



TRIS RATING

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# CreditNews ข่าวเครดิต

News for Investors

Announcement No. 505

14 November 2007

## Ratchaburi Electricity Generating Company Limited

**Company Rating:**

AA

**Issue Ratings:**

RG086A: Bt7,000 million senior secured debentures due 2008

AA

RG106A: Bt3,000 million senior secured debentures due 2010

AA

**Rating Outlook:**

Stable

**Rating History:**

**Company Rating**

**Issue Rating**

Secured Unsecured

30 Jun 2005

AA

AA

-

15 Jun 2005

AA

-

-

26 Jun 2003

AA-

-

-

### Rating Rationale

TRIS Rating affirms the company rating of Ratchaburi Electricity Generating Co., Ltd. (RATCHGEN) and the ratings of its senior secured debentures at "AA". The ratings reflect RATCHGEN's stable cash flow from the well-designed project structures, state-of-the-art power plants, years of experience in the power sector, and its proven record of power plant operation management. The ratings also take into consideration the operating risk of the power plants.

RATCHGEN is a wholly-owned subsidiary of Ratchaburi Electricity Generating Holding PLC (RATCH), which is 45% owned by the Electricity Generating Authority of Thailand (EGAT). RATCHGEN is the largest private power generating company in Thailand, with total installed capacity of 3,645 megawatts (MW), representing 13% of Thailand's total installed capacity. EGAT has 25-year power purchase agreements (PPAs) with RATCHGEN, while PTT PLC has a 25-year gas sale agreement (GSA) with the company.

The company's operating performance in 2006 was in line with targets. The equivalent availability factor (EAF) of the thermal and combined cycle units was maintained at 95.5 % and 88.6%, respectively. Electricity sales increased by 14.4%, from Bt44,035 million in 2005 to Bt50,373 million in 2006. The debt service coverage ratio (DSCR), without reserve accounts and after net changes in working capital, was 2.0 times in 2006. Though the operating performance in the first half of 2007 remained satisfactory, the scheduled shutdowns for major overhauls of three of the five power plants in the second half of 2007 will reduce RATCHGEN's operating performance in 2007; however, the company's performance is expected to be in line with the PPA targets.

The restoration of the Flue Gas Desulfurisation (FGD) system for RATCHGEN's Thermal Unit 1, following a fire in October 2005, was completed in October 2007. Approximately 97% of total replacement cost of Bt2,154 million will be covered by insurance.

### Rating Outlook

The "stable" outlook reflects TRIS Rating's expectation that RATCHGEN will continue to receive stable cash flows from the Ratchaburi power plants. The plants are expected to maintain their operating performance in line with the PPA targets.



### Key Rating Considerations

#### Strengths/Opportunities

- Well-structured project fundamentals
- Stable cash flow from 25-year PPAs with EGAT
- State-of-the-art power plant technology from credible suppliers
- Operation and maintenance agreement with EGAT
- Increasing demand for electricity

#### Weaknesses/Threats

- Dependent on a single customer
- Political uncertainty in Myanmar may impair gas supply to RATCHGEN

### Corporate Overview

RATCHGEN is a wholly-owned subsidiary of RATCH, which is 45% owned by EGAT. RATCH and RATCHGEN were established in 2000 to purchase the Ratchaburi power plants from EGAT. RATCHGEN, the largest private power generating company in Thailand, had total installed capacity of 3,645 MW, which was equivalent to 13% of Thailand's total installed capacity as of April 2007. EGAT operates RATCHGEN's power plants under an operation and maintenance agreement (OMA) and is RATCHGEN's sole customer under PPAs. In addition, EGAT has a minimum gas off-take obligation under a master gas sales agreement (MGSA) with PTT.

### Recent Developments

#### ▪ FGD restoration completed

On 13 October 2005, RATCHGEN had a fire at the absorber part of the FGD system for Thermal Unit 1. Restoring the system took 20 months and was completed in October 2007. The total replacement cost was Bt2,154 million, of which Bt2,080 million can be claimed from insurance.

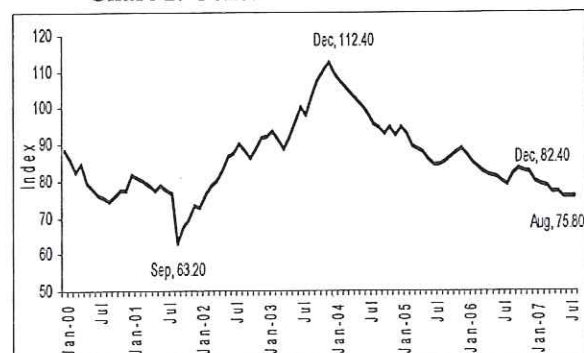
### INDUSTRY ANALYSIS

For several decades, Thailand's electricity sector has been dominated by three state-owned enterprises involved in the generation, transmission, and distribution of power. EGAT has dominated electricity generation and transmission, while the Metropolitan Electricity Authority (MEA) and the Provincial Electricity Authority (PEA) have been responsible for distribution. The MEA and the PEA are obligated to purchase electricity from EGAT. Since the planned privatization of EGAT was cancelled in

March 2006, EGAT continues to play a key role in the development of the power industry for the medium term.

The supply of electricity in Thailand is set to grow over the medium term since the new power plan was officially endorsed and a new round of IPP bidding has been launched. After experiencing softer demand in 2006, electricity demand improved in 2007. Peak demand during the first eight months of 2007 was 22,586 MW, a 7.23% increase from 2006. Nonetheless, the unstable political climate, weaker economic environment and enduring problems in the southern provinces continue to erode consumer confidences. The Consumer Confidence Index (CCI), reported by the University of the Thai Chamber of Commerce, had remained below 80 since January until August 2007, reflecting consumers' concerns about political and economic volatility.

Chart 1: Consumer Confidence Index



Source: University of the Thai Chamber of Commerce

#### ▪ Thailand's energy policy is changing after the 2006 coup d'etat

Following the 2006 coup d'etat, the interim government nominated by the Administrative Reform Council included a new Minister of Energy, Dr. Piyasvasti Amranand, who was formerly Director General of the Energy Policy and Planning Office (EPPO). Thai energy policy has changed under the new government. On 6 November 2006, the National Energy Policy Council (NEPC) endorsed the new national energy policy and plan. The drafted Energy Industry Act was endorsed by the NEPC on 2 March 2007 and is currently under consideration by the Office of The Council of State. The Act covers both the natural gas and electricity supply industries. Energy policy will focus more on private sector participation and will try to separate regulators and policymakers. A natural gas regulatory committee has been established to take



over any authority currently under the control of PTT PLC, the former national oil and gas state enterprise.

▪ **New government encourages increasing role of private producers**

Privatization of the electricity generating sector started in 1992 by encouraging private companies to produce and sell electricity to EGAT. The SPP scheme was introduced in 1992, followed by the IPP scheme in 1994. Both IPPs and SPPs have 20- to 25-year PPAs with EGAT. The PPAs are designed to mitigate the market risk of the operators, leaving mainly operating risk to be managed. Private producers under the IPP scheme are obligated to sell all their electricity output to EGAT, while private power producers under the SPP scheme can sell electricity to EGAT and/or to industrial users. EGAT has signed PPAs with seven IPPs and 92 SPPs.

As of March 2007, Thailand had combined installed electricity generating capacity of 27,788 MW. EGAT accounted for 58% of the total, followed by IPPs (32%), SPPs (8%), and power imported from Laos (2%). EGAT's share of power generation capacity decreased from 100% before 1995 to 92% in 1999 and to 58% at the end of March 2007. Electricity generation from private producers sharply increased by 2,870 MW in 2000 when the first two IPPs, Tri Energy Co., Ltd. (TECO) and Independent Power (Thailand) Co., Ltd., began commercial operations. The first two units of the Ratchaburi power plant started operations in the same year.

EGAT sold two of its power plants to Electricity Generating PLC (EGCO) in 1995 and 1996, and then sold the Ratchaburi power plant to RATCHGEN in 2000. EGAT has been relieved of its burden to develop and operate power plants, but remains the nation's sole electricity provider.

▪ **PDP 2007 aims for fuel diversification**

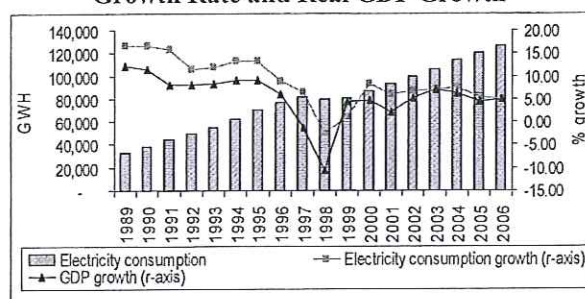
On 19 June 2007, the Cabinet approved the Power Development Plan 2007 (PDP 2007) covering power plans for the 15-year period. According to the new PDP, between 2007 and 2010 electricity will be generated by power plants under construction, which will add 7,885 MW of total new installed capacity. During this period, some existing power plants, with total capacity of 1,483 MW, will be retired. From 2011 to 2021, an estimated 31,791 MW in new capacity will be added by EGAT, IPPs, SPPs and power purchased from neighboring countries. Future sources of energy are planned to be more

balanced between natural gas, coal, ethanol, nuclear and other renewable fuels. In the first quarter of 2007, 65% of energy was from natural gas, 22% from coal, 7% from hydro power, 1% from fuel oil and 5% from imports and others.

▪ **Slower electricity demand growth reflects moderately growing economy**

Electricity demand generally moves in tandem with the domestic economy. According to the EPPO, electricity consumption during the first quarter of 2007 was 31,321 gigawatt hours (GWh), representing 3.5% year-on-year growth, lower than in 2006 (4.9%) and 2005 (5.5%).

**Chart 2: Electricity Consumption, Growth Rate and Real GDP Growth**



Sources: NESDB and EPPO

Except during the 1997/1998 economic crisis, electricity demand in Thailand had been very strong and relatively stable. Electricity consumption grew by approximately 7% per annum from 2000 to 2005. According to the PDP 2007, Thailand's peak electricity consumption will grow at an average rate of 5.85% per annum from 2007 to 2011.

**Table 1: Electricity Demand Forecasts (Base Case)**

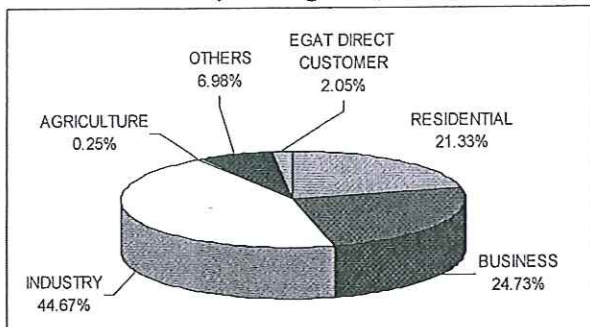
NESDB Plan	Year	Annual Growth (%)	
		Peak Generation	Energy Generation
10 <sup>th</sup>	2007-2011	5.85	5.55
11 <sup>th</sup>	2012-2016	5.95	5.98
12 <sup>th</sup>	2017-2021	5.54	5.55

Source: PDP 2007, EPPO

The industrial sector is still the largest electricity consumer, accounting for 44.67% of total consumption, followed by the business sector (24.73%), residential customers (21.33%), EGAT's direct customers (2.05%), agriculture sector (0.25%), and others (6.98%).



**Chart 3: Electricity Consumption by Sector  
(Jan-Aug 2007)**



Source: EPPO

The reserve margin in 2005 was 24.7%, higher than the target of 15% to 20%. In 2006, the reserve margin dropped slightly to 22.1%. Under PDP 2007, the reserve margin will remain over 20% between 2007 and 2010, but will decline afterward.

▪ ***The beginning of new round of IPP bidding***

The new round of IPP bidding started when a Request for Proposal (RFP) was issued to 60 bidders in June 2007. Preferred bidders are scheduled to be announced by the end of 2007 and PPAs are expected to be finalized in June 2008. According to the new policy, the electricity price will be more focused.

▪ ***Power industry liberalization plan held over for new government's action***

The power pool system, which aims to promote competition in electricity supply, was officially cancelled by Cabinet resolution on 9 September 2003. The new power industry model, namely the Enhanced Single Buyer or ESB system, was approved under a Cabinet resolution on 9 December 2003. Under the new structure, EGAT's role as the country's sole electricity buyer, transmitter, and wholesaler will be maintained, and EGAT will continue as the operator of the country's power grid.

On 23 March 2006, the Supreme Administrative Court blocked the previous government's attempt to list EGAT's shares on the Stock Exchange of Thailand. Further power industry liberalization has been stalled, as the interim government has no plans to consider the liberalization issue.

**BUSINESS ANALYSIS**

RATCHGEN's business profile is well above average. The power plant project is well-structured to mitigate commercial risks

and fuel risks through the long-term PPAs and GSA with creditworthy counterparties. Operating risk is partially mitigated by the OMA with EGAT and CSA with GE.

**Table 2: Composition of Ratchaburi Power Plants**

Type	No. of Unit	Unit Capacity (MW)	Total (MW)
Thermal unit	2	735	1,470
CCGT unit	3	725	2,175
<b>Total</b>	<b>5</b>	<b>-</b>	<b>3,645</b>

Source: RATCHGEN

▪ ***State-of-the-art power plant technology***

RATCHGEN owns two 735 MW thermal units and three 725 MW combined cycle gas turbine (CCGT) generating blocks. Thermal Units 1 and 2 commenced commercial operations on 31 October 2000. The thermal units were designed and constructed by Mitsubishi Corporation (Mitsubishi), with the majority of the equipment supplied by Mitsubishi Heavy Industries Ltd. (MHI). The steam generators manufactured by MHI are supercritical, single reheat, forced circulation and balanced draft boilers. Although this type of boiler is the first in EGAT's system, it has been used in the United States for more than 30 years and in China for more than 10 years.

The CCGT blocks 1 and 2 started commercial operations on 18 April 2002, and block 3 started up on 1 November 2002. Each block combines two gas turbines and one steam turbine. The 9FA gas turbine is one of the Frame 9 series of heavy gas turbines for power generation. The newer technology class of both gas turbines and supercritical boilers requires a higher level of maintenance than existing boilers in the EGAT system.

▪ ***25-year PPAs with EGAT protect RATCHGEN from market risk***

RATCHGEN has 25-year PPAs with EGAT. Like other IPPs, the PPAs protect the company from fluctuations in power demand and supply. The basic structure of RATCHGEN's PPAs is the same as all IPPs, including EGCO's power plants. The payments consist of two parts: the availability payment (AP) and the energy payment (EP). The pay-if-available basis provides RATCHGEN with stable cash flow as long as the company maintains its power plants to be ready for EGAT's dispatch instructions. The AP is designed to recover all



fixed costs associated with project financing and operations, including debt service and fixed operating and maintenance costs, as well as returns to equity holders. The full AP is subject to deductions for reduced availability (DRA), short notice (DSN) and dispatch failure (DDF). The maximum deduction percentage is identical to that of the Khanom power plant in southern Thailand and more favorable than other IPPs. The EP is designed to cover the incremental costs for actually producing electricity. This includes fuel costs and variable operating and maintenance (VOM) costs. Plant operators are exposed to operating risks only if they cannot prepare the plant to be ready for power production or if the plants' characteristics are lower than the agreed targets. Compared with other IPPs, RATCHGEN's conditions for plant availability are more favorable. While other IPPs are required to agree to contracted performance levels prior to the commencement of construction, the performance capability level for RATCHGEN's PPAs were determined after performance tests, subsequent to the completion of construction.

▪ ***Fuel risk partially mitigated by gas sales agreement (GSA) and master gas sale agreement (MGSA)***

RATCHGEN's fuel risk is partly mitigated by the GSA between RATCHGEN and PTT, and the Master IPP Program Gas Sales Agreement between EGAT and PTT. These agreements are similar to the ones held by other IPPs, whereby EGAT has an obligation to take a minimum level of gas under the take-or-pay GSA. The price for natural gas is a full pass-through, while the quantity of natural gas consumption is also a pass-through if the RATCHGEN plant heat rate meets its agreed target. RATCHGEN has the option of rejecting substandard gas while still receiving its availability payments for a period of one year.

The primary fuel for the RATCHGEN power plant is natural gas from the Yadana and Yetagan gas fields located in the Andaman Sea and offshore Myanmar, respectively. Over 25 years, RATCHGEN will require approximately 7.7 trillion cubic feet (tcf) of natural gas. Given that TECO will require 0.6 tcf of natural gas from the same source to cover its 20-year PPAs and the additional gas requirements for one or two new power plants to be awarded from the new round of IPP bidding, the long-term availability of gas from these two gas fields may be a concern. Though there is no disruption of natural gas from

these two sources, the current political uncertainty in Myanmar is another concern.

▪ ***Operating risk further mitigated by an operation and maintenance agreement (OMA) with EGAT***

Under the existing PPA structure, the company's performance is dependent on how well the company is able to keep its power plant available, as it gets paid according to the AP, regardless of the dispatch factor. RATCHGEN's operating risk is further mitigated by the OMA with EGAT. Under the contract, EGAT operates and maintains the entire plant on a daily basis. The OMA covers one full major maintenance cycle projected at nine to 10 years for all units. Although RATCHGEN's OMA is less favorable than other private operators, EGAT's excellent track record in operating power plants should significantly mitigate RATCHGEN's operating risk.

▪ ***Operating performance in line with targets***

The average 2006 EAF of the thermal units was 95.5% and there were no planned outages. However, the units had 781 hours of unplanned outages, due to a boiler vibration problem, and a temporary shortage of gas supplied. Thermal Unit 1 could not operate with fuel oil since the FGD system was being repaired. The plant heat rate of 9,596 BTU/KWh (76% of dispatch factor) in 2006 slightly underperformed its target of 9,434 BTU/KWh (88% of dispatch factor).

In 2006, the average EAF of 88.6% for the CCGT plants was slightly better than its target of 87.8%. However, there were 1,688 hours of unplanned outages at the CCGT plants, mainly due to a technical problem at the compressor of gas turbine unit 32 of block 3. The plant heat rate of 7,108 BTU/KWh (80.1% of dispatch factor) in 2006 was close to its heat rate of 7,139 BTU/KWh in 2005 (84.8% of dispatch factor).

For the first half of 2007, the operating performance of the power plants remained satisfactory. The average EAF of the thermal units was 98.6%, with only 95 hours of unplanned outages, which will compensate for the shutdown period in the second half of 2007, when there will be a major overhaul of both thermal units. The average EAF of CCGT blocks was 87.0%, with the outages lower than the target. CCGT block 2 is scheduled for a major overhaul in the second half of 2007. Since three of the five units will be shut down for major maintenances during the second half of 2007, the overall operating



performance of RATCHGEN in 2007 is expected to decline, but still in line with PPA targets. However, the efficiency of the plants, especially the plant heat rate, will be improved after the completion of the major overhaul.

▪ ***Lower dispatch for thermal units due to the commercial operation of the new coal-fired power plant***

Due to greater efficiency and lower fuel cost than the thermal units, CCGT blocks are normally operated as the base load. During 2002-2006, the dispatch factor for CCGT averaged 79%, while the dispatch factor for thermal units averaged 69%. During the first half of 2007, the average dispatch factor for thermal units declined to 59% due to the full operation of BLCP Power Co., Ltd.'s 1,434 MW coal-fired power plants. Since the fuel cost of the coal-fired power plant is lower than the cost of fuel for the combined cycle and thermal plants, EGAT is more likely to dispatch electricity from the coal-fired power plant than from the combined cycle and thermal plants. Therefore, the dispatch factor for thermal units is expected to remain low until at least 2014 when the debt financing cost of the thermal units will be fully repaid and the overall tariff for thermal units will be more competitive.

### FINANCIAL ANALYSIS

RATCHGEN's financial profile is strong, with relatively stable operating income. Its operating cash flow has been highly predictable due to the tariff structure under the existing PPA. The company's capital structure, with 60%-70% debt to capitalization ratio, is acceptable when compared with other power projects in Thailand, which have an average of 70% to 75% debt financing.

▪ ***Solid financial structure lowers financial risk***

RATCHGEN's project debt was 100% in baht denominated loans. Therefore, there is no foreign exchange risk in the debt service charge. Although all of RATCHGEN's debt has floating rates (MLR base), there is no interest rate risk because the interest expense properly matches the MLR charges in the debt service component of the AP. In addition, the AP and EP components will be adjusted annually to reflect changes in the exchange rate and the CPI indices. This mechanism helps mitigate foreign exchange and inflation risks.

▪ ***Relatively stable operating income***

In 2006, RATCHGEN sold 23,600 GWh of electricity, a 4.3% increase from 2005, generating Bt50,373 million in revenue, a 14.4% increase from 2005. This was mainly due to the result of higher fuel costs. According to the terms of the PPA, the incremental fuel cost can be recovered by the energy payment. Therefore, the company's operating income remained relatively stable at Bt7,177 million. The operating profit margin before depreciation and amortization in 2006, however, decreased to 19.7%, from 22.2% in 2005. In the first nine months of 2007, RATCHGEN's operating profit margin before depreciation and amortization was 19.9%, while operating income stood at Bt4,488 million. Due to the major overhaul of three power units in the second half of 2007, it is expected that the company's operating income for 2007 will stay at approximately Bt5,500-Bt6,000 million, as planned.

▪ ***Improved financial profile***

The company's total debt continuously fell from Bt32,586 million in 2005 to Bt27,442 million at the end of September 2007, in accordance with the principal repayment schedule. The debt to capitalization ratio improved from 59.2% at the end of December 2005 to 57.4% at the end of September 2007. The company's earnings before interest, tax, depreciation and amortization (EBITDA) interest coverage ratio was 7.1 times during the first nine months of 2007, up from 6.5 times in 2006. The company's debt service coverage ratio (DSCR), without reserve accounts and after net changes in working capital, was 2.0 times in 2006, and slightly increased to 2.2 times during the first nine months of 2007.

**Plant Performance Statistics**

	Unit	Target 6/2007	Actual 6/2007	Actual 2006	Actual 2005	Actual 2004
Thermal Units						
Net electrical output	GWh	3,882	3,520	9,168	8,166	7,669
Dispatch factor	%	88.0	59.4	76.0	74.9	62.9
EAF* avg. 12 months	%	95.5	98.6	95.5	86.1	96.2
Plant heat rate	BTU/kWh	9,399	9,855	9,596	9,645	9,811
Dependable capacity	MW	1,440	1,440	1,440	1,440	1,440
Planned outage	Hours	0	0	0	2,088	0
Forced outage	Hours	394	32	14	103	273
Maintenance outage	Hours		63	767	186	285
CCGT Units						
Net electrical output	GWh	5,901	6,494	14,432	14,464	13,809
Dispatch factor	%	88.0	79.2	80.1	84.8	80.7
EAF avg. 12 months	%	85.3	87.0	88.6	90.5	91.7
Plant heat rate	BTU/kWh	7,039	7,213	7,108	7,139	7,172
Dependable capacity	MW	2,011	2,011	2,011	2,011	2,011
Planned outage	Hours	1,091	1,242	1,772	1,446	1,246
Forced outage	Hours	843	136	526	386	243
Maintenance outage	Hours		419	1,162	-	68

\* EAF = Equivalent Availability Factor

**Financial Statistics and Key Financial Ratios**

Unit: Bt million

	9/2007	2006	2005	2004	2003	2002
Electricity sales	32,850	50,373	44,035	39,714	35,528	27,493
Total operating costs	28,362	43,196	37,225	32,423	28,433	21,305
Operating profit	4,488	7,177	6,810	7,291	7,095	6,188
Interest expense	1,029	1,445	1,209	1,225	1,702	1,967
Net profit	4,113	5,161	5,791	6,260	5,505	4,675
Total debt	27,442	29,743	32,586	35,765	38,652	40,894
Funds from operations (FFO)	6,256	8,686	8,741	8,905	8,034	6,694
Operating income before depre. and amort. as % of sales	19.9	19.7	22.2	25.1	27.1	30.0
Total debt/capitalization (%)	57.4	56.9	59.2	61.6	64.0	65.1
FFO/total debt (%)	22.8	29.2	26.8	24.9	20.8	16.4
Earnings before interest, tax, depre. and amort. (EBITDA) interest coverage (times)	7.1	6.5	8.3	8.3	5.8	4.5
Cash available for debt service	7,202	8,562	9,875	7,137	13,336	6,638
Total debt service	3,329	4,287	4,408	4,112	3,944	3,298
Total debt service coverage ratio (DSCR) (times)	2.2	2.0	2.2	1.7	3.4	2.0



### Rating Symbols and Definitions

TRIS Rating uses eight letter rating symbols for announcing medium- and long-term credit ratings. The ratings range from AAA, the highest rating, to D, the lowest rating. The medium- and long-term debt instrument covers the period of time from one year up. The definitions are:

- AAA** The highest rating, indicating a company or a debt instrument with smallest degree of credit risk. The company has extremely strong capacity to pay interest and repay principal on time, and is unlikely to be affected by adverse changes in business, economic or other external conditions.
- AA** The rating indicates a company or a debt instrument with a very low degree of credit risk. The company has very strong capacity to pay interest and repay principal on time, but is somewhat more susceptible to the adverse changes in business, economic, or other external conditions than AAA rating.
- A** The rating indicates a company or a debt instrument with a low credit risk. The company has strong capacity to pay interest and repay principal on time, but is more susceptible to adverse changes in business, economic or other external conditions than debt in higher-rated categories.
- BBB** The rating indicates a company or a debt instrument with moderate credit risk. The company has adequate capacity to pay interest and repay principal on time, but is more vulnerable to adverse changes in business, economic or other external conditions and is more likely to have a weakened capacity to pay interest and repay principal than debt in higher-rated categories.
- BB** The rating indicates a company or a debt instrument with a high credit risk. The company has less than moderate capacity to pay interest and repay principal on time, and can be significantly affected by adverse changes in business, economic or other external conditions, leading to inadequate capacity to pay interest and repay principal.
- B** The rating indicates a company or a debt instrument with a very high credit risk. The company has low capacity to pay interest and repay principal on time. Adverse changes in business, economic or other external conditions could lead to inability or unwillingness to pay interest and repay principal.
- C** The rating indicates a company or a debt instrument with the highest risk of default. The company has a significant inability to pay interest and repay principal on time, and is dependent upon favourable business, economic or other external conditions to meet its obligations.
- D** The rating for a company or a debt instrument for which payment is in default.

The ratings from AA to C may be modified by the addition of a plus (+) or minus (-) sign to show relative standing within a rating category.

TRIS Rating's short-term ratings focus entirely on the likelihood of default and do not focus on recovery in the event of default. Each of TRIS Rating's short-term debt instrument covers the period of not more than one year. The symbols and definitions for short-term ratings are as follows:

- T1** Issuer has strong market position, wide margin of financial protection, appropriate liquidity and other measures of superior investor protection. Issuer designated with a "+" has a higher degree of these protections.
- T2** Issuer has secure market position, sound financial fundamentals and satisfactory ability to repay short-term obligations.
- T3** Issuer has acceptable capacity for meeting its short-term obligations.
- T4** Issuer has weak capacity for meeting its short-term obligations.
- D** The rating for an issuer for which payment is in default.

All ratings assigned by TRIS Rating are local currency ratings; they reflect the Thai issuers' ability to service their debt obligations, excluding the risk of convertibility of the Thai baht payments into foreign currencies.

TRIS Rating also assigns a "Rating Outlook" that reflects the potential direction of a credit rating over the medium to long term. In formulating the outlook, TRIS Rating will consider the prospects for the rated company's industry, as well as business conditions that might have an impact on its fundamental creditworthiness. The rating outlook will be announced in conjunction with the credit rating. In all cases, the outlook assigned to a company will apply to all debt obligations issued by the company. The categories for "Rating Outlook" are as follows:

- Positive** The rating may be raised.
- Stable** The rating is not likely to change.
- Negative** The rating may be lowered.
- Developing** The rating may be raised, lowered or remain unchanged.

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