

Source: The Kathmandu Post; 8 October 2017

Money matters: MoF, NEA asked to arrange fund for Upper Trishuli 3A

The National Development Action Committee (NADC) has directed the Ministry of Finance (MoF) and the Nepal Electricity Authority (NEA) to arrange additional fund required for the Upper Trishuli 3A Hydropower Project which is being developed under the soft loan from the Export-Import (Exim) Bank of China.

After the Exim Bank refused to extend additional loan amount required to pay the consultant due to delay in construction of the project, the 40th NADC meeting, presided over by Prime Minister Sher Bahadur Deuba, directed the authorities to arrange the fund. The meeting was held last month. Recently, the Chinese bank extended a grace period of four and a half years for the repayment of loans granted to Nepal to construct the 60MW project after the NEA via the MoF called for the same. The grace period for repaying the loan expired in August last year after the project was also hit by the devastating earthquake in April 2015. During the grace period, the borrower need not start the loan repayment process.

“However, the bank refused to release additional fund required to pay the consultant due to delay in the construction as requested by the Nepal government,” said Arbind Kumar Mishra, member of the National Planning Commission (NPC) as well as NADC. “Therefore, the NADC meeting, at the initiative of the NPC, directed the MoF and the NEA to arrange domestic fund so that the project development can continue uninterrupted.”

The Chinese bank, in 2011, had extended a concessional loan of \$114.7 million at an annual interest rate of 1.75 percent for 25 years, with a grace period of five years. As the grace period of the loan expired in August 2016, the bank had written to the MoF and the NEA requesting commencement in payment of installment on a timely basis.

In response, the ministry asked for an extension of grace period, stating that the construction of the project had been stalled by natural disasters. The Chinese bank finally made the decision to extend the grace period a year after the MoF’s formal request.

Recently, China Gezhouba Group Company (CGGC), the contractor for the project, resumed construction works which were halted after the devastating earthquake in April 2015. In the last week of September, the project achieved an important milestone, completing the excavation of 4.067km long headrace tunnel.

Currently, a technical team of the Nepal Army is carrying out repair works at the landslide-affected areas near the place where the dam of the project is being built. The earthquake-triggered landslides had affected areas close to the dam site, raising concerns about workers’ safety.

The army team has almost completed shotcreting the hill that lies on the right-side of the dam.

Shotcreting is a process of spraying concrete throughout the surface of hills to avert landslides. In order to prevent landslides, the army is also building fences with a special type of wire. Lately, the army has also repaired various sections of the access road damaged by earthquakes.

Source: The Himalayan Times; 8 October 2017

Pumped storage hydropower in Nepal

In the context of Nepal, the Integrated Nepal Power System (INPS) is predominantly a hydro-dominated one, where the base and intermediate power demands are met by run-of-river hydropower plants and import from India. Therefore, the national grid should have storage power plants to improve system reliability..

A method of storing electricity is necessary so that it can be generated at one time and used at another, when necessary. Electricity itself cannot be stored, but it can be converted into other forms of energy and stored as chemicals or gravitational potential energy and then be converted back to electricity when needed..

One method that can be tried is pumped storage. The principle of pumped storage is fairly simple – utilising gravitational potential to store energy. Two reservoirs, one more elevated than the other, and a system of tunnels and pipes connecting them are needed. When demand is low and electricity is cheap the plant uses energy to pump water from the lower reservoir to the upper reservoir. When demand is high and electricity is more expensive water from the upper reservoir is released back into the lower reservoir through the same system of pipes or tunnels, this time the turbines acting as they would in a traditional hydroelectric plant generating electricity. This type of plant once operational can quickly respond to energy demands. The efficiency of this system is typically between 70 per cent and 85 per cent, making it one of the more efficient methods for storing energy. Pumped storage plant can also be used as solar energy storage..

The Department of Electricity Development (DoED) has planned to develop Sunkoshi-II (1,110 MW) and Sunkoshi-III (536 MW) projects as pumped-storage projects for the first time in Nepal. As per the plan, water will be pumped from the reservoir of Sunkoshi III, which will remain below the Sunkoshi River, to Sunkoshi III during the off-peak hour and release the stored water during the peak hour..

This modality is expected to help address power demand during winters. Currently, DoED is preparing to carry out a DPR for the projects. The Asian Development Bank (ADB) recently signed a loan agreement with the government to fund the DPR. Officials at the Nepal Electricity Authority (NEA) say the Sunkoshi III project can be completed by 2021 if construction starts immediately after the DPR..

According to Nepal Electricity Authority (NEA) study, the system grid will not generate sufficient peak power, even after the completion of 456 MW hydro-power project. Therefore, NEA is planning for series of storage projects to diversify energy generation. In this connection, NEA has planned for the construction of Rupatal-Begnas Tal pumped storage project in mid-western part of Nepal. According to preliminary survey, the project will generate about 100 to 300 MW of power utilising the natural head of 57 metre that exists between Begnas Tal and Rupa Tal. The project is designed to generate peak power for four hours during peak time..

Due to global warming and subsequent climate change, Nepal needs to urgently identify sites for pumped storage projects. A reasonable number of pumped storage plants will help deliver energy security in the long term, besides enhancing system reliability. Pumped storage projects require significant capital for development. Choosing the right location is a matter of identifying a site with ideal topography, a source of water and good proximity to and location within the transmission network. To repay heavy capital investment, the power purchase price should be over and above the break-even cost of pumping..

In the case of severe drought, the upper reservoirs thus constructed, can be used for drinking water, irrigation, hydropower et cetera..

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Source: The Kathmandu Post; 9 October 2017

Tunnel boring machine to be installed within a month

bheri babai diversion multipurpose project

PRAKASH ADHIKARI

The first ever tunnel boring machine (TBM) to be used in a construction project in Nepal will be installed within a month. The TBM will be used to dig the tunnel of the the Bheri Babai Diversion Multipurpose Project.

Previously, the project office had estimated that the installation of the TBM would take two months. However, technicians of the US based manufacturer of the TBM, Robbins, are on track to complete the installation before Tihar.

Currently, around 35 technical and non-technical people from the US, China and Nepal are engaged in the installation process of the machine. "Initially, we thought the shortage of labourers during long vacation Dashain would push back the installation work.

But the problem was solved after the US based company offered a three-fold rise in wages to the people working during the vacation," said Min Raj Dhakal, senior divisional engineer of the project.

China Overseas Engineering Group, the contractor hired to develop the project, had imported the tunnel boring machine manufactured by Robbins.

The manufacturing company will assemble the TBM and demonstrate the use of the machine by digging a 5-metre tunnel.

After installation, the 250-metre long machine will chew its way under the Chure hills to create a 4.2-metre wide and 12-km long tunnel through which water from Bheri River will be diverted to Babai River. It will take around 2 to 3 years to dig the entire tunnel. The Chinese contractor has installed a 4 MW diesel plant at the project site to generate power to operate the machine.

The Bheri Babai Multipurpose Diversion Project is a national pride project located at Bheri-Ganga Municipality in Surkhet district in western Nepal. It will have a dam 15 metres high and divert 40 cubic metres of water per second from the Bheri River to the Babai River.

The water will be used to irrigate 51,000 hectares of land round the year in Banke and Bardia districts. The project will also generate 48 MW of electricity.

The irrigation-cum-hydroelectric project is one of the strategic projects of the country, as it is expected to ease the food crisis in the mid-western region by increasing agricultural yields.

Some of the salient features of the project are easy access to road network, limited environmental hazards, less use of water from the Bheri River and little negative impact in the vicinity of the dam site.

Also, the project only requires 30 hectares of land to build the dam. The government had invited bids for the construction of the project in July 2012, but lack of resources and delays in the appointment of a contractor prevented the four-year project from moving ahead.

The construction of the project was finally inaugurated in April 2015 by the then prime minister, the late Sushil Koirala.

The total cost of the project is estimated to be around Rs16 billion. It is expected to make an indirect financial contribution of Rs3.1 billion to the state, and a direct revenue contribution of Rs2.1 billion through energy sales.

Source: The Kathmandu Post; 10 October 2017

NEA invites CTGC to sign joint venture deal

The Nepal Electricity Authority (NEA) has invited representatives of China Three Gorges Corporation (CTGC) to visit Kathmandu by October-end to seal their long-delayed joint venture deal so that the construction of the 750 MW West Seti Hydropower Project can begin.

The state-owned power utility has written to CTGC saying that it will try to resolve the causes of dissatisfaction during the visit. The NEA was responding to CTGC's letter sent to Investment Board Nepal (IBN) last September. In the letter, CTGC had said that its board had decided to endorse the joint venture agreement made with the NEA in January.

The Chinese company has also sought clarity on a number of issues including capitalization of pre-incorporation expenses, modality of issuing shares to locals and the power purchase rate for the electricity generated by the project.

"We dispatched the letter to the Chinese company via IBN on October 4," said Prabal Adhikari, spokesperson for the NEA. "As a majority of the Chinese company's concerns have already been addressed, there is a high chance that the deal will be sealed during the visit."

Meanwhile, Nepal Rastra Bank (NRB) has issued a directive allowing foreign companies developing infrastructure projects in Nepal to factor in the cost incurred prior to their establishment as paid-up capital. According to NRB's directive, foreign companies constructing national pride projects and those that have received investment approval from IBN are eligible to receive this facility.

"As per the central bank's directive, the Chinese company is eligible to receive this facility," said an IBN official.

Likewise, the Chinese company is concerned that the proposed joint venture company will automatically become a public limited company requiring greater disclosure and compliance if shares are issued to the general public.

"We will convince visiting CTGC officials that a proper mechanism will be developed before the company is formed so that it will not have to go public," said the IBN source.

Similarly, the power purchase rate, according to the NEA, will be set as per the guidelines issued by the Energy Ministry in January. According to the guidelines, reservoir type projects like the West Seti will get Rs12.40 per unit during the dry season (December to May) and Rs7.10 during the wet season (June to November).

In August 2012, IBN and CWE Investment Corporation, a subsidiary of CTGC, signed a memorandum of understanding to construct the West Seti Hydropower Project. As per the pact, the Chinese company will have a 75 percent stake in the joint venture company while the NEA will hold the rest of the shares.

More than four years later, NEA chief Kulman Ghising and the CTGC vice-president initialed a joint venture agreement which had to be ratified by the boards of their respective organizations. The NEA board immediately approved the agreement, but the Chinese developer took around eight months to make conditional endorsement.

The reservoir-type West Seti project, which will be spread over Baitadi, Bajhang, Dadeldhura and Doti districts, is being built at an estimated cost of \$1.6 billion.

Source: Qcosta Rica; 10 October 2017

Costa Rica Hydropower Plant Demonstrates Good Practice In Sustainability

The Reventazón project in Costa Rica, the largest hydropower plant in Central America, has been classed as an example of international good practice in hydropower sustainability.

It is the first hydropower plant in the region to undergo an official assessment under the Hydropower Sustainability Assessment Protocol, a tool which examines a project's performance against social, environmental and governance criteria.

The plant on the Reventazón river, inaugurated on 16 September 2016, was designed, developed and built by the Costa Rican Institute of Electricity (ICE). It has an installed capacity of 305.5 MW.

The results of the assessment were announced on 27 September 2017 during an international workshop on the Hydropower Sustainability Assessment Protocol in San José represented by experts from 22 countries. The workshop was organised by the World Bank, the International Hydropower Association (IHA), the Costa Rican Institute of Electricity (ICE) and the Ministry of the Environment (MINAE).

“We are delighted to receive the results, which reinforce the good practices we implemented during the construction of the plant. Reventazón is a source of pride for the country, and is now among a select group of projects with this level of recognition,” said Carlos Manuel Obregón, executive vice president of ICE.

During the workshop participants recounted their experiences of applying the Protocol in Argentina, Brazil, Canada, Colombia, France, Iceland, Nepal, Norway, Paraguay, Peru, Uruguay, and Vietnam.

Launched in 2011, the Hydropower Sustainability Assessment Protocol is governed by the Hydropower Sustainability Assessment Council, a multistakeholder body comprising IHA and representatives of the World Bank, the private sector, NGOs and other stakeholders.

Irene Cañas, Vice Minister of Environment and Energy for Costa Rica's Ministry of Environment and Energy (MINAE), said: “The implementation of the Protocol is a clear sign of the commitment we've made as a country towards securing a sustainable and low-carbon economy. Evidence shows it's possible to achieve an electricity supply based on renewables with a strong focus on environmental, social and economic concerns.”

Reventazón scored above three on all of the categories, meaning the project was deemed to demonstrate good practice against the evaluated topics. The project received best practice scores in communications and consultation, infrastructure safety, financial viability, resettlement, and public health, going above and beyond the requirements for international good practice.

“The Hydropower Sustainability Assessment Protocol offers a common language for the multiple sectors and stakeholders involved in hydropower development to work together towards sustainability,” said Richard Taylor, CEO of IHA.

“This workshop is an opportunity to share experiences of the Protocol's application at hydropower projects around the world, to look at those good practices which should be recognised and emulated, and to assist project managers in focusing their efforts on continuous improvement.”

The Protocol allows for evaluation of a hydropower project at different stages of development, from planning, to implementation and through to operation. In Reventazón's case, the assessment was carried out under contract by the World Bank, and evaluated 19 technical, environmental, social and business-related topics during the construction phase of the plant.

“Tools like the Protocol, together with international financing institutions’ safeguarding and performance policies, help strengthen the environmental, social and safety management of hydropower development, and reduce the impact on communities and the environment,” said Ruth Tiffer Sotomayor, Senior Environmental Specialist at the World Bank Group. She added that: “The workshop is an opportunity to exchange experience on the Protocol’s application in different regions around the world, to share good practices, and ultimately to improve the environmental and social management of projects.”

Source: The Rising Nepal; 11 October 2017

Construction of Puwakhola-1 hydel project completed

Construction of the Puwakhola-1 Hydroelectricity Project has been completed.

The project is located at the bank of the Puwakhola river located between Ilam municipality and Deumai municipality of Ilam district. The project with production capacity of four megawatts power has started generating 2.8 megawatts, Rama Kanta Dev, the project's plant manager, said. The project had already carried out test production from the third week of September.

The project has been completed at a cost of Rs 720 million, project manager Uttam Thapa said. A 6.5 kilometres long transmission line has been installed for feeding the electricity produced by the project to the national grid at the Godak sub-station. Sidhartha Bank and Citizen Bank have invested in the project. Puwakhola-1 Hydropower Company is the promoter of this project. With the construction of this project, the number of hydroelectricity projects in Ilam district has reached to eight, which produce 75 megawatts of power, combined.

Source: The Kathmandu Post; 11 October 2017

Kulekhani 3 deadline extended for fifth time

The Nepal Electricity Authority (NEA) has extended the completion deadline of the Kulekhani 3 Hydropower Project for the fifth time to January 2018 as construction has been running late due to its slowpoke contractor.

Last week, a meeting of the board of directors of the state-owned power utility agreed to give Sino Hydro, the Chinese contractor for the civil works, six more months to complete the project. The 14 MW cascade scheme was supposed to have been completed last July. Project owner NEA doubts the hydropower station will be able to start generating energy even by that date. Sino Hydro has been taking the rap for Jheijian Jialin Company, the hydro and electro mechanical contractor, which has been delaying the project and preventing the civil works contractor from finishing its task.

Although Sino Hydro has completed around 99 percent of the civil works, Jheijian Jialin Company has finished only 75 percent of its work.

Sino Hydro cannot complete the remaining 1 percent of the civil works until the electro and hydro mechanical works are completed.

The electro and hydro mechanical contractor, Jheijian Jialin Company, has been working at a snail's pace and holding up civil works, forcing the NEA to extend the deadline.

"We are trying our best to speed up the performance of the contractor," said Subash Mishra, the NEA appointed project chief of Kulekhani 3. As Jheijian Jialin has been fined Rs80 million for delaying construction, the NEA cannot extend its deadline nor fire it.

The contract cannot be terminated because it will be difficult to find another contractor at this late stage of construction. Also, the Chinese company has imported more than 80 percent of the equipment required for the project. If a new contractor is hired, it may not take responsibility for the quality of the equipment imported by the previous contractor.

"So, we will keep on pushing the contractor to complete the job on time," said Mishra.

Recently, Energy Minister Mahendra Bahadur Shahi visited the project site and directed the slowpoke contractor to speed up the construction work. Likewise, NEA and Energy Ministry officials have repeatedly taken up the issue with the Chinese ambassador.

The project's completion deadline has been extended four times since construction began in April 2008. It was originally scheduled to be completed by 2012. When the project missed the first deadline, it was extended by 30 months. When that deadline too passed, the target was pushed back till the end of the fiscal year 2015-16.

The then prime minister Pushpa Kamal Dahal had also directed project officials to expedite construction and complete the plant on time during his visit to the site last December.

When NEA officials complained about the Chinese contractor's indifferent attitude, he had said the government would take up the matter with the Chinese government.

But there has been no change in performance. The project has witnessed cost overruns due to delays, and the developer has spent double the amount of money than originally estimated.

The initial estimated cost of the project was Rs2.43 billion, which has now ballooned to Rs4.22 billion. In May 2014, the National Planning Commission declared Kulekhani 3 a troubled project.

Source: The Himalayan Times; 11 October 2017

West Seti deal with Chinese company likely to be scrapped

With the Chinese company dilly-dallying over implementation of the 750-megawatt West Seti Hydropower Project, the government has hinted it may scrap the deal with the China Three Gorges Corporation. In a discussion with senior officials of the Ministry of Energy today, Energy Minister Mahendra Bahadur Shahi expressed frustration at the preconditions put forth by the CTGC before initiating the project — the agreement for which was signed five years ago.

“The government is mulling scrapping the deal with the CTGC and offering the project to Nepal Electricity Authority for implementation,” he told *The Himalayan Times*.

The CTGC and the NEA had signed a joint venture agreement to develop the project, under which the CTGC would have 75 per cent stake in the joint venture company and NEA would hold the rest.

However, the CTGC has delayed kick-starting the project by putting forth a number of conditions that need to be met before it begins any work.

As per the memorandum of understanding signed between Investment Board Nepal and the CWE Corp — a subsidiary of CTGC — in February 2012, construction of the project was supposed to begin in 2014.

CTGC recently asked the government for capitalisation of expenses incurred by the CTGC in conducting necessary studies of the project and sought assurance of market for the electricity generated. It has also said that since NEA is a joint venture partner in the project, the authority should step in as guarantor to obtain loan (from Exim Bank of China or any other Chinese bank) for investment in the project.

The Chinese company has also asked for special consideration in share allocation for locals. As per the rules, allotment of 10 per cent share to locals of the project site area is mandatory for hydel projects. However, the CTGC has said it will not allot shares to locals.

According to IBN officials, CTGC is pressing for all of its demands to be fulfilled before it sits for further discussions.

Nevertheless, NEA recently invited CTGC for talks between October 23 and 25 in Kathmandu to discuss execution of the project. However, the latter has not conveyed any confirmation about its participation in the meeting.

“The government is seriously considering scrapping the deal with CTGC if the company intends to buy more time,” said Energy Minister Shahi. “The conditions put forth by the Chinese company clearly show its reluctance to develop the project.”

The CTGC and the NEA had signed the joint venture agreement on January 17 this year. After signing the joint venture agreement, the project was expected to gather pace. However, the only thing that has transpired till date is that numerous demands have been put forth by the Chinese company.

Talking to *THT*, Minister Shahi said he would take forward the proposal to scrap the West Seti deal with the Chinese company if the latter refused to budge from its stance and did not come for talks to form a joint venture company for project execution.

Source: The Himalayan Times; 12 October 2017

Upper Karnali project starts distributing compensation

As part of land acquisition process, Upper Karnali Hydropower Project has started distributing compensation to project affected locals. According to KK Sharma, chief of the field site office of GMR, the contractor, Rs 42.6 million has been distributed in compensation so far. "Till date compensation has been provided for 1.5 hectare land in Achham and Dailekh," he informed.

Meanwhile, with the beginning of compensation distribution, locals are hopeful about the project taking shape in near future. To ensure that the compensation is not misused, Upper Karnali Concern Committee has made the families concerned open a joint account.

Devi Budha of Turmakhand Rural Municipality, who received compensation, shared his plan to buy land in the plains. "I hardly believed that the project mired in one or the other controversy would ever take our land. Now we've got money in return for our land," he said, wishing for the successful completion of the project.

Achham, Bhairavsthan's Bam Bahadur BC, however, is still doubtful about the project taking off. "Though compensation is being given to locals, there is no way we could be assured for the project starting on time as there are news that there is no enough fund for the project," he said, urging for early completion of the project.

GMR field site office chief Sharma, however, told locals not to doubt the fate of the project. "We aren't for holding the project indefinitely, its construction will start within a year after we attain financial closure" he said.

The government of Nepal had signed a PDA with the Indian company GMR on September 14, 2014 for the construction of the 900MW power project. As per the project design, it will have a 150 metre high dam at Dailekh's Dab. Water collected at the dam site will then be channelled through a tunnel at the power production site at Balde. Nepal will receive 27 per cent free stock of the 120 billion rupees project, and will also get 12 per cent of the electricity produced for free.

Source: Share Sansar; 13 October 2017

Barun Hydropower 13th & 14th AGM today; to endorse 5% bonus & 100% right shares

Barun Hydropower Company Limited (BARUN) is convening its 13th and 14th Annual General Meeting (AGM) today (Asoj 27, 2074). The AGM is being held at Union House, Anamnagar, Kathmandu at 11:00 AM.

The main agendas of the AGM are:

To endorse 5% bonus shares and 0.263% cash dividends to its shareholders from the net profit of the FY 2073/74.

To endorse 1:1 (100%) right shares to its shareholders.

Other agendas includes highlights of financial statement of the FY 2072/73 and FY 2073/74 and appointment of the auditor for the FY 2074/75.

After distribution of 5% bonus and 100% right shares, its paid up capital will reach to Rs 51.03 crore.

BARUN has earned Rs 70.68 lakh in the second quarter of the FY 2073/74.