

Source: The Himalayan Times; 17 March 2018

## **Cross-border electricity trade and investment stressed**

As the per capita energy consumption in South Asia is relatively low, member nations have been advised to boost regional cooperation in cross-border investment in power sector and electricity trade. Since bilateral electricity trade has been in practice since long between India and Bhutan, India and Bangladesh, Nepal and India, experts have suggested developing regional grid and transmissions for robust electricity trade. Cooperation on energy can transform the future of South Asia through supply of clean, reliable, affordable and sustainable energy in the region, say experts.

Launching a book titled 'Regional Investment Framework and Guidelines for Promoting Investment in South Asian Power Sector and in Cross-Border Electricity Trade in South Asia' prepared by a think-tank, Integrated Research and Action for Development (IRADe) and South Asia Regional Initiative for Energy Integration (SARI/EI) under the assistance of USAID, in the South Asian Business Leaders Conclave, Ambassador of the United States to Nepal Alaina B Teplitz said that energy security is a critical issue for the entire South Asian region. Stating that to raise the per capita energy consumption to 3,000 kilowatt hours of global average from current 650 kilowatt hours, South Asian economies have to promote intra-regional investment in generation and transmission of the electricity and cross-border trade.

She underlined the positive development in the region's commitment for energy cooperation through 'Framework Agreement on Energy Cooperation'. South Asian countries have already signed the agreement in 2014, and Nepal and India signed Power Trade Agreement the same year.

Currently, around 2,300 megawatts of power is being traded in the BBIN (Bangladesh, Bhutan, India, Nepal) sub-region and the prospect of electricity trade is high in this region.

Against this backdrop, the United States Millennium Challenge Corporation (MCC) has pledged assistance to develop 300-km high capacity transmission line in Nepal.

US Ambassador Teplitz further said that the existing arrangements between the countries in electricity trade will provide a foundation for multilateral arrangements and transactions in the region.

She underpinned the need of building strong and effective regulatory regimes, designing competitive market pricing mechanisms, developing solid contracts and agreements, setting up dispute resolution mechanisms and supporting technical and regional coordination agency that can facilitate regional planning and development.

In the programme, Deepak Amitabh, chairman and managing director of PTC India, highlighted the potential of energy pool as the load profile varies in different seasons in different countries. "The only thing we need is balancing the energy supply," he said, adding, "For example, Nepal can export energy to India during the wet months, and purchase from its southern neighbour during the dry season."

Mohammad Tamim, a professor at Bangladesh University of Engineering and Technology, said that there is a need of conducive policies for investment and economic liberalisation to achieve these targets.

Source: The Himalayan Times; 18 March 2018

## **‘Cross-border power trade vital to South Asian region’**

### *Saarc Business Leaders Conclave*

Stakeholders stressed on the vital role that cross-border electricity trading could play in South Asian region for the larger economic integration of the region. Speaking at a plenary session titled ‘Regional Integration and Energy Cooperation:

Success through Synergy’ during Saarc Business Leaders Conclave being organised in Kathmandu, experts urged the government to formulate enabling policy and private sector to increase investment for energy cooperation in the region. Addressing the session, Alaina B Teplitz, the ambassador of the United States to Nepal hailed several developments in recent years, saying they have underlined the region’s commitment to energy cooperation. “The development includes Saarc framework agreement on energy cooperation, power trade agreement between Nepal and India and bilateral framework between India and Bangladesh and India and Bhutan,” said Teplitz. “Existing power trade in the region has demonstrated win-win benefits for all South Asian countries and provides a strong foundation for accelerating regional power trade.”

Teplitz presented the example of Bhutan which has achieved significant prosperity via hydro electricity trading. She said Bhutan’s surplus hydropower exports to India account for 25 percent of its GDP. In another example she explained how Bangladesh is eliminating power cuts and reducing cost of energy by importing energy from India. “South Asia is moving along the path of energy cooperation and the next step is to coordinate regional energy regulations and policies,” she said.

The cross border electricity trade in the South Asian region stands at just over 2000MW annually. India is importing around 1400MW of hydroelectricity from Bhutan while Bangladesh and Nepal are importing 500MW and 400MW from India annually.

A 2017 study report by USAID-funded South Asian Regional Initiative for Energy Integration (SARI/EI) which was unveiled

in the conclave showed that the trade volume will be doubled by 2020.

The same study showed that accelerated power trade between India and Nepal could increase Nepal’s GDP by over \$120 billion in the next 30 years and without this energy trade, the growth rate would be 39 percent lower. “The result of the study shows that energy cooperation will be beneficial for everyone and ensure better economic development of the region,” said Vijay Karbanda, director of SARI/EI.

The Saarc Business Leader Conclave 2018 has brought together the region’s economic and business leaders and policy makers of South Asia on a common platform to discuss debate and create solutions and opportunities to take the region on the path of shared prosperity through economic integration. The conclave is hosting various plenary sessions with experts from sectors like energy, tourism, digital finance and agriculture among others.

Source: The Himalayan Times; 18 March 2018

## **Hydro-powered dreams**

Significant investment in infrastructure needed to meet development challenges

*DEVENDRA ADHIKARI*

Economic growth and investment on infrastructure are inseparable. Infrastructure contributes to economic growth. Development of infrastructure is not possible without investment.

Infrastructure helps to reduce poverty and sustain the well-being of human society. There is a positive correlation between the human development index and per capita electricity use. Low levels of electricity generation not only limit economic growth but also limit social development. Therefore, significant investment in electricity infrastructure is needed to meet development challenges. Nepal has, so far, been able to generate around 1,000 MW. According to the Nepal Electricity Authority (NEA), there are 88 hydropower plants in operation with a total generating capacity of 967.85 MW, of which 60 hydropower plants belong to independent power producers that contribute 441 MW. There are 113 hydropower plants in the construction stage with a total generating capacity of 3,090 MW. Most of the hydropower plants are run-of-the river. As a result, electricity generation is highly seasonal and fluctuates. Apart from these hydropower plants, there are two thermal plants with a combined capacity of 53.4 MW.

The total Circuit Length of the transmission system is 3,465.76km, and an additional 3,205km is under construction. There are 2.79 (out of 5.4) million households connected to the NEA power system. However, due to the diversity in geography and development, there are a number of inequalities in terms of energy infrastructures in the seven federal states in Nepal.

Nepal is gearing up for a major socio-economic transformation. Sustainable development is built into Nepal's socio-economic development agenda. Nepal needs to increase its supply of electricity in order to achieve its overall national goals and meet the targets of economic development.

Investment for electricity infrastructure comes from a variety of sources. The main sources for investments are (i) Government Budget, (ii) Bank and Financial Institutions, (iii) Employee Provident Fund, (iv) Citizen Investment Trust, (v) Private Sector Equity, (vi) Individual Public Offering, and (vii) Others, such as Hydroelectricity Investment and Development Company Limited. The government budget, generally, is comprised of funds from its own sources, foreign loans, and foreign grants. The government has budgeted around one percent to seven percent of the total government budget to energy for the last five years. Investment in the energy sector from the banking sector is also gradually increasing. The banking sector has invested about one to three percent of the total investments in this sector. The Employee Provident Fund (EPF) has the largest funds with around \$2 billion. EPF has provided credit to a few hydropower projects, notably Upper Tamakoshi (456 MW) and the four hydropower projects equivalent to 272 MW that belong to Chilime Hydropower Company. The Citizen Investment Trust (CIT) has funds of around \$0.6 billion, and it provides credit to priority sector projects including hydropower. It invested \$11.76 million in the hydropower sector in 2014/15 and has planned to gradually increase investment. The Government has established the Hydroelectricity Investment and Development Company Limited as a special purpose vehicle to invest in hydropower development. It was established in July 2011 with a paid up capital of \$98 million. It has committed an investment of \$62 million for 13 projects. Looking into these institutions and their investment trends, Nepal can invest around \$1 billion annually in the hydropower sector.

The country needs to focus on strengthening its transmission and distribution capacities, increasing generation capacity, reducing its dependence on energy imports, and improving its system efficiency.

In order to reach a 15,000 MW generating capacity by 2030, Nepal may need around \$22.94 billion to \$38.21 billion. The investment costs will be on the higher side if we plan to have more storage hydropower plants. It is a challenging task to meet the required investment amount, therefore, the main thrust of the policy change should focus on stimulating private sector investment in the energy sector development. Pro-active investment policies such as tax incentives, risk mitigation provisions and eliminating administrative hurdles encourage private sector financing. Furthermore, through its regulatory measures, Nepal Rastra Bank can encourage the banking sector to increase its investment portfolio in the hydropower sector.

*Adhikari is an energy economist*

Source: The Kathmandu Post; 21 March 2018

## **Work begins on transmission line project in Attariya**

The Nepal Electricity Authority (NEA) has mobilized a contractor to implement the Balanch-Attariya Transmission Line Project under which the crucial 132 kV power line linking the country's far western region to the national grid will be upgraded from single circuit to double circuit.

A single circuit power transmission system allows transmission of three-phase electric power while a double circuit system allows transmission of six-phase electric power, ensuring greater reliability and efficiency.

According to the state-owned power utility, the contractor Sigma Con was selected through a global tender. It dispatched workers to the project site two weeks ago, and is currently doing a study to find out the quantity of equipment that will be needed to execute the upgradation.

Sigma Con will take at least two months to complete the survey and present a report to the NEA. "After we approve the report, the contractor will start importing the equipment," said Nava Raj Ojha, the NEA appointed project chief of the Balanch-Attariya power line. "The contractor plans to start the upgradation by the end of May." It will start work on the 131-km power line from two points, according to Ojha.

After the improvement project, the power line will be able to evacuate around 180 MW of electricity expected to be generated by various hydropower projects in the region in the medium term.

As per the Rs300 million contract, Sigma Con has to complete the upgradation by February 2019. As a single circuit transmission line is already in place, the contractor will not have to erect new towers or face obstacles from locals. All that the contractor needs to do is string new cables between the existing towers.

The single circuit Balanch-Attariya Transmission Line came into operation in November 2017 and is currently transmitting electricity generated by the 30 MW Chameliya Hydropower Project developed by the NEA, and the 8.5 MW Naugad Hydropower Project developed by Api Power.

The transmission line project was slated to be completed by 2014, but various factors, including problems in acquiring private and forest land, pushed back the completion date. The single circuit power line was developed under the financial aid of the Korean government with infrastructure, including towers, able to support a double circuit system.

The transmission line connects Darchula district with the far western business hub of Attariya. Apart from Chameliya and Naugad, the power line will be vital in evacuating electricity generated by the 86 MW Chameliya Chhattisgad, 40 MW Upper Chameliya, 54 MW Kalangagadh and other plants that are under construction in the region.

Source: The Himalayan Times; 21 March 2018

## **NEA to produce 800 MW power within one and half years**

Nepal Electricity Authority (NEA) and the companies it has been looking after are to produce 800 MW power within the next 18 months.

Based on the work plan prepared by the NEA, the hydropower companies as Upper Tamakoshi, Kulekhani III, Upper Trishuli A, Sanjen Rasuwagadhi would produce such volume of hydropower. The NEA has believed that the country would be self-reliant after producing ample energy within some years.

The Upper Sanjen is to generate 14.8 MW, while the Sanjen 14.5 MW, said Chief of the hydropower company, Kiran Shrestha, adding that both projects have completed 70 percent of the works.

Spokesperson at Energy Ministry, Dr Ganesh Neupane, said the Upper Tamakoshi hydropower project would be completed by coming mid-November. The government has provided every sort of assistance for the timely completion of the project.

According to NEA Executive Director Kulman Ghising, the project of some 1,000 MW would be linked to the national grid in coming three years.

Meanwhile, the private sector too has planned to complete the projects of some 1500 MW in one and half years.

Independent Energy Producers' Association Nepal Chairman Shailendra Guragain said among the projects of 3,500 MW capacity, 70 percent are in construction phase.

Source: The Kathmandu Post; 21 March 2018

## **IBN asks for files of hydro projects bigger than 500MW**

*BIBEK SUBEDI*

A long-standing dispute between Investment Board Nepal (IBN) and the Energy Ministry has flared up once again with the board demanding the original files of all 500 MW-plus hydropower projects that are currently being monitored by the ministry.

On March 15, IBN wrote to the Energy Ministry asking it to submit the files within 15 days after getting the go-ahead from the 29th meeting of IBN board held under the leadership of Prime Minister KP Sharma Oli.

“The 29th meeting of the board of directors of IBN has given it the authority to identify, screen and prepare profiles of hydropower projects with an installed capacity of more than 500 MW,” said IBN in the letter sent to the ministry, a copy of which was obtained by the Post.

The board has also asked the ministry to send the study reports of the projects above 500 MW carried out by the ministry, Water and Energy Commission Secretariat (WECS), Department of Electricity Development, Nepal Electricity Authority and other state agencies.

“We request the ministry to send the study reports in whatever condition they are,” IBN said in the letter signed by IBN CEO Maha Prasad Adhikari.

The Energy Ministry is yet to respond to IBN, and ministry officials said they were holding discussions within the ministry. “The board has given us 15 days to send the documents,” said Dinesh Kumar Ghimire, spokesperson for the ministry. “We are holding talks with various stakeholders. We will soon decide how to move forward.”

IBN and the ministry have been at loggerheads with each other previously over the implementation of hydropower projects with an installed capacity of more than 500 MW.

Earlier, a dispute flared up after IBN asked the ministry for the implementation rights for the 688 MW Betan Karnali and 617 MW Bheri-1 hydropower projects in western Nepal, claiming that it held the sole authority to execute schemes with a capacity of 500 MW or more. In a letter to the Energy Ministry in December 2017, IBN asked the ministry to send the documents of the two hydropower projects whose survey licences were issued by the ministry.

Subsequently, the Energy Ministry decided to consult the Law Ministry before reaching a decision and forwarded IBN’s letter to it. The Law Ministry said that the Energy Ministry had the sole authority to issue survey licences for hydropower projects, and that issuing such licences would not impinge on IBN’s jurisdiction nor violate the provisions of the Investment Board Act.

Source: The Himalayan Times; 21 March 2018

## **Upper Karnali works yet to resume**

### **Work on project stopped completely following last month's bomb explosion**

All works at the construction site of Upper Karnali Hydropower Project have been affected for more than a month.

Dailekh-based field office of the project has stopped all work citing security reasons after a bomb exploded at the construction site on February 10. An official of the project told Republica that all project works have come to a halt since the explosion. "All project staffers have moved to Surkhet and Kathmandu as there is no working environment at the project site," the official added.

All the project officials left the field office right after an unknown group hurled a bomb into the office compound. Before the explosion, the office was making plan to cut down trees to clear land for construction of dam.

"We had already sent letters to District Forest Offices of Dailekh and Achham, seeking their permission to cut down trees," the official said. "If explosion hadn't happened, we would have cut down all the trees at the dam site by now."

The project has already distributed compensation to clear forests from private land.

According to the official, Investment Board Nepal (IBN) is currently holding discussion with all concerned parties so that project works can be resumed at the earliest.

Officials are refusing to go to the project site and resume their work citing security reasons. "No staff will go to the project site unless they receive assurance on their safety," the official added.

The project office, however, managed to complete and submit the final report of resettlement of project-affected locals during the month-long period.

Indian business conglomerate GMR is the promoter of the 900-megawatt project. The official said that the government has extended financial closure deadline of the project by a year.

According to a report submitted to Investment Board Nepal, a total of 239 households will be affected by the project of which 57 households need resettlement.

The project will affect households in Dailekh, Achham and Surkhet.

Source: The Kathmandu Post; 22 March 2018

## **Govt preparing to set up energy regulatory body**

*BIBEK SUBEDI*

The Energy Ministry has been making preparations to establish the Nepal Electricity Regulatory Commission (NERC), a powerful body to regulate the country's energy sector. The NERC will set standards to regulate organisations involved in power generation, transmission, distribution and trade. The process of setting up the NERC's secretariat and hiring staff including the chairman and members will begin within a month, the ministry said. The Energy Ministry has sent a draft of the Electricity Regulatory Commission Regulation to the Law Ministry for its inputs

"We have been informed that the Law Ministry will approve the draft within a week," said Dinesh Kumar Ghimire, spokesperson for the Energy Ministry. "Once we get its consent, we will forward the draft to the Cabinet for final approval."

The ministry will be able to create the secretariat of the powerful commission and start hiring the required human resources within a month, according to Ghimire.

Newly appointed Energy Minister Barsha Man Pun said there would be no further delays in establishing the commission. Pun said Tuesday that the ministry would expedite the process to set up the commission.

Although the plan to form the NERC had been floated a decade ago, Parliament only endorsed the Electricity Regulatory Commission Act in August 2017, paving the way for its establishment. President Bidya Devi Bhandari signed the bill into law within 91 days as provisioned in the draft.

However, the ministry delayed the process of establishing the commission as a new government was in the offing, and senior officials of the Energy Ministry wanted to wait until the new administration was sworn in.

According to reliable sources at the ministry, Pun has been pressing officials to rush the establishment of the NERC after assuming office.

The NERC will supersede the existing Electricity Tariff Fixation Commission and fix the charges that customers will have to pay to the Nepal Electricity Authority (NEA), the state-owned power utility. The commission will fix the electricity tariff after holding a public hearing.

The commission, according to the regulation, will also establish a code that various entities under its jurisdiction will have to follow.

The code will specify standards for the construction of hydropower plants, transmission lines and distribution networks. It will also determine the voltage that will be supplied to customers by the utility.

The commission will even have a full mandate to determine the power purchase rate for the state-owned power utility. Currently, the NEA is the sole buyer of electricity in Nepal, and it has been fixing the rate for purchase of electricity from hydropower project developers.