

Grading Rationale Shiva Shree Hydropower Limited

Grading

Amount (Rs. In Million)	Grading	Grading Action
335.113		Assigned
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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 Shiva Shree Hydropower Limited (SSHL). '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. SSHL proposes to issue 3.35113 Mn shares of face value of Rs.100 each at par aggregating Rs. 335.113 Mn.

Detailed Rationale & Key Grading Drivers

The grading assigned to SSHL is constrained by significant time and cost overrun leading to relatively high cost of project and expected late commercial operational date (COD) penalty. This coupled with low tariff rate as well as decrease in project life has led to low return from the project. The grading is also constrained pending debt tie up of increased project cost. The grading also factors in hydrology risk associated with run of the river power generation and geological risk.

The grading, however, derives strength from experienced board members and management team, presence of power purchase agreement (PPA) with sufficient period coverage with no clause for decrease in number of escalation in tariff rate despite delay in COD. The grading also derive strength from low project implementation risk with project currently in final stages of completion, low power evacuation risk and expected additional income from sharing of transmission line with other hydropower projects. Further, grading is supported by moderate counter party risk, shortage of power in the country and government support for the power sector.

Detailed Description of the Key Grading Drivers

Key Grading Weaknesses

Significant time and cost overrun leading to high cost of project and late COD penalty

The project cost was initial estimated cost of Rs 3,010 Mn (i.e. Rs 136 Mn per MW), it has however escalated substantially by 52.69% to Rs 4,596 Mn (i.e. Rs 207 Mn per MW) mainly due to increase in



interest during construction (IDC) on back of delay in completion of the project. Apart from IDC, damage of electromechanical equipment by earthquake, purchase of additional land as well as road maintenance every year after monsoon, requirement of additional works due to difficult geological conditions contributed to cost overrun. Initial required commercial operation date (RCOD) of the project was April 14, 2014 which was extended to May 7, 2016. The project was not completed within extended RCOD also due to Jure landslide in 2014, earthquake in 2015, India- Nepal Boarder Blockade in the end of 2015, Bhotekoshi flood and landslide (July 2016), and problem in access road. Now, COD of project is expected from Mid-April 2019. The COD of the project is already delayed by ~ 33 month from extended RCOD which may result in high late COD penalty after COD.

Low tariff rate as well as decrease in project life lead to low return from project

Tariff rate of the project is relatively low (i.e. Rs 4 per kWh for wet season and Rs 7 per kWh for dry season with 3% escalation on base tariff for 9 times on annual basis). Further, the project life is reduced by ~2 years due to delay in COD (which will be further reduced by additional 2 months if project commercially operate from mid-April 2019), which shall result in significant loss of revenue from project. Return on Networth is expected at lower side.

Financial closure yet to be achieved for increased project cost

The revised cost of project is estimated at Rs 4,596 Mn (previously Rs 3,010 Mn) which is proposed to be funded through debt: equity ratio of 68.75:31.25 (i.e. Rs 3,160 Mn debt and Rs 1,436 Mn equity). Financial closure for Rs 509 Mn additional debt is yet to be achieved. However, the lead bank has approved bridge gap loan of Rs 100 Mn for smooth construction of the project till the date of financial closure. Approval of additional term loan is in process and expected to be completed soon. Out of Rs 1436 Mn equity; Rs 1,107 Mn injected by promoter shareholders and Rs 32.68 Mn received from IPO issued to local of project affected area.

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

Run-of-the-river (ROR) power is considered an uneven 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. ROR, therefore, generates much more power during times when seasonal river flows are high (Mid-April to Mid-December) and much less during the drier months (Mid-Dec to Mid-April). SSHL propose to utilizes discharge from Chaku Khola, having catchment area of 41.4 sq kms. Chaku Khola is a perennial river and is one of the major tributary of Bhotekoshi river. Hence, the project is exposed to risk associated with variation in discharge of water from the aforesaid river as the river is perennial.



Geological Risk

The project area is supposed to possess significant geological risks. The access road is prone to landslides and maintenance is required after each monsoon every year. Project being in hilly region of Sindhupalchowk district was heavily affected by 2015 earthquake.

Key Grading Strengths

Experienced Board Members and management team

SSHL has total 6 directors chaired by Mr. Bachhu Paudel, who is also director of Balephi Hydropower Ltd. (36 MW under construction) and Bhairabkunda Hydropower Ltd. (3 MW operational). The management team of the company is led by Mr. Mahendra Lal Shrestha, CEO of the company, has more than 3.5 decades of experience in Nepal Electricity Authority (NEA). He is ex-managing director of NEA. He has been supported by other experience management team members.

Power purchase agreement with sufficient period coverage and no clause for decrease in number of escalation in tariff rate.

SSHL had entered into a long term PPA with NEA as on September 7, 2010 for sale of 22.2 MW power to be generated from the project. The period of the PPA is 30 years from the date of COD or till validity of Generation License (received on February 24, 2012 for 35 years), whichever is earlier. PPA period may be extended with mutual consensus during the last six month of validity. 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 on annual basis. The contracted energy for the project is 118.08 million units (MU), at PLF of 60.72%. There is no clause in PPA about decrease in number of escalation in tariff rate despite there is delay in commercial operation of the project than RCOD.

Low project implementation risk

On the basis of cost incurred till Jan 14, 2019, the project achieved financial progress of ~ 94.55% (i.e. Rs 4,346.07 Mn cost incurred, including 350.21 Mn advance, out of Rs 4,596.49 Mn revised estimated project cost). Till Mid-January, 2019, ~ 97% of civil work; ~ 95% of power house electromechanical work; ~ 80% steel structure erection work including take-off structure of switchyard; ~66% of transmission line works has been completed. Major part of hydro mechanical work related to head works has been completed and ~71.36% of penstock pipes have been installed.

As the major part of the project work has been completed, the project implementation risk is reduced to large extent. However, the project is still exposed to the residual risks associated with project



implementation and satisfactory operations thereafter given that the uncertain geology and adverse climatic conditions of the project area.

Low power evacuation risk and additional income from sharing of transmission line

The power generated from the project will be evacuated via 22 km long 132 KV transmission line to existing NEA Lamosangu substation until the purposed 220kV Tamakoshi-Barhabise- Kathmandu Hub, comes into operation. After Tamakoshi- Barhabise-Kathmandu Hub comes into operation SSHL has option to evacuate power to any one of Barhabise hub or Lamosangu Substation. Till mid-January, 2019 ~ 66% of transmission line works has been completed as well as Lamosangu substation is in operation which results in low power evacuation risk.

SSHL transmission line cost is high (i.e. ~ Rs 397 Mn; Rs 17.89 Mn per MW) however, the company is expecting additional income from sharing of transmission line with the other hydro power projects. The company has entered into transmission line sharing agreement with one hydropower Generation Company at Rs 200 Mn which is going to share the transmission line of SHL for evacuation of power from their project.

Moderate counter party risk

SSHL is exposed to counter party payment risk pertaining to NEA, which has been making consecutive losses in past till FY16 and carry huge accumulated loss in its book. As per the annual report published by NEA, during FY18 (provisional), NEA earned profit of Rs 1,010 Mn (Rs 1,502 Mn during FY17). The counter party payment risk is moderated by the fact that, NEA is fully owned by government of Nepal and NEA is generating positive gross cash accruals and further, NEA has been making timely payment to independent power producer (IPPs) in past.

Shortage of power in the country

As per the statistics presented in report published by Ministry of Energy Nepal on July 2018, the current peak electricity demand is about 1300MW. The total domestic installed capacity stands 1073 MW which includes 562 MW generated by NEA and 511 MW generated and supplied by private sector IPPs. To meet the current demand, NEA is importing upto 450 MW power from beside domestic generation.

Government support for the power sector

GoN considers hydropower generation as priority sector and tries to involve private sector participation in power generation by offering different incentives. The sector is exempted from income tax for first 10 years and 50 percent for additional 5 years to those which generate electricity within Mid-April 2024. Income tax will be levied only 20% despite that normal tax rate for entity in Nepal is 25%. Furthermore,





GoN has declared to provide grant of amount equivalent to Rs. 5 Mn per MW installed capacity after the formal COD of the power plant.

About the Company

SSHL is a public company, incorporated on March 31, 2006 as private limited company and changed to public limited company on December 14, 2016. The company is promoted by various institutional promoters as well as individual promoters from different background for setting up of a 22.2 MW run-of-river, Upper Chaku 'A' Hydro Electric Project (UCHP) in Sindhupalchowk district of Nepal. The project is constructed under BOOT (Build, own, Operate and Transfer) mechanism.

SSHL has 150 promoter shareholders who have contributed Rs 1,107 Mn equity share capital as on January 27, 2018. Yeti Trade and Developers Pvt. Ltd (hold 25.30%), Baidik Hydro Investment Company Pvt. Ltd (hold 9.59%), Mr. Bishnu Bahadur Khatri (hold 6.04%), Mr. Bachhu Paudel (hold 5.81%) and M.I.A Investment Pvt. Ltd (hold 5.42%) are the major shareholder of the company. Currently 100% share capital of the company is held by promoter shareholders. After issue of purposed Initial Public Offer (IPO) of Rs 369.10 Mn (40% to local public of project affected area and 60% to general public) promoters and public holding will be 75:25 and share capital will be Rs 1,476 Mn. The share issuance to the local public of project affected area is already issued and is partially subscribed.

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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.