

# NAM NGUM 2 POWER CO., LTD

No. 21/2018  
5 March 2018

## CORPORATES

Company Rating:	A
Issue Ratings:	
Senior unsecured	A-
Outlook:	

### Company Rating History:

Date	Rating	Outlook/Alert
26/07/17	A	Stable

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## RATIONALE

TRIS Rating affirms the company rating of Nam Ngum 2 Power Co., Ltd. (NN2PC) at "A" and affirms the ratings of NN2PC's outstanding senior unsecured debentures at "A-". At the same time, TRIS Rating assigns the rating of "A-" to NN2PC's proposed issues of up to Bt3,000 million in senior unsecured debentures, one notch below the company rating. The difference in the ratings reflects the structural subordination of the debentures compared with the outstanding loans from banks. The proceeds from the proposed debenture issuance will be used to refinance some outstanding project loans.

The ratings reflect the company's solid contractual framework, reliable cash flows received from a long-term power purchase agreement (PPA) with the Electricity Generating Authority of Thailand (EGAT; rated "AAA" by TRIS Rating), the experienced management team, and the proven technology used in the hydroelectric power plant. However, the ratings are constrained by the unpredictable flow of water in the Nam Ngum river and the sovereign risk of the Lao People's Democratic Republic (Lao PDR; rated "BBB+/Negative" by TRIS Rating).

## KEY RATING CONSIDERATIONS

### Contractual framework mitigates most risks

The contractual framework embedded in the Nam Ngum 2 power project mitigates most of the risks of the project. A long-term PPA with EGAT mitigates market risk. The PPA is on a take-or-pay basis. EGAT is obliged to purchase up to 2,310 gigawatt-hour (GWh) (the Annual Supply Target) of power from NN2PC. The Annual Supply Target breaks down into Primary Energy (PE; 2,218 GWh) and Secondary Energy (SE; 92 GWh).

The concession agreement with the government of Lao (GOL) mitigates the risks of money transferability and currency convertibility. The concession agreement states NN2PC has the right to receive and hold its revenue accounts outside the Lao PDR. As a result, the revenue received from EGAT is paid to NN2PC's account in Thailand.

The operational risk is minimized because EGAT operates the power plant. NN2PC holds an operation and maintenance agreement (OMA) with EGAT covering the entire term of the PPA. EGAT has extensive experience and expertise in operating hydroelectric power plants in Thailand. Since the date of initial operation in March 2011, the plant availability factor has been higher than 96%. In addition, NN2PC also contracted with EGAT for major maintenance Services.

### Proven Technology

The technology used in the hydroelectric power plant is proven technology, and this technology helps ensure the reliability of the plant. NN2PC's plant contains three Francis turbines, manufactured by Toshiba. Each turbine is connected to a 205-megawatt (MW) synchronous generator. The combined capacity of these units is 615 MW.

### Hydrology risk remains, but PPA makes it manageable

The amount of water flowing into the hydroelectric plant may vary year by year. However, the PPA contains a mechanism to smooth out the cash flows for the project. The mechanism allows NN2PC to sell more electricity than the

Annual Supply Target in wet years, and then receive compensation for the extra sales in dry year. Whenever NN2PC sells an amount of electricity below the Annual Supply Target, the shortfall can be added to the Annual Supply Target in the following years.

The Annual Supply Target is derived from a water inflow of 6,270 million cubic meters (mcm), the yearly average, calculated from the historical records kept during 1949-2003.

During 2015-2017, the water inflow was below the historical average. The company had a cumulative shortfall of 641 GWh in PE and 216 GWh in SE to be added to the Annual Supply Target in later years. The mechanism will help smooth the cash flows of the project over time.

#### **EBITDA drops but credit profile holds steady**

In 2017, NN2PC's earnings before interest, tax, depreciation and amortization (EBITDA) declined by 12.5% to Bt2,627 million mainly due to a lower inflow of water. TRIS Rating forecasts NN2PC's EBITDA will be in the range of Bt3,000-Bt3,500 million per year during 2018-2020. This forecast is based on a 10% reduction from the historical average inflow of water. This amount of EBITDA is sufficient to cover the outstanding debts coming due. The company will repay debt of about Bt1,100 million per year during 2018 and 2019 and about Bt2,200 million in 2020.

#### **Moderate capital structure**

NN2PC recently made an investment of Bt3,120 million to upgrade the Nabong power substation over 2016-2018. The total debt outstanding increased from Bt16,347 million at the end of 2016 to Bt17,024 million at the end of 2017. The total debt to capitalization ratio was moderate at 62.5% at the end of 2017. TRIS Rating expects that the total debt to capitalization ratio will improve to be below 60% in 2020 as there are no plans for other major investments.

#### **Strong liquidity profile**

NN2PC has a strong liquidity profile. At the end of 2017, the company held Bt1,038 million in cash on hand. TRIS Rating expects NN2PC's funds from operations (FFO) will exceed Bt2,000 million over the next 12 months. Cash on hand, plus FFO, is sufficient to cover loan repayments of about Bt1,100 million in 2018.

According to the project loan agreements, NN2PC has to make deposits in the reserve account and the accrual reserves account in advance of the next loan payment. These accounts serve as a protective cushion for the lenders, in case operations do not reach expectations. NN2PC also has a policy to maintain at least Bt700 million in cash on hand. This amount can cover operating expenses for about 12 months.

Based on an estimation of TRIS Rating, the debt service coverage ratio (DSCR) of NN2PC will average 1.68 times during the life of loans. TRIS Rating believes that the company will comply with the financial covenants specified in the project loans and debentures.

#### **RATING OUTLOOK**

The "stable" outlook reflects TRIS Rating's expectation that NN2PC will continue to receive stable cash flows from its power plant. The power units and water flows into the reservoir are expected to be managed well, enabling NN2PC to achieve the Annual Supply Targets throughout the PPA life.

#### **RATING SENSITIVITIES**

Any credit upside would be likely if NN2PC demonstrates stronger performance on a sustainable basis. The downside case may emerge if cash flow deteriorates or if NN2PC makes any large investments which deteriorate the company's financial profile.

#### **COMPANY OVERVIEW**

NN2PC is one of the flagship companies of the power segment under the CH. Karnchang Group (the CK Group). NN2PC was incorporated in 2007, under the laws of the Lao PDR, to own and operate the Nam Ngum 2 hydroelectric power plant in the Lao PDR. The ultimate major shareholders of NN2PC comprise CK Power PLC (CKP; with a 42% stake), Ratchaburi Electricity Generating Holding PLC (RATCH; 25%), and EDL-Generation PLC (EDL-Gen; 25%).

The Nam Ngum 2 hydroelectric power plant has an installed capacity of 615 MW. It is located on the Nam Ngum river, 35 kilometers (km.) upstream from the 150-MW Nam Ngum 1 hydroelectric power plant. The construction of the power plant was completed on time within the budget of about Bt31,000 million. The plant commenced initial operation in March 2011 and commenced commercial operation in January 2013.

**KEY OPERATING PERFORMANCE**
**Table 1: Performance Statistics of Nam Ngum 2 Hydroelectric Power Plant**

Plant Performance	2017	2016	2015	2014	2013
Electricity generation (GWh)	1,857	2,109	2,104	2,215	2,568
Total availability (%)	98.1	97.6	96.5	97.1	97.3
Planned outage (GWh)	20.1	106.4	60.3	81.9	86.2
Maintenance outage (GWh)	19.7	19.8	57.2	52.8	54.6
Short notice and forced outage (GWh)	5.9	1.0	8.4	24.9	3.2
Reservoir Management					
Water level at the end of period (masl)	364.1	371.1	372.4	373.7	372.3
Water inflow (mcm)	5,104	5,360	5,806	6,342	7,029
Reservoir stock at the end of period (mcm)	4,160	4,747	4,779	4,851	4,714

Note: GWh = gigawatt-hours  
masl = meter above sea level  
mcm = million cubic meters

Source: NN2PC

**FINANCIAL STATISTICS AND KEY FINANCIAL RATIOS**

Unit: Bt million

	Year Ended 31 December				
	2017	2016	2015	2014	2013
Revenue	3,318	3,815	3,883	3,976	4,115
Gross interest expense	966	854	895	987	1,225
Net income from operations	656	1,041	972	1,080	1,116
Funds from operations (FFO)	1,799	1,777	2,095	2,185	2,150
Earnings before interest, tax, depreciation, and amortization (EBITDA)	2,627	2,997	2,962	3,165	3,337
Total assets	27,629	27,138	28,876	29,737	30,412
Total debts	17,024	16,347	16,209	17,485	18,928
Shareholders' equity	10,228	10,301	12,141	11,894	11,113
Operating income before depreciation and amortization as % of sales	78.9	78.1	75.8	79.4	80.9
Pretax return on permanent capital (%)	5.7	6.9	6.5	7.0	7.4
Earnings before interest, tax, depreciation, and amortization (EBITDA) interest coverage (times)	2.7	3.5	3.3	3.2	2.7
FFO/total debt (%)	10.6	10.9	12.9	12.5	11.4
Total debt/capitalization (%)	62.5	61.3	57.2	59.5	63.0

**Nam Ngum 2 Power Co., Ltd. (NN2PC)**

<b>Company Rating:</b>	A
<b>Issue Ratings:</b>	
NNPC200A: Bt1,000 million senior unsecured debentures due 2020	A-
NNPC240A: Bt1,400 million senior unsecured debentures due 2024	A-
NNPC270A: Bt3,600 million senior unsecured debentures due 2027	A-
Up to Bt3,000 million senior unsecured debentures due within 12 years	A-
<b>Rating Outlook:</b>	Stable

**TRIS Rating Co., Ltd.**

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