

Jagdulla Hydropower Company Limited

Ratings

Facility/Instrument	Amount (Rs. in Million)	Ratings ¹	Rating Action
Long Term Bank Facilities	16,180.00	CARE-NP BB [Double B]	Assigned
Total Facilities	16,180.00		

Details of Facilities in Annexure 1

CARE Ratings Nepal Limited (CRNL) has assigned the rating of 'CARE-NP BB' to the long-term bank facilities of Jagdulla Hydropower Company Limited (JHCL).

Detailed Rationale & Key Rating Drivers

The rating assigned to the bank facilities of JHCL is constrained by project implementation risk associated with its under-construction hydropower project. The rating also factors in hydrology risk associated with run-of-river power generation, however, partially mitigated by presence of peaking reservoir. The rating also takes note of power evacuation risk and risk of natural calamities. The rating, however, derives strength from government-backed institutional promoters, experienced directors and management team. The rating also factors in low offtake risk and moderate counter party risk and government support for the power sector, especially towards the reservoir and semi-reservoir projects.

Going forward, ability of the company to successfully execute the project within the envisaged cost and time will be key rating sensitivities.

Detailed Description of the Key Rating Drivers

Key Rating Weaknesses

Project implementation risk

Jagdulla Hydropower Company Limited (JHCL) is developing Jagdulla PROR Hydroelectric Project (JHEP), a peaking-run-of-river hydro power project with a planned capacity of 106 MW in the Dolpa district of Nepal. Total estimated cost for the project is Rs. 23, 595 Mn (~Rs. 223 Mn per MW). The financing structure of the project involves a debt-equity ratio of 69:31, leading to Rs 16,184 Mn (Rs. 11,500 Mn already tied up), while Rs. 7,411 Mn is in the form of equity (Rs. 1,271Mn injected as on June 26, 2024). JHCL plans to raise 49% of the equity through the issuance of Initial Public Offering (IPO). This financing arrangement exposes JHCL to funding risks associated with partial debt and IPO issuance.

Required Commercial Operation Date (RCOD) of the project is June 10, 2029. Currently, JHEP is in early stages of construction with ~4% financial progress, as on July 16, 2024. This exposes JHCL to project implementation risk and any delays in the commencement of the project beyond six months from RCOD will result in restrictions on the number of tariff escalations available, consequently, diminishing return indicators and adversely impacting the revenue prospects.

Hydrology risk associated with run-of-the-river power generation, however partially mitigated due to peaking reservoir

A Run-of-the-river (ROR) power project is recognized as a variable energy source of generation of power due to its reliance on natural river flow without significant water storage capacity. The dependency on river flow makes the power generation from the project highly responsive to seasonal variations. The project extracts discharge from Jagdulla Khola, covering a catchment area of 633.83 sq. kms at the headworks and dominated by snow and glacier in its upper part, characterized as a perennial snow-fed river. JHEL tends to produce higher electricity output during the wet season, June to November, when river flows are abundant. Conversely, during the dry season, from December to May, power generation may be

¹Complete definitions of the ratings assigned are available at <https://www.careratingsnepal.com/> and in other CRNL publications

reduced due to lower river flows. However, as snow and glaciers are the major sources of river flow, melted water from snow and ice contribute significantly to the sustained base flow throughout the dry period. Hydrology risk is further mitigated to some extent due to peaking reservoir of 6 hours capacity for dry season providing higher revenue prospects to the company. Consequently, the project's performance will be exposed to the inherent risk associated to the natural hydrological patterns, and variability in water discharge throughout the year.

Power Evacuation Risk

The power generated from the project is proposed to be evacuated through a ~50 km long double circuit 132KV Transmission Line to Nepal Electricity Authority (NEA)'s proposed Bafikot substation at Dolpa district, construction of which is under the scope of NEA. Stringing of transmission line from switchyard to substation falls under the scope of JHCL. Timely completion of the power evacuation infrastructures is crucial for the company from revenue generation prospective.

Risk of Natural Calamities

In Nepal, hydropower projects are commonly situated in topographically challenging terrains, making them susceptible to the vagaries of nature. The rugged landscapes often expose these projects to the risks of floods and landslides, which can pose significant threats by damaging infrastructure and disrupting operations. JHCL's power project is inherently exposed to these natural calamities that have the potential to cause infrastructural, operational, and financial damages to the project.

Key Rating Strengths

Experienced government-backed institutional promoters, directors and management team

JHCL is majorly promoted by Provincial Government (Karnali Province Government), Local Government (Jagdulla and Mudkechula Rural Municipalities) and Government backed entities-Vidyut Utpadan Company Limited (VUCL), Hydroelectricity Investment and Development Company Limited [HIDCL, CARE-NP A-(Is)] and Nepal Electricity Authority (NEA). VUCL is a public limited company incorporated on November 20, 2016 to engage in survey, development, electricity generation, operation and management of hydropower projects intended to be developed by Nepal Government. The company is promoted by different ministries under Government of Nepal (GoN) and public sector undertakings. As on July 13, 2023, ~70% of paid-up capital of VUCL is held by GoN. HIDCL, also known as Jalvidhyut Lagani Tatha Bikas Company Limited, is a public limited company, incorporated on July 11, 2011 as a specialized development financial institution to mobilize funds from domestic and international resource base to cater the needs of investments in middle to mega hydroelectricity generation, transmission and distribution projects in Nepal. As on January 14, 2024, ~55% of paid-up capital of HIDCL is held by GoN. NEA is a public limited company incorporated on August 16, 1985, which is involved in generation, transmission, distribution, and trading of power and is fully owned by GoN.

JHCL is managed under overall guidance of its five-member BoD, chaired by Joint Secretary, Ministry of Energy, Water Resources and Irrigation, Mr. Sandeep Kumar Dev. Mr. Dev, MTech Hydroelectric Engineering and Management, has over 28 years of professional experience in the public service sector of the Nepalese Government. He is also involved in Nalgad Hydro Power Development Company Limited in the capacity of Chairman. Mr. Sanjay Sapkota, M.SC. Engineering Management, Chief Executive Officer of JHCL heads day-to-day operations of the company. Mr. Sapkota has over 15 years of experience in the related field and is aptly supported by other experienced team members.

Low offtake risk and moderate counterparty risk

Power Purchase Agreement (PPA) for Jagdulla PROR Hydroelectric Project (JHEP) had been signed between NEA and JHCL on a take or pay modality, with the exception of 10% of contracted energy during wet months, which is placed under

reserve margin and will be purchased under the instruction of the Load Dispatch Centre (LDC). The Contracted Load Factor (PLF) is set at ~67% of generation capacity with total contracted energy of 623.47 million units (MU). Duration of PPA extends for 30 years from the Commercial Operation Date (COD) or until the expiration of the generation license, obtained on February 06, 2024, valid for 35 years, whichever occurs earlier. A provision for extension of the PPA period exists, subject to mutual consensus within the final six months of its validity.

Tariff rates for JHEP, as per PPA is Rs. 4.80 per kWh for wet season which extends from June to November and Rs. 8.40 per kWh for dry season (non-peaking hours) which extends from December to May. Tariff rate for the peaking hours during the dry season varies from Rs. 8.50 per kWh to Rs. 10.55 per kWh depending on the duration of peaking hours capped at six hours. The tariff rates are subject to 3% annual escalation for a duration of eight years provided the plant is commissioned within RCOD. Additionally, the dry energy mix of the project stands at ~31%. Relatively high dry energy mix coupled with eight tariff escalations is expected to support the project's incremental revenue, return, and coverage indicators. These contractual terms outline the framework governing the sale of power generated by the JHEP hydro power project, delineating the revenue structure and operational parameters for JHCP within the energy market. Additionally, the counterparty payment risk associated with NEA is deemed moderate, given its full ownership by the Government of Nepal. Such arrangements are expected to provide revenue stability and sustainability to the company.

Favourable Government policies towards power sector

The Government of Nepal (GoN) has featured the significance of power generation as a priority sector and encouraging private sector involvement by providing various exemptions within the power generation sector. GoN has also announced a comprehensive tax incentive package, offering full tax exemption for the initial 10 years and a 50% tax exemption for the subsequent 5 years to individuals or entities engaged in the commercial operation, transmission, and distribution of electricity until mid-April 2027. Additionally, GoN has provided full tax exemption for first 15 years and 50% tax exemption for next 6 years to reservoir and semi- reservoir projects completing financial closure within mid-April, 2029 with a capacity higher than 40 MW. This approach is aimed at promoting investment and growth in the energy sector. Furthermore, directives from the Nepal Rastra Bank (NRB) mandate financial institutions regulated by NRB to allocate a minimum share of their total advances to the energy sector. This strategic initiative is expected to contribute to the financial support and development of projects within the energy sector which argues well for the sector. The increasing trend of cross-border energy trade, coupled with the growing prospects stemming from new bilateral agreements between Nepal and India for additional power export from Nepal to India, further boosts the long-term demand outlook for the power sector in Nepal.

About the Company

Jagdulla Hydropower Company Limited (JHCL) is public limited company incorporated on May 28, 2017 for setting up of a 106 MW Jagdulla PROR Hydroelectric Project (JHEP) at Jagdulla rural municipality, Dolpa district, Karnali Province, Nepal. The company is majorly promoted by institutional investors backed by government of Nepal.

Annexure -1: Details of the Facilities/Instruments rated

Nature of the Facility	Type of the Facility	Amount (Rs. in Million)	Rating
Long Term Bank Facilities	Term Loan	11,500.00	CARE-NP BB
Long Term Bank Facilities (Proposed)	Term Loan	4,680.00	CARE-NP BB
Total		16,180.00	

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