

B. GRIMM POWER PLC

No. 24/2020
12 March 2020

CORPORATES

Company Rating:	A
Issue Ratings:	
Senior unsecured	A-
Hybrid	BBB+
Outlook:	Stable

Last Review Date: 30/09/19

Company Rating History:

Date	Rating	Outlook/Alert
09/04/18	A	Stable

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RATIONALE

TRIS Rating affirms the company rating on B. Grimm Power PLC (BGRIM) at "A". At the same time, TRIS Rating affirms the rating on BGRIM's senior unsecured debentures at "A-" and affirms the rating on its subordinated capital debentures at "BBB+". The rating outlook remains "stable". The ratings reflect the company's predictable cash flow from long-term power purchase agreements (PPAs) with the Electricity Generating Authority of Thailand (EGAT) under the small power producer (SPP) scheme. The ratings also reflect the company's proven record of operating cogeneration power plants and its well-diversified power portfolio. However, the ratings are partially weighed down by the company's highly-leveraged capital structure resulting from the debt load built up during the portfolio expansion.

KEY RATING CONSIDERATIONS

Well-diversified power portfolio

As of December 2019, BGRIM owned and operated 46 power plants in Thailand and abroad with a total installed capacity of 2,896 megawatts (MW), or 1,819 MW when measured in proportion to BGRIM's ownership of the plants.

Seventeen gas-fired combined-cycle cogeneration power plants account for 68% of BGRIM's total equity capacity. These power plants are located in leading industrial estates in central and eastern Thailand, namely Amata City (Chonburi), Amata City (Rayong), Laem Chabang, WHA Chonburi 1, Bangkadi, and WHA Eastern. The remaining equity capacity of 32% is spread across 22 solar power plants in Thailand, two solar power plants in Vietnam, three hydro power plants in the Lao People's Democratic Republic (Lao PDR), one diesel-fired power plant in Vietnam, and one waste-to-energy (WTE) power plant in Thailand. No single power plant accounts for more than 15% of the company's capacity.

Predictable cash flows from long-term PPAs

BGRIM's predictable cash flows are mostly secured by long-term PPAs with EGAT and reputable industrial users. EGAT is BGRIM's largest customer. During 2017-2019, sales to EGAT made up 65% of total sales. Electricity and steam sold to industrial users accounted for 29% of annual revenues. The remainder was electricity sold to the Provincial Electricity Authority (PEA), the Metropolitan Electricity Authority (MEA), Electricite du Laos (EDL), Vietnam Electricity (EVN), and industrial users in Vietnam.

Most of BGRIM's cogeneration power plants have long-term PPAs with EGAT under the SPP scheme. The term of a typical PPA with EGAT is 21-25 years. The PPAs with EGAT help mitigate market risk since EGAT agrees to order electricity dispatch of not less than 80% of the contracted capacity based on power plants operating hours. The PPAs also contain a gas price pass-through mechanism in the tariff formula to mitigate fuel price risk.

BGRIM's cogeneration power plants also have PPAs and steam purchase agreement (SPAs) with industrial users in various industries, such as automotive, packaging, and consumer products. Those PPAs and SPAs cover 5-15 years. The contracts with industrial users also specify the minimum amounts of electricity and/or steam each customer is obligated to purchase. The electricity tariffs charged to the industrial users are based on the electricity tariffs the PEA charges to large general service customers. The

tariffs generally carry a fuel adjustment charge, or Ft, to reflect changes in the price of fuel. However, the Ft adjustment carries a time lag and is subject to the authorities' discretion regarding the timing and size of the adjustments. BGRIM's cogeneration power plants hold gas supply contracts (GSAs) with PTT PLC (PTT) for 21-25 years. The terms of the GSAs usually match the terms of the PPAs with EGAT.

All of the company's solar power plants in Thailand have 25-year PPAs with PEA and MEA under the very small power producer (VSPP) scheme. The PPAs carry a Feed-in Tariff (FIT) of Bt4.12-Bt5.66 per kilowatt-hour (kWh). The three hydro power plants located in the Lao PDR, with a combined capacity of 25 MW, supply electricity to EDL under 25-year PPAs. The PPA for each of the hydro power plants has a flat tariff of US\$0.065 per kWh.

Proven record in operating cogeneration power plants

BGRIM has expertise in developing and operating gas-fired combined-cycle cogeneration power plants. BGRIM has its own teams for day-to-day operations and maintenance. The cogeneration plants have high availability factors (AF) and few unplanned outages. The plant heat rates meet the criteria specified in the PPAs. During the past three years, the actual AFs of the cogeneration power plants ranged between 91% and 100%, exceeding the PPA targets. The heat rate (HR) of each plant was also better than the heat rate specified in the PPAs.

In addition, most of BGRIM's power plants employ proven technology from reputable suppliers, such as Siemens and GE Power (GE). The cogeneration power plants have long-term service agreements (LTSA) of up to 16 years to ensure the reliability of the turbines and keep maintenance costs under control.

Expansion to Vietnam

In 2018, BGRIM announced to invest in two solar projects in Vietnam with the total equity capacity of 437 MW. The company was able to commence the commercial operations of two solar power plants within June 2019 as planned, and received the flat tariff of US\$0.0935 per kWh from EVN under 20-year PPAs. For the first half-year of operation, BGRIM's solar projects faced no curtailment risks since the two solar projects are located in Tay Ninh province and Phu Yen province, which have high demand of electricity.

Surge in leverage during expansion

BGRIM is expected to incur significant capital expenditure for the development of a number of projects in the pipeline. These projects consist of conventional and renewable power plants, with the largest investments slated for gas-fired cogeneration power plants. The company is developing seven cogeneration power plants with commercial operations scheduled within 2022. Five power plants are being developed under the SPP replacement scheme according to the Power Development Plan 2018 (PDP2018). The SPP replacement scheme is the renewal of PPAs expiring in 2017-2025 for SPP power plants under a 25-year replacement scheme. In the replacement PPAs, EGAT will reduce the contracted capacity to 30 MW from 90 MW in the original SPP's PPAs. Apart from the SPP replacement scheme, the company is also developing two new cogeneration power plants under the SPP regulation announced in 2010.

As a result, we expect the company to raise debt amounting to Bt42 billion during 2020-2022 to fund projects in the pipeline. The company will also raise debt about Bt15 billion in 2020 to replace supplier's credit for the solar projects in Vietnam.

At the end of 2019, BGRIM's adjusted debt stood at Bt41 billion. The company's adjusted debt could reach Bt97 billion in 2022. The debt to capitalization ratio is forecast to increase to 70% in 2022, from 51% in 2019, while the debt to EBITDA ratio could peak at 8 times. However, we expect the debt to EBITDA ratio to improve to 6 times when all the cogeneration power plants begin full-year operations in 2023.

BASE-CASE ASSUMPTIONS

- During 2020-2022, the average availability factors of the existing cogeneration units are expected to be in the range of 96%-98%.
- Revenue is forecast to be about Bt45 billion per year with EBITDA of around Bt12 billion per year. EBITDA margin will be in the range of 26%-27%.
- Minimum cash on hand to be Bt15 billion.
- Total capital expenditure to be Bt20-Bt23 billion per year.
- Debt repayment (loans and bonds) to be Bt3.9-Bt7.2 billion per year.

RATING OUTLOOK

The "stable" outlook reflects our expectations that the company's power plants will run smoothly and generate cash flow as planned. The outlook also reflects the expectation that BGRIM will be able to manage its capital structure in accordance

with the company's policy of maintaining a net interest-bearing debt to equity ratio of less than 2 times.

RATING SENSITIVITIES

A rating upgrade could occur if BGRIM can enlarge its portfolio while maintaining a healthy capital structure. A rating downgrade case may occur if the capital structure weakens significantly, resulting from excessive growth of debt-funded investments.

COMPANY OVERVIEW

BGRIM was established in 1993 as a holding company for the power business under the conglomerate of the B. Grimm Group. BGRIM generates and sells electricity and steam through its subsidiaries and affiliates. BGRIM was listed on the Stock Exchange of Thailand (SET) on 19 July 2017. As of October 2019, BGRIM's major shareholder was Mr. Harald Link and the B. Grimm Group, with a combined 69% stake. The rest of the company's shares are publicly owned.

BGRIM was awarded its first SPP contract through a subsidiary, Amata B. Grimm Power 1 Ltd. (ABP1), in 1998. As of December 2019, BGRIM owned and operated 46 power plants with a total installed capacity of 2,896 MW or equity capacity of 1,819 MW.

As of December 2019, the company had 16 projects under development and construction with the total capacity of 857 MW. The projects under development and construction consist of 11 new projects and 5 SPP replacement projects. Total capacity is expected to reach 2,369 MW in 2025.

KEY OPERATING PERFORMANCE

Table 1: Power Plants' Key Operating Performance

Plant Performance	Unit	2019	2018	2017	2016	2015
Gas-fired SPP power plants						
Net output energy ¹	GWhe	13,092	10,940	9,853	8,612	6,327
Plant heat rate ²	BTU/kWh	7,845	7,797	7,833	7,849	7,934
Availability factor ²	%	97.3	96.8	96.7	95.6	94.2
Unplanned outage ²	%	0.8	1.3	2.7	2.6	3.4
Planned outage ²	%	1.8	1.9	0.6	1.9	2.4
Solar power plants						
Capacity factor ²	%	17.9	17.4	18.0	18.2	n.a.

Sources: BGRIM and TRIS Rating's estimates

Notes: 1) Net output of electricity and steam

2) Values are average across all operating plants.

Table 2: Net Capacity (in Proportion to BGRIM's Ownership) by Fuel Type

Project	Dec-2019		Dec-2025	
	MW	%	MW	%
Gas-fired SPP power plants	1,231	67.7	1,657	70.0
Diesel-fired power plant	4	0.2	4	0.2
Renewable power plants				
- Hydro	25	1.4	95	4.0
- Solar	557	30.6	596	25.1
- Wind	-	-	15	0.6
- WTE	2	0.1	2	0.1
Total power plants	1,819	100.0	2,369	100.0

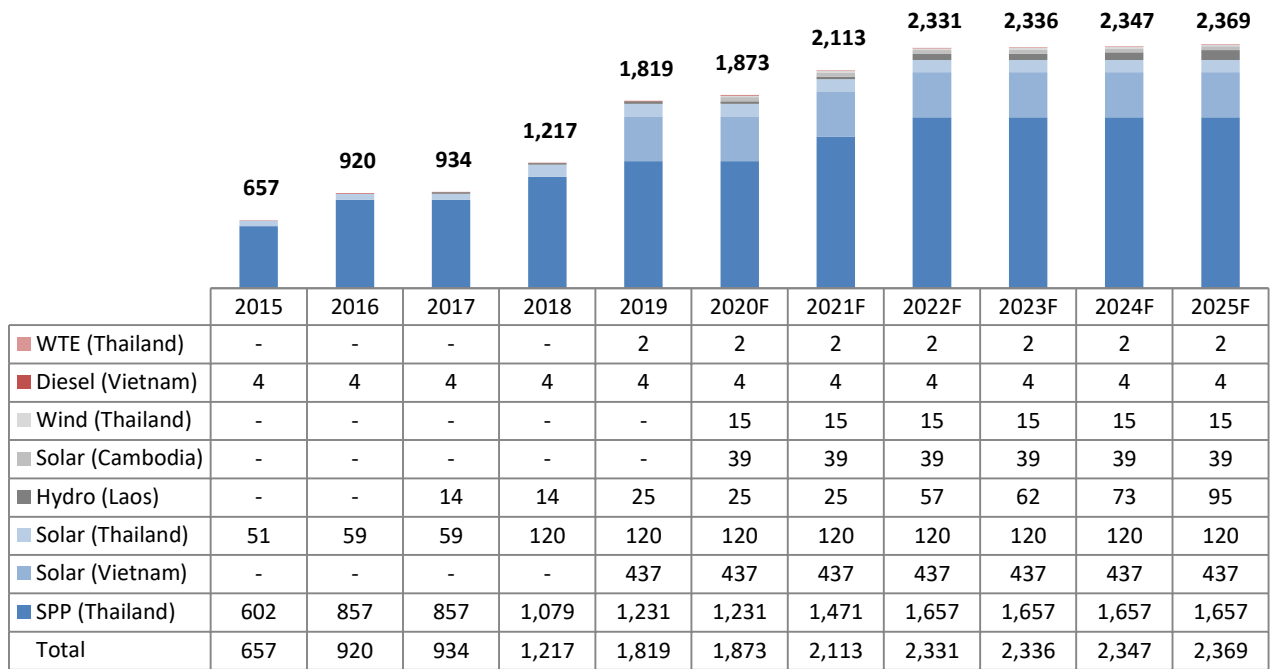
Sources: BGRIM and TRIS Rating's estimates

Table 3: Net Capacity (in Proportion to BGRIM's Ownership) by Country

Project	Dec-2019		Dec-2025	
	MW	%	MW	%
Thailand	1,353	74.4	1,794	75.8
Lao PDR	25	1.4	95	4.0
Vietnam	441	24.2	441	18.6
Cambodia	-	-	39	1.6
Total Power Plants	1,819	100.0	2,369	100.0

Sources: BGRIM and TRIS Rating's estimates

Table 4: Power Portfolio Development (Net Capacity in Proportion to BGRIM's Ownership)



Sources: BGRIM and TRIS Rating's estimates

FINANCIAL STATISTICS AND KEY FINANCIAL RATIOS

Unit: Bt million

	-----Year Ended 31 December -----			
	2019	2018	2017	2016
Total operating revenues	44,193	36,631	31,495	27,770
Earnings before interest and taxes (EBIT)	6,840	5,834	5,834	5,050
Earnings before interest, taxes, depreciation, and amortization (EBITDA)	11,547	9,218	8,579	7,408
Funds from operations (FFO)	8,551	5,912	6,010	4,332
Adjusted interest expense	2,761	3,130	2,335	2,851
Capital expenditures	3,796	5,837	6,272	10,003
Total assets	121,693	100,636	89,241	76,047
Adjusted debt	40,664	47,801	39,885	50,562
Adjusted equity	38,677	27,739	25,744	11,534
Adjusted Ratios				
EBITDA margin (%)	26.13	25.17	27.24	26.68
Pretax return on permanent capital (%)	7.05	6.63	7.40	7.76
EBITDA interest coverage (times)	4.18	2.95	3.67	2.60
Debt to EBITDA (times)	3.52	5.19	4.65	6.83
FFO to debt (%)	21.03	12.37	15.07	8.57
Debt to capitalization (%)	51.25	63.28	60.77	81.43

RELATED CRITERIA

- Rating Methodology – Corporate, 26 July 2019
- Hybrid Securities Rating Criteria, 12 September 2018
- Key Financial Ratios and Adjustments, 5 September 2018
- Group Rating Methodology, 10 July 2015

B. Grimm Power PLC (BGRIM)

Company Rating:	A
Issue Ratings:	
BGRIM200A: Bt500 million senior unsecured debentures due 2020	A-
BGRIM210A: Bt2,700 million senior unsecured debentures due 2021	A-
BGRIM230A: Bt1,500 million senior unsecured debentures due 2023	A-
BGRIM280A: Bt5,000 million senior unsecured debentures due 2028	A-
BGRIM19PA: Bt8,000 million subordinated capital debentures	BBB+
Rating Outlook:	Stable

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