Yambaling Hydropower Private Limited: [ICRANP] LB+ assigned

September 16, 2019

Summary of rated instruments

Proposed Instrument	Rated Amount (NPR Million)	Rating Action
Long-term loan; Fund based	840	[ICRANP] LB+ (Assigned)
Total	**840**	

Rating action

ICRA Nepal has assigned a long-term rating of [ICRANP] LB+ (pronounced ICRA NP L B plus) to the proposed long-term loan of Yambaling Hydropower Private Limited (YHPL).

Rationale

The assigned rating is constrained by the high execution risks due to the initial stage of development of the 7.27-MW Yambaling Khola hydropower project. At present, construction of access roads, installation of workers' camping facilities and excavation for the powerhouse are in progress. The execution risk also emanates from the lack of an already available evacuation infrastructure at the proposed connection point – Nepal Electricity Authority's (NEA) Barhabise Substation. Any delays in the completion of the substation could defer the project commissioning and hence increase the project cost. Nonetheless, YHPL has entered a memorandum of understanding (MoU) with a nearby hydropower project that is nearing completion. The MoU will allow the company to evacuate its power by accessing the transmission line of the nearby project. The execution risk is also mitigated, to an extent, by the key promoters' prior experience in hydropower project development and operations[1].

The assigned rating is also constrained by the high funding risks as financial closure[2] and substantial promoters' equity[3] injection are yet to be achieved. The hydrological risks are also high for the project, given the lack of a deemed generation clause in the power purchase agreement (PPA). Moreover, the source of the project is an ungauged rainfed perennial river with a small catchment area. This coupled with the low contract plant load factor (PLF; ~59%) for the project, could have an impact on energy generation and, subsequently, the company's revenues. The project is also exposed to counterparty credit risks arising from its exposure to the NEA, which has a weak financial profile. This is, however, mitigated by the fact that the NEA's financial profile has been improving since FY2016-17. Additionally, it is a fully owned Government entity and has been making timely payments to independent power producers (IPPs) so far. All these factors, along with the high interest volatility in the market as well as the possible imposition of a late commercial operation date (COD) penalty and loss of tariff escalation in case of delay, could weaken the company's debt coverage and profitability indicators.

Nonetheless, the assigned rating factors in the relatively lower budgeted cost of development (~NPR 165 million per MW) of the project and the expected healthy levelized tariff emanating from the relatively higher dry energy mix (18%) amid the fixed tariff structure. The rating also takes into consideration the low tariff risk and low offtake risk due to the firm PPA with pre-determined tariff rates under the take or pay model. Moreover, the rating factors in the positive demand outlook for the energy sector owing to the supply-demand gap in the power sector as well as the increasing energy consumption in the nation. Going forward, YHPL's ability to commission the project within the estimated budgeted cost (NPR 1,200 million), extend the required commercial operation date (RCOD)[4], and complete the project by achieving the designed parameters would be the key driver for determining the return metrics for the project and other coverage indicators for the company.

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[1] *The promoter group has also developed and operates the 5-MW Pikhuwa Khola Small HPP under Eastern Hydropower Limited*
[2] *Lumbini Bikas Bank (rated [ICRANP] IPO Grade 4 for its rights issue) has been approached for the financial closure*
[3] *Promoters' equity injection is ~35% so far*
[4] *RCOD is July 1, 2020; however, the management has applied to the NEA for a two-year extension*

Key rating drivers

Credit strengths

Low tariff risk, given presence of long-term PPA at predetermined tariff rates and escalations – The tariff risk for the project is low as the company already has a PPA with the NEA (the sole purchaser and distributor of electricity in Nepal) for its entire project capacity for a period of 30 years from the COD. The PPA has a predefined tariff rate for the purchase of energy i.e. the tariff for the wet season (mid-April – mid-December) is NPR 4.8 per kWh while that for the dry season is NPR 8.4 per kWh. An escalation of 3% per annum is allowed on the base tariff for five consecutive years after 12 months of the COD. However, to avail all five tariff escalations, it is imperative that the project starts commercial operations latest by six months of the RCOD. Failure to meet this deadline would subject the project to the loss of one tariff escalation for every year of delay, starting six months after the RCOD. This would also subject the project to a late COD penalty of 5% on the amount calculated on the energy gap between the RCOD and COD, at the rates prevailing on COD.

Low offtake risk on the back of PPA, current demand-supply gap and increasing energy utilisation – The company has a PPA for the offtake of energy under the take or pay model with the NEA. Any failure in the offtake of power would be compensated by the NEA. Also, a gap in the demand and supply of energy in Nepal would ensure the healthy offtake of energy. Nepal is a net importer of electricity, even with limited electrification across the country and the currently supressed demand (per capita power consumption of <150 KW as per a 2015 study[5]; among the lowest in Asia). In the fiscal year (FY) 2017-2018, the peak power demand in the Integrated Nepal Power System (INPS) surged to 1,508 MW while the installed operational capacity was only 1,074 MW. The shortfall was met through the import of electricity. As per the NEA, the power demand is expected to grow at a rate of ~15% over the next 22 years (driven by an increase in electrification, per capita consumption and industrial demand). Hence, the supply-demand gap is expected to persist, resulting in the healthy offtake of the energy generated by the project.

Prior experience of promoters can help development of current project – The project has been majorly promoted by promoters who have already developed an operational 5-MW hydropower project (Pikhuwa Khola HPP) through Eastern Hydropower Limited [6]. So, the promoters' prior experience in the development of Pikhuwa Khola is expected to help the development, running and maintenance of the Yambaling hydropower project as well.

Lower project cost and higher dry energy mix to support return and debt coverage indicators – The coverage indicators for the project remain supported by lower project cost (NPR 165 million/MW – budgeted), high dry energy mix (18%) and the ballooning repayment model expected for the repayment of loans. However, the relatively lower contract PLF (~59%), higher rate of interest on loans, loss of tariff escalation amid fixed tariff structures, and late COD penalty, if the project gets delayed, would pressurise the indicators.

It is important that the project comes into operation as soon as possible and utilises as many escalations as possible (out of five escalations) as the last escalated rate would remain effective through the life of the project and would remain a key determinant for supporting the overall revenue profile in the longer term. The coverage indicators could face pressure if the project fails to achieve its designed operating parameters or if it is not completed within the budgeted cost and estimated timeline and if there is a change in the final repayment schedule.

Credit challenges

High project execution risk may pose challenge in completing the project within the budgeted cost and estimated timeline – The project is in the initial stage of development. At present, the construction of access roads, installation of workers' camping facilities and excavation for the powerhouse are in progress. Of the critical components work of the project, the civil works contract has been entered into while the contracts for other critical components work such as electromechanical works, hydromechanical works and transmission line works are yet to be achieved. This, along with

[5] *Study conducted by Water and Energy Commission Secretariat, GoN*
[6] *Graded IPO grade 5 in November 2018*

the difficult terrain and adverse climatic conditions during the construction period, can escalate the project execution risk further, resulting in time and cost overruns. YHPL expects to construct the project within the budgeted cost of NPR 1,200 million, which is on a relatively lower side (~NPR 165 million per MW). This could benefit the return and coverage indicators if completed within the budgeted cost and estimated timeline.

High funding risk with financial closure yet to be achieved; ~35% promoters' equity injection so far – The project has been planned to be developed at a cost of ~NPR 1,200 million at a debt-equity ratio of 70:30. The overall equity requirement is NPR 360 million and as of mid-September 2019, the promoters had injected around 35% of the same. The rest of the equity is expected to be injected by the end of FY2020. At the budgeted cost, the debt component is NPR 840 million. The project is yet to achieve financial closure. However, the company has approached a bank for financing the project. Any cost escalation beyond the estimated cost of NPR 1,200 million will be met by the promoters through a short-term loan.

Evacuation risks remain high with NEA's Barhabise substation in construction phase – The evacuation risk emanates from the lack of an evacuation infrastructure at the proposed connection point, the NEA's 220-kV Barhabise Substation, through which the power is expected to be evacuated. Subject to approval, the company is now planning to evacuate its power by accessing the transmission line of a downstream project viz. the 36-MW upper Balephi "A" HPP under Balephi Hydropower Limited (BHL), which would be connected to an operational substation of the NEA (Lamosanghu substation). The company entered an MOU with BHL for the same in May 2019. YHPL would connect its power from its powerhouse to the Balephi powerhouse through an approximately 6-km long 132-kV transmission line.

Tariff escalation loss on expected delay in project completion though same might be avoided if RCOD is extended – The project is in the initial stage of construction and most of the critical components are yet to be mobilised. Therefore, it is unlikely to meet the RCOD of July 1, 2020. This would make the project liable for a late COD penalty. Also, the project is likely to lose tariff escalations for every year of delay starting six months of the RCOD. Amid the fixed tariff structure, the utilisation of all the tariff escalations remains critical for determining a strong revenue profile. Since the evacuation structure of the NEA is also not ready at the proposed connection point, the company has applied to the NEA for a two-year extension of the RCOD. If the extension is approved and the project starts operations within the revised RCOD, the company would be eligible for all tariff escalations and would not have to pay any late COD penalty.

High hydrology risks emanate from ungauged rainfed river with low catchment area and lack of deemed generation clause in PPA – The project draws its hydrology from the Yambaling River, which is a non-gauged rainfed perennial river. The medium irrigation project (MIP) method was used to calculate the design discharge for the project, based on the direct flow measurements that were carried out near the intake location in different months. The hydrology of the project might get affected if any unusual fluctuation is seen in the rainfall pattern in the low catchment area (~14 sq. km) of the rainfed river. Also, the PPA lacks a deemed generation clause, which exposes the project towards hydrology risks in case of adverse scenarios without receiving any compensation for such losses.

Analytical approach: For arriving at the rating, ICRA Nepal has applied its rating methodology as indicated below.
Links to applicable criteria:
Corporate Credit Rating Methodology

About the company

Yambaling Hydropower Private Limited (YHPL) was incorporated on November 21, 2007 as a private limited company. Its paid-up capital, as of mid-September 2019, was ~NPR 125 million (of which ~NPR 76 million has been certified by the Office of Company Registrar in March 2019), fully held by the promoters. The major shareholders include Ms. Indramaya Tamang (21%), Money Plant Investment Private Limited (20%), Mr. Kaman Singh Lama (8%) and Mr. Uttam Rajbhandary (8%). YHPL is developing the 7.27-MW Yambaling Khola HPP in Sindhupalchowk district, Province 3 of Nepal at a budgeted cost of NPR 1,200 million at a debt:equity ratio of 70:30. The project is a run-of-river (R-o-R) type and is being developed at 40% probability of exceedance (Q40). The contract PLF is ~59% with an annual production capacity of ~38 GWh of energy with a dry energy mix of ~18%. The major promoters are also operating the 5-MW Pikhuwa Khola Small Hydropower Project under Eastern Hydropower Limited.

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