

Lower Solu hydro, Nepal

Thomas Blott

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Nepal may boast abundant hydro potential, but lags behind its Asian rivals Laos and Bhutan in exploiting this resource. Less than 1% of Nepal's hydro resources have been developed, according to the International Finance Corporation (IFC).

Several factors account for these low levels of investment. Political uncertainty and the lack of a commercial framework for hydro development are the main domestic obstacles. But persistent – if finally resolved – wrangling between Nepal and India over a trade agreement has been the largest short-term issue. Selling power into the Indian market is the main way for Nepali projects to earn revenues.

The \$190 million financing for the Lower Solu run-of-river project, which signed in December 2014, is the first project financing for a Nepali hydro plant. The financing for the 82MW Lower Solu plant is also the first to feature both international and domestic banks.

But Lower Solu – amid a sudden burst of Nepali hydro-related activity, including the resolution of the country's power trade agreement with India – is not the highest-profile of Nepal's slate of hydro projects, and far from the largest.

In December 2014 the IFC said it plans to co-develop, alongside India's GMR Group, the 900MW Upper Karnali hydro project and two transmission lines, which would be the largest ever foreign investment in Nepal, at \$1.7 billion. The IFC said that 12% of Upper Karnali's output would be provided for free to Nepal, though most of its output will be sold to India.

Competitive bidding and PPA

But Lower Solu hints at a workable template for foreign sponsors planning future Nepali hydro investments.

Lower Solu is one of six power developments in Nepal – commonly referred to as the super six projects – that were bid out to private sponsors under a competitive procurement. It is located in the country's Solukhumbu district and is the largest of the six. The other five are: the 50MW Maya Khola; the 50MW Mewa Khola; the 23.5MW Upper Solu; the 24.1MW Khare; and the 16MW Singiti.

A venture of India's Essel Group and the Clean Energy Development Bank won Lower Solu. The Clean Energy Development Bank is managing an investment from a dedicated fund that it manages, the Hydro Fund, which comprises a consortium of Nepalese banks.

By early January 2015, the sponsors had yet to formally appoint an engineering, procurement and construction (EPC) contractor for Lower Solu, but are rumoured to have unofficially picked an Indian firm. Construction is expected to start in March.

The Nepal Electricity Authority (NEA) temporarily held up financial close when it refused to approve a power purchase agreement (PPA). The NEA said that the transmission lines that would carry Lower Solu's power had insufficient funding.

It was also unwilling to partially index the plant's tariff to the US dollar.

The NEA agreed to sign the 25-year PPA after EXIM Bank of India committed to provide soft loans that would meet the cost of a transmission line and the Nepali government approved the introduction of partial dollar-indexation in exchange for free electricity from the project.

The inclusion of a dollar revenue stream was needed to draw international lenders, because Nepal's banking sector is not liquid enough to support the deal on its own. The NEA agreed to purchase electricity equivalent to 55% of the overall payments from Lower Solu in dollars at a fixed exchange rate of NRs98.68 (which at the time of writing equalled \$0.984) to the dollar for the first ten years of operations.

The financing

The 16.5-year senior debt is split between \$100 million from international lenders, and \$30 million equivalent in Nepalese rupees from local lenders. The offshore lenders are:

- Netherlands Development Finance Company (FMO), \$30 million
- German Investment Corporation (DEG), \$25 million
- OPEC Fund for International Development (OFID), \$20 million
- Belgian Investment Company for Developing Countries (BIO), \$20 million
- Tridos Bank, \$5 million

The local banks are:

- Jalyidhyut Lagani Tatha Bikas Company
- Nepal SBI Bank
- Prabhu Bank
- Prime Commercial Bank (lead bank for local debt tranche)
- Siddhartha Bank

GuarantCo, a sovereign-backed provider of coverage in local currencies or projects in emerging economies, is assuming up to \$25 million of project risk on behalf of local lenders. Moody's Investors Service rates GuarantCo A1.

FMO is also providing a \$12.5 million mezzanine facility, because the development bank had already committed to lend its maximum allowed amount of senior project debt. The Lower Solu financing package also comprises \$49 million in equity and shareholder loans.

The overall debt package includes a \$40 million letter of credit facility plus some contingent equity to provide lenders with comfort until the negotiation of the project development agreement is completed.

The NEA-provided dollar payments will first service the debt held by the international lenders, and then other payments, including operating expenditure, an a conventional cashflow waterfall then applies to the rupee facility.

Conditions precedent that still need to be satisfied include the approval of Nepal's Central Bank for the loan agreements.

New hydro opportunities

The NEA has not signed any new PPAs since April 2014 because, it says, Nepal's rainy season would lead to spikes in electricity production that the country could not use.

But the recently-signed Nepali-Indian power trade agreement gives Nepal's hydro developers potential access to the energy hungry Indian states on Nepal's border of Uttar Pradesh, Bihar, Uttarakhand and West Bengal.

Export projects will also open up a new stream of funding. Since the Nepalese rupee is pegged to the Indian currency, Indian banks are able to lend to Nepali projects without having to execute expensive cross-currency swaps, unlike their

international counterparts.

Shearman & Sterling (international legal), Neupane legal (local legal), Induslaw (India legal), Moore McNeil (insurance) and Parsons Brinckerhoff (insurance) advised the lenders on the financing.

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