EQUITIES RESEARCH



Thailand Utilities

ระยะการเติบโตใหม่สำหรับพลังงานหมุนเวียน

- เมื่อวันที่ 5 เม.ย. 2023 กระทรวงพลังงานได้ประกาศรายชื่อผู้ชนะการประมูลโครงการพลังงานหมุนเวียน
 ขนาด 5.303MW ที่จะเริ่มดำเนินงานเชิงพาณิชย์ในช่วงปี 2024-30
- เราคาดว่าสำนักงานคณะกรรมการกำกับกิจการพลังงาน (ERC) จะประกาศการประมูลกำลังการผลิตเพิ่มอีก
 3.7GW
- GULF, GUNKUL และ BGRIM เป็นหุ้นเด่นของเราจากแนวโน้มการเติบโตของกำไรที่อยู่ในเกณฑ์ดี

ผู้ชนะโครงการพลังงานหมุนเวียนขนาด 5.3GW

เมื่อวันที่ 5 เม.ย. 2023 กระทรวงพลังงานได้ประกาศรายชื่อผู้ชนะหลังการประมูลโครงการพลังงานหมุนเวียนขนาด 5,303MW ที่จะเริ่มดำเนินงานเชิงพาณิชย์ (COD) ในช่วงปี 2024-30 จนถึงปัจจุบันรัฐบาลพึ่งจะเซ็นสัญญาสัมปทาน กำลังการผลิตได้เพียง 4.85GW ในรอบนี้มี 10 บริษัทได้รับสิทธิโนการพัฒนาโครงการใหม่ประกอบด้วย GUNKUL (832.4MW – พลังแสงอาทิตย์ 568.8MW, พลังแสงอาทิตย์พร้อมแบตเตอรี่ 83.6MW, และพลังลม 180MW), BGRIM (339.3MW – พลังแสงอาทิตย์ 323.3MW และพลังลม 16MW), SSP (170.5MW – พลังแสงอาทิตย์ 154.5MW และ พลังลม 16MW), Wind Energy (not listed) (120MW – พลังแสงอาทิตย์พร้อมแบตเตอรี่ 30MW และพลังลม 90MW), ACE (พลังแสงอาทิตย์ 113MW), EA (พลังลม 90MW), RATCH (พลังแสงอาทิตย์ 27MW), GPSC (พลัง แสงอาทิตย์ 16MW), BCPG (พลังแสงอาทิตย์ 12MW), และ GULF (คาดว่าประมูลได้กำลังการผลิตรวม 2GW ประกอบด้วยพลังลม แสงอาทิตย์และแสงอาทิตย์พร้อมแบตเตอรี่) เจ้าหน้าที่ได้ระบุว่า EGCO ไม่ชนะการประมูลใด ๆ เลยจากความสามารถในการแข่งขันด้านด้นทุนที่ต่ำกว่า

โครงการที่ชนะมี EIRR อยู่ที่ 11-14%

เรามีความมั่นใจในศักยภาพการเติบโตของผู้ชนะเนื่องจากเราคาด EIRR ที่ 11% สำหรับโครงการพลังแสงอาทิตย์และ 14% สำหรับโครงการพลังลมซึ่งจะให้กำไรสุทธิต่อ MW ที่ 1 ลบ. สำหรับโครงการพลังแสงอาทิตย์และ 3 ลบ. สำหรับโครงการพลังแสงอาทิตย์และ 3 ลบ. สำหรับโครงการพลังลมโดยมีสมมติฐานจากความสามารถในการแข่งขันด้านด้นทุนและประสิทธิภาพการดำเนินงาน สำหรับ GUNKUL เราคาด EIRR ที่ 14% สำหรับโครงการพลังแสงอาทิตย์และ 18% สำหรับโครงการพลังลม พลังแสงอาทิตย์ ให้ EIRR สูงจากค่าบำเหน็จ (Premium) 0.5 บาท/kWh ที่จ่ายให้สำหรับโครงการไฟฟ้าพลังแสงอาทิตย์ใน 3 จังหวัด ชายแดนภาคใต้ หมายเหตุโครงการทั้งหมดที่คาดว่าจะเริ่มดำเนินงานเชิงพาณิชย์ในช่วงปี 2024-25 ต้องเซ็นสัญญา ซื้อขายไฟฟ้าภายใน 180 วันในขณะที่โครงการที่มีกำหนดเริ่มดำเนินงานเชิงพาณิชย์ในช่วงปี 2026-30 น่าจะเซ็น สัญญาฯ ได้ภายใน 2 ปี

โครงการพลังงานหมุนเวียนมีโอกาสโตเพิ่มอีก 3.7GW ในปี 2023

เมื่อวันที่ 9 มี.ค. 2023 สำนักงานนโยบายและแผนพลังงาน (EPPO) ภายใต้แผนพัฒนากำลังผลิตไฟฟ้าแห่งชาติปี 2018 ฉบับปรับปรุงครั้งที่ 1 (PDP2018Rev1) ได้อนุมัติแผนในการเปิดประมูลโครงการพลังงานหมุนเวียนใหม่อีก 3,668.5MW อันประกอบด้วยโครงการพลังแสงอาทิตย์ 2,632MW, โครงการพลังลม 1,000MW, โครงการก๊าซชีวภาพ 6.5MW และขยะอุตสาหกรรม 30MW เราคาดว่าบริษัทโรงไฟฟ้าของไทยจะได้รับอนุมัติกำลังการผลิตไฟฟ้าพลังงาน หมุนเวียนเพิ่มจากหน่วยงานกำกับดูแลในอีกไม่กี่เดือนข้างหน้า

ยังเป็นกลุ่มการลงทุนที่ดีและมีความปลอดภัย

เราเชื่อว่ากลุ่มพลังงานหมุนเวียนพึ่งจะเริ่มมี Upside เราคาดว่า ERC จะประกาศการประมูลใหม่สำหรับโครงการ พลังงานหมุนเวียนจำนวน 3.7GW อันเป็นส่วนหนึ่งของแผนพัฒนากำลังผลิตไฟฟ้าแห่งชาติซึ่งอยู่ภายใต้แผนพัฒนากำลังผลิตไฟฟ้าฉบับปรับปรุงครั้งที่ 1 (PDPR1) โดยตั้งเป้าการปล่อยก๊าซเรือนกระจกเป็นศูนย์พร้อมสัดส่วนพลังงาน หมุนเวียน (RE) ที่สูงขึ้นเป็น 50% ของกำลังการผลิตไฟฟ้ารวม GULF, GUNKUL และ BGRIM เป็นหุ้นเด่นของเรา จากแนวโน้มการเติบโตของกำไรที่อยู่ในเกณฑ์ดี กำลังการผลิตในต่างประเทศที่เพิ่มขึ้นและศักยภาพที่จะได้ประโยชน์ มากที่สุดจากการเติบโตของกำลังการผลิตใหม่ภายใต้ PDPR1



Siriluck Pinthusoonthorn siriluck.pin@fssia.com +66 2611 3562

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

Exhibit 1: Capacity winners

Company	Solar premium (Fit THB2.6679)	Solar (Fit THB2.1679)	Solar + battery premium (Fit THB3.3331)	Solar + battery (Fit THB2.8331)	Wind (Fit THB 3.1014)	Total capacity
	(MW)	(MW)	(MW)	(MW)		(MW)
GUNKUL	272.4	296.4	17.6	66.0	180.0	832.4
BGRIM	-	323.3	-	-	16.0	339.3
SSP	-	154.5	-	-	16.0	170.5
Wind Energy (not listed)	-	-	-	30.0	90.0	120.0
ACE	-	112.7	-	-	-	112.7
EA	-	-	-	-	90.0	90.0
RATCH	-	27.0	-	-	-	27.0
GPSC	-	16.0	-	-	-	16.0
BCPG	-	12.0	-	-	-	12.0

Sources: Companies; ERC; FSSIA estimates

Exhibit 2: Projected CODs

Company	2024E	2025E	2026E	2027E	2028E	2029E	2030E	Total capacity
	(MW)							
GUNKUL	-	-	176.6	-	48.2	371.2	236.4	832.4
BGRIM	-	-	20.0	169.0	124.3	-	26.0	339.3
SSP	-	-	-	92.0	42.5	-	36.0	170.5
EA	-	-	90.0	-	-	-	-	90.0
RATCH			27.0					27.0
GPSC	-	-	-	-	-	-	16.0	16.0
BCPG	-	-	-	-	-	-	12.0	12.0

Sources: Companies; ERC; FSSIA estimates

Exhibit 3: Renewable capacity by COD year

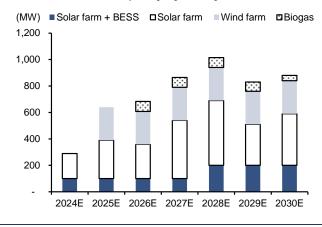
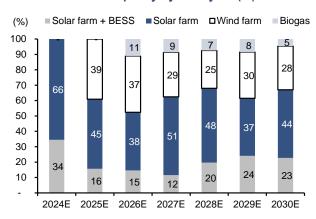


Exhibit 4: Renewable capacity by COD year (%)



Source: ERC Source: ERC

Exhibit 5: Renewable energy capacity breakdown under PDPR1

Projects	PDP 2018	PDP 2018 Rev. 1
	(MW)	(MW)
Projects under government-supportive policy		
- WTE – community waste	400	400
- Biomass (Pracharat) for three southernmost provinces	120	120
- Power Plants for Communities (PPC)	-	1,933
Subtotal	520	2,453
Projects under AEDP 2018		
Solar	10,000	8,740
Biomass	3,375	2,780
Biogas	546	400
Solar floating	2,725	2,725
Wind	1,485	1,485
WTE – industrial	44	44
Small hydro	-	69
Subtotal	18,175	16,243
Total	18,695	18,696

Source: Ministry of Energy

Public disclosures related to sustainable development evaluation of Thai listed companies

Rating regarding the sustainable development of Thai listed companies, both on the SET and MAI, are publicly available on the website of the Securities and Exchange Commission of Thailand (SEC). Currently, ratings available are 1) "CG Score" by the Thai Institute of Directors Association (Thai IOD); 2) "AGM Checklist" by the Thai Investors Association (TIA), a "CAC certified member" of the Thai Private Sector Collective Action Against Corruption (CAC); and 3) Sustainability Investment List (THSI) by the Stock Exchange of Thailand. The ratings are updated on an annual basis. FSS International Investment Advisory Company Limited does not confirm nor certify the accuracy of such ratings.

CG Score by the Thai Institute of Directors Association (Thai IOD) 1

The CG Score indicates corporate governance (CG) strength in the sustainable development of Thai listed companies. Annually, the Thai IOD, with support from the Stock Exchange of Thailand (SET), surveys and assesses the CG practices of companies and publishes the results on the Thai IOD website in a bid to promote and enhance the CG of Thai listed companies in order to promote compliance with international standards for better investment decisions. The results are from the perspective of a third party, not an evaluation of operations, as of the date appearing in the report, and may be changed after that date.

The five underlying categories and weighting used for the CG scoring in 2022 include the rights of shareholders and equitable treatment of shareholders (weight 25% combined), the role of stakeholders (25%), disclosure and transparency (15%), and board responsibilities (35%).

The CGR report rates CG in six categories: 5 for Excellent (score range 90-100), 4 for Very Good (score range 80-89), 3 for Good (Score range 70-79), 2 for Fair (score range 60-69), 1 for Pass (score range 60-69), and not rated (score below 50).

AGM Checklist by the Thai Investors Association (TIA)²

The "AGM Checklist" quantifies the extent to which shareholders' rights and equitable treatment are incorporated into business operations and the extent to which information is sufficiently disclosed and the level of its transparency. All the considered factors form important elements of two out of five the CG components. Annually, the TIA, with support from the SEC, leads the project to evaluate the quality of Annual General Meetings of Shareholders (AGMs) and to rate quality of the meetings.

The Checklist contains the minimum requirements under law that companies must comply with, or best practices according to international CG guidance. Representatives of the TIA will attend the meetings and perform the evaluation. The assessment criteria cover AGM procedures before the meeting (45%), at the meeting date (45%), and after the meeting (10%). The first assesses 1) advance circulation of sufficient information for voting; and 2) facilitating of how voting rights can be exercised. The second assesses 1) the ease of attending meetings; 2) transparency and verifiability; and 3) openness for Q&A. The third involves the meeting minutes that should contain discussion issues, resolutions and voting results.

The results are classified into four categories: 5 for Excellent (score 100), 4 for Very Good (score 90-99), 3 for Fair (score 80-89), and not rated (score below 79).

CAC certified member by the Thai Private Sector Collective Action Against Corruption (CAC)3

A <u>CAC certified member</u> is a listed company whose Checklist satisfies the CAC Certification's criteria and is approved by the CAC Council. The core elements of the Checklist include corruption risk assessment, establishment of key controls, and the monitoring and developing of policies. Note that the CAC does not certify the behaviour of the employees nor whether the companies have engaged in bribery, and Certification is good for three years.

Companies deciding to become a CAC certified member start with by submitting a Declaration of Intent signed by the Chairman of the Board to kick off the 18-month deadline for companies to submit the CAC Checklist for Certification. The 18-month provision is for risk assessment, in place of policy and control, training of managers and employees, establishment of whistleblowing channels, and communication of policies to all stakeholders.

The checklist document will be reviewed by the CAC Certification Committee for adequate information and evidence. It is worth noting that the committee consists of nine professionals in business law, corporate governance, internal audit, financial audit and experienced representatives from certified members.

A passed Checklist will move on to the <u>CAC Council</u> for granting certification approvals. The CAC Council consists of twelve prominent individuals who are highly respected in professionalism and ethical achievements. Among them are former ministers, a former central bank governor, the former head of the Thai Listed Companies Association, Chairman of Anti-Corruption Organizations (Thailand), Chairman of Thai Institute of Directors, and reputable academic scholars.

Sustainability Investment (THSI)4 by the Stock Exchange of Thailand (SET)

Thailand Sustainability Investment (THSI) quantifies responsibility in Environmental, and Social issues, by managing business with transparency in Governance. The THSI serves as another choice for investors who desire to adopt a responsible investment approach, according to the SET.

Annually, the SET will announce the voluntary participation of the company candidates which pass the preemptive criteria, and whose two key crucial conditions are met, i.e. no irregular trading of the board members and executives and a free float of >150 by the number of shareholders, and combined holding must >15% of paid-up capital. Some key disqualifying criteria include a CG score of below 70%; independent directors and free float violation; executives' wrongdoing related to CG, social and environmental impacts, equity in negative territory, and earnings in the red for more than three years in the last five years. To become eligible for THSI, the candidate must pass three indicators in data declaration: Economic (CG, risk management, customer relation management, supply chain management, and innovation); Environmental (environmental management, eco-efficiency, and climate risk); Social (human rights, talent attraction, operational health & safety, community development, and stakeholder engagement); and the incorporation of ESG in business operations.

To be approved for THSI inclusion, verified data must be scored at a 50% minimum for each indicator, unless the company is a part of the Dow Jones Sustainability Indices (DJSI) during the assessment year. The scoring will be fairly weighted against the nature of the relevant industry and materiality.

Note that, from the THSI list, the SET further developed a sustainability SETTHSI Index in June 2018 from selected THSI companies whose 1) market capitalisation > THB5b (~USD150b); 2) free float >20%; and 3) liquidity >0.5% of paid-up capital for at least 9 out of 12 months. The SETTHSI Index is a market capitalisation-weighted index, cap 5% quarterly weight at maximum, and no cap for number of stocks.

Sources: <u>SEC</u>; <u>Thai IOD</u>; <u>Thai CAC</u>; <u>SET</u>; FSSIA's compilation

Disclaimer:

Thai Institute of Directors Association (<u>Thai IOD</u>) was established in December 1999 and is a membership organisation 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.

Thai Investors Association (TIA) was established in 1983 with a mission to promote investment knowledge and to protect the investment rights of Thai investors. In 2002, the association was appointed by the Securities and Exchange Commission (SEC) to represent individual shareholders. To obtain information for evaluation, the association recruits volunteer investors to join AGMs and score the meetings. Weightings for each meeting are at a 45:45:10 ratio. They have been applied since 2017 and subject to change.

Thai Private Sector Collective Action against Corruption (CAC) was founded in 2010 and is 100% privately funded. It is an initiative by the Thai private sector to take part in tackling corruption problems via collective action. The CAC promotes the implementation of effective anti-corruption policies in order to create a transparent business ecosystem by developing a unique certification program for large/medium/small companies to apply for and to control corruption risk systematically and efficiently. The CAC's operations are sponsored by the US-based Center for Private Enterprise (CIPE) and the UK Prosperity Fund.

Sustainability Investment List (THSI), created by the Stock Exchange of Thailand in 2015, comprises the listed companies that conduct sustainable business operations.

5 Dow Jones Sustainability Indices – Wikipedia – Launched in 1999, DJSI evaluates the sustainability performance of companies based on corporate economic, environmental, and social performance.

GENERAL DISCLAIMER

ANALYST(S) CERTIFICATION

Siriluck Pinthusoonthorn FSS International Investment Advisory Securities Co., Ltd

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

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

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

Company	Ticker	Price	Rating	Valuation & Risks
Gulf Energy Development	GULF TB	THB 54.00	BUY	The downside risks to our SoTP-based TP on GULF include 1) lower-than-expected demand for electricity in Thailand; 2) a lower crude price; and 3) delays in project commercial operation dates.
Gunkul Engineering	GUNKUL TB	THB 4.00	BUY	The downside risks to our SoTP-based TP on GUNKUL include 1) lower-than-expected demand for electricity in Thailand, 2) declining EPC backlogs, and 3) lower-than-expected utilisation rates for solar and wind farms
B.Grimm Power	BGRIM TB	THB 39.75	BUY	The downside risks to our SoTP-based TP include 1) lower-than-expected demand for electricity in Thailand, 2) a lower crude price, and 3) unplanned shutdowns of its SPPs.
Sermsang Power Corp	SSP TB	THB 9.50	BUY	The downside risks to our SoTP-based TP for SSP include 1) a lower-than-expected demand for electricity in Thailand; 2) a lower crude price; and 3) project start-up delays.
Absolute Clean Energy	ACE TB	THB 2.30	BUY	The downside risks to our SoTP-based TP include 1) lower-than-expected demand for electricity in Thailand, 2) a lower crude price, and 3) higher costs of biomass feedstock.
Energy Absolute	EA TB	THB 76.25	BUY	Downside risks to our SoTP-based TP include: 1) lower-than-expected demand for electricity in Thailand; 2) lower crude prices; and 3) lower-than-expected demand for batteries.
Ratch Group	RATCH TB	THB 38.50	BUY	The downside risks to our SoTP-based TP include 1) lower-than-expected demand for electricity in Thailand; 2) lower crude price; and 3) delays in starting new projects.
Global Power Synergy	GPSC TB	THB 67.50	BUY	The downside risks to our SoTP-based TP on GPSC include 1) lower-than-expected demand for electricity in Thailand; 2) a lower crude price; and 3) lower-than-expected demand from industrial users.
BCPG	BCPG TB	THB 10.20	BUY	The downside risks to our SoTP-based TP include: 1) lower-than-expected demand for electricity in Thailand, the Philippines and Indonesia; and 2) government intervention by way of electricity tariff subsidies.
Electricity Generating	EGCO TB	THB 157.00	BUY	Downside risks to our SoTP-based TP include 1) lower-than expected demand for electricity in Thailand; 2) delays in project commencement or commercial operation dates (COD); and 3) government intervention in electricity tariff subsidies.

Source: FSSIA estimates

Additional Disclosures

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

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

All share prices are as at market close on 10-Apr-2023 unless otherwise stated.

RECOMMENDATION STRUCTURE

Stock ratings

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

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

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

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

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

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

Industry Recommendations

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

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

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

Country (Strategy) Recommendations

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

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

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