

Source: The Kathmandu Post; 15 May 2017

## **Energy output up due to rising water levels**

Hydropower projects have been generating more electricity due to rising water levels in the rivers. They are currently producing 600 MW, up 35 MW from a month ago, the Nepal Electricity Authority (NEA) said. The plants were producing around 565 MW at the beginning of April.

While NEA-owned hydroelectric projects are generating 393 MW of electricity, about the same as a month ago, private projects have boosted output by around 35 MW to 207 MW.

The major reason behind the surge in electricity generation, according to the NEA, is rising water levels due to spring rain and snow melting on the mountains.

As all the hydroelectric projects in the country except Kulekhani 1 and 2 are run-of-the-river type, their power generation increases with a rise in the water level in the rivers.

The NEA said power generation would increase even more as the rivers swell with snow-melt with rising temperatures. The Kali Gandaki, Marshyangdi and Trishuli rivers, which account for most of the hydroelectricity produced in the country, are snow-fed rivers.

The increase in energy output has encouraged the NEA to plan to cut imports from India.

Currently, Nepal buys 359 MW of electricity from India from nine different locations.

“Now we will start cutting down imports from India,” said Prabal Adhikari, chief of the power trading department. “First, we will reduce imports from the Dhalkebar-Muzaffarpur cross-border transmission line while renewing the power purchase agreement which will be effective from June.”

Starting next month, the authority will be importing 80 MW of electricity instead of 135 MW from the Dhalkebar-Muzaffarpur line.

The power purchase agreement between the NEA and NTPC Vidyut Vyapar Nigam (NVTN), the Indian state-owned power supplier to Nepal, expires at the end of May.

As hydropower generation in the country had plunged by almost 60 percent in the past due to a fall in the water level in most rivers, the NEA was relying heavily on the electricity imported from India to keep the Kathmandu Valley free from load-shedding and minimize power cuts in the rest of the country.

Apart from the Dhalkebar-Muzaffarpur cross-border transmission line, the NEA is importing electricity from the Kataiya-Kushhawa, Tanakpur-Mahendranagar and Ramnagar-Gandak transmission lines. The authority, according to Adhikari, is planning to reduce imports from other cross-border transmission lines too as domestic generation improves in the coming days.

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## **Preparations over for PPA talks: NEA**

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The Nepal Electricity Authority (NEA) has readied to start negotiations with Nepal Water and Energy Development Company (NWEDC) to sign a power purchase agreement (PPA) for the Upper Trishuli-1 Hydroelectric Project.

Korean joint venture NWEDC is the developer of the 216 MW hydroelectric project being built on the Trishuli River 70 km north of Kathmandu.

State-owned power utility NEA has authorized a committee headed by its power trading department chief Prabal Adhikari to hold talks with NWEDC.

According to Adhikari, the committee plans to begin formal negotiations by this weekend. "Our committee will be complete within a couple of days with the addition of a few experts, and then we will start negotiations immediately," said Adhikari. "However, informal talks have already begun." This will be the first PPA negotiations to be conducted after the government issued new guidelines on PPA in convertible currency.

The guidelines allow the NEA to sign the PPA in convertible currency terms for the amount of foreign debt for 10 years or until time the foreign loan is repaid. The debt amount, however, should not exceed 80 percent of the total cost of the project, according to Adhikari.

Also, the NEA does not have to negotiate the power purchase rate with the project developer as the PPA guidelines have specified the rates for different types of projects.

The Upper Trishuli-1 is a run-of-the-river type, and for this type of project, the rate has been fixed at Rs8.40 per unit during the dry season that lasts from December to May. During the wet season that lasts from June to November, the rate is Rs4.80 per unit.

"As the PPA negotiation will be carried out under the broad framework of the PPA guidelines, it won't take much time to complete the deal," said Adhikari. "However, I can't say when the negotiations will be completed and we will sign an agreement with the project developer."

The Energy Ministry signed a project development agreement (PDA) with NWEDC in December 2016 for the construction of the hydroelectric project located at Dhunche in Rasuwa district.

The PDA had given NWEDC six months to complete the PPA with the NEA, the sole buyer of electricity in Nepal; this means the two parties have one month to complete the negotiations and seal the deal.

Likewise, the Korean developer has two years to complete the project's financial closure and five years to complete the construction of the hydropower plant and start generating electricity.

NWEDC is a joint venture company formed by three Korean companies, International Finance Corporation (IFC) and Nepali investor Bikesh Pradhanang.

The three Korean companies are Korea South East Power Company, Daelim Industrial Corporation and Kyeryong Construction Industrial Corporation.

The Upper Trishuli-1 will generate 216 MW of energy through three turbines with a capacity of 72 MW each. The project is expected to generate 1,456.4 gigawatt hours of net electricity per year, of which 1,149.7 gigawatt hours will be generated in the wet season and 306.7 gigawatt hours in the dry season.