

EDL-GENERATION PUBLIC COMPANY

No. 79/2021
14 May 2021

CORPORATES

Company Rating:	BBB-
Issue Ratings:	
Senior unsecured	BBB-
Outlook:	Negative

Last Review Date: 15/05/20

Company Rating History:

Date	Rating	Outlook/Alert
15/05/20	BBB	Negative
28/06/19	BBB	Stable
12/06/17	BBB+	Negative
15/10/14	BBB+	Stable

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RATIONALE

TRIS Rating downgrades the company rating on EDL-Generation Public Company (EDL-Gen) and the ratings on EDL-Gen's senior unsecured debentures to "BBB-" with "negative" outlook from "BBB" with "negative" outlook. The downgrade follows TRIS Rating's rating action in downgrading the sovereign rating on the Lao People's Democratic Republic (Lao PDR) to "BBB-" with "negative" outlook from "BBB" with "negative" outlook on 14 May 2021.

The "BBB-" ratings reflect our views on EDL-Gen's status as a core subsidiary of Electricite du Laos (EDL) as well as its status as a state-owned enterprise of the Lao PDR and the critical roles it plays in the Lao PDR's electricity industry. EDL is a state-owned enterprise, 100% owned by the government of the Lao PDR. EDL's credit profile is linked to the sovereign rating on the Lao PDR.

EDL-Gen's stand-alone credit profile (SACP) of "bbb-" reflects its strong market position in the Lao PDR's electricity generation industry, acceptable operating performance, and its well-diversified portfolio. However, EDL-Gen's SACP is constrained by the weakening financial position of EDL who is the sole purchaser of the electricity produced by EDL-Gen's wholly-owned power plants.

KEY RATING CONSIDERATIONS

EDL's credit profile and Lao PDR's sovereign profile

EDL-Gen's credit profile is underpinned by the credit profile of EDL and sovereign profile of the Lao PDR. EDL-Gen is a core subsidiary of EDL. EDL-Gen has taken over the role of electricity generation for the country from EDL since its inception. On the other hand, EDL is the sole customer of EDL-Gen and the sole owner of the nation's power grid. EDL-Gen is tightly integrated with EDL under the structure.

EDL influences EDL-Gen's business direction in many ways, such as the pursuit of growth opportunities, the structure of future power purchase agreements (PPAs), and dividend policy.

EDL is wholly owned by the Ministry of Finance of the Lao PDR (MOFL). The credit quality of EDL is underpinned by the very high likelihood that the government of Lao PDR will provide full support to EDL in times of distress. This likelihood is reinforced by the fact that EDL and EDL-Gen fulfill a critical role in the power development plan of the Lao PDR, which is a critical part of the country's development plan to advance its economic system and social development.

Strong market position in the Lao PDR's power sector

EDL-Gen is one of the leading power producers in the Lao PDR. As of December 2020, EDL-Gen's equity capacity was 1,683 megawatts (MW), of which 939 MW (or 56%) was for the domestic market, while the remaining 744 MW (or 44%) was for export, mainly to Thailand. EDL-Gen's equity capacity accounted for about 16% of total installed capacity in the Lao PDR. For the domestic market, EDL-Gen is the largest power producer, supplying about 22% of the electricity consumed in the Lao PDR.

In 2020, EDL-Gen's equity capacity continued to increase, despite delays in the transfer of three hydropower plants from EDL. EDL-Gen acquired a 20% shareholding in the "Nam Tha 1" hydropower project from EDL in 2020,

increasing EDL-Gen's equity capacity by 34 MW to 1,683 MW. In 2021, the company expects to complete transactions to transfer three hydropower plants with total capacity of 187 MW and shareholdings in two Independent Power Producers (IPPs) with equity capacity of 27 MW from EDL. We expect EDL-Gen's equity capacity to increase to 1,897 MW by the end of 2021 from 1,683 MW at the end of 2020.

Electricity oversupply expected to ease

At the end of 2020, the Lao PDR had power generation capacity of about 10,400 MW. About 5,900 MW of the capacity was exported directly to Thailand (96%) and Cambodia (4%). Power generation capacity for the Lao PDR's domestic market was about 4,500 MW, while the domestic peak demand for electricity was about 1,100-1,200 MW. Based on capacity factor of around 50% of hydro power generation, an oversupply of electricity generation of the Lao PDR is estimated to be 1,000-1,500 MW at the end of 2020.

We expect the oversupply of electricity in the Lao PDR to gradually ease. Some IPP projects that currently sell electricity domestically will increasingly export power to neighboring countries such as Vietnam and Cambodia. The "Donsahong" hydropower project (260 MW) has currently exported 195 MW of electricity to Cambodia since late 2019. The "Nam San 3A" and "Nam San 3B" projects, with total capacity of 114 MW, aim to export power output to Vietnam by 2022. This should help gradually bring down the electricity capacity of the market. The Lao PDR has a memorandum of understanding (MOU) to export 9,000 MW of electricity to Thailand, 6,000 MW to Cambodia, 5,000 MW to Vietnam, and about 320 MW to Malaysia.

Electricity consumption in the Lao PDR's domestic market grew by 12% per annum during 2015-2019. Despite the Coronavirus Disease 2019 (COVID-19) pandemic in 2020, domestic power consumption grew by 17.9% to 7,779 gigawatt-hours (GWh), a rate almost 6 times higher than the country's gross domestic product (GDP) growth rate of 3%. The high consumption growth is expected to help ease the over-supply situation in the medium term.

EDL's financial position further weakened in 2020

EDL's financial position has deteriorated during the past several years due partly to the electricity oversupply situation and the strain of its capital needs for upgrading the country's transmission lines. The COVID-19 outbreak also played a part in further weakening EDL's financial position in 2020 as it lowered the price for the electricity sold to consumers as part of the government's policy to alleviate the economic impacts of the outbreak, while the purchase prices of electricity were in accordance with the PPA signed with private power producers.

EDL-Gen is exposed to payment risk of EDL. At the end of 2020, EDL owed EDL-Gen for LAK1.3 trillion. This amount was higher than the electricity EDL-Gen sold to EDL of LAK1.2 trillion for the whole year of 2020.

Satisfactory operating performance in 2020

Although the northern part of the Lao PDR has experienced a drought for two consecutive years, EDL-Gen recorded satisfactory operating performance in 2020. The company sold 2,308 GWh of electricity to EDL, up by 7% year-on-year (y-o-y). This growth in sales resulted from the company's well-balanced diversification of plant locations. The company's revenue from electricity sales also increased by 10.3% y-o-y to LAK1.17 trillion in 2020 from LAK1.06 trillion in 2019 (excluding extra revenue of LAK159 billion). The company benefited from higher volumes of water flow at the company's hydropower plants in the southern part of the country. Shared profits from investments in IPP projects also increased by 47% to LAK498 billion in 2020 from LAK339 billion in 2019.

We forecast EDL-Gen's revenue from electricity sales to increase to LAK1.5-LAK1.9 trillion per year during 2021-2023. The revenue forecast reflects our view that the transfers of new assets from EDL will be completed as planned.

Foreign exchange risk

EDL-Gen is exposed to significant foreign exchange risk because of the currency mismatch of revenues and expenses. The majority (52%) of EDL-Gen's income is denominated in Lao kip, followed by US dollars (44%) and Thai baht (4%), while its obligations are mostly in US dollars and Thai baht. At the end of 2020, the company reported total debt of LAK14.6 trillion, of which about 51% was denominated in Thai baht, 47% in US dollars, and 2% in euros and Japanese yen.

Due to a weakening LAK against USD and THB, EDL-Gen recorded foreign exchange loss of LAK45.4 billion for its 2020 operation.

Moderate investments during 2021-2023

During 2021-2023, EDL-Gen's capital expenditures are projected to be about LAK7.7 trillion in total. The expenditures will be used to acquire 100% shareholdings in four of EDL's power plants, purchase shares held by EDL in two IPP projects, as well as invest directly in two new IPP projects, expand capacity of existing assets, develop new projects, and cover

maintenance costs. Of the projected investment of LAK7.7 trillion, EDL-Gen has already paid an advance amount of about LAK2.2 trillion to EDL for equity stakes in several projects, while about LAK5.0 trillion will be made up of loans for hydropower plants transferred from EDL. EDL-Gen's equity capacity is forecast to increase to about 2,000 MW by 2023.

Leverage continues to increase

At the end of 2020, the company's reported debt was LAK14.6 trillion, an increase from LAK13.9 trillion at the end of 2019. The higher level of debt reflects EDL-Gen's increased need for working capital. The company's accounts receivable increased to LAK1.37 trillion at the end of 2020 due to an increased amount owed by EDL. However, the company and EDL are in the process of reducing this amount by setting off between PPA and Debt Repayment Agreement.

Financial leverage is forecast to rise mainly from the consolidation of the debts of several power plants transferred to EDL-Gen from EDL. We expect debts of about LAK5 trillion to be consolidated during 2021-2023. EDL-Gen's debt to capitalization ratio is likely to deteriorate to 60%-65% during 2021-2023, from 61.3 % at the end of 2020.

EBITDA to rise after 2021

In our base-case scenario, EDL-Gen's earnings before interest, taxes, depreciation, and amortization (EBITDA) is projected to increase to around LAK2 trillion in 2023 from LAK1.1 trillion in 2020, once EDL-Gen realizes the full benefits of the assets and shares in the IPP assets purchased from EDL. By 2023, almost all power projects will have been in operation for a full year.

Based on the forecast levels of EBITDA, capital expenditures, and the company's investment plan, we project EDL-Gen's debt to EBITDA ratio to fall to 8-10 times during 2021-2023, from about 13.2 times in 2020.

Liquidity to be monitored

In 2021, the company's sources of funds comprise cash on hand of LAK357 billion at the end of 2020 and funds from operations (FFO) of approximately LAK1 trillion. On the other hand, EDL-Gen has debts coming due in 2021 of about LAK2.8 trillion, of which LAK984 billion is mostly a long-term loan with EDL and the MOFL, and the remaining LAK1.84 trillion (or THB5.8 billion) is made up of debentures. We expect EDL-Gen to refinance all debentures coming due in 2021 by issuing new debentures. We also expect that the MOFL will provide full support to EDL-Gen, should EDL-Gen experience any short-falls from the planned new debenture issuances.

BASE-CASE ASSUMPTIONS

- Revenue from electricity sales in the range of LAK1.5-LAK1.9 trillion per year during 2021-2023.
- Oversupply and transmission line bottlenecks in the Lao PDR to begin easing in 2022.
- Operating margin (operating income before depreciation and amortization as a percentage of sales) to stay around 80% during the forecast period.
- Capital expenditure during 2021-2023 to total about LAK7.7 trillion. Expenditures includes annual maintenance costs, purchases of power plants from EDL, purchases of stakes in IPP companies from EDL, construction of new power plants, and investments in other IPP companies.

RATING OUTLOOK

The "negative" outlook reflects the outlook of the sovereign rating on the Lao PDR. TRIS Rating expects that the business model and the level of integration between EDL and EDL-Gen will remain unchanged, and that EDL will continue holding a majority interest in EDL-Gen and receiving full support from the government of the Lao PDR.

RATING SENSITIVITIES

A change in the sovereign rating or outlook on the Lao PDR will impact the rating or outlook on EDL-Gen. The rating on EDL-Gen reflects the credit profile of EDL and sovereign rating profile of the Lao PDR.

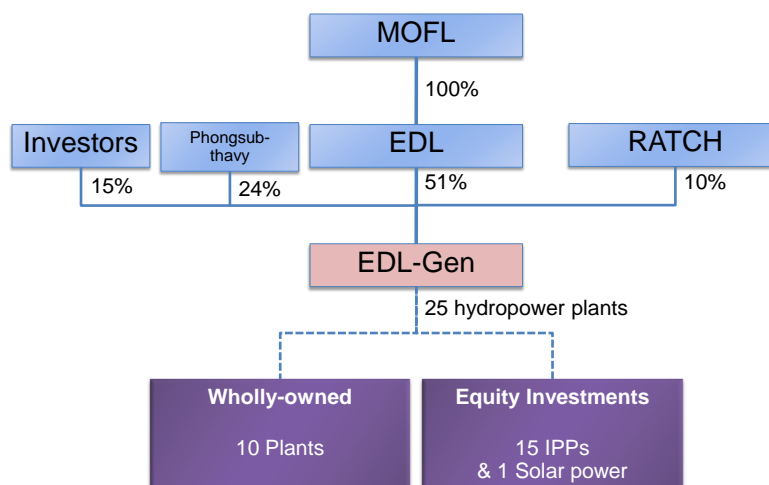
COMPANY OVERVIEW

EDL-Gen was founded in 2010 and listed on the Lao Securities Exchange (LSX) in 2011. The incorporation of EDL-Gen was part of the restructuring of the power sector in the Lao PDR, which called for EDL-Gen to purchase current and future power generating assets from EDL. Before EDL-Gen was set up, EDL was the sole vertically integrated electric power utility, dominating all aspects of the sector in the Lao PDR, from power generation, transmission lines, and the distribution of electricity to end-users. EDL also owned stakes in several IPPs operating in the Lao PDR. Notwithstanding the transfer of its electricity generating assets to EDL-Gen, EDL remains the single buyer of electricity in the Lao PDR and the dominant electricity distributor. EDL owns almost all of the power grids in the Lao PDR.

As of March 2021, EDL held a 51% stake in EDL-Gen. EDL-Gen owns and operates hydropower assets developed by EDL. EDL-Gen also invests in IPP hydropower projects previously held by EDL. Each of EDL-Gen's power generating assets operates under a PPA and concession covering 30 years.

As of March 2021, EDL-Gen's aggregate equity capacity was 1,683 MW, comprising 699 MW from its 10 wholly-owned hydropower plants and 984 MW from equity investments in 15 IPPs and one small solar power project.

Chart 1: EDL-Gen Group's Structure



Source: EDL-Gen, illustrated by TRIS Rating

Note: RATH = RATCH Group PLC

KEY OPERATING STATISTICS

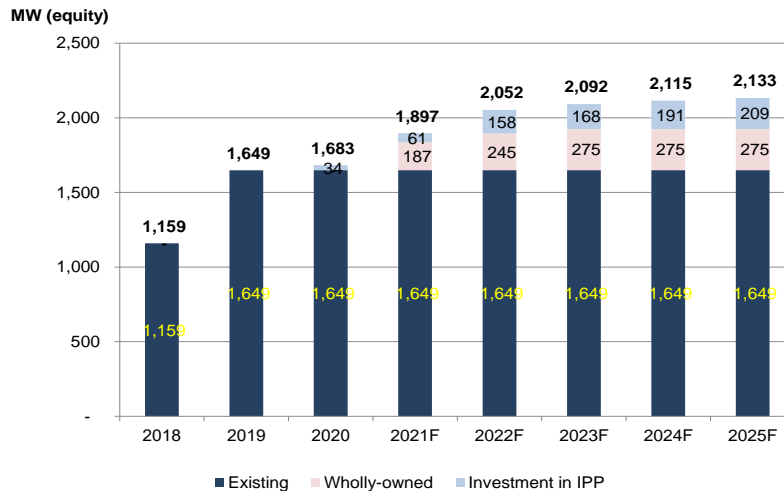
Table 1: EDL-Gen's Power Portfolio (In Operation)

	Plant	EDL-Gen's Stake (%)	Location	Acquired Year	COD	Installed Capacity (MW)	Equity Capacity (MW)
Wholly-owned							
1	Nam Ngum 1	100	Vientiane	2010, 2019	1971, 2018	235	235
2	Nam Leuk	100	Xaysomboun	2010	2000	60	60
3	Nam Mang 3	100	Vientiane	2010	2005	40	40
4	Nam Song	100	Vientiane	2010	2012	6	6
5	Xeset 1	100	Saravanh	2010	1991	45	45
6	Xeset 2	100	Saravanh	2010	2009	76	76
7	Selabam	100	Champasak	2010	1969	5	5
8	Nam Sana	100	Vientiane	2015	2014	14	14
9	Houy Lamphan Gnai	100	Xekong	2015	2015	88	88
10	Nam Khan 2	100	Luang Prabang	2015	2015	130	130
Total wholly-owned						699	699
Investment							
11	Theun-Hinboun	60	Bolikhamsai	2012	1998, 2013	520	312
12	Houay Ho	20	Attapeu	2012	1999	152	30
13	Nam Lik 1-2	10	Vientiane	2012	2010	100	10
14	Nam Ngum 2	25	Vientiane	2012	2011	615	154
15	Nam Ngum 5	15	Vientiane	2015	2012	120	18
16	Solar power	60	Vientiane	2017	2017	32	19
17	Nam Long	20	LuangNam Tha	2018	2013	5	1
18	Nam Beng	10	Oudomxay	2018	2016	34	3
19	Donsahong	20	Champasack	2018	2019	260	52
20	Xayaburi	20	Xayaburi	2019	2019	1,285	257
21	Nam Ou 2	15	Luang Prabang	2019	2017	120	18
22	Nam Ou 5	15	Phonsaly	2019	2017	240	36
23	Nam Ou6	15	Phonsaly	2019	2017	180	27
24	Nam Mang 1	10	Bolikhamsai	2019	2017	64	6
25	Nam Lik 1	10	Vientiane	2019	2019	60	6
26	Nam Tha 1	20	Bokeo	2020	2019	168	34
Total investment						3,955	984
Total						4,655	1,683

Note: As of Mar 2021

Source: EDL-Gen

Chart 2: EDL-Gen's Growth Plan



Source: EDL-Gen

FINANCIAL STATISTICS AND KEY FINANCIAL RATIOS*

Unit: Mil. LAK

	Year Ended 31 December				
	2020	2019	2018	2017	2016
Total operating revenues	1,211,467	1,248,800	1,163,906	1,245,535	1,252,246
Earnings before interest and taxes (EBIT)	945,075	851,800	1,088,865	1,026,593	819,900
Earnings before interest, taxes, depreciation, and amortization (EBITDA)	1,117,102	1,362,002	1,438,909	1,390,299	1,232,918
Funds from operations (FFO)	374,859	618,398	834,238	868,609	1,017,557
Adjusted interest expense	742,243	743,604	604,671	505,747	166,251
Capital expenditures	98,009	142,711	226,917	987,895	756,108
Trade account receivables	1,368,564	536,270	418,333	142,172	476,457
Total assets	24,702,826	23,656,378	22,553,171	19,619,193	18,729,565
Adjusted debt	14,738,657	13,082,815	11,754,784	8,377,012	2,160,325
Adjusted equity	9,293,720	9,290,405	9,353,869	9,208,819	9,186,402
Adjusted Ratios					
EBITDA margin (%)	92.21	109.06	123.63	111.62	98.46
Pretax return on permanent capital (%)	3.95	3.75	5.31	6.16	6.34
EBITDA interest coverage (times)	1.51	1.83	2.38	2.75	7.42
Debt to EBITDA (times)	13.19	9.61	8.17	6.03	1.75
FFO to debt (%)	2.54	4.73	7.10	10.37	47.10
Debt to capitalization (%)	61.33	58.48	55.69	47.64	19.04

* Consolidated financial statements

RELATED CRITERIA

- Group Rating Methodology, 13 January 2021
- Government-Related Entities Rating Methodology, 30 July 2020
- Rating Methodology – Corporate, 26 July 2019
- Key Financial Ratios and Adjustments, 5 September 2018

EDL-Generation Public Company (EDL-Gen)

Company Rating:	BBB-
Issue Ratings:	
EDLGEN217A: THB3,810.3 million senior unsecured debentures due 2021	BBB-
EDLGEN21DA: THB2,000 million senior unsecured debentures due 2021	BBB-
EDLGEN227A: THB1,085.5 million senior unsecured debentures due 2022	BBB-
EDLGEN237A: THB4,078.1 million senior unsecured debentures due 2023	BBB-
EDLGEN247A: THB1,660.7 million senior unsecured debentures due 2024	BBB-
EDLGEN24DA: THB3,000 million senior unsecured debentures due 2024	BBB-
EDLGEN257A: THB1,443.1 million senior unsecured debentures due 2025	BBB-
EDLGEN287A: THB1,897.9 million senior unsecured debentures due 2028	BBB-
EDLGEN307A: THB809.8 million senior unsecured debentures due 2030	BBB-
EDLGEN311A: THB1,093.4 million senior unsecured debentures due 2031	BBB-
EDLGEN337A: THB1,621.2 million senior unsecured debentures due 2033	BBB-
EDLGEN239A: USD51 million senior unsecured debentures due 2023	BBB-
EDLGEN269A: USD166 million senior unsecured debentures due 2026	BBB-
EDLGEN289A: USD95 million senior unsecured debentures due 2028	BBB-
Rating Outlook:	Negative

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