

Thailand Utilities Sector

Regulatory risks

Sector Valuation			Current	Target	Market	Norm EPS grw		— Norm PE —		— P/BV —		Div yield	
Company	BBG Code	Rec.	price (Bt)	price (Bt)	Cap (US\$ m)	2023F (%)	2024F (%)	2023F (x)	2024F (x)	2023F (x)	2024F (x)	2023F (%)	2024F (%)
BCPG Pcl	BCPG TB	BUY	9.50	18.00	30	(29.7)	34.2	19.1	14.3	0.9	0.9	3.8	3.8
B.Grimm Power Pcl	BGRIM TB	HOLD	28.50	31.00	82	na	21.7	46.8	38.5	1.9	1.9	1.1	1.3
Banpu Power Pcl	BPP TB	BUY	13.60	20.00	46	54.6	12.2	12.3	11.0	0.8	0.8	5.1	5.1
Global Power Synergy	GPSC TB	BUY	43.25	52.00	134	1,829.0	39.0	29.0	20.9	1.1	1.1	1.9	2.9
Gulf Energy Dev. Pcl	GULF TB	BUY	44.50	58.00	574	40.0	30.5	32.3	24.8	4.5	4.2	1.9	2.4

Source: Thanachart estimates, Based on 28 September 2023 closing prices

We maintain our Neutral stance on the utility sector amid higher regulatory risk factors. We lower our earnings forecasts for major SPP stocks to reflect the recent tariff cut and the new outlook. BCPG and BPP remain our top sector picks.

A deeper cut for SPPs

The new government has cut the national electricity tariff for Sep-Dec 2023 to Bt3.99/kWh from the previous announcement of Bt4.45 and from Bt4.70 in May-Aug 2023. We project this to reduce the spark margin of SPPs' electricity sales to industrial users (IUs) to Bt1.1/kWh in 4Q23F, from Bt1.5/1.4 in 3Q23F and 1H23. The normalized spark margin for IU sales was Bt1.2/kWh pre-Russia-Ukraine conflict, and it dropped to Bt0.3 in 2022 as the government decided not to pass on fuel price spikes to electricity users. The margin expansion in 1H23, on falling gas prices, allowed SPPs and EGAT to partially recoup their losses in 2022. However, as the government's intention is clear to subsidize electricity prices, we lower SPPs' earnings (Exhibit 5) due to this regulatory risk.

IPPs remain safe in our view

As for similar regulatory risks to IPPs, we see them as far less for three reasons. *First*, revisions to already signed PPAs are very difficult as they involve numerous laws and need approval from many parties and have repercussions on the country's reputation. *Second*, the leeway to cut electricity prices by changing those contracts is very low, at 2-5% of the current tariff on our estimate, which isn't worth the effort. *Third*, 7.5GW of IPP contracts will expire over 2024-28, which would organically lessen the impact from the fixed costs of those idle plants on electricity prices.

Renewable biddings to continue

We expect the new government to continue bidding out renewable PPAs. Some 5.2GW of renewable biddings were held in April 2023, and we expect a bid for another 3.6GW quota in early 2024. Feed-in tariffs for solar and wind projects, bid out in April, were Bt2.2/3.1kWh, respectively. These are low compared to the fuel costs for electricity generation at Bt2.6/kWh for natural gas and Bt3.0/kWh for coal. Therefore, we believe Thailand could still grow renewable capacity to achieve its pledged emission targets without hurting its long-term electricity price.

BCPG and BPP are our top picks

We keep our NEUTRAL stance on the utility sector for its limited growth outlook and higher regulatory risk. We downgrade BGRIM to HOLD (from Buy) on a peaking SPP margin. BCPG and BPP remain our top picks as their turnaround stories are secured by completed M&A deals. GULF looks overly punished by concerns over IPP contracts, in our view.

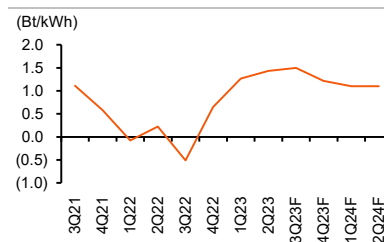


NUTTAPOP PRASITSUKSANT

662 – 483 8296

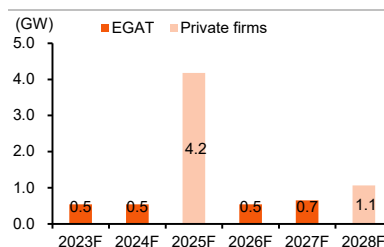
nuttapol.pra@thanachartsec.co.th

Peaking SPP Margin



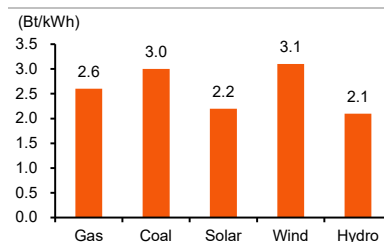
Sources: ERC; Thanachart estimates

IPP Plants Scheduled To Expire



Sources: ERC; Thanachart estimates

Current Electricity Cost For EGAT



Source: Thanachart estimates

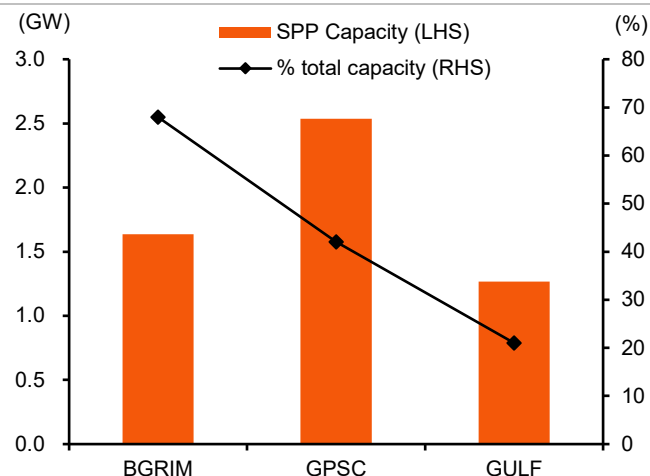
A deeper cut for SPPs

We see increasing risk to SPPs after government electricity tariff cuts

The recent national electricity tariff cut by the new government to Bt3.99/kWh for September to December 2023 (from Bt4.45/kWh in the earlier announcement by previous cabinet) poses a significant margin risk to power plants under small power producer (SPP) contracts, in our view.

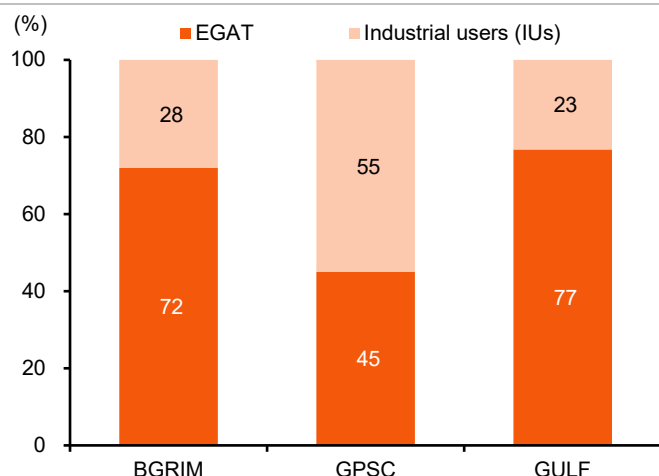
We recap here that SPP projects have two portions of electricity sales. Some 70-85% of the volume is sold to the national grid via the Electricity Generating Authority of Thailand (EGAT) as an off-taker, with fuel costs fully passed through. Thus, there is no impact from either tariff price adjustments or the movement of fuel prices. Another 15-30% portion is sold to industrial users (IUs) under private power purchase agreement (private-PPA) contracts, which usually set tariff prices at some discount to the national tariff. Therefore, the mismatch between national tariff adjustments and actual changes in fuel prices hits SPPs' IU sale margins, i.e., the IU spark margin fell sharply to Bt0.3/kWh in 2022 (vs. the Bt1.2/kWh average spark margin during 2016-21) when the government decided to limit tariff hikes amid surging global fuel prices.

Ex 1: Major SPP Stocks Under Our Coverage



Sources: Company data, Thanachart estimates

Ex 2: Each Has A Different Mix Of Electricity Off-takers



Sources: Company data, Thanachart estimates

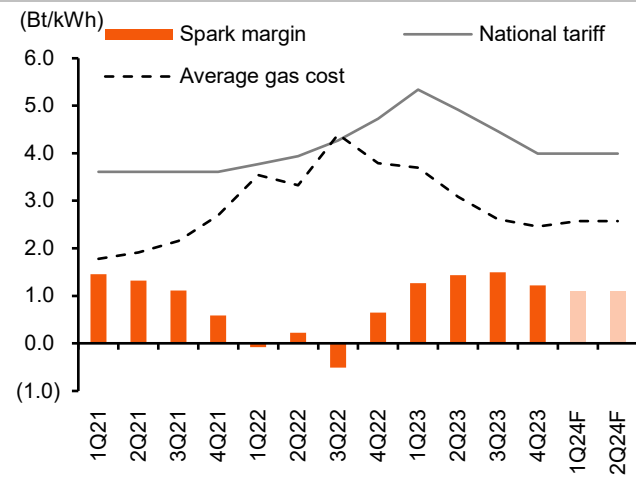
A sharp cut in 4Q23F hits SPPs' margin directly

First, we estimate the tariff cut will lower the spark margin (average selling price – fuel cost per unit) of SPPs' electricity sales to IUs to Bt1.1/kWh in 4Q23F, from a peak of Bt1.5/kWh in 3Q23F and Bt1.4/kWh in 1H23. This is vs. our bullish view earlier that the margin would be inflated in 2023-24F since we expected the national electricity tariff to remain high despite falling fuel prices so that EGAT could gain extra margin to gradually pay down its Bt120bn financial burden resulting from its electricity price subsidy during 2021-22.

We no longer expect an inflated SPP's margin in near term

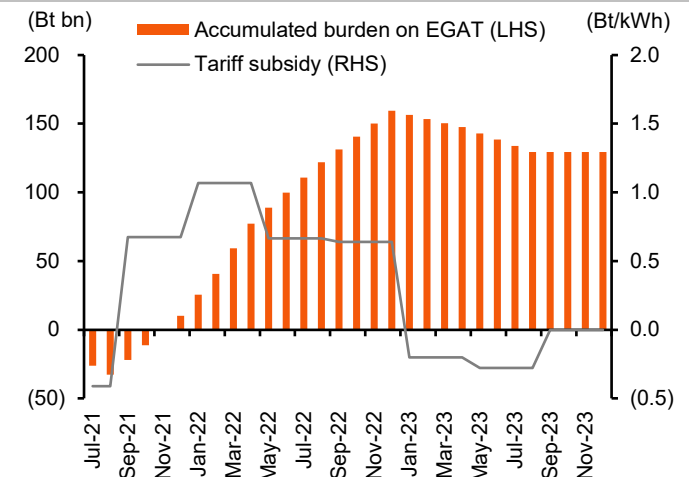
Second, given the strong intention of the new government to suppress electricity tariff prices as one of its key agendas to boost local consumption by reducing the cost of living for people, we no longer expect an inflated margin at SPP plants and we cut our IU spark margin assumptions to Bt1.1/1.2/kWh in 2024-25F (from Bt1.3/1.2/kWh).

Ex 3: SPPs' Margin Looks To Have Peaked In 3Q23F



Sources: Company data, Thanachart estimates

Ex 4: EGAT's Financial Burden Temporarily Untouched



Sources: Energy Regulatory Commission (ERC), Thanachart estimates

Higher risk of margin squeeze next year as a tariff hike is now unlikely

Lastly, this tariff cut round already requires financial support from the PTT group, with its role as the national energy company and sole gas distributor in Thailand, in pegging the domestic gas pool price at Bt305/mmbtu from September to December to prevent any additional financial burden on EGAT, which has already exceeded its borrowing limit. This, to us, implies that the new government has already activated every tool available to keep the national electricity tariff low. As we believe the government will refrain from raising the electricity tariff even if fuel prices rise again to maintain its popularity, we believe any natural gas price spike in the near future could trigger another margin squeeze for SPPs.

Ex 5: Key Assumption Changes

	2023F	2024F	2025F
National electricity tariff (Bt/kWh)			
New	4.68	4.00	3.80
Old	4.83	4.20	4.35
Change (%)	(3.1)	(4.8)	(12.6)
Domestic gas pool price (Bt/mmbtu)			
New	400	320	320
Old	395	325	340
Change (%)	1.3	(1.5)	(5.9)
IU sale spark margin (Bt/kWh)			
New	1.29	1.24	1.19
Old	1.36	1.29	1.24
Change (%)	(5.3)	(3.6)	(3.6)
BGRIM's norm profit (Bt m)			
New	2,216	2,790	2,984
Old	2,594	3,313	3,490
Change (%)	(14.6)	(15.8)	(14.5)
GPSC's norm profit (Bt m)			
New	4,200	5,839	7,582
Old	6,220	7,281	7,813
Change (%)	(32.5)	(19.8)	(3.0)

Sources: Thanachart estimates

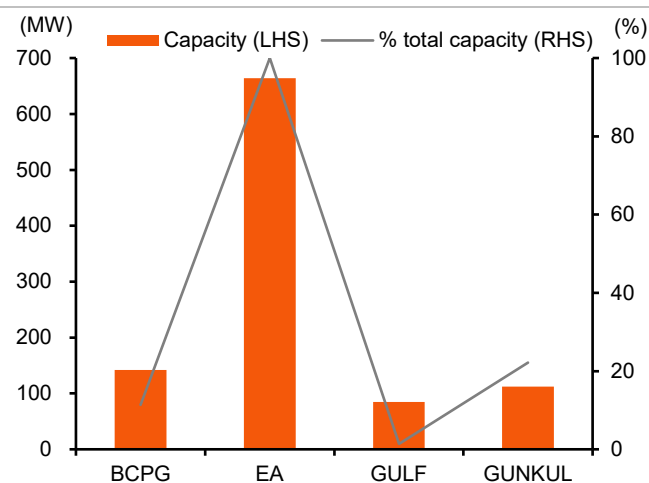
Due to emerging risk on SPPs, we downgrade BGRIM to HOLD

Impacts on subsidized renewable power plants relatively small

Amid the peaking of the margin for SPP projects and the looming risk of another margin hiccup, we downgrade BGRIM to HOLD (from Buy) as its earnings are most sensitive (in the sector) to SPP margin volatility. GPSC and GULF are also affected, but we project the hit to be offset by operational improvements in other business units and capacity growth.

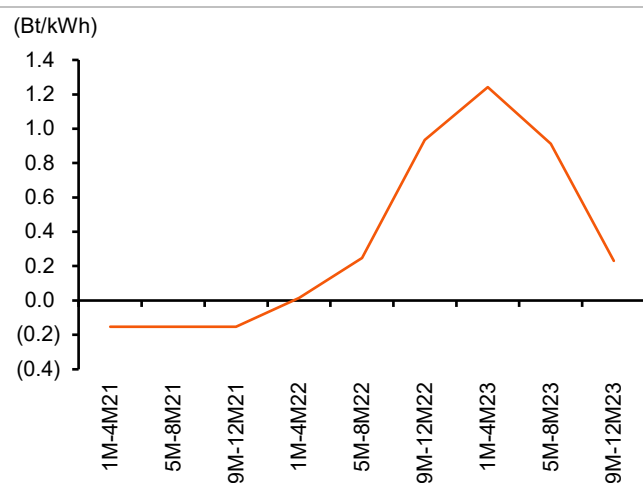
Note that subsidized renewables plants, both solar and wind power projects under the “adders” scheme, are also impacted by this tariff reduction since the electricity selling price formula is linked to the Ft value (tariff revenue = base tariff + Ft + adders). BCPG Pcl (BCPG TB, BUY, Bt9.50), Energy Absolute Pcl (EA TB, BUY, Bt50.50), and Gunkul Engineering Pcl (GUNKUL TB, BUY, Bt3.12) are three utility stocks under our coverage that have sizable capacity of subsidized (adders) renewable power projects in their portfolio. However, we estimate the impact to be relatively small vs. their earnings base.

Ex 6: Stocks With Sizable Subsidized Renewable Projects



Sources: Company data, Thanachart estimates

Ex 7: Historical Ft Value



Sources: ERC

IPPs remain safe in our view

Market concern over IPP contracts is excessive in our view

We believe the market has been overly concerned about the initiative by the new government to revoke or negotiate for lower fixed payments to power plants under independent power producer (IPP) contracts as another approach to reduce national electricity prices. In those contracts, EGAT has to pay fixed recurring revenue, the so-called availability payment (AP), to every IPP plant throughout their 25-year contract life, even if they are not asked to dispatch electricity. Cancelling or reducing the amount of AP payments to IPPs, therefore, means lower total electricity generation costs for EGAT and, therefore, a lower national electricity tariff. Having said that, we see this risk as unlikely to materialize based on three reasons.

We believe signed B2G contracts are difficult to be adjusted

First, revisions or sudden cancellations of already signed public-private contracts (including these PPAs) are difficult since numerous laws and regulations are involved, and a series of approvals are required from many related parties (i.e., official entities, regulators, lenders, and the private firms themselves as a counterparty). We also believe rash modifications of government-backed contracts would create repercussions to the credibility and reputation of the country.

Benefits look not worth the complications

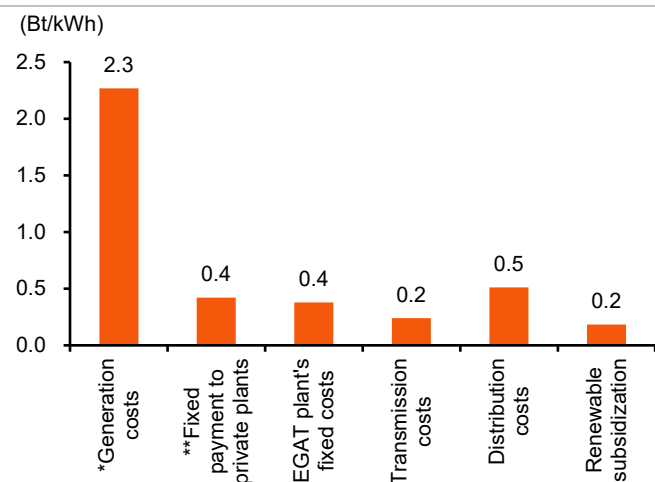
Second, fixed costs from major power plants (AP paid to IPPs, CP paid to SPPs, and fixed costs of large power plants operated by EGAT itself) comprise Bt0.8/kWh or 20% of the national tariff price currently. Having said that, we believe the benefits from revising IPP contracts could reduce the tariff price by at most Bt0.2/kWh (5% from the current price),

which doesn't look to be worth the effort of going through the series of legal processes with the potential of the government being sued by the private operators.

Many old IPP projects are set to expire over next five years

Lastly, 7.5GW of capacity of IPP plants and EGAT's major power plants are scheduled to expire over the next five years (2023-28). This would organically ease the burden of fixed costs and fixed payments paid to those old (thus idle) plants to the country's total electricity generation costs without having to negotiate existing contracts, which may need to compensate private operators with contract extensions that drag the issue on even further.

Ex 8: Thailand Electricity Tariff Breakdown (4Q23F)

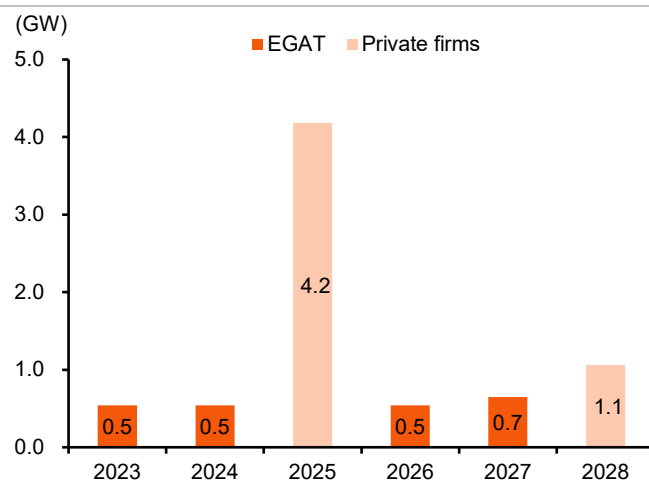


Sources: ERC, Thanachart estimates

Note: * Including fuel costs for electricity generation and the cost of electricity purchased from private plants and power plants overseas.

**Availability payment (AP) for IPPs, and Capacity payment (CP) for SPPs.

Ex 9: 7.5GW Of IPP Plants Scheduled To Expire In 2023-28



Sources: ERC

GULF is overly punished in our view

We see GULF's share price as being overly punished by this IPP concern. Its 25x 2024F PE now looks attractive to us as we maintain our estimate of a 22% EPS CAGR for GULF over 2024-26F, supported by its continuous capacity expansion.

We expect a bid for 3.6GW of renewable PPAs in early 2024

We expect another bidding round for renewable PPAs, i.e., "RE proposal phase 2", to be held in early 2024. Based on the already announced bidding scheme since the time of the previous government, the capacity quota for this coming bid totals 3.6GW (vs. a 5.2GW capacity quota for the phase 1 bidding in April 2023), comprising 2.6GW of solar power and 1.0GW of wind power projects. We see the feed-in-tariff offers for these new renewable projects, Bt2.2/kWh for solar and Bt3.1 for wind, are now at comparable levels to fuel cost for electricity generation from conventional power plants (Bt2.6/kWh for natural gas and Bt3.0 for coal). Therefore, these renewable plants could replace fossil-based power plants to take Thailand closer to its pledged emission targets of 1) lifting renewable sources to 50% of the country's electricity generation, 2) carbon neutrality by 2050, and 3) net-zero greenhouse gas emissions by 2065 without pressuring the national tariff prices.

But additional value from those PPAs looks small for the listed companies

Despite the quota looking sizable, we expect it to be more evenly shared among major and listed utility firms than in the previous bidding round. This means we believe there would be no firm that wins a significant amount of capacity compared to its existing portfolio size. We, therefore, have no preferred picks for this theme.

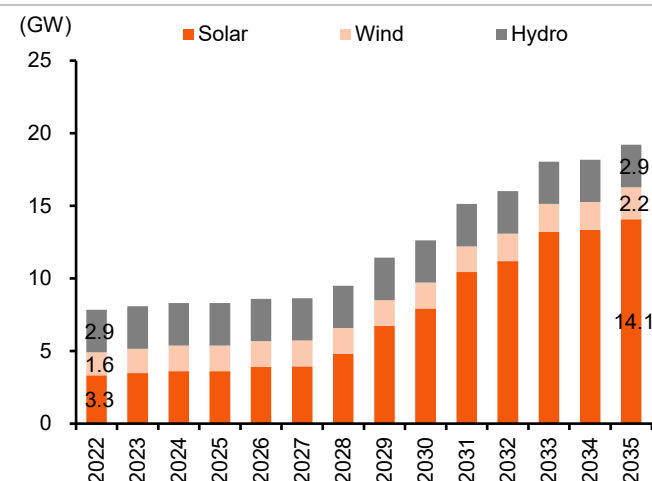
Ex 10: Renewable Capacity Quota In RE Proposal Biddings

		Phase 1 (Early 2023)	Phase 2 (Likely early 2024)
Solar	Capacity (MW)	2,328	2,632
	Feed-in-tariff (Bt/kWh)	2.17	2.17*
Solar + ESS	Capacity (MW)	1,000	-
	Feed-in-tariff (Bt/kWh)	2.83	-
Wind	Capacity (MW)	1,500	1,000
	Feed-in-tariff (Bt/kWh)	3.10	3.10*
Biomass	Capacity (MW)	375	7
	Feed-in-tariff (Bt/kWh)	2.07	2.07*
Total capacity quota (MW)		5,203	3,639

Sources: Company data, Thanachart estimates*

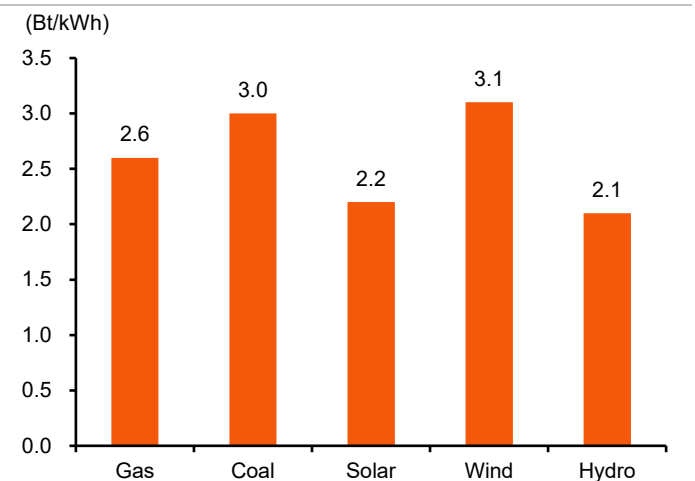
Note: ESS = Energy storage system

Ex 11: Thailand's Renewable Capacity Targets



Sources: Power Development Plan 2018, revision 1

Ex 12: Competitive Electricity Cost From Renewables



Sources: ERC, Thanachart estimates

BCPG and BPP are our top picks

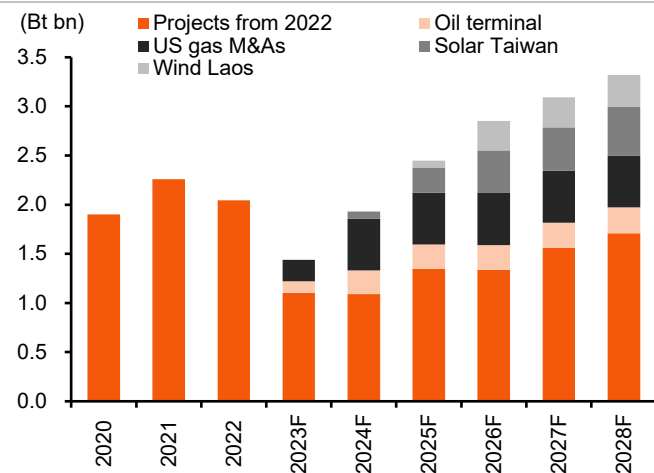
We stay NEUTRAL on the sector, seeing muted growth and rising risks

We maintain our NEUTRAL stance on the Thai utility sector despite the sector having underperformed the market over the past few months. Capacity growth potential in the domestic market remains limited, and now we see increasing regulatory risks adding a new overhang. BCPG and BPP remain our top picks, given their low exposure to the domestic market with a secured earnings turnaround story after the completion of US gas power M&As.

We pick BCPG for its M&A-driven earnings turnaround story

BCPG: We expect its earnings to turn around to 34/27/17% growth in 2024-26F after two years of decline due to the expiry of its subsidy revenues (adders). We forecast profit contributions from its new investments, i.e., an oil terminal facility in Thailand and the acquisition of a total of 857MW of gas-fired power projects in the US, to more than offset the negative impact from the expiring adders next year. Then, we expect the commencement of operations of developing renewable power projects (469MW of solar farms in Taiwan and 290MW of wind project in Laos) to drive growth further in 2025-26F. BCPG is trading at a 14x PE with a 4% dividend yield in 2024F, on our estimates. (See our report: BCPG – The time is now, dated 16 August 2023).

Ex 13: US Gas Power M&As Drive BCPG's Turnaround



Sources: Company data, Thanachart estimates

Ex 14: BCPG's Valuation Table

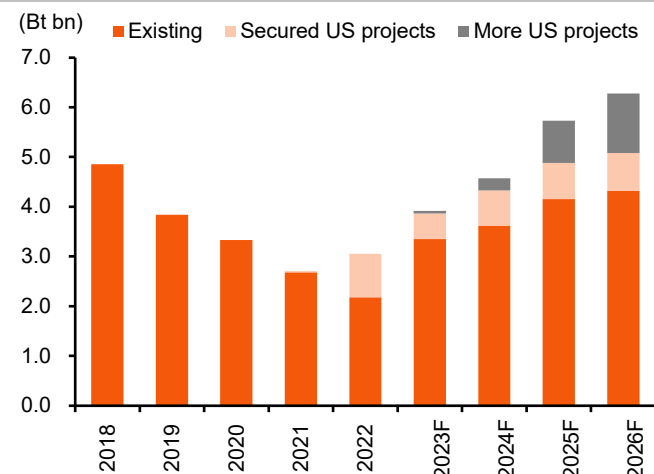
Y/E Dec (Bt m)	2022A	2023F	2024F	2025F
Sales	5,405	4,981	6,144	8,013
Net profit	2,630	1,436	1,927	2,447
Norm profit	2,044	1,436	1,927	2,447
Norm EPS (Bt)	0.7	0.5	0.7	0.8
Norm EPS grw (%)	(9.5)	(29.7)	34.2	27.0
Norm PE (x)	13.5	19.1	14.3	11.2
EV/EBITDA (x)	7.4	14.0	13.8	12.1
P/BV (x)	0.9	0.9	0.9	0.9
Div yield (%)	3.8	3.8	3.8	3.8
ROE (%)	7.2	4.9	6.4	7.9
Net D/E (%)	14.0	78.8	113.0	143.4

Sources: Company data, Thanachart estimates

We like BPP's attractive valuation with a decent earnings growth trend

BPP: We estimate BPP's earnings to jump 55% y-y this year and another 12/10% growth in 2024-25F. Recovering profitability at its coal-fired power plants in China is the main recovery factor. Completion of the M&A deal for the 378MW (equity-capacity) Temple-II gas power plant in Texas in July 2023 looks set to propel the growth further in the near term. We regard its trading multiple as attractive at 11x PE with a 5% dividend in 2024F, based on our numbers. (See our report: BPP – More solid footprint in the US, dated 21 July 2023).

Ex 15: BPP's Organic Recovery With Inorganic Boosts



Sources: Company data, Thanachart estimates

Ex 16: BPP's Valuation Table

Y/E Dec (Bt m)	2022A	2023F	2024F	2025F
Sales	24,501	25,295	28,220	27,925
Net profit	5,739	3,368	3,780	4,158
Norm profit	2,178	3,368	3,780	4,158
Norm EPS (Bt)	0.7	1.1	1.2	1.4
Norm EPS grw (%)	(18.7)	54.6	12.2	10.0
Norm PE (x)	19.0	12.3	11.0	10.0
EV/EBITDA (x)	57.2	31.2	23.0	25.9
P/BV (x)	0.9	0.8	0.8	0.8
Div yield (%)	5.1	5.1	5.1	5.1
ROE (%)	4.6	6.9	7.5	7.9
Net D/E (%)	22.0	18.5	31.1	40.1

Sources: Company data, Thanachart estimates

Ex 17: Sector Valuation Comparison

		BCPG	BGRIM	BPP	GPSC	GULF	Industry
Rating		BUY	HOLD	BUY	BUY	BUY	
Target price (Bt)	Thanachart	18.00	31.00	20.00	52.00	58.00	
	Consensus	14.22	43.53	17.50	68.76	58.18	
Consensus rec.	BUY	7	18	3	15	12	
	HOLD	0	2	2	5	3	
	SELL	0	0	0	0	0	
Sales (Bt m)	2022	5,405	62,395	24,501	123,685	94,151	310,138
	2023F	4,981	56,649	25,295	108,085	114,173	309,182
	2024F	6,144	54,497	28,220	89,579	152,747	331,187
	2025F	8,013	55,389	27,925	78,618	171,684	341,629
Norm profits (Bt m)	2022	2,044	159	2,178	218	11,528	16,127
	2023F	1,436	2,216	3,368	4,200	16,141	27,361
	2024F	1,927	2,790	3,780	5,839	21,064	35,400
	2025F	2,447	2,984	4,158	7,582	25,888	43,059
Sales growth (%)	2022	15.8	33.8	261.1	65.2	98.3	94.9
	2023F	(7.9)	(9.2)	3.2	(12.6)	21.3	(1.0)
	2024F	23.4	(3.8)	11.6	(17.1)	33.8	9.6
	2025F	30.4	1.6	(1.0)	(12.2)	12.4	6.2
Norm EPS growth (%)	2022	(9.5)	na	(18.7)	(96.8)	30.2	(23.7)
	2023F	(29.7)	na	54.6	1,829.0	40.0	21.6
	2024F	34.2	21.7	12.2	39.0	30.5	27.5
	2025F	27.0	10.0	10.0	29.8	22.9	19.9
Operating margin (%)	2022	51.6	7.2	(1.3)	1.2	17.5	15.2
	2023F	38.7	13.8	0.6	7.1	18.2	15.7
	2024F	36.9	15.7	3.1	9.8	16.8	16.5
	2025F	37.8	15.7	3.0	11.7	16.9	17.0
ROE (%)	2022	7.2	0.5	4.6	0.2	11.1	4.7
	2023F	4.9	6.5	6.9	4.0	14.2	7.3
	2024F	6.4	7.1	7.5	5.4	17.4	8.8
	2025F	7.9	7.5	7.9	6.8	19.8	10.0
Dividend yield (%)	2022	3.8	0.2	5.1	1.2	1.3	2.3
	2023F	3.8	1.1	5.1	1.9	1.9	2.8
	2024F	3.8	1.3	5.1	2.9	2.4	3.1
	2025F	3.8	1.4	5.1	3.7	3.0	3.4
P/BV (x)	2022	0.9	2.5	0.9	1.2	4.7	2.0
	2023F	0.9	1.9	0.8	1.1	4.5	1.9
	2024F	0.9	1.9	0.8	1.1	4.2	1.8
	2025F	0.9	1.9	0.8	1.1	3.8	1.7
Norm PE (x)	2022	13.5	(308.3)	19.0	560.1	45.3	65.9
	2023F	19.1	46.8	12.3	29.0	32.3	27.9
	2024F	14.3	38.5	11.0	20.9	24.8	21.9
	2025F	11.2	35.0	10.0	16.1	20.2	18.5
EV/EBITDA (x)	2022	7.4	16.5	57.2	22.7	33.9	27.5
	2023F	14.0	11.4	31.2	13.6	27.7	19.6
	2024F	13.8	10.5	23.0	11.9	22.8	16.4
	2025F	12.1	10.6	25.9	11.7	20.2	16.1
Net D/E (x)	2022	0.1	2.0	0.2	1.1	1.5	1.0
	2023F	0.8	1.5	0.2	0.9	1.7	1.0
	2024F	1.1	1.4	0.3	0.8	1.7	1.1
	2025F	1.4	1.4	0.4	0.8	1.5	1.1

Sources: Company data; Thanachart estimates

Valuation Comparison

Ex 18: Comparison With Regional Peers

Name	BBG code	Country	EPS growth		— PE —		— P/BV —		—EV/EBITDA—		— Div yield —	
			23F	24F	23F	24F	23F	24F	23F	24F	23F	24F
			(%)	(%)	(x)	(x)	(x)	(x)	(x)	(x)	(%)	(%)
Cheung Kong Infrastructure	1038 HK	Hong Kong	(10.3)	6.2	11.2	10.5	0.7	0.7	36.8	35.1	6.9	6.9
China Power Int'l	2380 HK	Hong Kong	64.8	45.0	8.9	6.2	0.8	0.7	9.0	6.8	4.9	6.4
China Resources Power	836 HK	Hong Kong	55.9	14.9	5.4	4.7	0.8	0.7	6.1	5.2	7.2	8.7
CLP Holdings	2 HK	Hong Kong	82.9	12.4	13.2	11.8	1.3	1.3	9.0	8.4	5.5	5.6
Hongkong Electric Holdings	6 HK	Hong Kong	(7.9)	5.4	13.2	12.6	0.9	0.9	61.3	60.4	7.4	7.4
Huaneng Power	902 HK	Hong Kong	na	14.2	5.0	4.4	0.6	0.5	7.8	6.9	8.5	9.4
Tata Power	TPWR IN	India	81.0	(9.7)	23.1	25.5	3.2	2.7	15.9	13.2	0.8	0.8
Tenaga Nasional	TNB MK	Malaysia	(9.0)	12.5	14.0	12.5	1.0	0.9	6.8	6.8	4.3	4.7
YTL Corp	YTL MK	Malaysia	na	64.4	20.5	12.5	1.2	1.1	10.6	7.5	2.3	4.1
YTL Power	YTLP MK	Malaysia	na	55.0	12.1	7.8	1.1	0.9	9.5	7.7	2.9	3.7
Manila Electric	MER PM	Philippines	21.5	(0.9)	13.0	13.2	3.5	3.2	10.1	9.3	5.1	5.4
BCPG Pcl *	BCPG TB	Thailand	(29.7)	34.2	19.1	14.3	0.9	0.9	14.0	13.8	3.8	3.8
B.Grimm Power Pcl *	BGRIM TB	Thailand	na	21.7	46.8	38.5	1.9	1.9	11.4	10.5	1.1	1.3
Banpu Power Pcl *	BPP TB	Thailand	54.6	12.2	12.3	11.0	0.8	0.8	31.2	23.0	5.1	5.1
CK Power Pcl *	CKP TB	Thailand	(30.4)	11.7	15.1	13.6	1.0	0.9	10.9	10.5	2.8	2.8
EA Pcl*	EA TB	Thailand	55.2	2.6	21.1	20.6	4.1	3.6	16.1	15.6	1.4	1.5
Electricity Generating *	EGCO TB	Thailand	(23.7)	(3.2)	6.5	6.7	0.5	0.5	13.6	13.8	5.4	5.4
Global Power Synergy *	GPSC TB	Thailand	1,829.0	39.0	29.0	20.9	1.1	1.1	13.6	11.9	1.9	2.9
Gulf Energy Dev. Pcl *	GULF TB	Thailand	40.0	30.5	32.3	24.8	4.5	4.2	27.7	22.8	1.9	2.4
Gunkul Engineering *	GUNKUL TB	Thailand	47.8	9.2	15.1	13.8	1.8	1.7	15.0	13.3	2.6	2.9
RATCH Group *	RATCH TB	Thailand	0.7	33.0	9.8	7.4	0.7	0.6	17.2	16.0	4.6	6.1
Average			24.6	18.6	15.9	13.6	1.6	1.4	17.0	15.3	4.2	4.7

Sources: Bloomberg, * Thanachart estimates

Based on 28 September 2023 closing prices

STOCK PERFORMANCE

	Absolute (%)				Rel SET (%)			
	1M	3M	12M	YTD	1M	3M	12M	YTD
SET Index	(5.2)	1.0	(7.3)	(11.2)	—	—	—	—
Utilities Sector	(14.9)	(6.1)	(24.8)	(28.8)	(9.8)	(7.1)	(17.5)	(17.7)
BCPG	(7.8)	6.1	3.3	(6.9)	(2.6)	5.1	10.6	4.3
BGRIM	(23.0)	(16.8)	(18.6)	(28.3)	(17.8)	(17.8)	(11.2)	(17.1)
BPP	(10.5)	(4.2)	(5.6)	(17.1)	(5.4)	(5.3)	1.8	(5.9)
CKP	(10.0)	(4.1)	(37.1)	(28.9)	(4.8)	(5.2)	(29.8)	(17.8)
EA	(21.4)	(3.3)	(43.3)	(47.9)	(16.2)	(4.4)	(35.9)	(36.8)
EGCO	(12.4)	(8.4)	(28.8)	(30.4)	(7.2)	(9.4)	(21.5)	(19.3)
GPSC	(22.4)	(19.5)	(35.7)	(40.8)	(17.2)	(20.6)	(28.4)	(29.6)
GULF	(10.1)	0.6	(15.6)	(19.5)	(4.9)	(0.5)	(8.3)	(8.3)
GUNKUL	(16.1)	3.3	(40.6)	(40.6)	(11.0)	2.3	(33.2)	(29.4)
RATCH	(15.8)	(14.6)	(26.3)	(28.1)	(10.6)	(15.6)	(19.0)	(16.9)

Source: Bloomberg

SECTOR - SWOT ANALYSIS

S — Strength

- Defensive as agreed revenues on PPAs are predetermined.
- Changes in fuel prices are passed through via PPAs for IPPs and mostly by formulae adjustments for SPPs.

O — Opportunity

- Huge investment potential in neighboring countries.
- Government supports and subsidizes renewable energy.

W — Weakness

- Most IPPs set their tariff as front-end loaded, so tariffs for ageing plants, especially ones approaching expiry, are set to fall drastically.
- There is sometimes intervention in the Ft adjustment.

T — Threat

- Local communities may protest against new projects.
- Increased regulatory risk on environmental concerns.

REGIONAL COMPARISON

Name	—EPS growth—		— PE —		— P/BV —		— EV/EBITDA —		— Div. Yield —	
	23F	24F	23F	24F	23F	24F	23F	24F	23F	24F
	(%)	(%)	(x)	(x)	(x)	(x)	(x)	(x)	(%)	(%)
Hong Kong	37.1	16.3	9.5	8.4	0.9	0.8	21.7	20.5	6.7	7.4
India	81.0	(9.7)	23.1	25.5	3.2	2.7	15.9	13.2	0.8	0.8
Malaysia	(9.0)	44.0	15.6	10.9	1.1	1.0	9.0	7.3	3.2	4.2
Philippines	21.5	(0.9)	13.0	13.2	3.5	3.2	10.1	9.3	5.1	5.4
Thailand	215.9	19.1	20.7	17.1	1.7	1.6	17.1	15.1	3.1	3.4
Average	69.3	13.8	16.4	15.0	2.1	1.9	14.7	13.1	3.8	4.2

Sources: Bloomberg Consensus

Note: * Thanachart estimate – using normalized EPS

HOLD (From: BUY)

Change in Recommendation

TP: Bt 31.00

Upside : 8.8%

(From: Bt 40.00)

29 SEPTEMBER 2023**B.Grimm Power Pcl** (BGRIM TB)**Peaked margin**

We downgrade our call on BGRIM to HOLD. Not only does the recent electricity tariff cut hurts its margin, we also see this reflecting the new government's strong intention to keep electricity prices low. We lower our earnings and cut our 2024F TP for BGRIM to Bt31/share.

**NUTTAPOL PRASITSUKSANT**

662 – 483 8296

nuttapol.pra@thanachartsec.co.th

Downgrading to HOLD

This report is a part of our report: *Utilities Sector – Regulatory risks*, dated 29 September 2023. We downgrade BGRIM to HOLD (from Buy) and lower our DCF-derived SOTP-based 12-month TP (2024F base year) to Bt31/share (from Bt40). *First*, we cut our earnings estimates for BGRIM by 15-16% in 2023-25F as we no longer expect an inflated margin for SPP plants as the new government has shown a strong intention to keep electricity prices low. *Second*, BGRIM's capacity growth looks set to fall to 8% p.a. in 2023-25F (from 16% p.a. in 2018-23). *Third*, after our earnings cuts and amid the higher regulatory risks, we see BGRIM as fairly priced at a 39x 2024F PE multiple against its 28% EPS CAGR over 2024-26F. *Lastly*, we like BGRIM's investments in greenfield renewable projects oversea, but their profit contributions likely won't materialize until 2026F.

Cutting our earnings

We bring down our earnings estimates for BGRIM by 15% in 2023F after the electricity tariff cut by the new government to Bt3.99/kWh in September-December 2023 (from Bt4.45 announced earlier by the previous government). We project BGRIM's spark margin for electricity sales to industrial users from its SPP plants to fall to Bt1.1/kWh in 4Q23F from a peak of Bt1.5/kWh in 3Q23F. We also lower our earnings by 16/15% in 2024-25F as we believe the government will keep the electricity tariff low, and thus now assume only a normalized spark margin for BGRIM's electricity sales to IUs of Bt1.2/kWh in 2024-25F, vs. our expectation of inflated margin levels of Bt1.3/1.2/kWh earlier.

Slower capacity growth in the near term

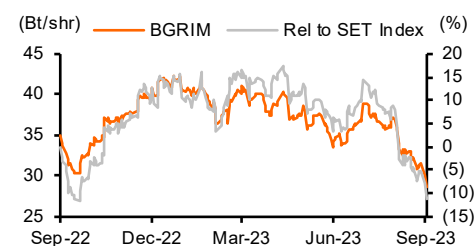
We project slower capacity growth for BGRIM of 11/5% in 2024-25F (from 16% p.a. over 2018-23). The growth is based on its secured projects of 1) 196MW equity-capacity of the BGPAT2-3 SPP project, set to commence operations in late 2023, 2) an 80MW private gas-fired power plant for U-Tapao airport, and 3) a total of 133MW renewable projects in South Korea and ASEAN. These translate into 22/10% earnings growth in 2024-25F.

Still a long-term growth stock

We continue to like BGRIM's long-term growth direction. Although the company targets to aggressively invest Bt200bn during 2024-30 in up to 7GW of renewable projects globally, we have yet to fully factor these into our valuation as we are conservatively waiting for the official project announcements or secured PPAs. We only include in our TP a part of BGRIM's ambitious plan for 560MW equity-capacity of offshore wind power projects in South Korea, which we value at Bt9.2 per BGRIM share.

COMPANY VALUATION

Y/E Dec (Bt m)	2022A	2023F	2024F	2025F
Sales	62,395	56,649	54,497	55,389
Net profit	(1,244)	2,216	2,790	2,984
Consensus NP	—	2,336	2,906	3,609
Diff frm cons (%)	—	(5.1)	(4.0)	(17.3)
Norm profit	159	2,216	2,790	2,984
Prev. Norm profit	—	2,594	3,313	3,490
Chg frm prev (%)	—	(14.6)	(15.8)	(14.5)
Norm EPS (Bt)	(0.1)	0.6	0.7	0.8
Norm EPS grw (%)	na	na	21.7	10.0
Norm PE (x)	na	46.8	38.5	35.0
EV/EBITDA (x)	16.5	11.4	10.5	10.6
P/BV (x)	2.5	1.9	1.9	1.9
Div yield (%)	0.2	1.1	1.3	1.4
ROE (%)	0.5	6.5	7.1	7.5
Net D/E (%)	202.9	148.9	139.9	137.5

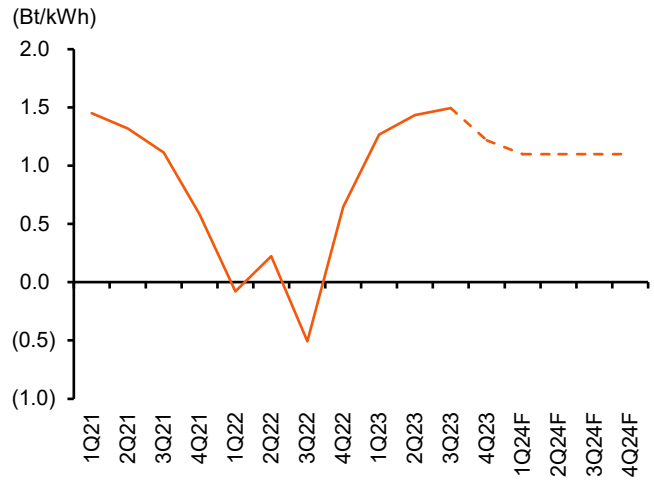
PRICE PERFORMANCE**COMPANY INFORMATION**

Price as of 28-Sep-23 (Bt)	28.50
Market Cap (US\$ m)	2,021.4
Listed Shares (m shares)	2,606.9
Free Float (%)	31.6
Avg Daily Turnover (US\$ m)	8.5
12M Price H/L (Bt)	42.25/30.00
Sector	Utilities
Major Shareholder	B.Grimm Group 18.39%

Sources: Bloomberg, Company data, Thanachart estimates

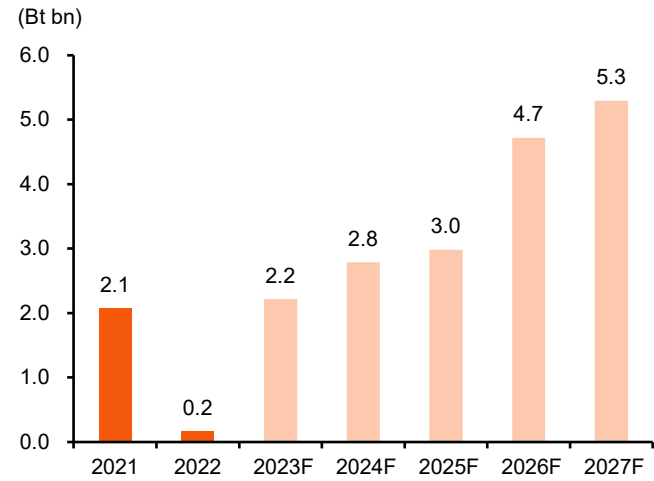
ESG Summary Report P16

Ex 1: Peaking Spark Margin For IU Electricity Sales



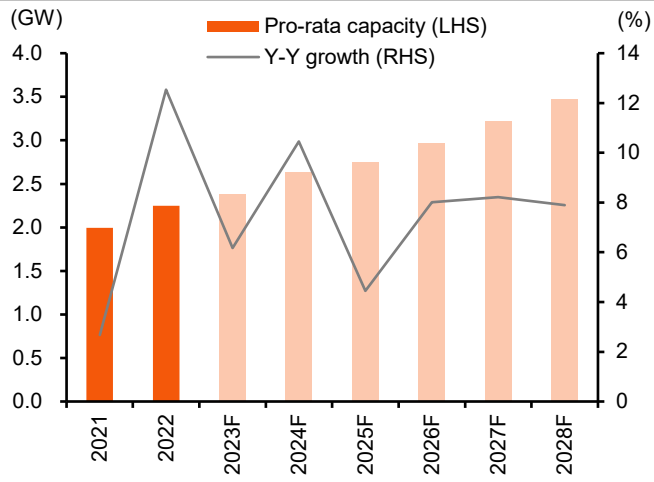
Sources: Company data, Thanachart estimates

Ex 2: Long-Term Earnings Growth Intact



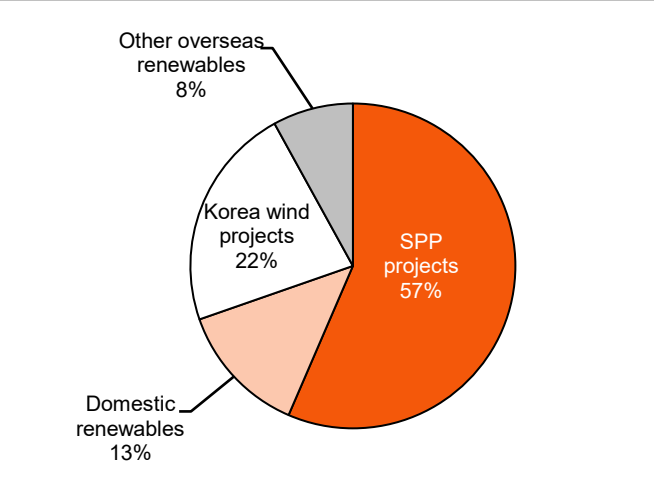
Sources: Company data, Thanachart estimates

Ex 3: Continuous Capacity Growth



Sources: Company data, Thanachart estimates

Ex 4: SOTP Valuation Breakdown By Segments



Source: Thanachart estimates

Ex 5: Key Assumption Changes

	2023F	2024F	2025F
Norm profit (Bt m)			
New	2,216	2,790	2,984
Old	2,594	3,313	3,490
Change (%)	(14.6)	(15.8)	(14.5)
National electricity tariff (Bt/kWh)			
New	4.68	4.00	3.80
Old	4.83	4.20	4.35
Change (%)	(3.1)	(4.8)	(12.6)
Gas pool price (Bt/mmbtu)			
New	400.0	320.0	320.0
Old	395.0	325.0	340.0
Change (%)	1.3	(1.5)	(5.9)
IU sale's spark margin (Bt/kWh)			
New	1.29	1.24	1.19
Old	1.36	1.29	1.24
Change (%)	(5.3)	(3.6)	(3.6)

Sources: Thanachart estimates

Ex 6: Our DCF-derived Sum-Of-The-Parts (SOTP)-Based 12-month TP Calculation

	Valuation method	WACC (%)	Value per BGRIM share (Bt)
Operating gas-fired SPP plants (ABP, ABPR, BPLC, BPWHA, BIP, BPAM, BGPAT, UVBGP)	DCF	5.2 - 6.4%	18.3
Developing projects (BGPR, U-Tapao airport)	DCF	5.5 - 6.5%	4.9
Renewable projects			18.0
Solar - Thailand	DCF	5.8%	1.2
Solar - Vietnam	DCF	6.7%	1.1
Solar - Malaysia (reNIKOLA)	DCF	6.6%	1.0
Solar - Cambodia	DCF	7.1%	0.7
Wind - Thailand	DCF	5.1%	0.5
Hydro - Laos	DCF	7.6%	1.0
Renewables - South Korea	DCF	6.8%	9.2
Other renewables oversea	DCF	6.0 - 7.2%	3.3
Net debt & others			(10.3)
Grand total			31.0

Source: Thanachart estimates

Valuation Comparison

Ex 7: Comparison With Regional Peers

Name	BBG code	Country	EPS growth		PE		P/BV		EV/EBITDA		Div yield	
			23F (%)	24F (%)	23F (x)	24F (x)	23F (x)	24F (x)	23F (x)	24F (x)	23F (%)	24F (%)
Cheung Kong Infrastructure	1038 HK	Hong Kong	(10.3)	6.2	11.2	10.5	0.7	0.7	36.8	35.1	6.9	6.9
China Power Int'l	2380 HK	Hong Kong	64.8	45.0	8.9	6.2	0.8	0.7	9.0	6.8	4.9	6.4
China Resources Power	836 HK	Hong Kong	55.9	14.9	5.4	4.7	0.8	0.7	6.1	5.2	7.2	8.7
CLP Holdings	2 HK	Hong Kong	82.9	12.4	13.2	11.8	1.3	1.3	9.0	8.4	5.5	5.6
Hongkong Electric Holdings	6 HK	Hong Kong	(7.9)	5.4	13.2	12.6	0.9	0.9	61.3	60.4	7.4	7.4
Huaneng Power	902 HK	Hong Kong	na	14.2	5.0	4.4	0.6	0.5	7.8	6.9	8.5	9.4
Tata Power	TPWR IN	India	81.0	(9.7)	23.1	25.5	3.2	2.7	15.9	13.2	0.8	0.8
Tenaga Nasional	TNB MK	Malaysia	(9.0)	12.5	14.0	12.5	1.0	0.9	6.8	6.8	4.3	4.7
YTL Corp	YTL MK	Malaysia	na	64.4	20.5	12.5	1.2	1.1	10.6	7.5	2.3	4.1
YTL Power	YTLP MK	Malaysia	na	55.0	12.1	7.8	1.1	0.9	9.5	7.7	2.9	3.7
Manila Electric	MER PM	Philippines	21.5	(0.9)	13.0	13.2	3.5	3.2	10.1	9.3	5.1	5.4
BCPG Pcl *	BCPG TB	Thailand	(29.7)	34.2	19.1	14.3	0.9	0.9	14.0	13.8	3.8	3.8
B.Grimm Power Pcl *	BGRIM TB	Thailand	na	21.7	46.8	38.5	1.9	1.9	11.4	10.5	1.1	1.3
Banpu Power Pcl *	BPP TB	Thailand	54.6	12.2	12.3	11.0	0.8	0.8	31.2	23.0	5.1	5.1
CK Power Pcl *	CKP TB	Thailand	(30.4)	11.7	15.1	13.6	1.0	0.9	10.9	10.5	2.8	2.8
EA Pcl*	EA TB	Thailand	55.2	2.6	21.1	20.6	4.1	3.6	16.1	15.6	1.4	1.5
Electricity Generating *	EGCO TB	Thailand	(23.7)	(3.2)	6.5	6.7	0.5	0.5	13.6	13.8	5.4	5.4
Global Power Synergy *	GPSC TB	Thailand	1,829.0	39.0	29.0	20.9	1.1	1.1	13.6	11.9	1.9	2.9
Gulf Energy Dev. Pcl *	GULF TB	Thailand	40.0	30.5	32.3	24.8	4.5	4.2	27.7	22.8	1.9	2.4
Gunkul Engineering *	GUNKUL TB	Thailand	47.8	9.2	15.1	13.8	1.8	1.7	15.0	13.3	2.6	2.9
RATCH Group *	RATCH TB	Thailand	0.7	33.0	9.8	7.4	0.7	0.6	17.2	16.0	4.6	6.1
Average			24.6	18.6	15.9	13.6	1.6	1.4	17.0	15.3	4.2	4.7

Sources: Bloomberg, * Thanachart estimates

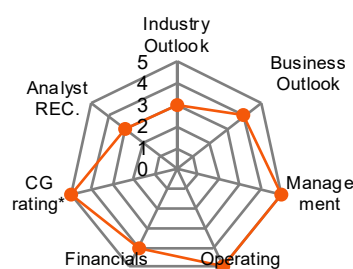
Based on 28 September 2023 closing prices

COMPANY DESCRIPTION

Established in 1993, BGRIM, the investment arm of B.Grimm Group for utilities and power generation projects, is one of the largest power producers in Thailand under Small Power Producer (SPP) contracts. BGRIM provides electricity and steam for the national power grid as well as nearly 200 industrial manufacturers and has also expanded its power business into Vietnam and Laos. The company has a target to expand its total installed capacity to 10GW by 2030, from 3.3GW as of 2022, in which renewable power capacity is its new key focus.

Source: Thanachart

COMPANY RATING



Rating Scale

Excellent	5
Good	4
Fair	3
Weak	2
Very Weak	1
None	0

Source: Thanachart; * CG rating

THANACHART'S SWOT ANALYSIS

S — Strength

- Good engineering team with strong expertise in developing and operating gas-fired power plants for over 20 years.
- Benefits from relationships with B.Grimm Group and other key strategic partners.

O — Opportunity

- Expansion of the power business in neighboring countries and the rest of Asia.
- Increasing power industry liberalization opens room for new business areas, i.e., smart grid and peer-to-peer trading.

W — Weakness

- Financial gearing looks a bit high compared with peers, but it is still well below its targeted threshold after the issuance of its second tranche of perpetual bonds in early 2023.

T — Threat

- Relies on government policy in balancing between the fuel cost pass-on for power plants and its potential inflationary impact on the economy.
- Regulatory risk with business overseas.

CONSENSUS COMPARISON

	Consensus	Thanachart	Diff
Target price (Bt)	43.53	31.00	-29%
Net profit 23F (Bt m)	2,336	2,216	-5%
Net profit 24F (Bt m)	2,906	2,790	-4%
Consensus REC	BUY: 18	HOLD: 2	SELL: 0

HOW ARE WE DIFFERENT FROM THE STREET?

- Our 2023-24F earnings are respectively 5% and 4% lower than the Bloomberg consensus numbers, which we attribute to us assuming higher gas pool price in the near term.
- Our TP is 29% lower than the Street's, likely since we project a much lower long-term spark margin from SPP plants than the market.

RISKS TO OUR INVESTMENT CASE

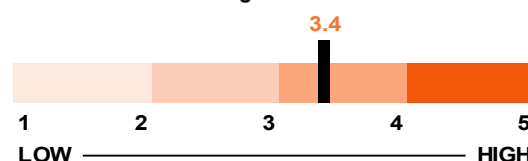
- Lower-/higher-than-expected domestic gas pool prices vs. our assumptions are the key upside/downside risks to our near-term earnings forecasts.
- Aggressive national electricity tariff hikes (or cuts) by the government, especially if they take place faster than the actual movement of fuel prices, are another key upside/downside risks to our numbers.
- Faster-/slower-than-expected capacity growth, either from greenfield project development or M&As than we currently expect, would represent a secondary upside/downside risk to our earnings forecasts and valuation.

Sources: Bloomberg consensus, Thanachart estimates

Source: Thanachart

BGRIM is one of the major gas-fired power plant operators in Thailand. Of its 2.2GW operating capacity, 67% is gas power plants in Thailand, and another 33% is renewable plants across ASEAN. We rate its ESG score at 3.4 on its policy to raise its green energy mix, various social activity initiatives, and its large dedicated team to improve ESG aspects.

Thanachart ESG Rating



	SETTHSI Index	THSI Index	DJSI Index	MSCI (CCC-AAA)	ESG Book (0-100)	Refinitiv (0-100)	S&P Global (0-100)	Moody's (0-100)	CG Rating (0-5)
BGRIM	YES	YES	-	BBB	47.61	64.47	84.00	-	5.0

Sources: SETTRADE, SETTHSI Index, Thailand Sustainability Investment (THSI), The Dow Jones Industrial Average (DJSI), MSCI ESG Research LLC, ESG Book, Refinitiv ESG Information, S&P Global Market Intelligence, Moody's ESG Solutions, Thai IOD (CG rating)

Note: Please see third party on "terms of use" toward the back of this report.

Factors

Our Comments

ENVIRONMENT

- Environmental Policies & Guidelines
- Energy Management
- Carbon Management
- Water Management
- Waste Management

- BGRIM provides detailed sets of data on the company's environmental reporting, including energy consumption, pollution emissions, and waste-management aspects.
- BGRIM targets net-zero carbon emissions by 2050 via an increase of the renewable mix in its total generation capacity to over 50% in 2030, from 25% as of 2022. BGRIM also plans to invest in carbon capture units to reduce its carbon footprint further.
- BGRIM emitted 0.38 tonnes of CO₂ equivalent per MWh of electricity generation in 2022. The company targets to reduce its carbon emission intensity to below 0.28 tonnes per MWh in 2030F, implying an emission reduction rate of 4% p.a. vs. (7% p.a. in 2018-22).
- BGRIM is one of the few Thai companies with a biodiversity policy. We like this initiative for helping to preserve the global environment apart from the global warming issue.

SOCIAL

- Human Rights
- Staff Management
- Health & Safety
- Product Safety & Quality
- Social Responsibility

- BGRIM's human rights policy is in line with the UN Guiding Principles (UNGP) to protect, respect, and remedy staff and all stakeholders. The company has not reported any human rights or staff violations for the past five years.
- BGRIM has developed a strong platform for its employees to self-develop their competencies under the name "B.Grimm Academy". The courses are formed based on BGRIM's core cultures of "positivity, partnership, pioneering, and professionalism".
- It also shares academic support to help develop human resources for Thais with 232 schools and over 100 students under its care.
- Since its core fossil-based power plant business leads to the risk of accidents and health issues in surrounding communities, BGRIM is committed to high standards and protocols to prevent unexpected chemical leaks and to ensure a swift emergency response.

GOVERNANCE &
SUSTAINABILITY

- Board
- Ethics & Transparency
- Business Sustainability
- Risk Management
- Innovation

- BGRIM's board of directors comprises 10 members. Six of them are independent directors, while half are female.
- We see BGRIM as one of the leading companies in providing clear and detailed data on both its operations and (recently) ESG issues. It has developed a dedicated team to ensure high ESG standards, including business transparency.
- BGRIM has high business sustainability supported by long-term contracts for all of its power plants, while the company continuously looks for more investments to deliver business growth to its shareholders.
- BGRIM still lacks an innovative business plan, in our view. It may need to accelerate the exploration of new technology to complement its traditional power business, especially the carbon capture, utilization, and storage (CCUS) trend, to mitigate the risk to its business from global emission regulations being implemented.

Sources: Thanachart, Company note

INCOME STATEMENT

FY ending Dec (Bt m)	2021A	2022A	2023F	2024F	2025F
Sales	46,628	62,395	56,649	54,497	55,389
Cost of sales	37,935	56,067	47,114	44,199	44,977
Gross profit	8,694	6,329	9,535	10,298	10,412
% gross margin	18.6%	10.1%	16.8%	18.9%	18.8%
Selling & administration expenses	1,673	1,857	1,739	1,719	1,736
Operating profit	7,021	4,472	7,797	8,579	8,676
% operating margin	15.1%	7.2%	13.8%	15.7%	15.7%
Depreciation & amortization	5,308	5,221	5,577	5,820	5,774
EBITDA	12,329	9,693	13,374	14,399	14,450
% EBITDA margin	26.4%	15.5%	23.6%	26.4%	26.1%
Non-operating income	188	291	264	254	258
Non-operating expenses	0	0	0	0	0
Interest expense	(3,394)	(4,056)	(4,406)	(4,221)	(4,259)
Pre-tax profit	3,814	707	3,655	4,612	4,676
Income tax	298	(156)	183	369	468
After-tax profit	3,516	863	3,472	4,243	4,208
% net margin	7.5%	1.4%	6.1%	7.8%	7.6%
Shares in affiliates' Earnings	44	(32)	211	328	642
Minority interests	(1,479)	(672)	(1,468)	(1,780)	(1,866)
Extraordinary items	195	(1,403)	0	0	0
NET PROFIT	2,276	(1,244)	2,216	2,790	2,984
Normalized profit	2,081	159	2,216	2,790	2,984
EPS (Bt)	0.7	(0.6)	0.6	0.7	0.8
Normalized EPS (Bt)	0.6	(0.1)	0.6	0.7	0.8

We no longer expect an inflated SPP margin in 2024-25F

BALANCE SHEET

FY ending Dec (Bt m)	2021A	2022A	2023F	2024F	2025F
ASSETS:					
Current assets:	41,058	48,803	41,427	38,905	37,116
Cash & cash equivalent	25,707	28,907	22,000	20,000	18,000
Account receivables	8,983	9,254	9,312	8,958	9,105
Inventories	971	833	645	605	616
Others	5,397	9,810	9,469	9,342	9,395
Investments & loans	3,124	4,492	4,727	6,650	11,591
Net fixed assets	84,804	94,071	96,670	95,300	94,627
Other assets	20,211	23,284	23,738	24,184	24,575
Total assets	149,198	170,651	166,562	165,039	167,910
LIABILITIES:					
Current liabilities:	12,724	19,624	19,603	18,738	18,905
Account payables	5,691	8,005	7,745	7,266	7,393
Bank overdraft & ST loans	750	414	5,018	4,851	4,860
Current LT debt	5,745	10,616	6,197	5,991	6,002
Others current liabilities	538	589	644	631	650
Total LT debt	89,241	103,424	89,138	86,180	86,332
Others LT liabilities	6,418	5,436	5,218	5,059	5,065
Total liabilities	108,382	128,483	113,959	109,977	110,301
Minority interest	11,344	12,440	13,908	15,688	17,554
Preferreds shares	0	0	0	0	0
Paid-up capital	5,214	5,214	5,214	5,214	5,214
Share premium	9,644	9,644	9,644	9,644	9,644
Warrants	0	0	0	0	0
Surplus	6,842	9,497	17,497	17,497	17,497
Retained earnings	7,771	5,373	6,341	7,019	7,700
Shareholders' equity	29,471	29,728	38,695	39,374	40,055
Liabilities & equity	149,198	170,651	166,562	165,039	167,910

BGRIM is using perpetual bonds and may spin off assets to lower gearing

Sources: Company data, Thanachart estimates

CASH FLOW STATEMENT

FY ending Dec (Bt m)	2021A	2022A	2023F	2024F	2025F
Earnings before tax	3,814	707	3,655	4,612	4,676
Tax paid	(298)	156	(183)	(369)	(468)
Depreciation & amortization	5,308	5,221	5,577	5,820	5,774
Chg In working capital	(2,054)	2,182	(131)	(85)	(29)
Chg In other CA & CL / minorities	(3,934)	(710)	607	442	608
Cash flow from operations	2,836	7,557	9,526	10,420	10,561
Capex	(9,643)	(14,254)	(7,920)	(4,177)	(4,815)
Right of use	(309)	(702)	(200)	(200)	(150)
ST loans & investments	(1,413)	(3,894)	0	0	0
LT loans & investments	(2,038)	(1,368)	(235)	(1,922)	(4,942)
Adj for asset revaluation	0	0	0	0	0
Chg In other assets & liabilities	(1,188)	(4,436)	(728)	(679)	(522)
Cash flow from investments	(14,591)	(24,655)	(9,083)	(6,978)	(10,429)
Debt financing	17,346	18,798	(14,101)	(3,330)	171
Capital increase	0	0	0	0	0
Dividends paid	(1,573)	(1,182)	(1,248)	(2,112)	(2,304)
Warrants & other surplus	1,298	2,683	8,000	0	0
Cash flow from financing	17,072	20,299	(7,349)	(5,442)	(2,132)
Free cash flow	(6,806)	(6,697)	1,606	6,243	5,746

Most of new investments
will be in renewables

VALUATION

FY ending Dec	2021A	2022A	2023F	2024F	2025F
Normalized PE (x)	44.2	na	46.8	38.5	35.0
Normalized PE - at target price (x)	48.1	na	51.0	41.9	38.0
PE (x)	39.6	na	46.8	38.5	35.0
PE - at target price (x)	43.1	na	51.0	41.9	38.0
EV/EBITDA (x)	11.7	16.5	11.4	10.5	10.6
EV/EBITDA - at target price (x)	12.2	17.2	11.9	11.0	11.1
P/BV (x)	2.5	2.5	1.9	1.9	1.9
P/BV - at target price (x)	2.7	2.7	2.1	2.1	2.0
P/CFO (x)	26.2	9.8	7.8	7.1	7.0
Price/sales (x)	1.6	1.2	1.3	1.4	1.3
Dividend yield (%)	1.5	0.2	1.1	1.3	1.4
FCF Yield (%)	(9.2)	(9.0)	2.2	8.4	7.7
(Bt)					
Normalized EPS	0.6	(0.1)	0.6	0.7	0.8
EPS	0.7	(0.6)	0.6	0.7	0.8
DPS	0.4	0.1	0.3	0.4	0.4
BV/share	11.3	11.4	14.8	15.1	15.4
CFO/share	1.1	2.9	3.7	4.0	4.1
FCF/share	(2.6)	(2.6)	0.6	2.4	2.2

Sources: Company data, Thanachart estimates

High multiples look fair
against its strong long-term
growth outlook

FINANCIAL RATIOS

FY ending Dec	2021A	2022A	2023F	2024F	2025F
Growth Rate					
Sales (%)	5.8	33.8	(9.2)	(3.8)	1.6
Net profit (%)	4.6	na	na	25.9	6.9
EPS (%)	5.8	na	na	21.7	10.0
Normalized profit (%)	(22.1)	(92.4)	1,293.9	25.9	6.9
Normalized EPS (%)	(25.9)	na	na	21.7	10.0
Dividend payout ratio (%)	58.4	(10.3)	50.0	50.0	50.0
Operating performance					
Gross margin (%)	18.6	10.1	16.8	18.9	18.8
Operating margin (%)	15.1	7.2	13.8	15.7	15.7
EBITDA margin (%)	26.4	15.5	23.6	26.4	26.1
Net margin (%)	7.5	1.4	6.1	7.8	7.6
D/E (incl. minor) (x)	2.3	2.7	1.9	1.8	1.7
Net D/E (incl. minor) (x)	1.7	2.0	1.5	1.4	1.4
Interest coverage - EBIT (x)	2.1	1.1	1.8	2.0	2.0
Interest coverage - EBITDA (x)	3.6	2.4	3.0	3.4	3.4
ROA - using norm profit (%)	1.5	0.1	1.3	1.7	1.8
ROE - using norm profit (%)	7.3	0.5	6.5	7.1	7.5
DuPont					
ROE - using after tax profit (%)	12.3	2.9	10.1	10.9	10.6
- asset turnover (x)	0.3	0.4	0.3	0.3	0.3
- operating margin (%)	15.5	7.6	14.2	16.2	16.1
- leverage (x)	4.9	5.4	4.9	4.2	4.2
- interest burden (%)	52.9	14.8	45.3	52.2	52.3
- tax burden (%)	92.2	122.1	95.0	92.0	90.0
WACC (%)	5.1	5.1	5.1	5.1	5.1
ROIC (%)	7.5	5.5	6.4	6.7	6.7
NOPAT (Bt m)	6,472	5,460	7,407	7,893	7,809
invested capital (Bt m)	99,500	115,274	117,047	116,396	119,248

Sources: Company data, Thanachart estimates

BUY (From: HOLD)
Change in Recommendation

TP: Bt 52.00
Upside : 20.2%

(From: Bt 50.00)

29 SEPTEMBER 2023

Global Power Synergy (GPSC TB)

Worst is over

We upgrade GPSC to BUY on a strong recovery of its three major profit contributors. 1) SPP margin normalization continues even after the recent tariff cut. 2) IPP projects are back at full operation. And 3) we believe hydropower output is already at its bottom this year.

Upgrading to BUY

We upgrade GPSC to BUY (from Hold). *First*, we still expect its SPP spark margin to recover to a normalized level in 2024-25F despite the recent tariff cut, thanks to falling fuel prices and better production efficiency. *Second*, its Gheco-1 IPP plant has resumed full operations after years of unplanned shutdowns. *Third*, we believe electricity output from its hydropower plants (15% of its earnings base) is at the bottom in this first El Nino year. *Fourth*, profit contribution from its solar power business in India (Avadaa) is accelerating faster than we'd expected earlier. *Lastly*, we see its 21x PE multiple in 2024F as attractive against our forecasted 34% earnings growth p.a. in 2024-25F. Our DCF-derived SOTP-based 12-month TP is lifted to Bt52/share (from Bt50) after our earnings revisions and our roll-over to a 2024F base year.

Earnings cuts on SPPs

We cut GPSC's earnings by 33% in 2023F due to its weaker-than-expected SPP performance even before the recent tariff cut, mainly due to a plant shutdown at Glow Energy Phase 5 and a lag in the fall of its fuel costs, and as we now factor in the impact of the lower tariff. The cuts are lower at 20/3% in 2024-25F as our lower SPP margin assumptions are partially offset by a stronger-than-expected profit recovery at its IPP and hydropower projects.

Expecting a strong 2024F turnaround

Despite the recent tariff cut directly hurting its SPP business, we expect GPSC's earnings to continue turning around with 39/30% growth in 2024-25F, with three drivers. First, having factored in lower tariff prices, we still expect stronger earnings from its SPP business in 2024F given the low 1H23 base, due to high fuel costs (especially coal) and a plant shutdown. Second, its 429MW equity-owned coal-fired IPP plant, Gheco-1, has resumed full operations after several major overhauls over the past two years. Third, we assume 7/10% higher output from its three hydropower plants (a total of 449MW equity-capacity) from the extraordinarily low base this year, since we expect an easing drought impact from the El Nino effect.

Improving Avadaa

The improving outlook at its solar power investment in India via its 43% stake in Avadaa is a major relief to our earlier concerns for GPSC. We project Bt0.3/0.4/1.0bn equity income from Avadaa in 2023-25F, backed by its faster-than-expected capacity ramp-up to 4.3/4.8/5.8GW (2.6GW in 2022). Avadaa holds 6.7GW of solar PPAs, as of 2Q23, and we assume it will meet its capacity target of 11GW in 2030 backed by the Indian government's plan to bid out 40GW of solar PPAs in 2024 and 200GW more in 2025-30. We value Avadaa at Bt3.7/GPSC share and project it to contribute Bt2.8bn of profit to GPSC in 2030F.



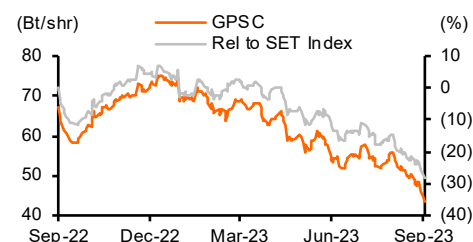
NUTTAPOP PRASITSUKSANT

662 – 483 8296
nuttapol.pra@thanachartsec.co.th

COMPANY VALUATION

Y/E Dec (Bt m)	2022A	2023F	2024F	2025F
Sales	123,685	108,085	89,579	78,618
Net profit	891	4,200	5,839	7,582
Consensus NP	—	4,376	6,255	7,246
Diff frm cons (%)	—	(4.0)	(6.6)	4.6
Norm profit	218	4,200	5,839	7,582
Prev. Norm profit	—	6,220	7,281	7,813
Chg frm prev (%)	—	(32.5)	(19.8)	(3.0)
Norm EPS (Bt)	0.1	1.5	2.1	2.7
Norm EPS grw (%)	(96.8)	1,829.0	39.0	29.8
Norm PE (x)	560.1	29.0	20.9	16.1
EV/EBITDA (x)	22.7	13.6	11.9	11.7
P/BV (x)	1.2	1.1	1.1	1.1
Div yield (%)	1.2	1.9	2.9	3.7
ROE (%)	0.2	4.0	5.4	6.8
Net D/E (%)	107.4	92.4	78.2	78.0

PRICE PERFORMANCE

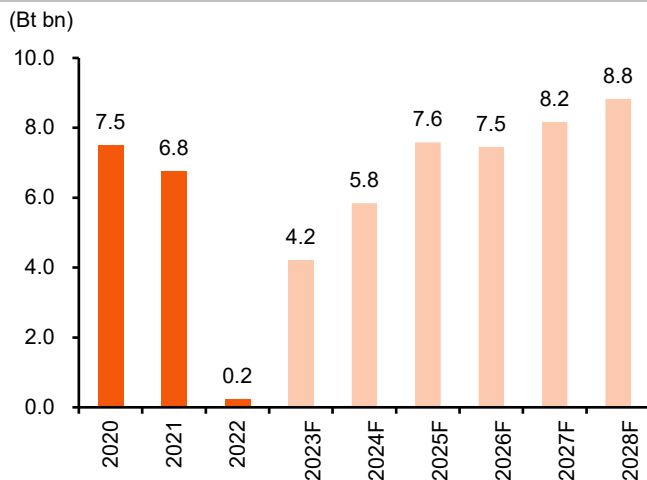


COMPANY INFORMATION

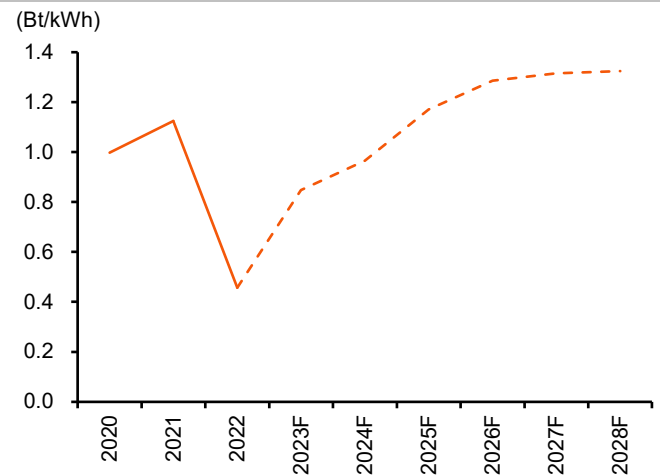
Price as of 28-Sep-23 (Bt)	43.25
Market Cap (US\$ m)	3,318.0
Listed Shares (m shares)	2,819.7
Free Float (%)	24.8
Avg Daily Turnover (US\$ m)	11.3
12M Price H/L (Bt)	75.25/44.75
Sector	Utilities
Major Shareholder	PTT Group 67.27%

Sources: Bloomberg, Company data, Thanachart estimates

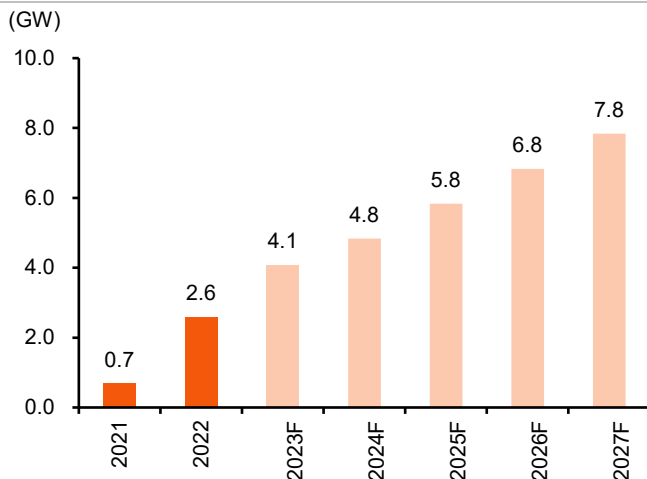
ESG Summary Report P25

Ex 1: Earnings Turnaround Looks Intact

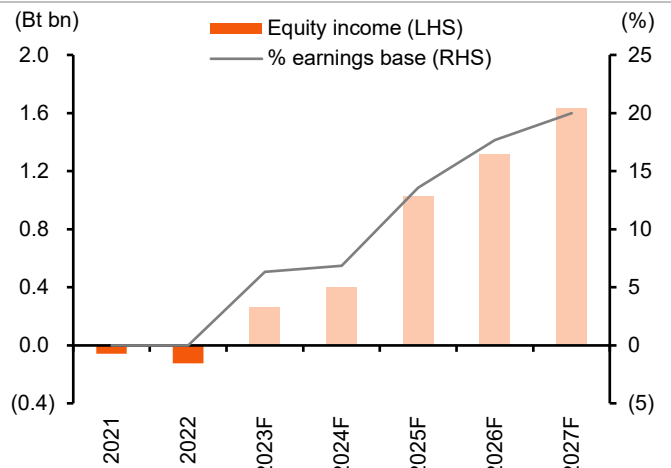
Sources: Company data, Thanachart estimates

Ex 2: Improving SPP Spark Margin

Sources: Company data, Thanachart estimates

Ex 3: Accelerating Capacity Growth At Avadaa

Sources: Company data, Thanachart estimates

Ex 4: Avadaa Is Becoming A Major Profit Contributor

Sources: Company data, Thanachart estimates

Ex 5: Our Key Assumption Changes

	2023F	2024F	2025F
Norm profit (Bt m)			
New	4,200	5,839	7,582
Old	6,220	7,281	7,813
Change (%)	(32.5)	(19.8)	(3.0)
SPP's spark margin (Bt/kWh)			
New	0.85	0.97	1.17
Old	0.98	1.05	1.15
Change (%)	(13.5)	(8.2)	1.7
Avadaa capacity (GW)			
New	4.1	4.8	5.8
Old	3.1	4.0	4.8
Change (%)	33.7	20.3	21.7

Sources: Thanachart estimates

Ex 6: Our 12-month DCF-derived Valuation Plus Potential Capacity

(Bt m)	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	2034F	Terminal value
EBITDA excl. depre from right of use	18,128	18,685	19,138	19,389	19,437	19,680	18,742	18,348	18,822	19,485	20,192	
Free cash flow	17,357	(450)	18,127	17,894	17,968	18,676	18,041	17,559	17,778	18,520	19,155	92,203
PV of free cash flow	16,364	(400)	15,190	14,137	13,120	12,805	11,616	10,617	10,093	9,874	9,196	92,203
Risk-free rate (%)	2.5											
Market risk premium (%)	8.0											
Beta	1.0											
WACC (%)	6.1											
Terminal growth (%)	2.0											
Enterprise value - add investments	214,815											
Net debt (2023F)	108,804											
Minority interest	10,675											
Equity value	95,336											
# of shares (m)	2,820											
Valuation/share (Bt)	33.8											

	Valuation method	WACC	Equity value	Value per share
BIC	DCF	5.1%	1,320	0.5
TSR/SSE	DCF	6.4%	2,142	0.8
NNEG	DCF	5.0%	3,545	1.3
GRP	DCF	6.7%	1,359	0.5
NL1PC	DCF	5.5%	2,820	1.0
RPCL	DCF	4.8%	905	0.3
XPCL	DCF	6.0%	18,797	6.7
Avaada	DCF	8.2%	10,499	3.7
Taiwan wind farms	DCF	6.0%	2,868	1.0
Li-ion battery business	DCF	8.0%	7,721	2.5
Total				18.2

Grand total**52.0**

Source: Thanachart estimates

Valuation Comparison

Ex 7: Comparison With Regional Peers

Name	BBG code	Country	EPS growth		PE		P/BV		EV/EBITDA		Div yield	
			23F	24F	23F	24F	23F	24F	23F	24F	23F	24F
			(%)	(%)	(x)	(x)	(x)	(x)	(x)	(x)	(%)	(%)
Cheung Kong Infrastructure	1038 HK	Hong Kong	(10.3)	6.2	11.2	10.5	0.7	0.7	36.8	35.1	6.9	6.9
China Power Int'l	2380 HK	Hong Kong	64.8	45.0	8.9	6.2	0.8	0.7	9.0	6.8	4.9	6.4
China Resources Power	836 HK	Hong Kong	55.9	14.9	5.4	4.7	0.8	0.7	6.1	5.2	7.2	8.7
CLP Holdings	2 HK	Hong Kong	82.9	12.4	13.2	11.8	1.3	1.3	9.0	8.4	5.5	5.6
Hongkong Electric Holdings	6 HK	Hong Kong	(7.9)	5.4	13.2	12.6	0.9	0.9	61.3	60.4	7.4	7.4
Huaneng Power	902 HK	Hong Kong	na	14.2	5.0	4.4	0.6	0.5	7.8	6.9	8.5	9.4
Tata Power	TPWR IN	India	81.0	(9.7)	23.1	25.5	3.2	2.7	15.9	13.2	0.8	0.8
Tenaga Nasional	TNB MK	Malaysia	(9.0)	12.5	14.0	12.5	1.0	0.9	6.8	6.8	4.3	4.7
YTL Corp	YTL MK	Malaysia	na	64.4	20.5	12.5	1.2	1.1	10.6	7.5	2.3	4.1
YTL Power	YTLP MK	Malaysia	na	55.0	12.1	7.8	1.1	0.9	9.5	7.7	2.9	3.7
Manila Electric	MER PM	Philippines	21.5	(0.9)	13.0	13.2	3.5	3.2	10.1	9.3	5.1	5.4
BCPG Pcl *	BCPG TB	Thailand	(29.7)	34.2	19.1	14.3	0.9	0.9	14.0	13.8	3.8	3.8
B.Grimm Power Pcl *	BGRIM TB	Thailand	na	21.7	46.8	38.5	1.9	1.9	11.4	10.5	1.1	1.3
Banpu Power Pcl *	BPP TB	Thailand	54.6	12.2	12.3	11.0	0.8	0.8	31.2	23.0	5.1	5.1
CK Power Pcl *	CKP TB	Thailand	(30.4)	11.7	15.1	13.6	1.0	0.9	10.9	10.5	2.8	2.8
EA Pcl*	EA TB	Thailand	55.2	2.6	21.1	20.6	4.1	3.6	16.1	15.6	1.4	1.5
Electricity Generating *	EGCO TB	Thailand	(23.7)	(3.2)	6.5	6.7	0.5	0.5	13.6	13.8	5.4	5.4
Global Power Synergy *	GPSC TB	Thailand	1,829.0	39.0	29.0	20.9	1.1	1.1	13.6	11.9	1.9	2.9
Gulf Energy Dev. Pcl *	GULF TB	Thailand	40.0	30.5	32.3	24.8	4.5	4.2	27.7	22.8	1.9	2.4
Gunkul Engineering *	GUNKUL TB	Thailand	47.8	9.2	15.1	13.8	1.8	1.7	15.0	13.3	2.6	2.9
RATCH Group *	RATCH TB	Thailand	0.7	33.0	9.8	7.4	0.7	0.6	17.2	16.0	4.6	6.1
Average			24.6	18.6	15.9	13.6	1.6	1.4	17.0	15.3	4.2	4.7

Sources: Bloomberg, * Thanachart estimates

Based on 28 September 2023 closing prices

COMPANY DESCRIPTION

Established in January 2013, Global Power Synergy Company Ltd (GPSC) is PTT Group's flagship company in the power business. GPSC generates and distributes electricity, steam, and processed water to the national grid and industrial customers in Thailand. GPSC acquired Glow Energy which doubled its generation capacity in March 2019. The company has a total of 7.2GW equity-owned operating capacity of power plants, both domestic and overseas, of which 38% was from renewable sources as of 2022.

Source: Thanachart

COMPANY RATING



Rating Scale

Excellent	5
Good	4
Fair	3
Weak	2
Very Weak	1
None	0

Source: Thanachart; * CG rating

THANACHART'S SWOT ANALYSIS

S — Strength

- Growing along with PTT Group's business expansion.
- Access to low financing costs as part of PTT Group.

O — Opportunity

- Expansion into neighboring countries' electricity generation industries through both greenfield developments and M&As.
- Tapping into new S-curve industries of electric vehicle (EV) and energy storage systems (ESS) through its investments in Li-ion battery production plants.

W — Weakness

- No direct experience investing abroad.
- Late player in the renewable segment and Li-ion battery business.

T — Threat

- Thailand's high reserve margin and EGAT's own planned generation look as if they will last longer than the market had earlier anticipated.
- Relies on the group's policy for key investment decisions.

CONSENSUS COMPARISON

	Consensus	Thanachart	Diff
Target price (Bt)	68.76	52.00	-24%
Net profit 23F (Bt m)	4,376	4,200	-4%
Net profit 24F (Bt m)	6,255	5,839	-7%
Consensus REC	BUY: 15	HOLD: 5	SELL: 0

HOW ARE WE DIFFERENT FROM THE STREET?

- Our 2023-24F earnings estimates are 4% and 7% lower than the Bloomberg consensus numbers, likely as we assume the new government continues to keep electricity tariffs low.
- Our DCF-derived SOTP-based TP is 24% lower, which we believe is due to us also having a more bearish view on the long-term profitability of SPP power plants than the market.

Sources: Bloomberg consensus, Thanachart estimates

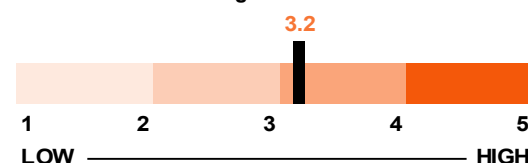
RISKS TO OUR INVESTMENT CASE

- A slower-than-expected recovery of SPP's margin, either from the gas cost spike or downward tariff adjustment, is the key downside risk to our earnings forecasts.
- Weaker-than-expected growth in Avadaa's portfolio, which has become its key growth driver over the next few years, is another major downside risk to our earnings forecasts.
- A slower investment pace or lower rate of return from asset acquisitions and development of new power projects than our current projections would represent another downside risk to our numbers.

Source: Thanachart

GPSC is the utilities investment arm of the PTT Group. It ran 6.1GW of power generating capacity in 2022; 52% gas, 17% coal, and 31% renewables. Its ESG policy is relatively strong since it needs to align its performance with PTT Group. We thus rate its ESG score at 3.2. But we see some negatives over its business sustainability and innovation aspects.

Thanachart ESG Rating



	SETTHSI Index	THSI Index	DJSI Index	MSCI (CCC-AAA)	ESG Book (0-100)	Refinitiv (0-100)	S&P Global (0-100)	Moody's (0-100)	CG Rating (0-5)
GPSC	YES	YES	YES	B	63.23	60.42	88.00	-	5.0

Sources: SETTRADE, SETTHSI Index, Thailand Sustainability Investment (THSI), The Dow Jones Industrial Average (DJSI), MSCI ESG Research LLC, ESG Book, Refinitiv ESG Information, S&P Global Market Intelligence, Moody's ESG Solutions, Thai IOD (CG rating)

Note: Please see third party on "terms of use" toward the back of this report.

Factors

Our Comments

ENVIRONMENT

- Environmental Policies & Guidelines
- Energy Management
- Carbon Management
- Water Management
- Waste Management

- GPSC shares the same targets as PTT Group in achieving carbon neutrality by 2050 and net-zero emissions by 2060, slightly ahead of the country's goals. Its nearer-term plan is to increase its renewable mix to 45% of its equity capacity by 2025 (from 35% in 2022), and reduce its carbon emission intensity by 35% within 2030, from 2020's base.
- GPSC allocates an annual budget to investment emission reduction businesses and innovative technology for lowering emissions from its power plants, based on its internal carbon pricing policy to minimize air and water pollution from its operations.
- The 3Rs approach (Reduce, Reuse, and Recycle) is implemented to reduce waste creation from all its business activities.
- GPSC saved 2.17MWh of electricity consumption in 2022 (from 1.78MWh of savings in 2021) through efficiency improvements and solar rooftop adoption. It emitted 0.45 tonnes CO2 equivalent of greenhouse gas (GHG) per MWh of electricity generated in 2022, slightly higher than the 0.44 tonnes in 2021.

SOCIAL

- Human Rights
- Staff Management
- Health & Safety
- Product Safety & Quality
- Social Responsibility

- GPSC sticks to the UN Guiding Principles (UNGP) in developing its human rights policies to protect the rights of its direct staff and all stakeholders along its supply chain.
- GPSC provides a self-development platform and a clear career path for its staff. This is based on the company's belief that its business success relies heavily on 1) an internal succession plan, 2) preparation to keep its staff up-to-date with industry dynamics, 3) ensuring morale/unity among staff, and 4) enjoying good employer branding.
- GPSC collaboratively provides support donations to communities around its power plants and facilities with other business entities under the PTT Group; thus, it has significant impacts in boosting the local economy and quality of life.

GOVERNANCE &
SUSTAINABILITY

- Board
- Ethics & Transparency
- Business Sustainability
- Risk Management
- Innovation

- GPSC's board of directors comprises 14 members, which looks slightly too large in our view, with only six of them (less than half) independent directors. Three members of its board of directors are female.
- We see GPSC's corporate governance (including transparency) as very strong, in line with the protocols from the PTT Group.
- We are slightly concerned over GPSC's business sustainability as power purchase contracts for some big power plants are expiring, and it now looks difficult amid the current market situation to find investment opportunities to acquire new plants to offset the gap.
- GPSC had a good initiative via an investment in 24M's Li-ion battery technology in 2017. However, it has been delayed in reaching the commercialized stage despite already having launched various product prototypes with the support of the PTT Group.

Sources: Thanachart, Company note

INCOME STATEMENT

FY ending Dec (Bt m)	2021A	2022A	2023F	2024F	2025F
Sales	74,874	123,685	108,085	89,579	78,618
Cost of sales	63,616	120,324	98,536	78,852	67,459
Gross profit	11,258	3,361	9,549	10,727	11,159
% gross margin	15.0%	2.7%	8.8%	12.0%	14.2%
Selling & administration expenses	2,095	1,817	1,871	1,927	1,966
Operating profit	9,163	1,544	7,678	8,799	9,193
% operating margin	12.2%	1.2%	7.1%	9.8%	11.7%
Depreciation & amortization	9,314	9,293	9,256	9,452	9,618
EBITDA	18,477	10,837	16,934	18,252	18,811
% EBITDA margin	24.7%	8.8%	15.7%	20.4%	23.9%
Non-operating income	1,483	1,076	1,069	1,104	1,156
Non-operating expenses	0	0	0	0	0
Interest expense	(3,860)	(4,299)	(5,098)	(4,629)	(4,435)
Pre-tax profit	6,786	(1,679)	3,648	5,274	5,914
Income tax	1,031	(746)	292	527	651
After-tax profit	5,754	(932)	3,356	4,747	5,263
% net margin	7.7%	-0.8%	3.1%	5.3%	6.7%
Shares in affiliates' Earnings	1,536	1,716	1,148	1,523	2,796
Minority interests	(522)	(566)	(304)	(430)	(477)
Extraordinary items	550	674	0	0	0
NET PROFIT	7,319	891	4,200	5,839	7,582
Normalized profit	6,769	218	4,200	5,839	7,582
EPS (Bt)	2.6	0.3	1.5	2.1	2.7
Normalized EPS (Bt)	2.4	0.1	1.5	2.1	2.7

*Earnings recovery story
remains intact*

BALANCE SHEET

FY ending Dec (Bt m)	2021A	2022A	2023F	2024F	2025F
ASSETS:					
Current assets:	45,907	52,822	46,471	41,035	37,844
Cash & cash equivalent	13,793	14,236	15,000	15,000	15,000
Account receivables	13,441	20,178	14,806	12,271	10,770
Inventories	6,938	11,915	10,798	8,641	7,393
Others	11,735	6,494	5,867	5,123	4,682
Investments & loans	37,660	54,135	64,734	65,480	66,180
Net fixed assets	95,581	92,647	88,197	83,554	96,157
Other assets	91,648	89,206	79,010	70,045	63,818
Total assets	270,796	288,810	278,413	260,114	263,999
LIABILITIES:					
Current liabilities:	23,453	32,193	33,902	27,346	26,067
Account payables	6,407	10,887	12,148	9,722	8,317
Bank overdraft & ST loans	0	3,371	4,952	4,387	4,506
Current LT debt	9,121	11,457	8,320	7,371	7,570
Others current liabilities	7,925	6,478	8,482	5,866	5,674
Total LT debt	110,474	123,033	110,532	97,926	100,570
Others LT liabilities	19,121	18,483	16,234	13,734	12,222
Total liabilities	153,048	173,710	160,668	139,006	138,859
Minority interest	9,413	10,370	10,675	11,105	11,582
Preferreds shares	0	0	0	0	0
Paid-up capital	28,197	28,197	28,197	28,197	28,197
Share premium	70,176	70,176	70,176	70,176	70,176
Warrants	0	0	0	0	0
Surplus	(15,219)	(16,441)	(16,441)	(16,441)	(16,441)
Retained earnings	25,180	22,798	25,138	28,070	31,626
Shareholders' equity	108,334	104,730	107,070	110,003	113,558
Liabilities & equity	270,796	288,810	278,413	260,114	263,999

Sources: Company data, Thanachart estimates

CASH FLOW STATEMENT

FY ending Dec (Bt m)	2021A	2022A	2023F	2024F	2025F
Earnings before tax	6,786	(1,679)	3,648	5,274	5,914
Tax paid	(1,031)	746	(292)	(527)	(651)
Depreciation & amortization	9,314	9,293	9,256	9,452	9,618
Chg In working capital	(5,381)	(7,232)	7,749	2,265	1,345
Chg In other CA & CL / minorities	3,567	4,841	3,779	(349)	2,907
Cash flow from operations	13,255	5,969	24,140	16,115	19,134
Capex	(4,715)	(6,179)	(2,515)	(2,515)	(19,925)
Right of use	78	116	(50)	(50)	(50)
ST loans & investments	(1,408)	1,060	0	0	0
LT loans & investments	(20,284)	(16,475)	(10,599)	(745)	(700)
Adj for asset revaluation	0	0	0	0	0
Chg In other assets & liabilities	3,157	2,228	5,706	4,221	2,606
Cash flow from investments	(23,173)	(19,249)	(7,459)	911	(18,069)
Debt financing	5,308	18,220	(14,057)	(14,119)	2,961
Capital increase	0	0	0	0	0
Dividends paid	(4,230)	(3,384)	(1,860)	(2,907)	(4,026)
Warrants & other surplus	2,344	(1,112)	0	0	0
Cash flow from financing	3,422	13,724	(15,917)	(17,026)	(1,065)
Free cash flow	8,539	(210)	21,625	13,600	(791)

Three-year capex plan
has secured its near-term
capacity growth

VALUATION

FY ending Dec	2021A	2022A	2023F	2024F	2025F
Normalized PE (x)	18.0	560.1	29.0	20.9	16.1
Normalized PE - at target price (x)	21.7	673.4	34.9	25.1	19.3
PE (x)	16.7	136.8	29.0	20.9	16.1
PE - at target price (x)	20.0	164.5	34.9	25.1	19.3
EV/EBITDA (x)	12.3	22.7	13.6	11.9	11.7
EV/EBITDA - at target price (x)	13.7	24.9	15.1	13.2	13.0
P/BV (x)	1.1	1.2	1.1	1.1	1.1
P/BV - at target price (x)	1.4	1.4	1.4	1.3	1.3
P/CFO (x)	9.2	20.4	5.1	7.6	6.4
Price/sales (x)	1.6	1.0	1.1	1.4	1.6
Dividend yield (%)	3.5	1.2	1.9	2.9	3.7
FCF Yield (%)	7.0	(0.2)	17.7	11.2	(0.6)
(Bt)					
Normalized EPS	2.4	0.1	1.5	2.1	2.7
EPS	2.6	0.3	1.5	2.1	2.7
DPS	1.5	0.5	0.8	1.2	1.6
BV/share	38.4	37.1	38.0	39.0	40.3
CFO/share	4.7	2.1	8.6	5.7	6.8
FCF/share	3.0	(0.1)	7.7	4.8	(0.3)

Sources: Company data, Thanachart estimates

FINANCIAL RATIOS

FY ending Dec	2021A	2022A	2023F	2024F	2025F
Growth Rate					
Sales (%)	7.6	65.2	(12.6)	(17.1)	(12.2)
Net profit (%)	(2.5)	(87.8)	371.2	39.0	29.8
EPS (%)	(2.5)	(87.8)	371.2	39.0	29.8
Normalized profit (%)	(9.9)	(96.8)	1,829.0	39.0	29.8
Normalized EPS (%)	(9.9)	(96.8)	1,829.0	39.0	29.8
Dividend payout ratio (%)	57.8	158.2	55.0	60.0	60.0
Operating performance					
Gross margin (%)	15.0	2.7	8.8	12.0	14.2
Operating margin (%)	12.2	1.2	7.1	9.8	11.7
EBITDA margin (%)	24.7	8.8	15.7	20.4	23.9
Net margin (%)	7.7	(0.8)	3.1	5.3	6.7
D/E (incl. minor) (x)	1.0	1.2	1.1	0.9	0.9
Net D/E (incl. minor) (x)	0.9	1.1	0.9	0.8	0.8
Interest coverage - EBIT (x)	2.4	0.4	1.5	1.9	2.1
Interest coverage - EBITDA (x)	4.8	2.5	3.3	3.9	4.2
ROA - using norm profit (%)	2.6	0.1	1.5	2.2	2.9
ROE - using norm profit (%)	6.4	0.2	4.0	5.4	6.8
DuPont					
ROE - using after tax profit (%)	5.4	na	3.2	4.4	4.7
- asset turnover (x)	0.3	0.4	0.4	0.3	0.3
- operating margin (%)	14.2	na	8.1	11.1	13.2
- leverage (x)	2.5	2.6	2.7	2.5	2.3
- interest burden (%)	63.7	(64.1)	41.7	53.3	57.1
- tax burden (%)	84.8	na	92.0	90.0	89.0
WACC (%)	6.1	6.1	6.1	6.1	6.1
ROIC (%)	3.9	0.7	3.1	3.7	4.0
NOPAT (Bt m)	7,770	1,544	7,064	7,919	8,182
invested capital (Bt m)	214,137	228,355	215,874	204,687	211,204

Sources: Company data, Thanachart estimates

BCPG Pl

INCOME STATEMENT

FY ending Dec (Bt m)	2021A	2022A	2023F	2024F	2025F
Sales	4,669	5,405	4,981	6,144	8,013
Cost of sales	1,608	1,978	2,419	3,211	4,186
Gross profit	3,061	3,427	2,562	2,933	3,826
% gross margin	65.6%	63.4%	51.4%	47.7%	47.8%
Selling & administration expenses	588	637	636	668	794
Operating profit	2,473	2,790	1,925	2,265	3,032
% operating margin	53.0%	51.6%	38.7%	36.9%	37.8%
Depreciation & amortization	1,180	1,504	1,717	2,223	3,005
EBITDA	3,653	4,294	3,642	4,488	6,037
% EBITDA margin	78.2%	79.4%	73.1%	73.0%	75.3%
Non-operating income	72	153	252	112	47
Non-operating expenses	0	0	0	0	0
Interest expense	(787)	(882)	(1,033)	(1,351)	(1,557)
Pre-tax profit	1,757	2,061	1,144	1,026	1,522
Income tax	99	145	157	169	274
After-tax profit	1,658	1,916	987	858	1,248
% net margin	35.5%	35.4%	19.8%	14.0%	15.6%
Shares in affiliates' Earnings	600	130	449	1,070	1,198
Minority interests	0	(2)	0	0	0
Extraordinary items	(247)	586	0	0	0
NET PROFIT	2,011	2,630	1,436	1,927	2,447
Normalized profit	2,258	2,044	1,436	1,927	2,447
EPS (Bt)	0.7	0.9	0.5	0.7	0.8
Normalized EPS (Bt)	0.8	0.7	0.5	0.7	0.8

BALANCE SHEET

FY ending Dec (Bt m)	2021A	2022A	2023F	2024F	2025F
ASSETS:					
Current assets:	13,933	22,878	22,444	7,851	10,990
Cash & cash equivalent	11,228	20,333	20,000	5,000	7,500
Account receivables	2,317	1,762	1,637	2,020	2,634
Inventories	0	0	0	0	0
Others	389	783	807	831	856
Investments & loans	13,486	1,342	20,035	21,163	22,613
Net fixed assets	17,372	17,014	18,709	30,023	41,756
Other assets	13,931	14,926	14,672	14,417	14,162
Total assets	58,721	56,160	75,860	73,454	89,521
LIABILITIES:					
Current liabilities:	4,678	3,462	6,164	8,310	10,185
Account payables	888	701	1,193	1,584	2,064
Bank overdraft & ST loans	0	0	2,166	1,972	2,662
Current LT debt	3,527	2,538	2,552	4,474	5,090
Others current liabilities	263	222	252	280	368
Total LT debt	25,574	21,880	38,609	32,989	45,495
Others LT liabilities	1,241	1,542	1,486	1,668	1,950
Total liabilities	31,493	26,884	46,258	42,967	57,630
Minority interest	69	51	51	51	51
Preferreds shares	0	0	0	0	0
Paid-up capital	14,470	14,538	14,470	14,470	14,470
Share premium	7,753	7,791	7,791	7,791	7,791
Warrants	24	31	31	31	31
Surplus	(144)	249	249	249	249
Retained earnings	5,056	6,615	7,009	7,894	9,298
Shareholders' equity	27,160	29,225	29,551	30,436	31,840
Liabilities & equity	58,721	56,160	75,860	73,454	89,521

Sources: Company data, Thanachart estimates

BCPG Pcl

CASH FLOW STATEMENT

FY ending Dec (Bt m)	2021A	2022A	2023F	2024F	2025F
Earnings before tax	1,757	2,061	1,144	1,026	1,522
Tax paid	(45)	(20)	(225)	(108)	(240)
Depreciation & amortization	1,180	1,504	1,717	2,223	3,005
Chg In working capital	(749)	368	616	8	(133)
Chg In other CA & CL / minorities	500	(454)	524	1,013	1,228
Cash flow from operations	2,644	3,459	3,776	4,162	5,381
Capex	(3,884)	(1,146)	(3,412)	(13,537)	(14,737)
Right of use	(36)	(371)	(20)	(20)	(20)
ST loans & investments	0	0	0	0	0
LT loans & investments	(1,763)	12,144	(18,693)	(1,128)	(1,450)
Adj for asset revaluation	0	0	0	0	0
Chg In other assets & liabilities	(2,007)	479	218	457	556
Cash flow from investments	(7,690)	11,105	(21,907)	(14,228)	(15,650)
Debt financing	2,467	(4,894)	18,908	(3,892)	13,812
Capital increase	2,031	107	(68)	0	0
Dividends paid	(882)	(1,071)	(1,042)	(1,042)	(1,042)
Warrants & other surplus	1,520	399	(0)	(0)	(0)
Cash flow from financing	5,136	(5,459)	17,798	(4,935)	12,770
Free cash flow	(1,241)	2,312	364	(9,374)	(9,356)

VALUATION

FY ending Dec	2021A	2022A	2023F	2024F	2025F
Normalized PE (x)	12.2	13.5	19.1	14.3	11.2
Normalized PE - at target price (x)	23.1	25.5	36.3	27.0	21.3
PE (x)	13.7	10.5	19.1	14.3	11.2
PE - at target price (x)	25.9	19.8	36.3	27.0	21.3
EV/EBITDA (x)	12.4	7.4	14.0	13.8	12.1
EV/EBITDA - at target price (x)	19.2	13.1	20.7	19.3	16.2
P/BV (x)	1.0	0.9	0.9	0.9	0.9
P/BV - at target price (x)	1.9	1.8	1.8	1.7	1.6
P/CFO (x)	10.4	7.9	7.3	6.6	5.1
Price/sales (x)	5.9	5.1	5.5	4.5	3.4
Dividend yield (%)	3.5	3.8	3.8	3.8	3.8
FCF Yield (%)	(4.5)	8.4	1.3	(34.1)	(34.0)
(Bt)					
Normalized EPS	0.8	0.7	0.5	0.7	0.8
EPS	0.7	0.9	0.5	0.7	0.8
DPS	0.3	0.4	0.4	0.4	0.4
BV/share	9.4	10.1	10.2	10.5	11.0
CFO/share	0.9	1.2	1.3	1.4	1.9
FCF/share	(0.4)	0.8	0.1	(3.2)	(3.2)

Sources: Company data, Thanachart estimates

BCPG Pcl

FINANCIAL RATIOS

FY ending Dec	2021A	2022A	2023F	2024F	2025F
Growth Rate					
Sales (%)	10.4	15.8	(7.9)	23.4	30.4
Net profit (%)	5.2	30.8	(45.4)	34.2	27.0
EPS (%)	(15.1)	30.8	(45.4)	34.2	27.0
Normalized profit (%)	18.8	(9.5)	(29.7)	34.2	27.0
Normalized EPS (%)	(4.1)	(9.5)	(29.7)	34.2	27.0
Dividend payout ratio (%)	47.5	39.6	72.6	54.1	42.6
Operating performance					
Gross margin (%)	65.6	63.4	51.4	47.7	47.8
Operating margin (%)	53.0	51.6	38.7	36.9	37.8
EBITDA margin (%)	78.2	79.4	73.1	73.0	75.3
Net margin (%)	35.5	35.4	19.8	14.0	15.6
D/E (incl. minor) (x)	1.1	0.8	1.5	1.3	1.7
Net D/E (incl. minor) (x)	0.7	0.1	0.8	1.1	1.4
Interest coverage - EBIT (x)	3.1	3.2	1.9	1.7	1.9
Interest coverage - EBITDA (x)	4.6	4.9	3.5	3.3	3.9
ROA - using norm profit (%)	4.1	3.6	2.2	2.6	3.0
ROE - using norm profit (%)	9.1	7.2	4.9	6.4	7.9
DuPont					
ROE - using after tax profit (%)	6.7	6.8	3.4	2.9	4.0
- asset turnover (x)	0.1	0.1	0.1	0.1	0.1
- operating margin (%)	54.5	54.4	43.7	38.7	38.4
- leverage (x)	2.2	2.0	2.2	2.5	2.6
- interest burden (%)	69.1	70.0	52.5	43.2	49.4
- tax burden (%)	94.4	93.0	86.2	83.6	82.0
WACC (%)	6.4	6.4	6.4	6.4	6.4
ROIC (%)	6.1	5.8	5.0	3.6	3.8
NOPAT (Bt m)	2,333	2,594	1,660	1,893	2,487
invested capital (Bt m)	45,033	33,311	52,878	64,870	77,587

Sources: Company data, Thanachart estimates

Banpu Power Pcl

INCOME STATEMENT

FY ending Dec (Bt m)	2021A	2022A	2023F	2024F	2025F
Sales	6,784	24,501	25,295	28,220	27,925
Cost of sales	6,824	22,933	23,181	25,221	24,977
Gross profit	(40)	1,568	2,114	2,999	2,948
% gross margin	-0.6%	6.4%	8.4%	10.6%	10.6%
Selling & administration expenses	1,103	1,887	1,968	2,121	2,117
Operating profit	(1,143)	(318)	146	878	832
% operating margin	-16.8%	-1.3%	0.6%	3.1%	3.0%
Depreciation & amortization	581	1,246	1,507	1,698	1,691
EBITDA	(562)	928	1,653	2,576	2,523
% EBITDA margin	-8.3%	3.8%	6.5%	9.1%	9.0%
Non-operating income	1,034	905	1,083	1,106	973
Non-operating expenses	0	0	0	0	0
Interest expense	(249)	(897)	(978)	(1,066)	(1,276)
Pre-tax profit	(358)	(310)	251	918	528
Income tax	57	108	88	275	159
After-tax profit	(416)	(418)	163	643	370
% net margin	-6.1%	-1.7%	0.6%	2.3%	1.3%
Shares in affiliates' Earnings	3,142	3,338	3,740	3,898	4,571
Minority interests	(47)	(742)	(535)	(760)	(783)
Extraordinary items	448	3,560	0	0	0
NET PROFIT	3,127	5,739	3,368	3,780	4,158
Normalized profit	2,679	2,178	3,368	3,780	4,158
EPS (Bt)	1.0	1.9	1.1	1.2	1.4
Normalized EPS (Bt)	0.9	0.7	1.1	1.2	1.4

BALANCE SHEET

FY ending Dec (Bt m)	2021A	2022A	2023F	2024F	2025F
ASSETS:					
Current assets:	9,883	11,670	13,574	9,567	7,906
Cash & cash equivalent	2,760	4,105	6,050	2,050	1,050
Account receivables	1,311	1,754	2,079	2,319	2,295
Inventories	1,186	1,101	1,270	1,382	1,369
Others	4,625	4,710	4,175	3,816	3,192
Investments & loans	39,245	41,157	43,803	55,861	66,841
Net fixed assets	23,811	22,876	21,997	20,800	19,535
Other assets	1,928	1,962	2,171	2,273	2,372
Total assets	74,867	77,665	81,545	88,501	96,652
LIABILITIES:					
Current liabilities:	10,968	9,385	11,053	12,677	14,822
Account payables	331	220	953	1,036	1,026
Bank overdraft & ST loans	6,551	242	807	988	1,251
Current LT debt	1,439	5,617	5,364	6,568	8,319
Others current liabilities	2,647	3,307	3,930	4,084	4,225
Total LT debt	13,965	9,860	9,961	12,199	15,450
Others LT liabilities	354	5,628	5,989	6,675	6,621
Total liabilities	25,287	24,873	27,002	31,551	36,893
Minority interest	3,944	4,310	4,845	5,606	6,389
Preferreds shares	0	0	0	0	0
Paid-up capital	30,477	30,477	30,457	30,457	30,457
Share premium	7,231	7,231	7,231	7,231	7,231
Warrants	0	0	0	0	0
Surplus	(4,369)	(4,955)	(4,955)	(4,955)	(4,955)
Retained earnings	12,295	15,727	16,963	18,611	20,637
Shareholders' equity	45,635	48,481	49,697	51,344	53,371
Liabilities & equity	74,867	77,665	81,545	88,501	96,652

Sources: Company data, Thanachart estimates

Banpu Power Pcl

CASH FLOW STATEMENT

FY ending Dec (Bt m)	2021A	2022A	2023F	2024F	2025F
Earnings before tax	(358)	(310)	251	918	528
Tax paid	(115)	(80)	(100)	(266)	(162)
Depreciation & amortization	581	1,246	1,507	1,698	1,691
Chg In working capital	(894)	(469)	239	(268)	28
Chg In other CA & CL / minorities	6,464	2,969	4,310	3,802	4,740
Cash flow from operations	5,678	3,356	6,207	5,883	6,825
Capex	(16,390)	(310)	(595)	(460)	(380)
Right of use	(62)	64	(200)	(100)	(100)
ST loans & investments	50	542	600	600	600
LT loans & investments	(6,866)	(1,912)	(2,646)	(12,058)	(10,979)
Adj for asset revaluation	0	0	0	0	0
Chg In other assets & liabilities	(53)	8,580	319	643	(99)
Cash flow from investments	(23,322)	6,965	(2,522)	(11,375)	(10,958)
Debt financing	16,686	(6,082)	412	3,624	5,265
Capital increase	(33)	0	(20)	0	0
Dividends paid	(1,981)	(2,286)	(2,132)	(2,132)	(2,132)
Warrants & other surplus	3,413	(607)	0	0	0
Cash flow from financing	18,085	(8,975)	(1,740)	1,492	3,133
Free cash flow	(10,713)	3,045	5,612	5,423	6,445

VALUATION

FY ending Dec	2021A	2022A	2023F	2024F	2025F
Normalized PE (x)	15.5	19.0	12.3	11.0	10.0
Normalized PE - at target price (x)	22.7	28.0	18.1	16.1	14.6
PE (x)	13.2	7.2	12.3	11.0	10.0
PE - at target price (x)	19.5	10.6	18.1	16.1	14.6
EV/EBITDA (x)	na	57.2	31.2	23.0	25.9
EV/EBITDA - at target price (x)	na	78.2	42.9	30.5	33.6
P/BV (x)	0.9	0.9	0.8	0.8	0.8
P/BV - at target price (x)	1.3	1.3	1.2	1.2	1.1
P/CFO (x)	7.3	12.3	6.7	7.0	6.1
Price/sales (x)	6.1	1.7	1.6	1.5	1.5
Dividend yield (%)	4.8	5.1	5.1	5.1	5.1
FCF Yield (%)	(25.9)	7.4	13.5	13.1	15.6
(Bt)					
Normalized EPS	0.9	0.7	1.1	1.2	1.4
EPS	1.0	1.9	1.1	1.2	1.4
DPS	0.7	0.7	0.7	0.7	0.7
BV/share	15.0	15.9	16.3	16.9	17.5
CFO/share	1.9	1.1	2.0	1.9	2.2
FCF/share	(3.5)	1.0	1.8	1.8	2.1

Sources: Company data, Thanachart estimates

Banpu Power Pcl

FINANCIAL RATIOS

FY ending Dec	2021A	2022A	2023F	2024F	2025F
Growth Rate					
Sales (%)	23.2	261.1	3.2	11.6	(1.0)
Net profit (%)	(15.5)	83.5	(41.3)	12.2	10.0
EPS (%)	(15.5)	83.5	(41.3)	12.2	10.0
Normalized profit (%)	(19.5)	(18.7)	54.6	12.2	10.0
Normalized EPS (%)	(19.5)	(18.7)	54.6	12.2	10.0
Dividend payout ratio (%)	63.3	37.2	63.3	56.4	51.3
Operating performance					
Gross margin (%)	(0.6)	6.4	8.4	10.6	10.6
Operating margin (%)	(16.8)	(1.3)	0.6	3.1	3.0
EBITDA margin (%)	(8.3)	3.8	6.5	9.1	9.0
Net margin (%)	(6.1)	(1.7)	0.6	2.3	1.3
D/E (incl. minor) (x)	0.4	0.3	0.3	0.3	0.4
Net D/E (incl. minor) (x)	0.4	0.2	0.2	0.3	0.4
Interest coverage - EBIT (x)	na	na	0.1	0.8	0.7
Interest coverage - EBITDA (x)	na	1.0	1.7	2.4	2.0
ROA - using norm profit (%)	4.3	2.9	4.2	4.4	4.5
ROE - using norm profit (%)	6.2	4.6	6.9	7.5	7.9
DuPont					
ROE - using after tax profit (%)	na	na	0.3	1.3	0.7
- asset turnover (x)	0.1	0.3	0.3	0.3	0.3
- operating margin (%)	na	na	4.9	7.0	6.5
- leverage (x)	1.4	1.6	1.6	1.7	1.8
- interest burden (%)	328.8	(52.7)	20.4	46.3	29.3
- tax burden (%)	na	na	65.0	70.0	70.0
WACC (%)	5.2	5.2	5.2	5.2	5.2
ROIC (%)	(2.6)	(0.5)	0.2	1.0	0.8
NOPAT (Bt m)	(1,143)	(318)	95	615	582
invested capital (Bt m)	64,831	60,095	59,778	69,049	77,341

Sources: Company data, Thanachart estimates

Gulf Energy Dev. Pcl

INCOME STATEMENT

FY ending Dec (Bt m)	2021A	2022A	2023F	2024F	2025F
Sales	47,467	94,151	114,173	152,747	171,684
Cost of sales	34,388	74,711	90,782	124,183	139,538
Gross profit	13,079	19,440	23,391	28,564	32,146
% gross margin	27.6%	20.6%	20.5%	18.7%	18.7%
Selling & administration expenses	2,297	2,955	2,652	2,875	3,090
Operating profit	10,782	16,485	20,739	25,689	29,056
% operating margin	22.7%	17.5%	18.2%	16.8%	16.9%
Depreciation & amortization	4,989	5,063	7,332	9,174	10,208
EBITDA	15,771	21,548	28,070	34,863	39,265
% EBITDA margin	33.2%	22.9%	24.6%	22.8%	22.9%
Non-operating income	2,516	355	294	228	211
Non-operating expenses	0	0	0	0	0
Interest expense	(5,596)	(7,652)	(8,780)	(9,221)	(9,236)
Pre-tax profit	7,703	9,189	12,252	16,696	20,032
Income tax	347	1,344	724	697	851
After-tax profit	7,356	7,845	11,529	15,998	19,181
% net margin	15.5%	8.3%	10.1%	10.5%	11.2%
Shares in affiliates' Earnings	3,853	6,665	8,689	10,497	13,021
Minority interests	(2,356)	(2,982)	(4,076)	(5,431)	(6,313)
Extraordinary items	(1,182)	(110)	0	0	0
NET PROFIT	7,670	11,418	16,141	21,064	25,888
Normalized profit	8,852	11,528	16,141	21,064	25,888
EPS (Bt)	0.7	1.0	1.4	1.8	2.2
Normalized EPS (Bt)	0.8	1.0	1.4	1.8	2.2

BALANCE SHEET

FY ending Dec (Bt m)	2021A	2022A	2023F	2024F	2025F
ASSETS:					
Current assets:	38,811	70,249	52,902	56,831	51,233
Cash & cash equivalent	22,634	42,209	23,000	18,000	8,000
Account receivables	9,569	18,999	23,460	31,386	35,278
Inventories	1,303	1,561	2,487	3,402	3,823
Others	5,306	7,481	3,955	4,042	4,132
Investments & loans	142,229	177,379	181,748	187,166	188,126
Net fixed assets	130,128	99,555	134,366	153,528	165,681
Other assets	51,506	70,989	76,268	77,494	78,740
Total assets	362,674	418,172	445,283	475,018	483,779
LIABILITIES:					
Current liabilities:	35,016	51,868	33,285	37,255	38,772
Account payables	3,080	7,484	7,462	10,207	11,469
Bank overdraft & ST loans	9,998	6,669	5,568	5,814	5,611
Current LT debt	9,528	22,633	10,913	11,396	10,998
Others current liabilities	12,410	15,082	9,343	9,838	10,693
Total LT debt	212,465	220,770	261,910	273,502	263,958
Others LT liabilities	7,684	9,732	3,881	4,323	4,568
Total liabilities	255,165	282,370	299,076	315,080	307,298
Minority interest	10,913	25,015	29,091	34,522	40,835
Preferreds shares	0	0	0	0	0
Paid-up capital	11,733	11,733	11,733	11,733	11,733
Share premium	51,822	51,822	51,822	51,822	51,822
Warrants	0	0	0	0	0
Surplus	(3,891)	4,172	4,172	4,172	4,172
Retained earnings	36,931	43,060	49,390	57,690	67,919
Shareholders' equity	96,596	110,787	117,117	125,417	135,646
Liabilities & equity	362,674	418,172	445,283	475,018	483,779

Sources: Company data, Thanachart estimates

Gulf Energy Dev. Pcl

CASH FLOW STATEMENT

FY ending Dec (Bt m)	2021A	2022A	2023F	2024F	2025F
Earnings before tax	7,703	9,189	12,252	16,696	20,032
Tax paid	(259)	(1,377)	(636)	(698)	(805)
Depreciation & amortization	4,989	5,063	7,332	9,174	10,208
Chg In working capital	(3,153)	(5,284)	(5,410)	(6,096)	(3,050)
Chg In other CA & CL / minorities	2,939	18,170	6,389	10,905	13,739
Cash flow from operations	12,218	25,760	19,926	29,981	40,125
Capex	(5,399)	25,511	(42,023)	(28,211)	(22,231)
Right of use	131	(1,697)	(100)	(100)	(100)
ST loans & investments	(596)	(443)	0	0	0
LT loans & investments	(115,511)	(35,150)	(4,369)	(5,418)	(960)
Adj for asset revaluation	0	0	0	0	0
Chg In other assets & liabilities	8,973	(14,634)	(11,149)	(809)	(1,031)
Cash flow from investments	(112,403)	(26,414)	(57,642)	(34,537)	(24,322)
Debt financing	76,147	17,455	28,318	12,321	(10,144)
Capital increase	0	0	0	0	0
Dividends paid	(4,459)	(5,162)	(9,685)	(12,638)	(15,533)
Warrants & other surplus	29,357	7,936	(126)	(126)	(126)
Cash flow from financing	101,046	20,229	18,507	(443)	(25,803)
Free cash flow	6,820	51,271	(22,097)	1,770	17,894

VALUATION

FY ending Dec	2021A	2022A	2023F	2024F	2025F
Normalized PE (x)	59.0	45.3	32.3	24.8	20.2
Normalized PE - at target price (x)	76.9	59.0	42.2	32.3	26.3
PE (x)	68.1	45.7	32.3	24.8	20.2
PE - at target price (x)	88.7	59.6	42.2	32.3	26.3
EV/EBITDA (x)	46.4	33.9	27.7	22.8	20.2
EV/EBITDA - at target price (x)	56.4	41.2	33.3	27.3	24.3
P/BV (x)	5.4	4.7	4.5	4.2	3.8
P/BV - at target price (x)	7.0	6.1	5.8	5.4	5.0
P/CFO (x)	42.7	20.3	26.2	17.4	13.0
Price/sales (x)	11.0	5.5	4.6	3.4	3.0
Dividend yield (%)	1.0	1.3	1.9	2.4	3.0
FCF Yield (%)	1.3	9.8	(4.2)	0.3	3.4
(Bt)					
Normalized EPS	0.8	1.0	1.4	1.8	2.2
EPS	0.7	1.0	1.4	1.8	2.2
DPS	0.4	0.6	0.8	1.1	1.3
BV/share	8.2	9.4	10.0	10.7	11.6
CFO/share	1.0	2.2	1.7	2.6	3.4
FCF/share	0.6	4.4	(1.9)	0.2	1.5

Sources: Company data, Thanachart estimates

Gulf Energy Dev. Pcl

FINANCIAL RATIOS

FY ending Dec	2021A	2022A	2023F	2024F	2025F
Growth Rate					
Sales (%)	44.4	98.3	21.3	33.8	12.4
Net profit (%)	79.1	48.9	41.4	30.5	22.9
EPS (%)	69.3	48.9	41.4	30.5	22.9
Normalized profit (%)	100.5	30.2	40.0	30.5	22.9
Normalized EPS (%)	89.4	30.2	40.0	30.5	22.9
Dividend payout ratio (%)	67.3	61.7	60.0	60.0	60.0
Operating performance					
Gross margin (%)	27.6	20.6	20.5	18.7	18.7
Operating margin (%)	22.7	17.5	18.2	16.8	16.9
EBITDA margin (%)	33.2	22.9	24.6	22.8	22.9
Net margin (%)	15.5	8.3	10.1	10.5	11.2
D/E (incl. minor) (x)	2.2	1.8	1.9	1.8	1.6
Net D/E (incl. minor) (x)	1.9	1.5	1.7	1.7	1.5
Interest coverage - EBIT (x)	1.9	2.2	2.4	2.8	3.1
Interest coverage - EBITDA (x)	2.8	2.8	3.2	3.8	4.3
ROA - using norm profit (%)	2.9	3.0	3.7	4.6	5.4
ROE - using norm profit (%)	11.0	11.1	14.2	17.4	19.8
DuPont					
ROE - using after tax profit (%)	9.2	7.6	10.1	13.2	14.7
- asset turnover (x)	0.2	0.2	0.3	0.3	0.4
- operating margin (%)	28.0	17.9	18.4	17.0	17.0
- leverage (x)	3.8	3.8	3.8	3.8	3.7
- interest burden (%)	57.9	54.6	58.3	64.4	68.4
- tax burden (%)	95.5	85.4	94.1	95.8	95.8
WACC (%)	4.0	4.0	4.0	4.0	4.0
ROIC (%)	5.2	4.6	6.1	6.6	7.0
NOPAT (Bt m)	10,296	14,074	19,514	24,616	27,822
invested capital (Bt m)	305,953	318,651	372,508	398,128	408,214

Sources: Company data, Thanachart estimates

ESG Information - Third Party Terms

www.Settrade.com
SETTRADE: You acknowledge that the use of data, information or service displayed and/or contained in this website may require third party's data, content or software which is subject to the terms of third party provider. By accessing and/or using of such certain data, you acknowledge and agree to comply with and be bound by the applicable third party terms specified below.

- ESG Scores by Third Party data from www.SETTRADE.com
- 1. MSCI (CCC- AAA)
 - 2. ESG Book (0-100)
 - 3. Refinitiv (0-100)
 - 4. S&P Global (0-100)
 - 5. Moody's ESG Solutions (0-100)

SET THSI Index (SETTHSI)
Nowadays, long-term investment tends to be more focused on sustainable companies. The financial statement performance and the consideration in environmental, social and governance (ESG) perspective are keys aspects for analysis.
SET has created a Thailand Sustainability Investment (THSI) list since 2015 for using as an alternative investment in the high performance ESG stocks for investors while, supporting the sustainable Thai companies. SET defines the sustainable companies as the companies that embrace risk management, supply chain management and innovations together with responsibility for environmental, social and governance aspects
As a result, SET has created the SETTHSI for the purpose of indicating the price of these sustainable companies that pass the market capital size and liquidity criteria.

ESG Book's Disclaimer
Arabesque S-Ray GmbH, also trading as "ESG Book", is a limited liability company (Gesellschaft mit beschränkter Haftung) incorporated in Frankfurt am Main and organised under the laws of Germany with registered number HRB 113087 in the commercial register of the local court with its seat and business address at Zeppelinallee 15, 60325 Frankfurt am Main, Germany (hereinafter "ESG Book"). ESG Book, with its UK branch and local subsidiaries, is a provider of sustainability data and advisory services and operates the sustainability data platform ESG Book. ESG Book does not offer any regulated financial services nor products. This document is provided on a confidential basis by ESG Book and is for information purposes only; accordingly, it is not a solicitation or an offer to buy any security or instrument or to participate in any trading activities nor should it be construed as a recommendation or advice on the merits of investing in any financial product. **THIRD PARTY INFORMATION.** Certain information contained in this document has been obtained from sources outside ESG Book. While such information is believed to be reliable for the purposes used herein, no representations are made as to the accuracy or completeness thereof and neither ESG Book nor its affiliates take any responsibility for such information. To the extent this document contains any links to third party websites, such links are provided as a convenience and for informational purposes only; they do not constitute an endorsement or an approval by ESG Book of any of the products, services or opinions of the corporations or organization or individual operating such third party websites. ESG Book bears no responsibility for the accuracy, legality or content of the external site or for that of subsequent links. **RELIANCE –** ESG Book makes no representation or warranty, express or implied, as to the accuracy or completeness of the information contained herein, and accepts no liability for any loss, of whatever kind, howsoever arising, in relation thereto, and nothing contained herein should be relied upon. **CONFIDENTIALITY.** This document contains highly confidential information regarding ESG Book's strategy and organization. Your acceptance of this document constitutes your agreement to keep confidential all the information contained in this document, as well as any information derived by you from the information contained in this document and not disclose any such information to any other person. This document may not be copied, reproduced, in any way used or disclosed or transmitted, in whole or in part, to any other person.

MSCI ESG Research LLC
"Certain information @2021 MSCI ESG Research LLC. Reproduced by permission"
"Although [User ENTITY NAME's] information providers, including without limitation, MSCI ESG Research LLC and its affiliates (the "ESG Parties"), obtain information (the "Information") from sources they consider reliable, none of the ESG Parties warrants or guarantees the originality, accuracy and/or completeness, of any data herein and expressly disclaim all express or implied warranties, including those of merchantability and fitness for a particular purpose. The Information may only be used for your internal use, may not be reproduced or redisseminated in any form and may not be used as a basis for, or a component of, any financial instruments or products or indices. Further, non of the Information can in and of itself be used to determine which securities to buy or sell or when to buy or sell them. None of the ESG Parties shall have any liability for any errors or omissions in connection with any data herein, or any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages."

Score range	Description
CCC - B	LAGGARD: A company lagging its industry based on its high exposure and failure to manage significant ESG risks
BB - BBB - A	AVERAGE : A company with a mixed or unexceptional track record of managing the most significant ESG risks and opportunities relative to industry peers
AA - AAA	LEADER: A company leading its industry in managing the most significant ESG risks and opportunities

The Dow Jones Sustainability Indices (DJSI)
The Dow Jones Sustainability Indices (DJSI) are a family of best-in-class benchmarks for investors who have recognized that sustainable business practices are critical to generating long-term shareholder value and who wish to reflect their sustainability convictions in their investment portfolios. The family was launched in 1999 as the first global sustainability benchmark and tracks the stock performance of the world's leading companies in terms of economic, environmental and social criteria. Created jointly by S&P Dow Jones Indices and SAM, the DJSI combine the experience of an established index provider with the expertise of a specialist in Sustainable Investing to select the most sustainable companies from across 61 industries. The indices serve as benchmarks for investors who integrate sustainability considerations into their portfolios, and provide an effective engagement platform for investors who wish to encourage companies to improve their corporate sustainability practices.

S&P Global Market Intelligence
Copyright © 2021, S&P Global Market Intelligence (and its affiliates as applicable). Reproduction of any information, opinions, views, data or material, including ratings ("Content") in any form is prohibited except with the prior written permission of the relevant party. Such party, its affiliates and suppliers ("Content Providers") do not guarantee the accuracy, adequacy, completeness, timeliness or availability of any Content and are not responsible for any errors or omissions (negligent or otherwise), regardless of the cause, or for the results obtained from the use of such Content. In no event shall Content Providers be liable for any damages, costs, expenses, legal fees, or losses (including lost income or lost profit and opportunity costs) in connection with any use of the Content. A reference to a particular investment or security, a rating or any observation concerning an investment that is part of the Content is not a recommendation to buy, sell or hold such investment or security, does not address the suitability of an investment or security and should not be relied on as investment advice. Credit ratings are statements of opinions and are not statements of fact.
ESG risk combines the concepts of management and exposure to arrive at an absolute assessment of ESG risk. We identify five categories of ESG risk severity that could impact a company's enterprise value

Moody's ESG Solutions
© 2022 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.
CREDIT RATINGS ISSUED BY MOODY'S CREDIT RATINGS AFFILIATES ARE THEIR CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED BY MOODY'S (COLLECTIVELY, "PUBLICATIONS") MAY INCLUDE SUCH CURRENT OPINIONS. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE APPLICABLE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES ITS PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS, AND PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS OR PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the rating process or in preparing its Publications.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY CREDIT RATING, ASSESSMENT, OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any credit rating, agreed to pay to Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it fees ranging from \$1,000 to approximately \$5,000,000. MCO and Moody's Investors Service also maintain policies and procedures to address the independence of Moody's Investors Service credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moody.com under the heading "Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors.

Additional terms for Japan only: Moody's Japan K.K. ("MJKK") is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJKK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJKK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

Additional terms for Hong Kong only: Any Second Party Opinion or other opinion that falls within the definition of "advising on securities" under the Hong Kong Securities and Futures Ordinance ("SFO") is issued by Vigeo Eiris Hong Kong Limited, a company licensed by the Hong Kong Securities and Futures Commission to carry out the regulated activity of advising on securities in Hong Kong. This Second Party Opinion or other opinion that falls within the definition of "advising on securities" under the SFO is intended for distribution only to "professional investors" as defined in the SFO and the Hong Kong Securities and Futures (Professional Investors) Rules. This Second Party Opinion or other opinion must not be distributed to or used by persons who are not professional investors.

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any credit rating, agreed to pay to MJKK or MSFJ (as applicable) for credit ratings opinions and services rendered by it fees ranging from JPY125,000 to approximately JPY550,000,000.

MJKK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.

Refinitiv ESG

These Terms of Use govern your access or use of the ESG information and materials on the Refinitiv website and any AI powered voice assistance software ("Refinitiv ESG Information"). 2020© Refinitiv. All rights reserved. Refinitiv ESG Information is proprietary to Refinitiv Limited and/or its affiliates ("Refinitiv").

The Refinitiv ESG Information is for general informational and non-commercial purposes only. Reproduction, redistribution or any other form of copying or transmission of the Refinitiv ESG Information is prohibited without Refinitiv's prior written consent.

All warranties, conditions and other terms implied by statute or common law including, without limitation, warranties or other terms as to suitability, merchantability, satisfactory quality and fitness for a particular purpose, are excluded to the maximum extent permitted by applicable laws. The Refinitiv ESG Information is provided "as is" and Refinitiv makes no express or implied warranties, representations or guarantees concerning the accuracy, completeness or currency of the information in this service or the underlying Third Party Sources (as defined below). You assume sole responsibility and entire risk as to the suitability and results obtained from your use of the Refinitiv ESG Information.

The Refinitiv ESG Information does not amount to financial, legal or other professional advice, nor does it constitute: (a) an offer to purchase shares in the funds referred to; or (b) a recommendation relating to the sale and purchase of instruments; or (c) a recommendation to take any particular legal, compliance and/or risk management decision. Investors should remember that past performance is not a guarantee of future results.

The Refinitiv ESG Information will not be used to construct or calculate and index or a benchmark, used to create any derivative works or used for commercial purposes. Refinitiv's disclaimer in respect of Benchmark Regulations applies to the Refinitiv ESG Information.

No responsibility or liability is accepted by Refinitiv its affiliates, officers, employees or agents (whether for negligence or otherwise) in respect of the Refinitiv ESG Information, or for any inaccuracies, omissions, mistakes, delays or errors in the computation and compilation of the Refinitiv ESG Information (and Refinitiv shall not be obliged to advise any person of any error therein). For the avoidance of doubt, in no event will Refinitiv have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) relating to any use of the Refinitiv ESG Information.

You agree to indemnify, defend and hold harmless Refinitiv from and against any claims, losses, damages, liabilities, costs and expenses, including, without limitation, reasonable legal and experts' fees and costs, as incurred, arising in any manner out of your use of, or inability to use, any Information contained on the Refinitiv web site or obtained via any AI powered voice assistance software.

You represent to us that you are lawfully able to enter into these Terms of Use. If you are accepting these Terms of Use for and on behalf of an entity such as the company you work for, you represent to us that you have legal authority to bind that entity.

By accepting these Terms of Use you are also expressly agreeing to the following Refinitiv's website Terms of Use.

Refinitiv ESG scores are derived from third party publicly available sources ("Third Party Sources") and are formulated on the basis of Refinitiv own transparent and objectively applied methodology. Refinitiv's ESG Information methodology can be accessed [here](#).

Score range	Description	
0 to 25	First Quartile	Scores within this range indicates poor relative ESG performance and insufficient degree of transparency in reporting material ESG data publicly.
> 25 to 50	Second Quartile	Scores within this range indicates satisfactory relative ESG performance and moderate degree of transparency in reporting material ESG data publicly.
> 50 to 75	Third Quartile	Scores within this range indicates good relative ESG performance and above average degree of transparency in reporting material ESG data publicly.
> 75 to 100	Fourth Quartile	Score within this range indicates excellent relative ESG performance and high degree of transparency in reporting material ESG data publicly.

CG Report : by Thai Institute of Directors Association (Thai IOD), Established in December 1999, the Thai IOD is a membership organization that strives to promote professionalism in directorship. The Thai IOD offers directors certification and professional development courses, provides a variety of seminars, forums and networking events, and conducts research on board governance issues and practices. Membership comprises board members from companies ranging from large publicly listed companies to small private firms.



General Disclaimers And Disclosures:

This report is prepared and issued by Thanachart Securities Public Company Limited (TNS) as a resource only for clients of TNS, Thanachart Capital Public Company Limited (TCAP) and its group companies. Copyright © Thanachart Securities Public Company Limited. All rights reserved. The report may not be reproduced in whole or in part or delivered to other persons without our written consent.

This report is prepared by analysts who are employed by the research department of TNS. While the information is from sources believed to be reliable, neither the information nor the forecasts shall be taken as a representation or warranty for which TNS or TCAP or its group companies or any of their employees incur any responsibility. This report is provided to you for informational purposes only and it is not, and is not to be construed as, an offer or an invitation to make an offer to sell or buy any securities. Neither TNS, TCAP nor its group companies accept any liability whatsoever for any direct or consequential loss arising from any use of this report or its contents.

The information and opinions contained herein have been compiled or arrived at from sources believed reliable. However, TNS, TCAP and its group companies make no representation or warranty, express or implied, as to their accuracy or completeness. Expressions of opinion herein are subject to change without notice. The use of any information, forecasts and opinions contained in this report shall be at the sole discretion and risk of the user.

TNS, TCAP and its group companies perform and seek to perform business with companies covered in this report. TNS, TCAP, its group companies, their employees and directors may have positions and financial interest in securities mentioned in this report. TNS, TCAP or its group companies may from time to time perform investment banking or other services for, or solicit investment banking or other business from, any entity mentioned in this report. Therefore, investors should be aware of conflict of interest that may affect the objectivity of this report.

Note: Thanachart Securities Public Company Limited act as a Market Maker and Derivative Warrants Issuer. At present, TNS has issued 23 Derivative Warrants which are CBG16C2312A, CPALL16C2310A, DELTA16C2309A, EA16C2311A, EA16C2309A, GULF16C2311A, GULF16C2309A, HANA16C2312A, HANA16C2309A, JMT16C2311A, JMART16C2310A, KBANK16C2312A, KBANK16C2310A, KCE16C2401A, KCE16C2309A, PTTEP16C2311A, SAWAD16C2312A, SAWAD16C2309A, SCB16C2311A, SET5016C2312B, SET5016C2312A, SET5016P2312A, TIDLOR16C2311A (underlying securities are (CPALL, DELTA, EA, GULF, HANA, JMART, JMT, KBANK, KCE, PTTEP, SAWAD, SCB, SET50, TIDLOR). (underlying securities are (CPALL, DELTA, EA, GULF, HANA, JMART, JMT, KBANK, KCE, PTTEP, SAWAD, SCB, SET50, TIDLOR). before making investment decisions.

Note: Our major shareholder TCAP (Thanachart Capital Pcl) which holding 89.96% of Thanachart Securities and also TCAP holding 100% of Thanachart SPV1 Co. Ltd. TCAP and Thanachart SPV1 Co. Ltd has stake in THANI for 60% and being the major shareholder of THANI.

Note: Thanachart Capital Public Company Limited (TCAP), TMBThanachart Bank Public Company Limited (TTB), are related companies to Thanachart Securities Public Company Limited (TNS). Thanachart Securities Pcl is a subsidiary of Thanachart Capital Pcl (TCAP) which holds 24.33% of the shareholding in TMBThanachart Bank Pcl.

Thanachart Capital Public Company Limited (TCAP), Ratchthani Leasing Public Company Limited (THANI), MBK PUBLIC COMPANY LIMITED (MBK) and PATUM RICE MILL AND GRANARY PUBLIC COMPANY LIMITED (PRG) are related companies to Thanachart Securities Public Company Limited (TNS) . Since TNS covers those securities in research report, consequently TNS incurs conflicts of interest.

Note: Thanachart Securities Public Company Limited (TNS) acts as an underwriter of "Debentures of True Corporation Pcl (TRUE) No. 1/2023 (B.E. 2566) (No. 1-4) which its maturity at 2025, 2026, 2028, 2033 (B.E. 2568, 2569, 2571, 2576)", therefore investors need to be aware that there could be conflicts of interest in this research.

Disclosure of Interest of Thanachart Securities

Investment Banking Relationship

Within the preceding 12 months, Thanachart Securities has lead-managed public offerings and/or secondary offerings (excluding straight bonds) of the securities of the following companies: Moshi Moshi Retail Corporation Pcl. (MOSHI TB)

Recommendation Structure:

Recommendations are based on absolute upside or downside, which is the difference between the target price and the current market price. If the upside is 10% or more, the recommendation is BUY. If the downside is 10% or more, the recommendation is SELL. For stocks where the upside or downside is less than 10%, the recommendation is HOLD. 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 the market price and the formal recommendation.

For sectors, an "Overweight" sector weighting is used when we have BUYs on majority of the stocks under our coverage by market cap. "Underweight" is used when we have SELLs on majority of the stocks we cover by market cap. "Neutral" is used when there are relatively equal weightings of BUYs and SELLs.

Thanachart Securities Pcl.

Research Team

18 Floor, MBK Tower

444 Phayathai Road, Pathumwan Road, Bangkok 10330

Tel: 662 - 779-9119

Email: thanachart.res@thanachartsec.co.th

Pimpaka Nichgaroon, CFA

Head of Research, Strategy

Tel: 662-779-9199

pimpaka.nic@thanachartsec.co.th

Nuttapop Prasitsuksant

Telecom, Utilities

Tel: 662-483-8296

nuttapop.pra@thanachartsec.co.th

Rata Limsuthiwanpoom

Auto, Industrial Estate, Media, Prop. Fund

Tel: 662-483-8297

rata.lim@thanachartsec.co.th

Siriporn Arunothai

Small Cap, Healthcare, Hotel

Tel: 662-779-9113

siriporn.aru@thanachartsec.co.th

Sittichet Rungrassameephat

Analyst, Retail Market Strategy

Tel: 662-483-8303

sittichet.run@thanachartsec.co.th

Adisak Phupipathirungul, CFA

Retail Market Strategy

Tel: 662-779-9120

adisak.phu@thanachartsec.co.th

Pattadol Bunnak

Electronics, Food & Beverage, Shipping

Tel: 662-483-8298

pattadol.bun@thanachartsec.co.th

Saksid Phadthananarak

Construction, Transportation

Tel: 662-779-9112

saksid.pha@thanachartsec.co.th

Yupapan Polpornprasert

Energy, Petrochemical

Tel: 662-779-9110

yupapan.pol@thanachartsec.co.th

Thaloengsak Kucharoenpaisan

Analyst, Retail Market Strategy

Tel: 662-483-8304

thaloengsak.kuc@thanachartsec.co.th

Pattarawan Wangmingmat

Senior Technical Analyst

Tel: 662-779-9105

pattarawan.wan@thanachartsec.co.th

Phannarai Tiypittayarut

Property, Retail

Tel: 662-779-9109

phannarai.von@thanachartsec.co.th

Sarachada Sornsong

Bank, Finance

Tel: 662-779-9106

sarachada.sor@thanachartsec.co.th

Witchanan Tambamroong

Technical Analyst

Tel: 662-779-9123

witchanan.tam@thanachartsec.co.th

Nariporn Klangpremchitt, CISA

Analyst, Retail Market Strategy

Tel: 662-779-9107

nariporn.kla@thanachartsec.co.th