

## Joshi Hydropower Development Company Limited

### Ratings

Facilities	Amount (Rs. Million)	Rating <sup>1</sup>	Rating Action
<b>Issuer Rating</b>	<b>NA</b>	<b>CARE-NP B (Is) [Single B (Issuer)]</b>	<b>Assigned</b>

*\* The issuer rating is subject to total debt not exceeding Rs. 250 Mn at the end of FY24 (FY refers to the twelve-month period ending mid-July).*

*Details of instruments/facilities in Annexure-1*

CARE Ratings Nepal Limited (CRNL) has assigned rating of 'CARE-NP B (Is)' to Joshi Hydropower Development Company Limited (JHDCL). Issuers with this rating are considered to offer high risk of default regarding timely servicing of financial obligations, in Nepal.

### Detailed Rationale & Key Rating Drivers

The ratings assigned to JHDCL are constrained by weak operational performance of its power projects amid hydrology issues coupled with extended plant downtime due to flood in FY23 (Unaudited, FY refers to the twelve-month period ending mid-July) leading to poor financial performance and stretched liquidity position of the company. Hydrology challenges have plagued the company's power generation potential since commencement of operations leading to sustained muted cash flow from operations leading to accumulated losses as on mid-July 2023. The ratings also factor in hydrology risk associated with run-of-the river power generation, exposure to volatile interest rates and risk of natural calamities.

The ratings, however, derive strengths from JHDCL's experienced promoters and management team, presence of Power Purchase Agreement (PPA) with sufficient period coverage, moderate counter party risk and government support for the power sector.

*Going forward, the ability the company to successfully reduce the gap between operational Plant Load Factor (PLF) and contracted PLF and availability of sufficient hydrology with timely receipt of payments from Nepal Electricity Authority (NEA) will be the key rating sensitivities.*

### Detailed description of the key rating drivers

#### Key Rating Weaknesses

##### Poor financial performance of the company amid low power generation

JHDCL has 3 MW run-of-the-river Upper Puwa- I Small Hydropower Project (UPSHP) at Illam district which has been in operation since January 15, 2015. UPSHP's power generation has been impacted since commencement of operations due to hydrology issues on account of diversion of water to irrigation canals by locals, resulting in below par PLF levels over the years. The annual contracted PLF for UPSHP is 65.42% of the installed capacity of the plant. However, PLF was low at 14% of contracted energy during FY23 (FY22: 59%). This was mainly on account of flood in plant site leading to shutting down of plant operations for around 7 months during FY23. Lower power generation led to decline in Total Operating Income (TOI) of JHDCL by 79% y-o-y to Rs. 12 Mn in FY23 (FY22: Rs. 58 Mn). The company reported losses at PBILDT levels in FY23 (FY22: Rs. 50 Mn). Consequently, the company reported net loss of Rs. 71 Mn during FY23 as compared to net profit of RS. 9 Mn during FY22 and Gross Cash Accruals (GCA) was negative during FY23. Similarly, total debt to GCA and interest coverage ratios stood negative during FY23 (PY: 6.24x and 2.77x respectively). Debt service coverage indicators are likely to remain suppressed over the near term although improvement is expected in FY24, barring a prolonged plant shutdown.

<sup>1</sup>Complete definition of the ratings assigned are available at [www.careratingsnepal.com](http://www.careratingsnepal.com) and other CARE publications

**Stretched liquidity position amid low cash generation from operations**

JHDCL's cash flow from operations has been low owing to muted income from power sales. As a result, the company had accumulated losses of Rs. 124 Mn at the end of FY23. Amid stretched liquidity, the company has depended on financial support from promoters for meeting its debt obligations in the past. It is expected that the company would require additional financial support to meet its repayment of financial obligations attributed to its subdued operations. The company's ability to operate the plant without substantial interruptions leading to revenue generation and adequate cash flow generation from the projects for a sustained period as envisaged remains crucial from credit perspective. To overcome the situation of its stretched liquidity position, the company is planning for issuing additional shares in the form of rights issue amounting to Rs. 241.41 Mn.

**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 (Mid-April to Mid-December) and less during the winter season (Mid-Dec to Mid-April). UPSHP is proposed to utilize discharge from Puwa Khola having catchment area of 30.9 sq kms from Thulo Puwa and 22.3 sq km from Sano Puwa with the design discharge of 2.31 M3/S at Q40 exceedance flow and available gross head of 159 m. JHDCL is facing hydrology challenges as a result of which energy generation is substantially low than contracted energy since the commencement of operations.

**Exposure to volatile interest rate**

The company's interest rates are based on a floating interest rate regime, where a certain premium is added to the quarterly base rate and interest rate is changed accordingly on quarterly basis. The base rates of the banks and financial institutions (BFIs) in Nepal remain quite volatile as they are impacted by available liquidity in the system which leads to change in interest rates. Higher interest rates than envisaged could result in squeezed margins of the company. Hence, funding taken by the company is exposed to volatile interest rate.

**Risk of natural calamities**

In Nepal, hydropower projects are usually located in terrains that are topographically challenging making their construction and operations vulnerable to adversities of nature. Floods and landslides that tend to occur in these areas pose threat to these power projects damaging their infrastructures as well as impacting their timely completion. Moreover, disruption in their construction in turn could lead to time and/or cost overrun, negatively impacting the project's financial aspects. Moving forward also, these natural calamities can adversely affect the smooth flow of power generation and distribution, which can further impact financial returns of the projects. UPSHP is also exposed to such risks of natural calamities that might cause infrastructural, operational and financial damages to the project.

**Key Rating Strengths****Experienced promoters and management team**

JHDCL has four board of directors, chaired by Mr. Ganga Prasad Joshi, who has more than two decades of experience in hydropower sector. He has been involved with JHDCL since its inception and before, he was involved as executive director in Khoranga Khola Hydropower Company Limited. Mr. Birendra Bahadur Neupane, promoter of the company has around four decades of experience in civil construction including experience in hydropower sector. He has been associated in operational hydropower projects under Himal Dolakha Hydropower Company Limited (HDHCL) (CARE-NP B+ (Is)) and other under-constructed hydropower projects. Furthermore, the day-to-day operations are supported by experienced management team.

### Power purchase agreement with sufficient period coverage

The company had entered into PPA with Nepal Electricity Authority (NEA) as on May 06, 2009 for 985 kw (amended to 3 MW as on August 02, 2011) for sale of entire power generated by the plant on take or pay modality. The PPA is signed for a period of 30 years from RCOD (i.e. December 16, 2013) for 985 kw and 30 years from the date of COD for 2015 kw or till validity of Generation License whichever is earlier. PPA period may be extended with mutual consensus through discussion from last six month of validity. Tariff rate as per PPA is Rs 4 and Rs. 4.80 per Kwh for wet season (Mid-April to Mid-December) and the tariff rate for dry season (Mid-December to Mid-April) is Rs. 7 and Rs. 8.40 per Kwh, with 3% annual escalation on base tariff for 9 and 5 years for 985 kw and 2015 kw respectively.

### About the company

Joshi Hydropower Development Company Limited (JHDCL) is a public limited company incorporated on April 19, 2005, and converted into public limited company on February 06, 2015. JHDCL is involved in the operation of 3 MW run-of-the –river Upper Puwa- I Small Hydropower Project (UPSHP) at Illam district of Nepal by utilizing available flow from Puwa Khola (river) since January 15, 2015.

Brief financial performance of JHDCL during last 3 years is given below:

(Rs. In Million)

Particulars	FY21 (A)	FY22 (A)	FY23 (UA)
Income from power sales	36	58	12
PBILDT Margin (%)	70.34	86.59	Negative
Overall Gearing (times)	0.79	0.63	0.85
Interest coverage (times)	1.20	2.77	Negative
Total Debt / Gross Cash Accruals (times)	58.02	6.24	Negative

A: Audited; UA: Unaudited

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