

Grading Rationale

Greenlife Hydropower Limited

Grading

| Facility | Amount (Rs. In Million) | Grading | Rating Action |
|----------------------|-------------------------|---|---------------|
| Initial Public Offer | 360.00 | CARE-NP IPO Grade 4 [IPO Grade Four] | Assigned |

The explanatory notes regarding the Grading symbols of CARE Ratings Nepal Limited (CRNL) are attached as Annexure 1

CRNL has assigned grading of ‘CARE-NP IPO Grade 4’ to the proposed Initial Public Offer (IPO) of Greenlife Hydropower Ltd (GLH). ‘CARE-NP IPO Grade 4’ indicates Below Average Fundamentals. CRNL assigns IPO grades on a scale of Grade 1 to Grade 5, with Grade 1 indicating strong fundamentals and Grade 5 indicating poor fundamentals. CRNL’s IPO grading is an opinion on the fundamentals of the issuer. The grade assigned to any individual issue represents a relative assessment of the ‘fundamentals’ of the issuer. GLH proposes to issue 3.6 Million shares of face value of Rs.100 each at par aggregating Rs. 360 million.

Detailed Rationale & Key Grading Drivers

The grading assigned to GLH is constrained by promoters group having limited experience in hydropower sector, exposure to fluctuation in exchange rate and volatile interest rate, significant cost and time overrun leading to high cost of initial 25MW project, financial closure for additional 15MW project cost yet to be achieved, hydrology risk associated with run of the river power generation, project implementation risk and power evacuation risk. The grading, however, derives strength from Power purchase agreement (PPA) with sufficient period coverage and moderate counter party risk, fixed price of Civil, Hydromechanical and Electromechanical contract, financial closure achieved for initial 25MW revised project cost, shortage of power in the country and government support for the power sector.

Timely completion of the project within the revised cost estimates, transmission of the power through appropriate infrastructure, sufficient hydrology and timely receipt of the payments from Nepal Electricity Authority (NEA) are the key grading sensitivities.

Detailed Description of the Key Grading Drivers

Key Grading Weaknesses

Promoter group having limited experience in hydropower sector

The promoter group of the company has limited prior experience of executing power projects and the project under consideration is the first power project with 40 MW capacity being implemented by the company. GLH has total 7 directors. Mrs. Yanchain Doma Lama, Chairman of GLH, is the major promoter shareholder of the company who holds 26.5% promoter share of the company. She is chairman of GLH since last 7 years and has 9 years of experience in other hydropower company as board member. Mr. Tenzin Jampe Lama, MBA, Master in Electrical and Computer Engineering, is Managing director/Technical director of GLH since last 7 years has 3 years of prior experience in other hydropower company as a technical director. Mr. Batu Lamichhane, director of GLH, is associated in hydropower sector since 1995 in various projects.

Significant Cost and Time Overrun

The initial estimated cost for 25MW was Rs 3,338 Mn which has been escalated to Rs 4,936 Mn mainly due to increase in IDC on back of delay in completion of the project and increase in cost of electro mechanical works due to increase in foreign exchange rate. The cost of project per MW for 25MW is high @Rs. 197 million per MW and once the generation capacity is upgraded to 40MW, the cost Per MW will moderate to around Rs.160 million as the powerhouse and transmission line constructed for 25MW project will be utilized for 15 MW project. Initially RCOD of 25MW was June 16, 2015 and additional 15MW was December 19, 2019 which was revised to May 2, 2018 for 25MW and remain same (i.e. December 19, 2019) for additional 15MW. GLH is not able to execute the project within revised RCOD which result in loss of revenue, reduction of project life. Completion of the project was delay due to delay in construction of road because of various difficulties in land acquisition from public for road as well as difficult geographical condition, earthquake of 2015, India-Nepal border blockade of 2015-16 and the local level, provincial and federal level elections during 2017 etc.

Project implementation risk- Delay in execution of project, however substantial progress achieved

The project has faced significant time and cost overrun. On the basis of cost incurred till Jan 14, 2018 ~ 87% (i.e. Rs 4,296.41 Mn cost incurred) of project work for 25MW has been completed

and water diversion work from Napke and Hanapu Khola for next 15MW is yet to be started. Timely financial closure for additional 15MW within the cost estimates and completion of the additional facilities will be critical for the financial viability of the overall project. Till April, 2018, out of 1956m headrace tunnel only 20m has been left, 90% of surface penstock pipe has been erected, 95% of civil work of powerhouse has been completed, heavy electromechanical equipment (i.e. Transformer, Generator) has been transported to the site, 90% of switchyard work has been completed, and out of total 54 no's of towers for power transmission, foundation work for 18 no's of tower has been completed and work is ongoing on another 12 towers.

Though a major part of the project has been completed, the same is still in the implementation stage and the company continues to remain exposed to the residual risks associated with project implementation and satisfactory operations thereafter. However, further delays in execution cannot be totally ruled out, given that the plant is being executed in the Himalayan region where the uncertain geology and adverse climatic conditions of the area plays a major part in the timely completion of the planned activities.

Power evacuation risk

The Power generated from the project will be evacuated by 18Km long 132KV Transmission Line to the substation of NEA at Singati to be constructed by GLH. Further, the Transmission line of 132KV from Singati to Lamosangu should be constructed by NEA to evacuate the all energy generated from GLH. Till April, 2018, out of the total 54 no's of towers for power transmission till Singati, foundation work for 18 no's of tower has been completed and ongoing for 12 no's of tower. Timely completion of transmission lines before the COD are critical for the project cashflows.

Hydrology risk associated with run-of-the-river power generation

Run-of-the-river power is considered an unsteady source of power, as a run-of-the-river project has little or no capacity for water storage and therefore is dependent on the flow of river water for power generation. It, thus, generates much more power during summer season when seasonal river flows are high and less during the winter season. GHL is proposed to utilize discharge from Khani Khola, Hanapu Khola and Napke Khola, which are snow fed streams, comprising of mountainous terrain with steep hill slopes. Hence, the project is exposed to risk associated with variation in discharge of water from the aforesaid river/khola.

Key Grading Strengths***Power purchase agreement with sufficient period coverage and moderate counter party payment risk***

GLH had entered into a long term PPA with NEA as on October 10, 2010 for sale of 25MW power which was amended to 40MW on June 4, 2017. The period of the PPA is 30 years from the date of COD or till validity of Generation License (received on May 11, 2011 for 35 years), whichever is earlier. PPA period may be extended with mutual consensus during the last six month of validity. For the 25MW project, the tariff for wet season (Mid-April to Mid-December) is Rs 4 per kWh and for dry season (Mid-December to Mid-April) is Rs 7 per kWh with 3% escalation on base tariff for 9 years. For additional 15MW project, the tariff for wet season is Rs 4.80 per kWh and for dry season is Rs 8.40 per kWh with 3% escalation on base tariff for 8 years. The contracted energy for the project is 227. 822 million units (MU), at PLF of 65.95% of initial 25MW, 63.45% for additional 15MW and 65.01% for the overall 40MW.

The company is not able to complete the Phase I of the project by May 2, 2018 (RCOD) and the company has made request to NEA for extension of RCOD of 25MW to mid Jan 2019. As per the PPA, NEA can charge penalty to the company for delay in COD. NEA has been making losses in the past which may lead to the counter party risk. Counter party risk is mitigated to moderate level as NEA is a Government of Nepal's owned organization and over the period the net losses are decreasing and NEA is able to generate positive gross cash accrual in FY17 and NEA has been making timely payment to independent power producers in past.

Fixed price of civil, Hydro-mechanical and Electromechanical contract, however, exposure to fluctuation in the foreign currency exchange rates

GLH has appointed Eco-Infra Builders Pvt. Ltd. for Civil work, Shine Hydro Generation Pvt. Ltd for Hydro mechanical work and Hunan Allonward Hydro-Generating Equipment Co. Ltd, (HAHG) China for Electro Mechanical work. All these contracts are fixed price contracts and contract amount agreed initially was not changed even though there is delay in completion of the project. All the above contract were in NPR except the contract with HAHG with fixed amount of USD 7.56 Mn and the USD selling rate at the time of the contract (i.e. December 23, 2011) was Rs 84.55 per USD. The foreign exchange exposure is unhedged which expose GHL to the risk associated with fluctuation in foreign currency exchange rates.

Financial closure achieved for the initial 25MW of project cost; arrangement for additional 15 MW project are yet to be made and exposure to volatile interest rates

The financial closure for 25MW at revised cost estimates of Rs.4936 million is completed and the same is proposed to be financed in debt equity ratio of 66:34 with debt sanctioned from bank amounting to Rs 3,267 Mn loan. Further, the financial closure for additional 15MW project is not done yet and the same will be done once the 25MW project achieves COD. The proposed project cost of 15 MW of the project is Rs 1457 Mn, which is projected to be financed by debt of Rs 1020 Mn, equity of Rs 131Mn and rest Rs 306 Mn by internal accruals. Further, the banks and financial institution of Nepal facing liquidity problem at present and because of this interest rate on loans has been increased. Due to existence of such problem, GLH also faces the risk of volatile interest rate (i.e. agreement for enhancement of loan to Rs 3268 Mn has been sanctioned at 11.5% interest rate which was 10.5% previously). The company has incurred Rs. 4296 million including IDC over the project till Jan 14, 2018 and the same is funded through debt of Rs.2711 million and balance from equity.

Shortage of power in the country

As per ‘White paper on current Situation of Energy sector and immediate Action Plan’ published by Ministry of Energy Nepal on July 2017, the current peak electricity demand is 1306 MW which will reach to 1742 MW in the dry season. The electricity generation in the country at present is not adequate to meet the current demand of the country. To meet the current demand, NEA is able to provide only 976 MW electricity (including 300MW imported from India as on Mid July 2017) through National Grid. At present Nepal faces 330MW electricity shortage. The gap of demand and supply is expected to be increased substantially in coming days.

Government support for the power sector

Considering the immense gap in demand and supply of electricity, Government of Nepal (GoN) is emphasizing on development of hydropower generation and has estimated the hydropower potential in the country to be 83,290MW theoretically (of which technical potential of 45,610MW and economical potential of 42,133MW) out of which hardly 920MW (installed capacity) has been harnessed. GoN considers hydropower generation as priority sectors and tries to involve private sector participation in generation of hydroelectricity by offering different incentives. Through budget speech of FY 2017/ 18 GoN provided income tax exemption for first

10 years and 50 percent tax exemption for additional 5 years to those producers who generate electricity within Mid-April 2024; further lump sum capital subsidy Rs. 5 Mn per MW will be granted to those producers who generate and connect the generated electricity to national grid.

About the Company

GHL was incorporated as on September 20, 2009 as a Greenlife Energy P Ltd. and the name of the company was changed to present name as on June 23, 2017. It is promoted by individual promoters from different background as well as investment companies for setting up of a 40 MW run-of-river, Khani Khola 1 Hydropower Project in Dolakha district of Nepal. The power project is proposed to be constructed in two phases. In the first phase, the generation capacity will be 25 MW by utilizing available head and flow from Khani Khola which will be upgraded to 40 MW in the second phase by adding discharge from Hanapu Khola and Napke Khola (Tributaries Joining Khani Khola). The project is constructed under BOOT (Build, own, Operate and Transfer) mechanism. As per the Generation License, from Government of Nepal – Ministry of Energy, obtained on May 11, 2011 the project shall be handed, on whatever conditions the project is, to the Government of Nepal after expiry of Generation License, which is 35 years.

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Annexure 1

CARE Ratings Nepal – IPO Grading Scale

| CARE IPO grade | Definition |
|-----------------------|----------------------------|
| CARE-NP IPO Grade 1 | Strong fundamentals |
| CARE-NP IPO Grade 2 | Above average fundamentals |
| CARE-NP IPO Grade 3 | Average fundamentals |
| CARE-NP IPO Grade 4 | Below average fundamentals |
| CARE-NP IPO Grade 5 | Poor fundamentals |

Note:

Modifiers {"+" (plus)} can be used with the grading symbols 2, 3 and 4. The modifiers reflect the comparative standing within the category.