

Source: The Kathmandu Post, May 19, 2019

Koshi corridor power line project faces new setback, likely to miss deadline by 10 months

- PRAHLAD RIJAL, Kathmandu

Just a month after works resumed following a six-month hiatus, the Koshi corridor transmission line project has again faced a setback as the project has been barred from extracting construction materials from local rivers for the construction of substations.

The national pride project, being built to evacuate around 550 MW of energy in the initial phase from under construction hydel plants in the eastern region, is facing a shortage of granular materials after local forest authorities forbade extraction of sand and gravel from Sabha River.

“The project contractor has been asked to haul sand and gravel from Itahari to build substations at Basantapur, Baneshwar and Tumlingtar,” said project chief Rajan Dhakal. “We are reeling under severe crunch of construction materials and hauling sand and gravel from Itahari to Tumlingtar will increase cost overruns and is also logistically challenging.”

According to Dhakal, government officials have asked the project to shift sand and gravel crushers from Sabha River banks elsewhere but the crusher contractor is reluctant to do so. “With the onset of monsoon, forest officials will also enforce an extraction prohibition period starting from May to September and it will push the project completion deadline by at least 10 months,” he said.

The Nepal Electricity Authority, the project executing agency, is likely to face penalties, if the transmission line does not go live within the stipulated deadline, as it has already signed power purchase agreements for 516 MW of electricity with 28 independent hydropower projects in the region.

In absence of a transmission system connecting Bhojpur, Shankhuwasabha, Tehrathum and Taplejung, the power produced by the private plants including 51 MW Mewa Khola, 15 MW Maya Khola, which is nearing completion, will go to waste.

“Just a month ago we resolved a row over route of power lines with Dharan metropolis and now we are being denied from extracting construction materials,” said managing director Kulman Ghising of Nepal Electricity Authority. “If the project is delayed, both private producers and NEA will have to bear losses running into the millions.” As per the purchase terms, the state-owned power utility is obliged to cover 45 percent of the operational losses of the private plants, if it fails to build the transmission system within one and a half years, said Ghising.

According to electricity authority officials, both private hydropower projects and government owned projects in the region are experiencing shortage of construction materials following the ban.

“Despite multiple rounds of talks facilitated by the district coordination committee, there has been no headway and forest officials who are guided by vested interests are adamant on not letting us extract materials from Sabha River citing environmental issues,” a project official said after requesting not to be named. “We cannot extract sand and gravel from Arun River as the water level is high and it is too costly to haul materials from Itahari.” The government had approved the preliminary environmental impact assessment of the project and issued a permission letter allowing the electricity authority to develop the 220 kV transmission lines and supporting infrastructures and transmit electricity from Koshi River basin in line with provisions of the Electricity Act 1992 in January, 2015.

Hailed as a life-line project in the eastern region, the project funded through a line of credit worth \$250 million from Export-Import Bank of India, is being built to evacuate power from hydel plants located at Arun River, Tamor River and their tributaries that carry massive generation potential over 2000 MW.

Indian contractor Larsen and Turbo has been building three substations at Basantapur, Baneshwar and Tumlingtar under the second component of the corridor project at a cost of \$25.29 million. The electricity authority began works on the substation in June 2016 and has set a completion deadline of February 2020.

Earlier, the construction of towers along the 105 km Inaruwa-Tumlingtar transmission route was obstructed by Dharan Metropolis citing that the alignment of towers would hurt tourism and paragliding prospects in the area.

Works on the first component worth \$37.5 million, the 220 kV double circuit line from Inaruwa to Tumlingtar, halted for six months and had resumed after Chief Minister Sherdhan Rai of Province 1 facilitated an agreement between local representatives, Dharan metropolis and the electricity authority in April.

Source: The Kathmandu Post, May 18, 2019

Construction work on 200kV substation resumes

Construction work on a 200 kV substation in Paharebesi, Nuwakot, which had stalled following protests by locals, resumed on Friday. Officials of the Nepal Electricity Authority visited the construction site on the banks of the Trishuli River on Thursday to talk with the residents about their grievances. Kulman Ghising, managing director of the state-owned power utility, asked locals not to obstruct work in the name of benefitting the people. He said the electricity authority was committed to addressing their genuine demands.

Locals and project officials had clashed over the location of the wall built around the command centre of the substation. Locals had obstructed work demanding that the wall be shifted. “If the substation is not built within a year, the electricity generated by plants poised to come online, like Rasuwagadhi (111 MW), Sanjen (42 MW) and Upper Sanjen (14 MW), will go to waste as it cannot be delivered to the national grid,” said Ghising. “Moreover, the power utility will have to pay a penalty to cover operational losses if the plants cannot evacuate power due to delays.”

Following a brief argument with locals, Ghising requested the chief district officer of Nuwakot to provide security. The local administration then deployed armed police personnel at the site. The contractor for the substation resumed work with support from the local administration on Friday.

The \$16-million substation built with domestic investment and soft loans from the German Development Bank and European Investment Bank is being built to connect hydel plants with a combined installed capacity of 600 MW in the Trishuli river basin. Project officials expect to get the substation up and running by December.

Source: My Republica, May 21, 2019

High court orders five firms to pay tariffs as determined by NEA

KATHMANDU, May 21: The Patan High Court on Sunday ordered five industrial firms to pay electricity tariff of dedicated lines/trunk lines as determined by the Nepal Electricity Authority (NEA).

The court vacated its earlier stay order. The firms had denied paying the electricity bills issued by NEA after years of consumption, arguing that they were not liable to pay the bills as they did not use electricity in required capacity and volume per day.

Industrial firms had filed writ at the court saying that the tariff imposed has made huge losses to them.

Everest Paper Mill Pvt Ltd, Arihanta Multi Fibers Ltd, Shuvashree Agni Cement Udhyog Pvt Ltd, Arihanta Poly Max Ltd, and Raghupati Jute Mills Pvt Ltd had filed cases against the NEA.

The court has stated that NEA's decision to collect tariff from those companies has not made any irreparable loss to them.

The firms have also argued that they have not used continuous supply for minimum 20 hours as required by the standards of dedicated lines and trunk lines of electricity.

After NEA did not listen to their claim, all three professional bodies of the private sector -- The Federation of Nepalese Chambers of Commerce and Industry (FNCCI), the Confederation of Nepalese Industries (CNI), and Nepal Chamber of Commerce (NCC) -- have jointly criticized the Nepal Electricity Authority (NEA) for billing industries for electricity that they did not consume.

They organized a press meet at FNCCI's office on May 8 and jointly announced their denial to pay bills.

They also argued that having a dedicated connection doesn't mean that industries have consumed electricity supplied through the line.

Speaking at the press meet, Pashupati Murarka, a former president of FNCCI had argued: "Trunk lines are connected to each enterprise. But most of them neither used the facility, nor completed the prescribed procedure to get such facility from the NEA."

NEA officials, however, say that these enterprises enjoyed continuous electricity supply before mid-May last year, while the country was facing power shortage, and also thereafter.

NEA's Managing Director Kulman Ghising said that NEA issued bills to enterprises for energy consumed through dedicated lines during load-shedding. "We charged them for energy supplied through trunk lines as per the law," he said, adding, "We have also been matching day meters of the enterprises and their electricity bills."

Source: Nepal Energy Forum, May 21, 2019

Hydropower goals: Ambitions and challenges

MAXIMUM EXPLORATION OF HYDROPOWER IS NEEDED TO MEET THE ENERGY DECADE GOAL

May 19, 2019

Nepal is estimated to have a hydro potential of 83,000 MW electricity, and 43,000 MW is considered to be economically viable.

However, the hydropower generating capacity of 1,047 MW at present seems to be a distant dream from the government's target of generating 15,000 MW by the year 2029 during the announcement of the 'Energy and Water Resources Decade' through the government's White Paper on May 8, 2018.

Hence, the authorities concerned need to do more in order to meet the goal and fulfil the growing energy demand in the country and also boost national economy.

ONGOING PROJECTS

Many hydropower projects are currently under construction while several projects have already been completed which can be taken as a positive step for meeting the government's goal.

"We have already commissioned the Chameliya Hydropower Project, Bagmati Small Hydropower Project, Kulekhani- III and Upper Trisuli 3A with 30 MW, 22 MW, 14 MW and 60 MW capacities, respectively whereas the construction of Kabeli-B1, Lower Hewa Khola, and Iwa Khola hydro projects with 25 MW, 21.6

MW and 9.9 MW capacities, respectively are ongoing,” says Prabal Adhikari, Spokesperson at Nepal Electricity Authority (NEA).

According to Adhikari, the Upper Tamakoshi Hydropower Project and Rasuwagadhi Hydropower Project with 456 MW and 111 MW capacities, respectively will be completed by the next fiscal whereas, Khani Khola -1, Mistri Khola and Upper Sanjen Hydropower projects with 40 MW, 42 MW and 14.8 MW capacities will be completed within this fiscal.

“We have targeted to complete 23 hydropower projects such as the Upper Sanjen, Upper Khimti, Junbeshi, and Singati Khola with 14.8 MW, 12 MW, 5.2 MW and 16 MW, et cetera in the coming fiscal 2019-20 with 983 MW combined capacity,” adds Adhikari.

Similarly, as per the data of Ministry of Energy, Water Resources and Irrigation (MoEWRI), several projects such Likhu-4, Dordi-1, Nyadi Khola, Middle Modi and Madhya Bhotekoshi hydropower projects with 52.4 MW, 10.3 MW, 30 MW, 15.1 MW and 102 MW generation capacity, respectively are already underway, which will be completed within the fiscal 2020-21, claims Pravin Raj Aryal, Spokesperson at MoEWRI.

“Apart from this, we have introduced potential projects such as Lohore Khola, Salankhu Khola, Upper Hewa HPP, Sisa Khola A, among 30 projects spread across the country that we aim to complete by the fiscal 2020-21,” he adds.

PRESENT SCENARIO

As per NEA’s data, to fulfil the rising energy demand, Nepal imports around 400 MW electricity annually from India, whereas Nepal at present has been producing 1,047 MW electricity annually.

To this, NEA contributes 570 MW whereas 477 MW is contributed by Independent Power Producers (IPPs).

"We only generate around 400 MW electricity in the dry season but the demand yearround is more than 1,600 MW. So, in order to supply electricity throughout the year, the energy banking system should be implemented by the government through which we can sell excess power during monsoon to India and buy it from them during the dry season," says Shailendra Guragain, President at Independent Power Producers' Association (IPPAN), Nepal. Gyandendra Lal Pradhan, Treasurer at the Federation of Nepalese Chambers of Commerce and Industry (FNCCI), says, "The trade deficit with India is rising and it can be reduced significantly by replacing fuel imports by increasing the use of electrical appliances such as electric vehicles and induction stoves in the country. The Upper Tamakoshi Hydropower Project alone will be of a great help to the nation by producing surplus electricity for exports which can bring foreign currency into the country and helps national GDP." However, according to Pradhan, the NEA together with private sectors should join hands to maximise energy production in the coming years.

OVERCOMING HURDLES

According to Guragain, increased bureaucratic hurdles such as lengthy paper work for project approval have made it difficult for foreign investors to start projects through Foreign Direct Investments (FDI) in Nepal.

However, according to Aryal, in order to ensure unhindered bureaucratic process for foreign investors, the government has recently launched the one-window service in the Department of Industry which has eight different units of the department concerned for performing overall tasks for investors from a single place.

"We have already signed Power Purchase Agreement (PPA) with several hydropower investors for 2,500 MW worth projects with financial closure, whereas PPA of 2,600 MW worth projects have been done and we are waiting for their financial closure.

Similarly, another 2,600 MW worth projects are in the process of PPA. This will surely boost foreign investors' confidence in investing in Nepal's hydro power sector to a great extent," adds Aryal. Likewise, the issues of power leakage and land acquisition during the construction of the substations have been a headache for NEA for a long time. "Protests by locals in issues such as disrupting the construction of transmission lines by demanding higher prices for their lands have been hampering the construction of substations and transmission lines in the country.

However, we have been trying to settle down these issues with the locals by devising a middle path for land acquisition.

We are also working to upgrade our transmission and distribution systems across the country to control the electricity leakage as well, which can save us a lot of energy," adds Adhikari.

ENCOURAGEMENT NEEDED

The private sector has a big role in contributing a large chunk of power production in the country. "We have already signed PPA with NEA for constructing hydropower projects worth 3,500 MW.

Similarly, other projects worth 2,000 MW are already under construction whereas another 1,500 MW projects are under financial closure process," adds Guragain.

According to him, many IPPs have, of late, applied for licence and PPAs for projects, which is very encouraging for meeting the energy decade's objectives.

However, only increasing the generation capacity of power is not enough as transmission lines and substations are needed for the smooth supply of electricity to each household in the country.

“Previously only the NEA looked after everything, but now a new transmission line management department has already been formed by the government, which will help manage all the problems related to grid connectivity and transmission lines in the country,” shares Adhikari.

According to Aryal, the government is also planning to construct new substations and transmission lines in the country, which will facilitate electricity transmission.

“In rural areas, we are planning to instal many solar mini grids so that each household gets electricity equally in the country,” he adds.

THE FUTURE AHEAD

According to Aryal, although the country might be able to produce even close to the predicted amount of electricity in the envisioned period, it will still need to export the electricity abroad due to lack of factories and industries in the country that consume maximum electricity.

Moreover, he claims that the country is bound to see a rise in construction activities in the coming years due to the improving business climate which will give rise to industries.

“The MoU signed between Nepal and Bangladesh in 2018 has facilitated the export of the surplus electricity, which Nepal will be producing in the coming years. We are very optimistic of the timely completion of all the ongoing hydropower projects, which will not only help us achieve our energy goals, but also boost our economy,” adds Aryal.

Similarly, Uttam Wagle, Spokesperson at the Investment Board Nepal (IBN), says, “The construction of the 900 MW Arun III hydro project has already begun while the construction of the Upper Karnali with same capacity will start soon.”

“The government is planning to allocate more than Rs 88 billion for the upcoming fiscal 2019-20 to MoEWRI for hydro power development in the country and we have demanded Rs 103 billion for the same. We aim to produce 5,000 MW electricity in the coming five years and increase it to 15,000 in one decade,” adds Aryal.

Source: The Himalayan Times

Source: The Kathmandu Post, May 22, 2019

Power utility chief butts head with ruling party lawmaker

- PRAHLAD RIJAL, Kathmandu

A dispute between NEA Managing Director Kulman Ghising and Nepal Communist Party (NCP) lawmaker Aman Lal Modi emerged during a meeting of the Public Accounts Committee on Tuesday after the latter accused Ghising of involvement in suspicious transactions and corruption.

“The recent report by Office of the Auditor General points at increasing dues yet to be collected by the authority,” Lawmaker Modi told the Post. “Instead of recovering the amount, the managing director is busy forming committees and that has raised our eyebrows.”

According to Modi, the accounts committee must launch an investigation into ‘acts of professional misconduct’ at the state-owned power utility.

In April, the Office of the Auditor General in its annual report had pointed that the electricity authority’s receivables from electricity charges had increased by 14.44 percent and stood at a massive Rs15.54 billion in the fiscal year 2017-18.

“Out of the receivables, the authority has transferred its liability of Rs560 million maintained under ‘suspicious provisions’ earlier to other headings. The authority has also not taken necessary steps to recover the due amounts,” the OAG report stated.

The Public Accounts Committee had called the electricity authority’s managing director, secretary at the energy ministry and other officials to deliberate on the recent row over due amount between industrialists and the power utility.

The meeting was held a day after the Patan Appellate Court revoked its earlier interim order allowing the authority to recover due electricity bills from industrialists, who had utilised regular power through trunk lines when the country was witnessing severe load shedding a few years ago.

Earlier, a row between the industrialists and electricity officials had intensified after the power utility sent them bills in line with its internal committee's assessment that the industries supplied by dedicated feeders and trunk lines are yet to pay Rs4.3 billion in charges.

After some industrialists moved Patan Court accusing the authority of 'illegally charging' them, the court

had issued an interim order asking the power utility to not collect dues from industrialists for the time being.

The interim order was repealed on Monday.

After his motives were questioned by the lawmaker, Ghising in his defence challenged Modi to come up with evidence and not make baseless accusations.

Moreover, Ghising said that the lawmaker has mobilised his cadres in his constituency to halt cable pulling works at the 33 kV Duhabi-Katahari transmission line for the last six months.

"The lawmaker has not allowed us to pull cables in the 3-km-stretch of the transmission lines in his constituency and we have not been able to charge a recently built substation at Katahari," said Ghising.

"A local representative should not create obstructions in development works."

The Nepal Electricity Authority recently concluded the construction of Katahari substation but has not been able to charge it because locals of Gramtham Rural Municipality have obstructed the power utility from pulling cables in the region.

Gramtham is a small settlement in Morang constituency 4 from where lawmaker Modi won the elections.

According to NEA's Biratnagar Division Chief Rajib Singh, Katahari is an industrial region and the existing Tankisinuwari substation used to relay power to the industries is already overloaded.

“Lawmaker Modi has mobilised his cadres to halt the works saying that the industrialists in the region did not fund his election campaign,” said an official at the electricity authority asking not to be named.

“Despite multiple rounds of talks at the District Administration Office of Morang (DAO), Modi has not budged from his stance and has even demanded Rs500,000 at a meeting in DAO on the pretext of bringing locals to the same page.”

When asked, Modi denied the allegations labelled against him and said the official is spreading misinformation.

“I have no vested interests and even if the works are ongoing at my constituency, I have not paid much heed to recent developments,” Modi told the post.

“The electricity authority officials must be investigated because they are involved in corruption while selecting a contractor for the Koshi Corridor Transmission Line project and have received commission for importing electricity from India without running domestic power plants to full capacity,” he said.

Source: The Himalayan Times, May 23, 2019

Government urged to allow private sector to invest in power transmission

• *BUDGET COUNTDOWN*

UMESH POUDEL

In a bid to ensure that the country meets its ambitious hydropower production plan and boosts its economy, power producers have urged the government to let the private sector invest in transmission lines.

During the budget announcement for the current fiscal, the government had opened the door for the private sector to invest in transmission lines. However, the government failed to implement the provision and power producers have urged the government to fulfil its commitment in the budget for the next fiscal.

Shailendra Guragain, president of Independent Power Producers' Association–Nepal — the umbrella association of private sector hydropower developers in the country — said the government needed to fulfil its previous commitments. For instance, it had been announced earlier that developers of generation projects that start commercial operation by 2022-23 would be given incentives worth Rs 5 million per megawatt. However, the commitment has not translated into action to date.

“Independent power producers have been lobbying the government for the execution of the incentive facility following the announcement made through the fiscal budget 2014-15, but our pleas have fallen on deaf ears,” said Guragain.

He added that there was a huge misunderstanding among the federal, provincial and local governments on taxation system, jurisdiction of work and other issues. “So, the upcoming budget needs to address these issues and clearly define the roles of each tier of government.”

Private power producers have also urged the government to introduce one-window system for the private sector to boost the production and distribution of energy.

“Also, we have been facing problems supplying electricity due to lack of transmission lines,” he said, suggesting that the situation could be resolved if the government allowed private sector players to build transmission lines as per ‘Build and Transfer’ model.

Khadga Bahadur Bista, executive director of Millennium Challenge Account-Nepal, said the government should facilitate forest clearance, remove certain provisions of Environmental Impact Assessment, help in land acquisition process, address locals’ demands and formulate procurement policies to boost investment in the power sector.

“The Nepali government should go through energy policies of other developing nations to see how they are luring private sector investment in the energy sector and try to do the same here,” he opined.

Prabin Aryal, joint secretary at the Ministry of Energy, Water Resources and Irrigation, said there had been discussions on allowing multiple IPPs working in the same corridor to build a transmission line from power house to substation.

“However, nothing concrete has come out of the discussion yet,” he admitted, adding that the government is, nonetheless, serious about the issue along with other concerns raised by the IPPs.

Source: The Himalayan Times, May 22, 2019

NEA MD Ghising refutes corruption charges against him

Nepal Electricity Authority (NEA) Managing Director Kul Man Ghising has refuted the corruption charges levelled against him.

Addressing the meeting of Public Accounts Committee (PAC) of Legislature-Parliament here today, Ghising challenged lawmakers to prove the corruption charges against him and said, "I am ready to be hanged if I am proved guilty."

Among others, lawmaker and PAC member Aman Lal Modi, had claimed that Ghising was involved in embezzling billions of rupees in the name of collecting pending taxes from industrialists who have been using dedicated feeder and trunk line from the power utility.

However, Ghising not only refuted this charge but also said that lawmakers of various constituent assemblies have been obstructing development activities, which PAC and other parliamentary committees should look into.

"Baseless accusations only demoralise people who are dedicatedly fulfilling their responsibilities," said Ghising.

However, Modi said that NEA is involved in policy corruption amounting to billions in different projects, including in the 25-megawatt solar plant project and the Koshi Corridor Transmission Line Project.

"I may be criticised for levying corruption charges against NEA MD. But there has been financial embezzlement and corruption in a number of NEA-led projects and it should be investigated," said Modi.

Source: The Himalayan Times, May 23, 2019

NEA to prioritise distribution of smart meters next fiscal year

With an aim to reduce electricity leakage in the distribution system, the government has said it will introduce a special programme in the budget for next fiscal to distribute smart meters in Kathmandu Valley and to all industrial sector consumers.

As per government officials, the project will design, supply and instal advanced metering infrastructure (smart meters and associated facilities) for the entire Valley and industrial sector.

Prabin Aryal, joint secretary at the Ministry of Energy, Water Resources and Irrigation (MoEWRI), informed the ministry has focused on strengthening the distribution system in core urban areas, including Kathmandu Valley, and industrial sector.

“We plan to upgrade the traditional metering system to smart metering system for Kathmandu Valley customers in the first phase and industrial sector consumers in the second phase within the next fiscal year.”

Moreover, NEA has also set a target to reduce electricity leakage by three percentage points this year to 13 per cent of the overall electricity supply.

As per Aryal, installation of smart meters in said areas will help improve network visibility and hence reduce or defer network reinforcement costs, improve management of power outages, improve connection processes and stop electricity bypass, reduce costs for micro-generation customers, reduce losses and improve customer service across a range of routine activities.

“Our ultimately goal is to increase customer satisfaction,” he added.

Moreover, government will focus on mini-grid system for rural electrification as per flagship programme named ‘Ujyaalo Nepal’ previously announced by the government. “Electricity supply will reach every household across Province 2 and 3 within the next fiscal,” he informed, adding that in next fiscal the NEA has targeted to improve transmission backbone system for interrupted power supply.

Aryal informed that the ministry has set a budget ceiling of Rs 115 billion for upcoming fiscal 2019-20.

Source: The Rising Nepal, May 24, 2019

‘Nepal, Austria energy MoU milestone’

Nepal and Austria have signed a Memorandum of Understanding (MoU) on energy. Minister for Energy, Water Resources and Irrigation Barsha Man Pun and Austrian Minister for Transport and Technology Undes Rechar signed the MoU on behalf of their respective governments on Tuesday.

Both the countries agreed to exchange investment, technology assistance and experience in the field of energy sector, according to a press statement issued by Roshan Khadka, media coordinator of Minister Pun.

As per the agreement, both the countries will co-work in energy and alternative sectors, exchange technical support and study the hydropower projects jointly, read the press statement.

Speaking at the signing ceremony, Minister Pun said that he had taken the agreement signed between Nepal and Austria to invest in the energy sector as a milestone.

Pun urged the Austrian counterpart to invest and provide technical support in energy as the government of Nepal had a target to generate 15,000 megawatt power in the next 10 years.

Stating that Nepal has suitable opportunities for investment, he asked Minister Rechar to encourage the private sector of his country to invest in Nepal.

Minister Rechar said that his government was interested to invest and support the development of hydropower sector in Nepal.

He committed to providing technical and financial support to the government of Nepal in its hydropower projects.

“We have a good and long experience in hydropower and alternative energy sector. We want to share our experience with Nepal,” Minister Rechar said.

Source: My Republica, May 24, 2019

NEA installing 10 EV charging stations

Himal Lamsal

KATHMANDU, May 24: Nepal Electricity Authority (NEA) is all set to install 10 charging stations for electric automobiles across the valley within the next 6 months.

The state-owned utility aims to shortlist suitable locations for the charging ports to be set up, looking to promote the usage of electric vehicles (EV). The Office of Energy Efficiency and Leakage Control of the NEA has stated it has sped up the task of finalizing the locations.

Pramod Rimal, a deputy manager at the office, said that the NEA has published a notice, requesting interested firms to provide space for installing public charging stations that enables all kinds of electric vehicles to be speed-charged via 'DC Boost Charging'. "Our plan is to set up charging stations at places like corporate offices, super markets, cinemas and government offices," Rimal said. "Once we get appropriate space, we will install charging stations using our resources.

According to Rimal, each outlet will require three charging stations of 50 kilowatts each, and a parking space that accommodate at least 50 motor vehicles. The cost has been estimated in range of Rs 100-150 million.

NEA has already received about 10 proposals. "Three types of electric vehicles have been imported Nepal. These proposed stations will support all these vehicles," said Rimal.

Elaborating more on the turbo-charging feature of the proposed stations, Sagar Mani Gyawali, assistant manager of the NEA, said that hour should be more than enough to fully recharge an electric vehicle.

According to Gyawali, the propose stations will recharge EVs using any of the three ports – CHAdeMO, CCS and GBT. He also highlighted the economic advantage of using electric vehicles over other automobiles running on fossil fuel. "Fuel cost of a kilometer in electric vehicles is Re 1, while the same on motor vehicles using diesel and petrol goes up to Rs 7," added Gyawali.

CHARGING STATIONS NEEDED LIKE PETROL PUMPS

The plan is finally is being executed after almost a year since it was announced in the Policy and Programs of the government for FY2018/19.

At present, there are 12 BYD charging ports in Nepal installed by Cimex – the distributor of BYD in Nepal – and one on Sajha Yatayat premises in Pulchowk. Korean automaker KIA has also installed some charging stations in Nepal. Likewise, the President's Office and National Planning Commission Secretariat also have a charging station each.

However, they are not for public use. Shailendra Guragai, director of Independent Power Producers' Association, Nepal (IPPAN), suggests that the government should install charging stations in order to encourage the usage of EV.

"The government must formulate necessary laws to help create environment conducive for effective implementation of the plan," he said: "Mere policies are not enough. These programs won't materialize if we don't have necessary infrastructure"

Recent surge in emergence of electric vehicles in the streets, and the lack of charging services has started posing a problem to consumers. "We find petrol stations everywhere in abundance, but charging stations are nowhere in sight. There is an urgency to install charging stations at the earliest." Guragai added.

There are around 700 electric vehicles in Nepal.

Source: Urja Kahabar, May 24, 2019

Risk of Dona Lake burst could affect Marsyangdi Corridor's Hydel Project

Shriju Saral

Kathmandu- Dona, the glacier lake spread over the upstream of the Dharapani of Manang District has shown going to burst downstream that might destroy all the constructed and under-construction projects in the downstream areas.

This lake adjoining the River Marsyangdi has been found increasing from its surface level every year with the sign of crack possibility. The glacial lake is situated close to the Mt. Manaslu and is popularly known as “Thulagi Glacier” too.

This Thulagi or Dona glacial lake is situated at about 4,044 meters above from the sea level with the length of about 2.5 kilometer and width of about 600 meters. Due to the increment of the surface level every year, the geologist, as well as the Chairperson of Himalayan Research Expedition Mr Dhananjay Regmi, declares the risk of cracking of the lake at any time.

“Our team reaches there to measure the water-level in every 3 months which has shown the continuous increment of this Dona lake.” said Regmi to *Urja khabar* and also added, “It might burst at any time and might destroy all the hydropower projects construct in the downstream.”

According to the International Center for Mountain Development (ICIMOD), Dona is enlisted in the 3rd number among the glaciers with the risk of burst. Other two glacial lakes, Chhyo Rolpa and Ijma are also ranked 1st and 2nd dangerous among the risky glaciers respectively. Also the time before, these 2 lakes were managed to minimize from the risk, by conducting the force of Nepal Army and the expert team of the geologists.

Regmi then suggested to the government to take the risk-minimizing approach for the Dona Lake immediately. Applying water drainage system or utilizing the water of the

lake to produce the hydroelectricity are the two alternatives that have been proposed to the government. According to the research, from the implementation of this approach, the state is also merited being able to produce the hydroelectricity for sustainable management.

For the management of the glacier, Himalayan Research has already gone through the initial investigation. According to the research done in 2017 A.D. 36 million cubic meter of water is available in the lake. As the glacier is 76 meters deep and can be processed to electricity production by using the water from the depth of 36 meters.

Research has remarked that Marsyangdi Valley can be protected as well as the risk of human habitat, village and forest destruction too can be minimized if the glacial water is utilized for the electricity production.

The initial research also predicts that 45 megawatt of electricity can be generate if the lake is used as the water reservoir. According to Himalayan Research, electricity can be produced by constructing power stations in 3 different places. Research also suggests the rope way or the cable-car for the transportation of the construction materials and other equipment. It also states that this approach also reduces the investment of the project.

Firstly, the lake itself is contained with enough water with the required depth, so it can be used as a water reservoir and can reduce the cost of constructing a new one. Secondly, it also doesn't need to construct a settling basin. And the third one is that it can supply the electricity with full capacity. Fourth and the final point is, both, the geological and geographical situation are stated to be efficient enough to produce the hydroelectricity without any harm to nature and human settlement.

For permission to construct the project, Himalayan Research has submitted the application to the Department of Electricity Development. Regmi said "But the department is denying to provide stating the others under-construction projects in the region." and also added, "We are trying to work on something beneficial to the society and to the whole nation but they are denying for the permission."

As the discussions are going on the context of constructing big water reservoir, utilizing this natural reservoir seems to be very fruitful in a dual way to the state, if the alternative is implemented by the government.

On the first side, the risk of glacial burst would be sustainable solved and the projects completed and running on the downstream would also be out of the danger. And, on the other side, the target of government on hydroelectricity production can also be achieved at the same time.

Downstream Projects

About half a dozens of projects on the downstream of Dona Lake and Marsyangdi Hydropower has already been constructed. As well as, dozens of projects are under construction on both government and private investment. And if the risk of the lake is not managed in time all those completed and under construction projects will be devastated. Even the villages by the riverside will also be destructed by flood due to the burst of glacial.

The 70 megawatt Madhya-Marsyangdi and 69 megawatt Marsyangdi, constructed by Nepal Electricity Authority (NEA) and the next of 50 megawatt Upper Marsyangdi 'A' by a Chinese Company, Sinohydro is in operation in the downstream. Also, many other small projects constructed by private sectors are also in operation on the same area.

Similarly, Marsyangdi, Manang-Marsyangdi 100 megawatt, Lower Manang-Marsyangdi 138 megawatt, Upper Marsyangdi-2 600 megawatt are on under-construction. And dozens of projects are under construction in the tributaries of Marsyangdi River like, Dordi, Nyadi and many more.

But, all these projects are on the risk zone. The Dona Lake which is in the critical condition and is about to burst might impact all the projects at any time. This also shows the risk of loss of millions of investment made by the government and the private sectors on those numerous projects. For these all reasons, it seems to be very prior for the government to manage the lake on time and prevent the possible damages of nature and the state.

Challenge for Construction

There is a great challenge to transport the construction materials & equipment to the workplace as the Dona Lake is situated 4,044 m above the sea level. Also, the research has concluded that the water should be processed from the depth 36 meter down from the lake surface which requires helicopter than anything else to join the penstock pipe & other equipment.

It seems difficult to use helicopter but it is cost friendly in comparison to make a new roadway to reach the lake. And research also defines it is hardly possible to construct access road to the project location.

Tools can be transported through the ropeway & the cable car but Regmi notifies that the use of the helicopter is must for the transportation of big & heavy equipment. But in context to the geographical environment, there is no any sign of risk & problem to construct the targeted project. It reports no harm to the human settlement, forest & wildlife because all the construction are designed to be underground.