THAI SOLAR ENERGY PLC

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CORPORATES

Company Rating:	BBB
Outlook:	Stable

Company Rating History:

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RATIONALE

TRIS Rating affirms the company rating on Thai Solar Energy PLC (TSE) at "BBB". The rating continues to reflect the predictable cash flows arising from the long-term power purchase agreements (PPAs) with state-owned utility off-takers, and the steady performance of its solar power plants. However, the rating is constrained by the sizable investment in the Onikoube project, a Japan-based solar farm, which will significantly weaken TSE's financial profile over the development period. The rating is also tempered by execution risks associated with its biomass power projects.

KEY RATING CONSIDERATIONS

Solid cash flow from solar power portfolio

The rating affirmation is predicated on TSE's reliable cash flow, underpinned by long-term PPAs with trustable off-takers and the low operation risk of solar farms. The state-owned utilities, including the Provincial Electricity Authority (PEA) and the Metropolitan Electricity Authority (MEA), are main counterparties for PPAs in Thailand. The contractual conditions in PPAs largely mitigate demand risk and provide secured tariffs to the power producers. The low operation risk of solar power projects supports stability and predictability of power outputs and income streams along the life of PPAs.

Steady operating results

Solar power plants continue to be key cash flow contributors in TSE's power portfolio. As of September 2018, TSE has a total contracted capacity of 298.42 megawatts (MW), including 34 solar power plants (276.22 MW) and three biomass power plants (22.2 MW). Of the total, 121.14 MW is in operation and 177.28 MW is under development.

TSE's power plants have performed well in line with TRIS Rating's forecast. In 2017, the actual output was 181 million kilowatt-hour (kWh), a slight increase of 2.3% from 2016. The core project, 80-MW solar farms, continues to beat a 50% probability of production (P50) by 5%-7%. In the first half of 2018, total output continued to grow by 10% year-on-year (y-o-y) to 102.2 million kWh, due to commercial commissioning of the Bangsawan Green (BSW) project, the first biomass power plant of TSE.

Execution risks of biomass projects

The execution risk of TSE's biomass projects continues to suppress credit strength as the company's track record of operation remains short and has not proven reliability of production. We assess that a biomass power project carries higher execution risks than a solar power project, given its higher operational complexity, resource risks, and uncertainty of fuel prices. TSE mitigates some of these risk exposures by hiring experienced operators and partnering with fuel suppliers.

TSE currently owns three biomass power projects, comprising a project under BSW (4.6 MW), and two projects under Oscar Save the World Co., Ltd. (OSW) (17.6 MW). The company's first power project under BSW started commercial operation in March 2018. Meanwhile one of the two power plants under OSW is operating and another plant will begin operation within the last quarter of 2018.

Expected revenue jump in 2019

TRIS Rating forecasts that TSE's revenue and cash flow will surge by 50%-60% as two biomass power plants totaling 17.6 MW under OSW and a Japanese solar farm (Hanamizuki) with 13.5 MW, will begin selling electricity. The total contracted capacity of operating plants will increase from 121.14 MW as of September 2018 to 143.4 MW in 2019. Once these projects achieve full operations, we forecast revenue will increase from about Bt1.3 billion in 2018 to Bt2.1 billion during 2019-2020. TSE's earnings before interest, tax, depreciation, and amortization (EBITDA) will rise from Bt0.9 billion per annum to Bt1.4 billion per annum over the same period.

Heavy debt loading from the Onikoube project

The rating is largely constrained by the sizable investment in the Onikoube project, which is TSE's largest-ever acquisition. TSE's main objective of the investment is to maintain revenue growth as its revenue will tail off when the adder tariff of existing solar farms starts to expire in 2023 and 2024.

The Onikoube project is a single large-scale solar farm in Japan, with a contracted capacity of 154.9 MW. The project requires TSE to spend Bt18 billion of investments, starting from 2017 through 2022. The company plans to finance 85% of the project cost with debt. The project timeline is long as it requires over four years for development.

The heavy debt-funded investment will diminish the credit profile significantly as we see the financial leverage will lift to a high level until the project starts up in 2023. However, the impending high leverage is counterbalanced by low execution risk, derived from low country risk of Japan, low construction and operational risks of solar power, as well as, minimal payment risk of the utility off-taker. The downside risks could arise from potential delay in obtaining permits and licenses in Japan, due in large part to stringent regulatory requirements.

We highlight that the rating affirmation embeds our expectation that TSE will successfully sell 40% stakes of the project to interested partners in order to share the investment risk and restrain from excessive gearing. We expect that TSE will not further engage in sizable investments over the next few years.

In our base case scenario, TSE's capital expenditures will be about Bt1.5 billion in 2019 and rise to Bt2.0-Bt6.0 billion per annum during the construction period of the Onikoube project between late 2020 and 2022. We assume the company will receive at least Bt1.5 billion in equity from selling its 40% shares in the project. As such, we expect the debt to capitalization ratio will rise but should stay below 70%. The debt to EBITDA ratio will also increase to 10-11 times but should drop rapidly when the Onikoube project starts generating cash flows.

Bond repayment causes a liquidity squeeze

TRIS Rating assesses TSE's liquidity profile is weakening because it has a large bond issue coming due. As of June 2018, outstanding debts were about Bt10.4 billion. About 50% of total is long-term project loans while about 30% is outstanding bonds. Sources of funds are cash and short-term investments of Bt1.2 billion as of June 2018, plus EBITDA at least Bt0.9 billion for the next 12 months. These sources are adequate to service the project loan repayments of Bt0.5 billion over the next 12 months. However, they cannot cover bond repayment since there will be a bond worth Bt2.05 billion maturing in October 2019. We hold the view that TSE has to roll over the bond or repay part of the outstanding bond if the company is able to sell some of its stake in the Onikoube project. We believe that the company can manage to refinance the maturing bond, given its past record of accessing the money market.

RATING OUTLOOK

The "stable" outlook reflects the expectation that TSE will remain capable of generating sizable cash flows from its solar power projects in the years ahead, on the back of sustained operating efficiencies. The rating also takes into account of TSE's weakening financial profile as a result of the investment in the Onikoube project. TRIS Rating does not expect TSE to make any more sizable investments unless the company could raise additional capital to maintain leverage at an acceptable level.

RATING SENSITIVITIES

The credit upside is limited during the developing period of the Onikoube project, given the expected worsening financial profile over the next three years. In contrast, the credit downside would emerge if the financial profile is weaker than our projection, such as the debt to capitalization ratio is higher than 70% or the debt to EBITDA ratio exceeds 10 times for a sustained period. This could happen if TSE makes excessive debt-funded investments or fails to raise new equity sufficient to support project investments.

COMPANY OVERVIEW

TSE is an investment holding company, established in 2008 to develop renewable power projects. The company was listed on the Market for Alternative Investment (MAI) in October 2014. The company's first project was a solar thermal power plant, opened in 2011. TSE added 80 MW of capacity with 10 solar farm projects in 2013 through Thai Solar Renewable Co., Ltd. (TSR), a 60:40 joint venture (JV) between TSE and Global Power Synergy PLC (GPSC). TSE also owns 14 solar rooftop projects, with a combined capacity of 14 MW.

TSE's 80-MW solar farms are considered a centerpiece of profit-making, all of which carry the multi-year PPAs that receive a favorable tariff adder of Bt6.5 per kWh for 10 years. The secured cash flows from the solar power projects are supported by the contractually committed tariffs, the minimal payment risk of the buyers, as well as a low operational risk in the solar power plants.

To grow its power generating capacity, TSE expanded abroad by investing in solar farm projects in Japan in late 2015. In September 2016, TSE further added three biomass power projects, which are under the operation of OSW and BSW.

In 2017, the company decided to invest in the Onikoube project, TSE's largest project so far, with a capacity of 154.98 MW. TSE will receive a Feed-in Tariff (FiT) of 36 yen per kWh under a 20-year PPA. The investment will be structured as a JV with strategic partners. The project development phase will span over four years and the commercial operation date is planned in 2023.

As of June 2018, the company has a total of 37 projects. The company secured a total contracted capacity of about 298.42 MW, comprising Thai solar power projects of 99.5 MW, Thai biomass power projects of 22.2 MW, and Japanese solar farms of 176.7 MW. In terms of capacity, solar power plants in Japan will make up more than half of TSE's power-generating assets once all current developing projects are in operation.

KEY OPERATING PERFORMANCE

Table 1: Power Project Portfolio as of Jun 2018

Project/Country	Hold by TSE (%)	Status	Installed Capacity (MW)	Contracted Capacity (MW)	Tariff
Thailand					
Solar					
Solar Thermal	100	Operating	5	4.5	Adder
Solar Farm	60	Operating	100.5	80	Adder
Solar Farm Co-op	100	Operating	1	1	FIT
Solar Rooftop	100	Operating	14	14	FIT
Biomass					
BSW	49	Operating	6	4.6	FIT
OSW 1 & 2	70	Construction	19.8	17.6	FIT
				121.7	
Overseas (Japan)					
Solar					
Kuno	97	Operating	0.65	0.5	FIT
Shima	97	Operating	1.43	1.25	FIT
Hikeme	97	Operating	1.86	1.5	FIT
Ryugasaki	97	Operating	2.34	1.75	FIT
Sakura	97	Operating	2.5	1.99	FIT
Jyoso	97	Operating	1.43	1.25	FIT
Hanamizuki	97	Construction	17.5	13.5	FIT
Onikoube	100	Developing	182.8	154.98	FIT
				176.72	
Grand total				**298.42**	

Source: TSE

FINANCIAL STATISTICS AND KEY FINANCIAL RATIOS*

Unit: Bt million

	Jan-Jun 2018		-------Year Ended 31 December 2017	2016	2015	2014 -------
Total operating revenues	628		1,172	1,332	1,081	834
Adjusted interest expense	96		213	177	165	166
Operating income	438		840	1,028	842	633
Earnings before interest and taxes (EBIT)	317		626	827	694	480
Earnings before interest, taxes, depreciation, and amortization (EBITDA)	467		861	1,041	878	633
Funds from operations (FFO)	365		641	831	708	470
Capital expenditures	989		1,737	938	938	1,060
Total assets	15,994		14,125	10,599	7,296	6,881
Adjusted debt	9,003		8,175	2,962	2,166	2,063
Adjusted equity	5,120		4,781	4,585	4,040	3,488
Adjusted Ratios						
Operating income as % of total operating revenues (%)	69.7		71.7	77.2	78.0	75.9
Pretax return on permanent capital (%)	7.9	**	5.2	9.4	9.8	14.0
EBITDA interest coverage (times)	4.9		4.0	5.9	5.3	3.8
Debt to EBITDA (times)	8.0	**	9.5	2.8	2.5	3.3
FFO to debt (%)	9.7	**	7.8	28.0	32.7	22.8
Debt to capitalization (%)	63.7		63.1	39.2	34.9	37.2

* *Consolidated financial statements*
** *Annualized with 12 months trailing*

Note: *All figures and financial ratios are adjusted by including TSR's financial performance (80-MW solar farm projects) on proportionate basis instead of equity method..*

Thai Solar Energy PLC (TSE)

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Rating Outlook:	Stable

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