long term debt	465	328	24	12	10
Other long-term liabilities	6	38	38	38	38
Long-term liabilities	**471**	**366**	**61**	**49**	**47**
A/C payable	700	446	268	216	220
Short term debt	161	228	100	100	100
Other current liabilities	265	312	216	185	185
Current liabilities	**1,126**	**985**	**584**	**501**	**506**
Total liabilities and shareholders' equity	**2,029**	**1,955**	**2,859**	**2,985**	**3,209**
Net working capital	(152)	(158)	100	188	198
Invested capital	970	1,160	1,568	1,772	1,987
* Includes convertibles and preferred stock which is being treated as debt					
Per share (THB)					
Book value per share	0.59	0.63	1.64	1.72	1.80
Tangible book value per share	0.59	0.63	1.64	1.72	1.80
Financial strength					
Net debt/equity (%)	123.3	85.9	(30.9)	(28.8)	(26.6)
Net debt/total assets (%)	26.2	26.5	(23.9)	(23.4)	(22.0)
Current ratio (x)	0.8	0.6	2.4	2.8	2.8
CF interest cover (x)	21.5	0.7	(24.4)	27.9	43.4

Valuation	2019	2020	2021E	2022E	2023E
Recurring P/E (x) *	**53.7**	**39.6**	**28.0**	**28.6**	**28.0**
Recurring P/E @ target price (x) *	**76.1**	**56.2**	**39.6**	**40.6**	**39.7**
Reported P/E (x)	53.7	39.6	28.0	28.6	28.0
Dividend yield (%)	-	-	1.2	1.4	1.4
Price/book (x)	6.6	6.2	2.4	2.3	2.2
Price/tangible book (x)	6.6	6.2	2.4	2.3	2.2
EV/EBITDA (x) **	16.1	13.2	15.4	14.7	15.8
EV/EBITDA @ target price (x) **	20.1	18.0	22.6	21.5	22.8
EV/invested capital (x)	2.0	3.7	2.8	2.5	2.3

* Pre-exceptional, pre-goodwill and fully diluted ** EBITDA includes associate income and recurring non-operating income

Sources: Clover Power; 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	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	TMB	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	AMANAH	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	WIIK	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	TPIPP	TPLAS
TTI	TYCN	UKEM	UMS	VCOM	VRANDA	WIN	WORK	WPH		

Description	Score Range
Excellent	90-100
Very Good	80-89
Good	70-79

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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	AMANAH	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	TMB	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	WIIK	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)

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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

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Suwat Sinsadok FSS International Investment Advisory Securities Co., Ltd

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Company	Ticker	Price	Rating	Valuation & Risks
Clover Power	CV TB	THB 3.88	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.
BCPG	BCPG TB	THB 14.60	BUY	The downside risks to our SoTP-based TP include: 1) lower-than-expected demand for electricity in Thailand, the Philippines and Indonesia; and 2) government intervention by way of electricity tariff subsidies.
CK Power	CKP TB	THB 5.45	BUY	The downside risks to our SoTP-based TP include lower-than-expected demand for electricity in Thailand and lower-than-expected water supply for hydro projects.
Energy Absolute	EA TB	THB 66.50	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.
Gunkul Engineering	GUNKUL TB	THB 4.80	BUY	The downside risks to our SoTP-based TP on GUNKUL include 1) lower-than-expected demand for electricity in Thailand, 2) declining EPC backlogs, and 3) lower-than-expected utilisation rates for solar and wind farms.
Demco	DEMCO TB	THB 4.96	BUY	Downside risk includes delays in bidding for power transmission projects.
Power Solution Technologies	PSTC TB	THB 2.58	BUY	The downside risks to our SoTP-based TP on PSTC include 1) lower-than-expected demand for electricity in Thailand and delays of power plant project start-ups.
Sermsang Power Corp	SSP TB	THB 12.70	BUY	The downside risks to our SoTP-based TP for SSP include 1) a lower-than-expected demand for electricity in Thailand; 2) a lower crude price; and 3) project start-up delays.
TPC Power Holding	TPCH TB	THB 10.70	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.
TPI Polene Power	TPIPP TB	THB 4.40	BUY	Downside risks to our SoTP-based TP include 1) lower-than-expected demand for electricity in Thailand; 2) lower crude price, and 3) unplanned shutdown of the company's power plants.
Absolute Clean Energy	ACE TB	THB 4.20	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.
Earth Tech Environment	ETC TB	THB 2.62	HOLD	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 industrial waste volumes. Upside risks are the faster and larger-than-expected new capacity won by ETC in 2021.

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

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All share prices are as at market close on 3-Sep-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.