

# CK POWER PLC

No. 61/2020  
28 April 2020

## CORPORATES

<b>Company Rating:</b>	A
<b>Issue Ratings:</b>	
Senior unsecured	A-
<b>Outlook:</b>	Stable

Last Review Date: 11/04/19

### Company Rating History:

Date	Rating	Outlook/Alert
02/05/18	A	Stable

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## RATIONALE

TRIS Rating affirms the company rating on CK Power PLC (CKP) at "A", with a "stable" outlook, and also affirms the issue ratings on CKP's senior unsecured debentures at "A-". The issue ratings' one notch below the company rating reflects the structural subordination of the debentures, relative to the loans extended to CKP's operating subsidiaries.

The ratings reflect the company's strengths in developing and operating large-scale hydroelectric power plants, highly predictable cash flow derived from power purchase agreements (PPAs) with the Electricity Generating Authority of Thailand (EGAT; rated "AAA/Stable" by TRIS Rating), and the track record of efficient operations. However, the ratings are constrained by the susceptibility to hydrology risk and the country risk of the Lao People's Democratic Republic (Lao PDR).

## KEY RATING CONSIDERATIONS

### Strengths in developing large greenfield projects

CKP has a well-established track record of developing greenfield power projects, especially large-scaled hydropower projects, which typically entail considerable geographical and environmental challenges and require specialized engineering expertise.

CKP is best known for the huge Nam Ngum 2 Hydroelectric Power Project (NN2HPP), and Xayaburi Hydroelectric Power Project (XHPP), with capacities of 615 megawatts (MW) and 1,285 MW, respectively. Both projects started commercial run as scheduled.

One of the key success factors is the strength of its major shareholder, CH. Karnchang PLC (CK; rated "A/Stable" by TRIS Rating), the second-largest engineering and construction (E&C) company listed on the Stock Exchange of Thailand (SET) based on size of revenue and assets. Added to that, CKP also successfully developed other types of power projects, including cogeneration and solar power projects.

### Increased capacity with hydropower remaining the majority

XHPP's commencement of commercial operation in October 2019 has considerably lifted up CKP's equity capacity in operating plants to 936 MW, from 425 MW at the end of 2018. Hydropower continues to represent the majority of CKP's power portfolio.

As of March 2020, CKP's operating power plants comprised hydropower of about 765 MW (82%), two gas-fired cogeneration of 155 MW (17%), and solar power of 16 MW (1%). All of CKP's operating power plants have secured long-term PPAs.

### Reliable cash flows from well-structured PPAs with creditworthy parties

The ratings mirror the highly reliable cash flows secured by long-term PPAs with credible power buyers. In CKP's power portfolio, EGAT is the main off-taker, buying about 92% of the total installed capacity, including that of XHPP. The rest of capacity is purchased by Electricite Du Laos (EDL), Thai industrial customers, and The Provincial Electricity Authority (PEA) of Thailand.

Moreover, the company's PPAs are well structured in a bid to mitigate major operating risks. As for the two hydropower projects, the PPAs contain a compensating mechanism which allows the hydropower plants to sell

electricity in excess of the annual supply target in a year of plentiful water flow, and receive compensation for those above-target sales in a dry year. That means in a dry year of electricity output falling short of the annual supply target, the shortfall can be added to the annual supply target in the following years. This mechanism helps smooth out the project's cash flow.

### **Proven record of efficient operations**

NN2HPP holds an operation and maintenance agreement (OMA) with EGAT covering the entire term of the PPA. Since the date of initial operation in March 2011 to 2017, the plant availability factor has been higher than 96%. During 2018-2019, the plant availability factor was about 92%-93% due to a partial overhaul in 2018 and a water shortage in 2019.

As for the cogeneration power plants, the PPAs enable CKP's plants to pass on fuel costs to EGAT as long as they meet the agreed plant efficiency. The exposure to fluctuations in fuel prices is hence manageable. CKP's plants have so far outperformed the allowance.

### **Susceptibility to risk of low water resources**

The technology used by the hydropower plants is proven with low operating risk. In general, the hydropower renders EBITDA margin (earnings before interest, taxes, depreciation, and amortization as percentage of revenue) of more than 75%, which is much higher than those of conventional fuel power plants due to the absence of the hydro fuel cost. However, it is subject to hydrology risk, i.e., the uncertainty of the volume of water flow.

The electricity production of hydropower plants is forecast by using long-term hydrological statistics of average water flow. But yearly water flows can vary. Even longer-term records offer no assurance that the hydrology will not change. Notwithstanding the contractual framework with the compensating mechanism to mitigate the risk of a dry year, CKP's hydropower plants remain subjective to significant risk of water flow uncertainty, which could drastically dampen cash flow in a dry year.

### **Exposure to country risk of the Lao PDR**

CKP's main power plants are located in the Lao PDR. CKP is inevitably exposed to the country risk of the Lao PDR, in particular the downside risks stemming from changes in the country's regulations for power generation. However, these risks are mitigated by the concession agreement entered into with the government of Laos (GOL) and the PPAs entered into with EGAT. Moreover, the Laos state-run EDL is one of the sponsors of both NN2HPP and XHPP.

### **Lower-than-expected EBITDA due to a severe drought**

Due to the severe drought in the North of the Lao PDR, NN2HPP's operating performance in 2019 substantially fell shy of expectations, resulting in lower-than-expected performance of CKP. This is because NN2HPP contributed a majority portion of CKP's EBITDA, or around 70% over the earlier two years. NN2HPP reported a sharp decline of 31.6% in power output. Its Primary Energy (PE) considerably trailed behind the Annual Supply Target by 24%. In effect, CKP arrived at Bt4 billion in EBITDA in 2019, which is 12% below our expectations.

The severe drought has resulted in the water level in NN2HPP's reservoir hitting the lowest since its commencement of operations. NN2HPP will likely suffer from a water shortage before the rainy season starts and the Annual Supply Target seems out of reach at this point in time. We forecast CKP's EBITDA to arrive at about Bt4 million in 2020, the same level in 2019.

In our base case forecast, we project CKP's EBITDA to increase to Bt4.5-Bt5 billion per year in 2021 and 2022, as we expect that NN2HPP's robust cash flow will resume. In addition, we estimate that CKP will receive about Bt200-Bt250 million per year of dividend from XHPP in 2021 and 2022. During the forecast period, we expect the two gas-fired cogeneration power plants and solar power projects will still generate stable stream of EBITDA of around Bt1-Bt1.5 billion per year.

### **Satisfactory financial profile**

CKP received capital injection of about Bt4.5 billion through the exercises of warrants in June and September 2019. The investment in new projects has been delayed from our previous forecast. As a result, CKP's gearing was below our forecast. At the end of 2019, CKP's reported a total debt of Bt27.5 billion. The ratio of debt to EBITDA was 5.6 times. The debt to capitalization ratio fell to 39% as of 2019, from 44% a year earlier.

TRIS Rating expects that CKP's debt to EBITDA ratio will improve to range around 4-5 times in 2021 and 2022. We have taken CKP's potential to invest in new projects into our forecast, with total capital spending of Bt6.3 billion during 2020-2022. We expect CKP will continue focusing on neighboring countries and leveraging its strengths to develop sizable hydropower projects. Since a hydropower project, in essence, takes several years to develop and alters large areas of the

environment, we do not expect tremendous growth in the company's assets in the next few years. In effect, we expect the debt to capitalization ratio will stay below 40% in 2020-2022.

### Adequate liquidity profile

On a consolidated basis, CKP held cash and cash equivalents, including restricted cash for project loans, of about Bt5.4 billion at the end of 2019. We expect CKP's funds from operations (FFO) will be about Bt3 billion in 2020. Cash on hand and FFO should be sufficient to cover long-term loans and bonds coming due for about Bt2.6 billion, along with capital expenditures and potential investments of about Bt1.7 billion.

CKP plans to refinance about Bt1.6 billion of its subsidiary's debentures coming due in 2020 by issuing new debentures. CKP also plans to issue new debentures or secure loans from financial institutions worth about Bt3.5 billion for funding new investments.

Based on TRIS Rating's forecast, the operating subsidiaries should be capable of generating sufficient cash to repay their respective financial obligations, both debentures and project loans. In addition, the operating subsidiaries are required to make deposits in the reserve accounts for the next loan payment. These accounts serve as a protective cushion for the lenders, in case operating results do not meet expectations.

### BASE-CASE ASSUMPTIONS

- The capacity factor of NN2HPP to be in the range of 30%-32% in 2020 and 36%-40% in 2021-2022.
- The capacity factor for two cogeneration power plants to range 75%-77%.
- Total capital spending to be around Bt1.7 billion in 2020, Bt1.8 billion in 2021, and Bt2.7 billion in 2022.

### RATING OUTLOOK

The "stable" outlook reflects our expectation that CKP's power plants will perform in line with their respective guidance. As such, we expect CKP will continue receiving stable cash flows from its investments. Moreover, we also expect XHPP will contribute the target return.

### RATING SENSITIVITIES

A rating upgrade would be limited over the next 12-18 months. In contrast, downward rating pressure could develop if the performances of the operating power plants, particularly NN2HPP, undershot our estimates, which could materially weaken CKP's cash flow. The ratings could also be lowered if the performance of XHPP deviates materially from the expectation. Any large debt-funded investment that significantly deteriorates the company's financial profile could also trigger a rating downgrade.

### COMPANY OVERVIEW

CKP, as a holding company, was spun off from CK to be a flagship company of the CK Group to invest in power business. CKP was listed on the SET in July 2013. As of March 2020, CKP's major shareholders were CK (31.9%), TTW PLC (25.0%), and Bangkok Expressway and Metro PLC (16.5%). The rest of the company's shares were publicly owned.

CKP's track record dates back in 2004 when it was a department of CK developing the 615-MW NN2HPP in the Lao PDR. This project's initial operation was in March 2011 and it commenced commercial operation in January 2013. The management, development, and operation teams were transferred to CKP in 2013.

Currently, CKP invests in eight power projects, through its subsidiaries and affiliated companies, with an aggregated installed capacity of 2,166.8 MW or equity capacity of 938.3 MW. Out of the equity capacity, about 935.6 MW is in operation while the remaining 2.7 MW is under construction.

CKP's portfolio of power plants comprises hydropower, cogeneration, and solar power. All of CKP's operating power plants have secured long-term PPAs. The NN2HPP and the gas-fired cogeneration power plants, under the small power producer (SPP) scheme, hold 25-year PPAs with EGAT. The solar power projects hold five-year PPAs (with auto-renewal every five years) with the PEA. Meanwhile, the XHPP has secured PPAs with EGAT and EDL for 29 years and 31 years, respectively.

NN2HPP contributed a majority portion of CKP's EBITDA, accounting by about 64% in 2019. The rest of 36% was generated by the two gas-fired cogeneration power plants, a small solar power project, and others.

In terms of off-takers for the operation phase of the project, 857 MW (or 92%) is sold to EGAT, 45.5 MW (6%) is sold to the industrial customers in Thailand and the PEA. The rest of 22.5 MW or 2% is sold to EDL.

CKP plans to double its aggregate installed capacity to 5,000 MW by 2025. The company will focus on cross-border

hydropower projects to leverage the strength of the Group.

## KEY OPERATING PERFORMANCE

**Table 1: CKP's Portfolio**

Project	Plant Type	Installed Capacity (MW)	CKP's Interest (%)	CKP's Capacity (MW)	COD/SCOD	Main Off-taker	PPA (Years)
1. NN2HPP	Hydro	615	46	282.7	Mar 11*	EGAT	25+2
2. Bangpa-in Cogeneration 1	Gas-fired	118	65	76.7	Jun 13	EGAT	25
3. Bangpa-in Cogeneration 2	Gas-fired	120	65	78.0	Jun 17	EGAT	25
4. Bangkhenchai	Solar	8	100	8.0	Aug 12	PEA	5 (auto)
5. Chiang Rai Solar	Solar	8	30	2.4	Jan 13	PEA	5 (auto)
6. Nakhon Ratchasima Solar	Solar	6	30	1.8	Mar 12	PEA	5 (auto)
7. XHPP	Hydro	1,285	38	481.9	Oct 19	EGAT	29
						EDL	31
8. Solar rooftop & farm	Solar	6.8	100	6.8	2019	IUs	5 (auto)
<b>Total</b>		<b>2,166.8</b>		<b>938.3</b>			

\* NN2HPP commenced initial operation date in March 2011 and commenced commercial operation date in January 2013.

## FINANCIAL STATISTICS AND KEY FINANCIAL RATIOS\*

Unit: Bt million

	-----Year Ended 31 December -----				
	2019	2018	2017	2016	2015
Total operating revenues	8,859	9,096	6,916	6,337	6,779
Earnings before interest and taxes (EBIT)	2,264	2,517	1,597	1,731	1,903
Earnings before interest, taxes, depreciation, and amortization (EBITDA)	4,015	4,618	3,587	3,658	3,785
Funds from operations (FFO)	2,831	3,173	2,077	2,384	2,649
Adjusted interest expense	1,171	1,400	1,494	1,260	1,135
Capital expenditures	251	779	2,704	3,496	1,186
Total assets	64,191	62,503	60,462	59,305	54,567
Adjusted debt	22,616	24,765	23,565	21,727	17,229
Adjusted equity	35,547	31,522	30,659	30,506	31,812
<b>Adjusted Ratios</b>					
EBITDA margin (%)	45.32	50.77	51.87	57.71	55.83
Pretax return on permanent capital (%)	3.62	4.16	2.70	3.08	3.71
EBITDA interest coverage (times)	3.43	3.30	2.40	2.90	3.33
Debt to EBITDA (times)	5.63	5.36	6.57	5.94	4.55
FFO to debt (%)	12.52	12.81	8.81	10.97	15.38
Debt to capitalization (%)	38.88	44.00	43.46	41.60	35.13

\* Consolidated financial statements

## RELATED CRITERIA

- Rating Methodology – Corporate, 26 July 2019
- Key Financial Ratios and Adjustments, 5 September 2018
- Group Rating Methodology, 10 July 2015
- Sovereign Credit Rating, 8 October 2013

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**CK Power PLC (CKP)**

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<b>Company Rating:</b>	A
<b>Issue Ratings:</b>	
CKP216A: Bt4,000 million senior unsecured debentures due 2021	A-
CKP286A: Bt2,500 million senior unsecured debentures due 2028	A-
<b>Rating Outlook:</b>	Stable

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**TRIS Rating Co., Ltd.**

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