

# THAI SOLAR ENERGY PLC

No. 151/2019  
26 September 2019

## CORPORATES

**Company Rating:** BBB  
**Outlook:** Negative

**Last Review Date:** 18/10/18

### Company Rating History:

Date	Rating	Outlook/Alert
08/02/16	BBB	Stable

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## RATIONALE

TRIS Rating affirms the company rating on Thai Solar Energy PLC (TSE) at “BBB”. At the same time, we revise the rating outlook to “negative” from “stable”. The outlook revision reflects the likelihood that the company’s financial profile will be weaker than our previous forecast. This is due to the excessive debt-financed investment in the Onikoube project following the delay in selling a 40% stake of the project to lessen the investment risk.

However, the rating continues to reflect the reliable cash flows from the company’s investment portfolio in renewable power projects and steady operating performance of the projects.

## KEY RATING CONSIDERATIONS

### Reliable cash flows from power portfolio

The rating reflects reliable cash inflow, as solar power will remain TSE’s key cash flow contributor. Earnings before interest, taxes, depreciation, and amortization (EBITDA) from solar power plants cover about 70%-80% of the total.

We forecast that steady cash flows from TSE’s power portfolio will continue for a sustained period, backed by long-term power purchase agreements (PPAs) with creditable utility off-takers and the low operation risk of solar farms. The conditions in the PPAs largely mitigate demand risk and provide fixed tariffs. The low operational risk of the solar power projects also supports stability of power output and thus earnings visibility throughout the life of the PPAs.

As of 31 August 2019, TSE’s total contracted capacity was 305.67 megawatts (MW). Solar power projects constitute about 90% of total contracted capacity, with the remainder coming from biomass power plants. Currently, the power plants, with about half of contracted capacity, are in operation. Meanwhile, the company has been developing the Onikoube project which makes up the other half of the portfolio.

### Steady operating performance

TSE’s operating power plants continue to beat our forecast. In the first half of 2019, total output rose to 200.6 gigawatt-hours (GWh), from 102.2 GWh over the same period last year, up by 96.2% year-over-year. The rapid growth was driven by the addition of power outputs from two new projects, including the biomass power plants under Oscar Save The World Co., Ltd. (OSW) and the Hanamizuki solar farm in Japan.

The core project, 80-MW solar farms, continues to beat a 50% probability of production (P50) by 5%-7%. At the same time, the good performance of OSW lessens our concerns on TSE’s short track record in operating biomass power plants. OSW has achieved above an 80% capacity factor ratio during the first year of operations. Its good feedstock control also contributed to the favorable profit margin.

### Investment risks in the Onikoube project

The rating is largely constrained by the huge investment in the Onikoube project, which is TSE’s largest-ever acquisition. The project is a single large-scale solar farm with contracted capacity of 154.73 MW. TSE’s main objective of the investment is to maintain revenue growth given a sharp drop of the

revenue from its key solar farms due to the expiry of adders between 2023 and 2024. On the flip side, the Onikoube project alone would contribute a substantial proportion of TSE's earnings, to a degree reflecting a concentration risk of the power portfolio.

We hold the opinion that the project size is excessive, in consideration of the size of TSE's equity. TSE has invested in the project since 2017. The company to date has defrayed approximately Bt4.7 billion for the investment. The lengthy project development timeline and its heavy debt-financing structure will propel the company's balance sheet to carry massive debt load until the project starts operation in early 2023. However, these drawbacks are offset by the project's low country risk, favorable tariff rate of JPY36 per kilowatt-hour (kWh), and low construction and operational risks.

#### **Impacts from METI's new measures**

In December 2018, the Ministry of Economy, Trade and Industry (METI) of Japan announced "new measures for non-operational solar projects", which are meant to accelerate the execution of the pending solar power projects which have been granted permits between the fiscal years 2012 to 2014. Under the new measures, TSE's grid construction start application must be accepted by the utility off-taker by the end of September 2019, otherwise its awarded FiT would be slashed to JPY21 per kWh. In addition, TSE must obtain Environmental Impact Assessment (EIA) approval by February 2020.

The Onikoube project is, therefore, adversely affected by the new measures. With the tighter deadline, TSE has to skip the EIA process by modifying its project layouts and installing solar panels on non-forest land instead. The revised project layouts bring down the contracted capacity to about 143 MW from 154.73 MW. Moreover, the terms of the PPA will be shortened to 18 years as its PPA will be cut off at the end of 2040. However, the project cost is estimated to reduce by 20% to JPY49 billion (approximately Bt14 billion).

We believe that the risk of FIT reduction is mitigated as the company submitted the grid construction application in time in August 2019.

#### **Highly-leveraged financial profile**

The "negative" outlook embeds our expectation that TSE's financial profile will deteriorate materially over the next 1-2 years from huge outlays in the Onikoube project although the project cost has dropped. We highlight that the company's failure to raise new capital by divesting 40% stake in the Onikoube project will lift the financial leverage to a high level over the course of project development. Given negative changes in the project conditions, the company's plan to sell 40% stakes of the project to interested partners is postponed. Despite the company's plan to raise Bt0.95 billion in new equity through a right offering in October 2019, we expect the proceeds will be spent to facilitate new investments instead of deleveraging the Onikoube project.

In our base case, we assume the performance of TSE's power plants will remain on solid course. The company will generate around Bt1.4 billion in EBITDA per year during 2019-2022. We assume that the Onikoube project will be materialized as planned, with construction starting in 2020. We assume that TSE will still hold 100% ownership in the project.

During 2020-2022, we expect that the debt to capitalization ratio will reach 70% and the debt to EBITDA ratio will exceed 10 times successively in 2020-2021. Any new debt-funded investments over the course of the Onikoube project development are downside factors that could trigger a negative rating action.

#### **Maturing bonds tighten liquidity**

TSE's liquidity is tight as the company has a bond worth Bt2.0 billion due in October 2019. After assessing its annual cash inflow and current cash on-hand, we expect that TSE will need to refinance the bonds. We believe that the company can manage to refinance the maturing bonds, backed by its past record of accessing the capital market.

#### **BASE-CASE ASSUMPTIONS**

- Total operating revenues of about Bt2.2 billion per year during 2019-2022.
- Operating margin (operating income before depreciation and amortization as a percentage of total operating revenues) to stay over 62%.
- Total capital expenditures (CAPEX) amounting to about Bt2.0 billion in 2019, Bt3.3 billion a year in 2020-2021, and Bt1.5 billion in 2022.
- The CAPEX excludes possible new investments.
- Excludes new equity from rights offerings.

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**RATING OUTLOOK**

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The “negative” outlook reflects the likelihood that TSE’s financial profile will weaken despite the company’s solid cash flow generation. This is a result of higher-than-expected investments, which could cause the debt to capitalization ratio to reach 70% in the years ahead and the debt to EBITDA ratio to exceed 10 times for a sustained period.

**RATING SENSITIVITIES**

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A rating downgrade would occur if the company’s financial profile deteriorates during the investment period, as we expect. In addition, a pressure on the rating could emerge if the company cannot develop the Onikoube project as planned or if there are any adverse changes which materially impact the feasibility of the project.

The outlook could be revised back to “stable” if TSE significantly strengthens its capital structure, which could result from selling part of its stake in the Onikoube project or raising new equity.

**COMPANY OVERVIEW**

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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. TSE’s shares were moved to trade on the Stock Exchange of Thailand (SET) in May 2019.

The company’s core project is undertaken by Thai Solar Renewable Co., Ltd. (TSR), a 60:40 joint venture (JV) between TSE and Global Power Synergy PLC (GPSC). The project’s installed capacity is 104.8 MW with contracted capacity of 80 MW. The project is a centerpiece of profit-making, generating over 90% of TSE’s total revenue and EBITDA during 2014-2018.

As of August 2019, the company had 39 projects in its power portfolio. The company has a total installed capacity of about 344.9 MW and has contracted capacity of 305.67 MW. All projects are operating, except the Onikoube project.

**KEY OPERATING PERFORMANCE**
**Table 1: Power Project Portfolio as of Aug 2019**

Project/Country	Hold by TSE (%)	Status	Installed Capacity (MW)	Contracted Capacity (MW)	Tariff	Commercial Operating date
<b>Thailand</b>						
<b><u>Solar</u></b>						
Solar Farm	60	Operating	104.8	80	Adder Bt6.5	Jul-13- Jun14
Solar Rooftop	100	Operating	14	14	FIT Bt6.16	Sep14 - Aug15
SLC	100	Operating	1	1	FIT Bt5.66	Dec 16
Infinity Solar (Ang Thong)	100	Operating	2	2	FIT Bt5.66	Dec 15
Bangsai (Ayuthaya)	100	Operating	5	5	FIT Bt5.66	Dec 16
Solar Energy (Udonthani)	100	Operating	5	5	FIT Bt4.12	Dec 18
<b><u>Biomass</u></b>						
BSW	49*	Operating	6	4.6	FIT Bt4.24 + Premium Bt0.3 (8 years)	Mar18
OSW 1 & 2	100	Operating	19.8	17.6	FIT Bt4.24 + Premium Bt0.3 (8 years)	Aug-Oct-18
			<b>157.6</b>	<b>129.2</b>		
<b>Japan</b>						
<b><u>Solar</u></b>						
Kuno	97	Operating	0.65	0.5	FIT JPY36	Aug 15
Shima	97	Operating	1.43	1.25	FIT JPY32	Mar 16
Hikeme	97	Operating	1.86	1.5	FIT JPY32	Apr 16
Ryugasaki	97	Operating	2.34	1.75	FIT JPY36	Sep 16
Sakura	97	Operating	2.5	1.99	FIT JPY32	Nov 17
Jyoso	97	Operating	1.43	1.25	FIT JPY36	May 18
Hanamizuki	97	Operating	18.1	13.5	FIT JPY36	Jan 19
Onikoube**	100	Developing	159.0	154.73	FIT JPY36	Q1 2023
			<b>187.31</b>	<b>176.47</b>		
<b>Total Capacity</b>			<b>344.91</b>	<b>305.67</b>		

Source: TSE

\*BSW's financial performance is recognized by the consolidation method as TSE has the full controlling power in the project.

\*\* Capacity before revised the business plan

**FINANCIAL STATISTICS AND KEY FINANCIAL RATIOS\***

Unit: Bt million

	Jan-Jun 2019	-----Year Ended 31 December -----			
		2018	2017	2016	2015
Total operating revenues	1,161	1,481	1,172	1,332	1,081
Operating income	764	952	840	1,028	842
Earnings before interest and taxes (EBIT)	527	666	626	827	694
Earnings before interest, taxes, depreciation, and amortization (EBITDA)	777	1,089	861	1,041	878
Funds from operations (FFO)	627	797	640	831	708
Adjusted interest expense	150	207	213	177	165
Capital expenditures	287	2,304	1,737	938	938
Total assets	16,688	16,352	14,125	10,599	7,296
Adjusted debt	10,356	10,236	8,175	2,962	2,166
Adjusted equity	5,043	4,915	4,781	4,585	4,040
<b>Adjusted Ratios</b>					
Operating income as % of total operating revenues (%)	65.8	64.3	71.7	77.2	78.0
Pretax return on permanent capital (%)	5.5 **	4.5	5.2	9.4	9.8
EBITDA interest coverage (times)	5.2	5.3	4.0	5.9	5.3
Debt to EBITDA (times)	7.4 **	9.4	9.5	2.8	2.5
FFO to debt (%)	10.2 **	7.8	7.8	28.0	32.7
Debt to capitalization (%)	67.3	67.6	63.1	39.2	34.9

\* 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.

**RELATED CRITERIA**

- Rating Methodology – Corporate, 26 July 2019
- Key Financial Ratios and Adjustments, 5 September 2018

**Thai Solar Energy PLC (TSE)**
**Company Rating:**
**BBB**
**Rating Outlook:**
**Negative**
**TRIS Rating Co., Ltd.**

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