

Source: My Republica, 31 March 2018

Nothing moves on Budhi Gandaki hydro

Prime Minister K P Oli had once indicated that under his premiership the decision of the previous government to cancel the license of China Gezhouba Group Corporation to construct the Budhi Gandaki Hydropower Plant would be revised.

During an economic debate held by the Federation of Nepalese Chambers of Commerce and Industries (FNCCI) in November 2017, he had criticized the Nepali Congress-led government stating: "This government is going to remain in place for only one more month and its mandate is to hold elections. It made the decision to first award the project and later scrap the contract."

He further added: "The next government will correct any unauthorized decision taken by this government."

However, even 45 days after the government took office, nothing has moved. During a meeting with the Budhi Gandaki Stakeholder's Committee, Minister for Energy, Water Resources and Irrigation, Barsha man Pun, failed to explain to the locals how the project was to be constructed.

Speaking with Republica, coordinator of the committee Hare Ram Dhakal stated: "The minister did not know whether the project would be given to the same Chinese company or Nepal would build it on its own."

"Due to frequent change in government and subsequent changes in the policy, and lack of clear cut instructions on project construction, the ministry has not been able to do anything," he added.

"The minister stated that he had installed the development committee model of the project during his previous tenure as the minister for energy. However, the ministry has not been able to decipher what is best for the project."

Although the government promised completion of the project at the earliest, the locals are not convinced at all. "Ministers have come and gone. They all promised to see through the completion of the project, but all their commitments have gone to vain," said Dhakal. "When we asked minister Pun, he failed to answer when the project will move ahead."

"The locals have been insisting on constructing the project at the earliest, but the government has never heard our plea," Dhakal said.

Likewise, the cabinet's decision to provide Rs 94 billion to construct the project via viability fund gaping (VFG) has not yet been relayed to the Ministry of Energy, Water Resources and Irrigation for implementation.

According to Dhakal, this has not only stalled the development of the project, but has also hindered the rehabilitation of locals of the area. "Hundreds of households are yet to receive compensation for their lands and property even after years of waiting," said Dhakal.

Source: My Republica, 1 April 2018

Nepal to propose power swap deal with India

BIBEK SUBEDI

The Ministry of Energy is planning to finalise a number of deals on electricity trading with India during Prime Minister KP Sharma Oli's proposed visit to New Delhi from April 6-8. The ministry is currently finalising agendas for discussion between PM Oli and his Indian counterpart. The list of agendas would soon be forwarded to the Ministry of Foreign Affairs.

Among a wide range of issues that would be proposed by the Energy Ministry, securing the Indian market for surplus electricity that Nepal is likely to generate during the wet season tops the list.

Nepal will have surplus electricity during the wet season once the 456MW Upper Tamakoshi Hydropower Project comes online by the end of this year. The ministry is planning to sell surplus electricity in India for cash. But it is also planning to float the option of "power banking", if "determining the price of electricity becomes an issue".

Power banking, according to the Energy Ministry, refers to exchange of electricity for electricity instead of cash. It is a mechanism under which one country exports electricity to the other when there is surplus energy and imports back the same quantum of energy when there is a deficit. If the southern neighbour agrees to the power swap arrangement, Nepal can export surplus electricity to India during the wet season and import back the same volume of power during the dry season when there is shortage of energy.

Nepal is eyeing the option to barter energy, as the price of electricity is lower in India than here, which is likely to make domestic power less competitive in the southern neighbour's market. "Against this scenario, the power banking could be an ideal way to manage our surplus energy," said Dinesh Kumar Ghimire, joint secretary at the Energy Ministry.

Another agenda the ministry will push for, according to Ghimire, is allowing Nepal to purchase electricity from the Indian market through competitive bidding.

"India has extended this facility to Bangladesh. We want to purchase electricity in a similar way, as it will cheapen our imports," said Ghimire.

The ministry is also planning to use the PM's visit to convince India to develop the New Butwal-Gorakhpur cross-border transmission line under the government-to-government financing model. As per this financing model proposed by Nepal, the two governments should build the 400 kV power line in their respective territories. Around 20 km of the 135-km transmission line falls in the Nepali territory. The Indian side, which has not put forward its desired modality, has rejected Nepal's proposal and repeatedly questioned the project's commercial viability, raising doubts over the fate of the proposed transmission line.

Although the Nepal-India energy secretary-level Joint Steering Committee (JSC) is the proper mechanism to deal with these issues, the Energy Ministry is planning to get India on board during the PM's visit. The ministry is of the view that if Prime Minister Oli can convince his counterpart during his visit, a deal on construction of the transmission line could be reached between Nepal and India during the next JSC meeting, which is likely to be held in the near future.

Source: The Rising Nepal, 1 April 2018

Theulekhola Hydropower Project begins test production

The 1.5 megawatts project will be connected to the national grid within two weeks after power production starts, said the project chairperson and engineer Surya Prasad Adhikari. "We are ready from every point for linking the project to the national grid," he said, adding that commercial production would begin after 15 days of the test production.

The project cost is Rs 345 million, and the power generated from the project will make up around 40 per cent of electricity demand for the district, said Adhikari. Completion target was two years ago, but the earthquake of April, 2015, border blockade and other reasons delayed the project.

Source: The Kathmandu Post, 1 April 2018

NEA to work with Ministry of Finance

A Nepal Economic Association (NEA) delegation led by its President Bhawani P Dhungana met with Finance Minister Yuba Raj Khatriwada this week to discuss pertinent national economic issues and to establish an action plan to tackle said issues.

During the meeting, Dhungana congratulated the Finance Minister and highlighted the role of NEA in stimulating Nepal's economy along with other stakeholders. According to the press statement, NEA could help in refining economic policies and effective implementation of programmes announced by the government across the country.

It added that the NEA was preparing a paper on fiscal federalism and resource mobilisation mechanisms which is expected to aid the current government.

Source: The Kathmandu Post, 1 April 2018

NEA picks new route for Nepal-China power line

The Nepal Electricity Authority (NEA) has worked out a new alignment for a Nepal-China cross-border power line that avoids Langtang National Park in the north of Kathmandu.

A preliminary feasibility report prepared by the NEA last month had identified three potential routes for the proposed trans-Himalayan transmission line, but NEA Managing Director Kulman Ghising rejected all of them because they passed through the nature and wildlife preserve.

Ghising then ordered Komal Atreya, chief of the monitoring department of the NEA and the focal person for the cross-border power line project, to figure out a route that completely avoids the national park.

“A team of engineers made a field visit and they have come up with an alternative route,” said Atreya.

“We will now submit a report to the managing director who will forward it to the Energy Ministry.”

After the ministry approves the route, the NEA will hold talks with State Grid Corporation of China (SGCC) to finalise the deal and the construction modality. The Chinese government has appointed SGCC as the focal institution for the development of the power line between China and Nepal.

The proposed new route steers clear of the national park, but it is situated at a high altitude and is covered by snow throughout the year. This will make it extremely difficult for workers to erect the transmission line, said officials.

“If we select the new route, we will have to erect towers at an elevation of 3,800 metres from sea level at some locations,” said Atreya. “But it should not be a problem if the Chinese government helps Nepal because it has built power lines at places higher than this.”

Nepal has also sought financial assistance to build the transmission line which is estimated to cost Rs10 billion. According to the NEA, the Chinese side is very keen on developing the project and has prioritized it.

SGCC officials visited Nepal in early 2017 to hold talks with the Energy Ministry and the NEA to build a 400 kV power line linking Rasuwagadhi and Kerung across the northern border. During the meeting, Ghising asked the Chinese delegation to extend the proposed transmission line further south up to Galchhi so that the power line could be linked to the Nepal-India cross-border transmission line proposed to be built in Rupandehi district. SGCC officials were positive about Ghising’s proposal.

As the transmission line is necessary to supply electricity to the railway service which China plans to build up to Kathmandu, the northern neighbour is very keen on developing it. China has already erected a high voltage transmission line up to Shigatse, and if the Nepal government shows adequate commitment, they have agreed to extend it to Kerung within one and a half years, and ultimately connect it with the power line in Nepal, according to the NEA.

Source: The Kathmandu Post, 5 April 2018

Hydro projects expected to improve living standards in Karnali

Financial turnaround

PRAKASH ADHIKARI

Karnali province in western Nepal comes last in electricity generation among the seven states despite its potential of 18,000 MW as per government statistics. However, that status will change drastically once the projects that have been planned to be built here roar into life.

According to the Department of Electricity Development, 55 companies are in various stages of receiving licences to construct hydroelectric projects in Karnali. Currently, the 3.75 MW Dwarikhola Hydroelectricity Project in Dailekh district is the only plant that is producing energy.

The 55 hydropower projects awaiting permits have a combined installed capacity of 9,359 MW. Among them, 21 have obtained survey licences while four are in line to receive them. One is in operation, eight have applied for survey licences and 21 projects have been put in 'reserve' by the government.

Nine hydroelectric projects are being constructed in Karnali under the National Energy Crisis Reduction and Electricity Development Decade. These prioritised projects are Upper Karnali (900 MW), Phukot Karnali (426 MW), Betan Karnali (688 MW), Tila-1 (300 MW), Tila-2 (297 MW), Nalagaad (410 MW), Jagadulla (307 MW), Bheri-1 (617 MW) and Bheri-4 (300 MW).

Gokarna Raj Pantha, senior division engineer at the Ministry of Energy, Water Resources and Irrigation, said, "If Karnali can complete these projects within a decade, it will become the richest province in the country."

The nine projects, all slated for completion within eight years, have a combined installed capacity of 4,245 MW. The provincial government will receive 50 percent royalty from these projects, which is estimated to total Rs3.8 billion annually. The Upper Karnali project will be paying the highest amount of royalty of Rs2.32 billion.

Stakeholders claim that after the completion of the planned hydroelectric projects, Karnali's image as a 'poor province' will be changed as electricity generation, road expansion, employment and improvement in economic and social status of the people will follow. Former chairman of the Independent Power Producers Association of Nepal (IPPAN) Khadak Bahadur Bista said that policy-level intervention was necessary for hydroelectric development. He said, "The tedious administrative process involving seven ministries, 23 departments and 36 clauses of 18 acts needs to be slashed. Restrictions related to Environment Impact Assessment (EIA) and cutting trees should be eased."

Chief Minister of Karnali Mahendra Bahadur Shahi said, "The provincial government is willing to waive taxes for several years as a matter of investment security and guarantee of profits. He added, "Without developing large hydroelectric projects, Karnali province cannot become prosperous."

The Upper Karnali Hydroelectricity Project is one of the prioritised projects in Karnali province. The project will be spread over Dailekh and Surkhet in Karnali and Achham district in Province 7. The project is being constructed by GMR, an Indian company. The dam will be constructed in Dailekh. The powerhouse will be located at Balde in Achham and water will be brought to it from the reservoir at Daab in Dailekh through a 2.5-km tunnel.

The government will receive 12 percent of the electricity generated by the plant and 18 percent of the shares in the project for free. Survey details of a 400 kV double circuit transmission line to be constructed up to Bareli to export power to India are already complete. The transmission line in Nepal that will pass through Surkhet, Achham and Kailali districts will be about 400 km long. GMR and the government of Nepal conducted a Project Development Agreement (PDA) in September 2014. All the land required for the project has been acquired. As the Power Purchase Agreement (PPA) got delayed, the project was under pressure to generate the necessary funding in the last one year. GMR is said to be

in the final stage of signing the PPA. Delays in the PPA have affected securing financial sources for the project. Investment Board Nepal (IBN), a governmental agency responsible for implementing hydroelectric projects, extended the deadline for financial closure to September 2019 due to repeated delays by GMR. The company has signed a memorandum of understanding with Power Trading Corporation (PTC), India to sell 500 MW electricity to Bangladesh.

Co-secretary of IBN Madhu Bhetwal said, "The memorandum has already been signed. Work related to a 'term sheet' between GMR and Bangladesh Power development is in the final stage." Nepal will receive 108 MW for free while the remaining 300 MW will be purchased by the government of the Indian state of Haryana.

Another large hydroelectric project planned in Karnali, the 410 MW Nalagaad Hydroelectric Project, is a reservoir-type plant. The project has completed land acquisition. International advisors have been selected for various studies related to the project. Work related to the design and the construction of a road from the dam site to the powerhouse is underway. The Nalagaad project was estimated to cost Rs64.15 billion in 2012. The project will affect 588 families.

Likewise, the Bheri-4 Hydroelectricity Project will be built under the Boot model by Bheri Energy Company. The project received a survey licence about a year ago. This will be the first large reservoir-type hydroelectric project to be constructed by the private sector. Currently, hydrology and sediment studies are underway. Energy producers say that the Bheri basin is most appropriate for the construction of reservoir-type projects.

Source: The Kathmandu Post, 5 April 2018

FinMin entity to direct US-funded projects

BIBEK SUBEDI

The Cabinet on Tuesday passed an order facilitating the establishment of an entity to oversee the implementation of US government-funded projects worth \$630 million.

The decision will allow the Finance Ministry to establish Millennium Challenge Account (MCA) Nepal that will execute schemes with a \$500 million grant provided by the Millennium Challenge Corporation (MCC), an independent US government agency working to reduce global poverty through economic development.

The \$500 million grant is part of the \$630 million 'compact programme' designed by the MCC to strengthen the country's energy and transport infrastructure. The Nepal government will contribute the remaining \$130 million.

The compact fund will be used to build robust energy and transport networks which will enable the country to attract more domestic and foreign investment, foster economic growth and reduce the incidence of poverty.

Following the Cabinet decision, the government has moved a step closer to enforcing the grant agreement signed between the MCC and the Nepal government in September 2017. The incorporation of MCA Nepal is one of the conditions for enforcing the agreement.

After the Cabinet decision is published in the Nepal Gazette, the existing Office of Millennium Challenge Nepal (OMCN) will be converted to MCA Nepal, according to Tulasi Prasad Sitaula, national coordinator of OMCN.

"Subsequently, the board of directors of MCA Nepal chaired by the finance secretary will be given full shape by inducting six members," said Sitaula.

"One joint secretary each from the Energy Ministry and the Physical Infrastructure and Transport Ministry, managing director of the Nepal Electricity Authority, one representative each from the private sector and civil society, and the CEO of the MCA will be made members of the board." The board will then recruit a staff of 62 persons to operate the office.

A preparation fund of \$40 million will be released immediately out of the \$500 million to set up the office and hire staff while the rest will be released once the agreement enters into force. The grant agreement will come into force once the government fulfills the preconditions put forth by the MCC while signing the agreement.

Getting the Indian government's consent over the financial terms for the construction of the 400 kV New Butwal Gorakhpur Cross-Border Transmission Line Project, which is being developed under the compact programme, is one of the preconditions set by the MCC.

Likewise, the government needs to ensure that land acquisition, site access and forest clearance for the projects being developed under the compact fund are done in a timely manner for the agreement to come into force.

The MCC board of directors selected Nepal for its compact programme in December 2014. Nepal was selected for the MCC programme 'in recognition of the country's efforts to establish rule of law and democratic institutions, and its strong performance on MCC's policy scorecard'.

Since then, the MCC has agreed to support two broad projects in Nepal: the Electricity Transmission Project and the Road Maintenance Project, as energy shortages and inferior transport network are two binding constraints for Nepal's rapid economic growth.

The bulk of the investment being made in Nepal, or \$520 million, will be spent on the development of 300 km of the 400 kV transmission line extending from the eastern to the western part of the country and three power substations.

Another \$55 million will be used to maintain 305 km of roads. The remaining amount will be used for activities like monitoring and evaluation of projects being implemented, hiring procurement and fiscal agents, and covering other administrative expenses.

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Source: The Kathmandu Post, 6 April 2018

Energy security

Nepal must broaden its vision to include energy security provisions in its development

DEVENDRA ADHIKARI

Energy security is a term that entails the protection of a nation against any possible threats caused by energy insecurity in the future. To understand energy security, we need to analyse the possible threats that may arise in national energy systems.

Nepal's energy threats stem from two causes. The first relates to climate change. Climate change may alter energy systems and reduce or interrupt the energy supply. The second relates to possible high costs of fossil fuels and a subsequent supply constraint, especially when it comes to petroleum products.

Ensuring a sustainable supply

The objective of energy security should be to ensure an uninterrupted and smooth supply of energy that is easily available, cost-effective and efficient. Energy security can be achieved by ensuring a sustainable energy supply, promoting clean and efficient use of energy, establishing efficient market mechanisms and promoting cross border transactions.

The energy system must have a large indigenous production capacity to ensure a sustainable supply. Nepal's energy supply is highly reliant on hydropower for electricity generation, and biomass for meeting cooking energy demands. There is considerable danger that accompanies this reliance on only a few energy sources. This is why energy sources should be diversified. Nepal has considerable hydropower, solar, biomass, and wind potential. However, the contribution of solar and wind energy is negligible in the total energy supply within the nation. Nepal should ensure that 10 to 20 percent (or more) of its electricity comes from sources other than hydropower to ensure sustainable supply of energy. Solar resources will no doubt be a potential source for the future because of its declining price trend in the world market. Nepal also needs to start strategic moves to harness its wind power potential. However, its large-scale use is contingent upon the development of other infrastructures, especially road infrastructure.

Even within hydropower, there are different types of production methods. Nepal has so far relied more on run-of-the river (ROR) plants. There should also be a proper mix of reservoir storage, peaking ROR, and ROR plants; and small mini/micro-hydropower plants should also be given due consideration. The storage plant should also comprise pumped storage, which can contribute remarkably towards energy security.

Energy infrastructure generally has a long life span, ranging from 25 to even 100 years. As large investment is required to build energy infrastructures, they should be of a quality that can withstand the rigours of time. It should also be resilient enough to withstand the likely impacts of nature and climate change. Furthermore, the utmost care should be given to maximise the electricity generation per drop of water. The same also applies to electricity generation using other resources.

Focusing on the demand side

Nepal has low energy productivity per unit of use. Therefore, there should not only be supply side strategies but also a demand side focus.

Urban infrastructure such as houses and buildings should be designed to run on low levels of energy consumption. Big houses and housing complexes should be mandated to follow a design which requires them to have their own electricity generating capacity, for example, they can install a solar system on rooftops and other free spaces. The distribution system must have smart-grid operation. The system should follow a low carbon development path so that the future demand for clean and efficient energy systems is fulfilled. It is also important to attract global funds targeted to mitigate climate change impacts.

Without an efficient market mechanism, energy security is hard to achieve. The price of electricity should reflect the marginal cost of supply. The government should make a judicious provision of subsidies and taxes depending on external benefits and costs associated with their production and use. There should be efficient business models to attract funds from the banking and private sector in infrastructure development, operation and management.

Furthermore, cross border cooperation is paramount in energy security; it helps all participating countries. While cooperation may also depends on the national interests of individual participating countries, it is fundamentally influenced by diplomacy. Nepal and India have been exchanging electricity for a long time, and yet meaningful electricity trade has not yet begun.

It is time for Nepal to broaden its vision to include energy security provisions in its development process. Nepal should immediately adopt two strategies. The first involves diversifying the energy supply through the energy mix. We should not rely only on one or two sources for supplying energy. The second requires gradually replacing the fossil fuels used in cooking and in transport sector with clean energy.

Adhikari is an energy economist

Source: The Kathmandu Post, 6 April 2018

Transmission line extension left in limbo

The 132 kv Singati-Lamosanghu transmission line is yet to be constructed eight years after the contract was signed for the same. As the project has been left in the lurch, a significant amount of power generated from different hydropower projects has gone to waste. At the same time, those who have invested in hydropower projects have incurred losses amounting to tens of millions of rupees over the past five years.

The contractor Indian company Arawali Infra Power has been delaying construction of the transmission line citing its poor financial health.

Eight years ago, the company had committed to complete the project in a period of two years. The contract has been renewed four times till date.

Nepal Electricity Authority has renewed the contract with the same contractor to avoid the procedure involved in selecting a new contractor. Meanwhile, NEA has claimed that 40 per cent of the project work has been completed so far.

As per the contract, the 40km line extension will have 125 pylons from Singati in Dolakha to Lamosanghu in Sindhupalchowk.

“So far, the foundation of 40 pylons have been laid,” said project Chief Rajan Dhungel. “The foundation of the remaining pylons will be completed by July and other related works will be completed within one year,” he said, adding that there will be two sub-stations built at Singati and Lamosanghu.