

Source: The Kathmandu Post; 12 January 2019

Bheri Babai calls bids for hydropower component

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The Bheri Babai Diversion Multipurpose Project finally moved to appoint a contractor to execute its hydropower component. The project office initiated the public procurement process Wednesday to select a contractor by publishing a notice inviting interested firms to apply for prequalification to construct the headworks, surge shaft, penstock and powerhouse.

Hopeful contractors have to send in their application for prequalification by February 22. After the project office finishes evaluating the proposals, it will ask shortlisted firms to submit their request for proposals in two envelopes--technical and financial.

The project office will then evaluate the technical proposal of the prospective contractors, and open the financial proposals of the bidders who are technically qualified.

According to Sanjib Baral, the government appointed project chief of Bheri Babai, the project office is planning to complete the public procurement process within five months. "Our plan is to mobilise the contractor at the project site to execute the hydropower component by this fiscal year," said Baral.

The multipurpose project should have hired the contractor for the second component by this date, but it was held up by delays in preparing the design and receiving approval from the Department of Irrigation. The department took more than two months to approve the design of the hydropower component of the multipurpose project.

Construction work on the irrigation component of the project is progressing at a rapid pace. The project office has completed digging more than 85 percent of the 12-km tunnel. The national pride project, which is using a tunnel boring machine for the first time in Nepal, has excavated more than 10.5 km of tunnel, the key component of the irrigation-cum-hydropower scheme.

The tunnel will be used to divert water from the Bheri River to the Babai River to irrigate farmland and generate electricity.

Bheri Babai is located in Bheri-Ganga Municipality in Surkhet district in western Nepal. It will have a 15-metre high dam 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 throughout the year in Banke and Bardia districts and generate 46.8 MW of electricity.

Bheri Babai 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 yield. 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 getting off the ground.

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

Source: My Republica; 12 January 2019

Construction work at Solukhola Dudhkoshi Hydropower Project stalled for 3 months

[Shikhar Jung Shrestha](#)

Works at the Solukhola Dudhkoshi Hydropower Project in Solukhumbu have stalled for the last three months after its Italian contractor abandoned the project site, according to officials of the developer company.

The Italian contractor – Cooperativa Muratori e Cementisti (CMC) di Ravenna – is the contractor that also abandoned its work at Melamchi Water Supply Project just before its completion.

Public relation officer of the developer company Sahas Urja Pvt Ltd, Kailash Niraula, informed that the contractor has left the project site in the middle, leaving the projects works uncertain.

The CMC staffers, who had left for Italy claiming to be on Christmas vacation, have not yet returned to Nepal to resume works.

The company had put forward a proposal of project termination before its staffers tried to abscond the country.

The CMC, assigned the task of the entire tunneling work, has completed digging only 140 meters of tunnel.

With the staffers leaving the project site, all its heavy equipment, tippers, excavators, and tankers are left idle since the Dashain festivals.

Project officials said they were trying to terminate the contract with CMC as it has stopped working.

Project officer Balkrishna Khakurel said they were trying to award the contract to another contractor.

However, it would be a lengthy process, he added.

Some of the completed works in the project site include workers' facilities, campsites, kitchen, and guesthouses.

Lack of electricity stalls bridge construction

Lack of electricity has hit the construction of bailey bridge over Benikhola in Solududhkhola Municipality. Indreni Dawa JV, the contractor for bailey bridge construction, has said that they have no electricity to use pumps to clear water from the pit dug for building the foundation. The pit is filled with water, stalling the construction work.

Local Beni Hydropower Plant has denied giving them electricity for the work, the contractor claimed.

“We are unable to clear water from the pit as the hydropower plant has denied supplying electricity to us,” Janak Shahi, officer of the construction company, said.

Shahi said the company needed only 3 kilowatts of electricity for the purpose.

The bridge is crucial for connecting Solududhkunda Municipality to Likhupike Rural Municipality and several surrounding villages such as Shalabeshi, Thupting, Chholing, Gumbung, Khamje, and Mopung.

Source: My Republica; 13 January 2019

Taskforce formed to solve problems facing Koshi corridor transmission line

A task force has been formed to solve the problems facing the Koshi corridor transmission line project in Dharan area.

According to Nepal Electricity Authority (NEA), a task force has been formed under the coordination of Chief District Officer of Sunsari, Prem Prakash Uprety. It will submit the report to the Chief Minister of Province 1, Sherdhan Rai, within a week.

The members of the task force include project chief, engineer at Dharan Sub Metropolis, stakeholders committee, contractor company, consultant company, and the representatives of the political parties at local level.

Dharan Sub Metropolis has argued that the transmission line will negatively affect the tourist places set up Ward No 20 where the problems on the transmission are surfaced.

Ward 20 urged the NEA in written to bypass the line. As a result, the construction work has been halted. The NEA, however, has said the issues raised by Ward 20 are not serious, because the transmission line would not affect these. As most of the process is over, the construction way could not be diverted.

Meanwhile, Chief Minister Rai has stressed that the Koshi corridor transmission line needs timely accomplishment because Province 1 was planning to bring investment in hydropower.

However, Acting Mayor of Dharan Sub Metropolis Manju Bhandari viewed that they were neither for thwarting the transmission line nor against development.

The NEA has proposed to set up the transmission line via Bhedetar-Chhoti, Morang-Sardu, Jaladhar area-Tamakham-Salbote-Chinde, and Danda-Bhyangjyan-Gorkha Memorial Park-Jalkanya Community Forest. But, the Sub Metropolis wants to have the line via Bhedetar-Chulikot (Ghumaunedanda) to Khaire-Kokaha river-Bhaludhunga.

Similarly, the decision to set up seven towers in the Koshi river for Hetauda-Dhalkebar-Inaruwa 400 KV transmission line has been protested.

The towers need to be set up by digging 40 meters in the river for the project. There is no alternative to expanding the line through the river, as changing the route involves technical difficulties, said NEA Executive Director Kulman Ghising.

"The issues raised by the Sub Metropolis do not clash with the expansion of the line. The effect of changing the route will befall the development of the whole country," he said.

He said that the NEA was ready to discuss ways of providing social security to the affected while calling for not entering the technical issue of the route change.

The NEA has signed the power purchase agreement with 28 private hydropower projects with the total 516 megawatts capacity so as to connect it to the transmission line.

Under the first part of the corridor project, construction of 220 KV double circuit line is underway along the 105 kilometers Inaruwa-Basantapur-Baneshwor-Tumlingtar. The project cost is estimated to be USD 37 million.

Under this section, construction of a 220 KV substation is ongoing along the Inaruwa-Basantapur-Baneshwor-Tumlingtar with the target of completion by February 2020. The project costs estimated USD 25 million.

And under the third part, construction of the transmission line has started along the 33 kilometers Basantapur-Dhungesanghu (Taplejung district) with the December 2020 completion target. Its estimated cost is USD 22 million. RSS

Source: My Republica; 14 January 2019

NEA offers to supply 100 MW of power to Dharan

Rohit Rai

Kulman Ghising, managing director of Nepal Electricity Authority (NEA), has offered to provide 100 MW of hydropower to Dharan Sub-Metropolitan City.

The offer has come from the head of the country's power utility to assuage locals not to create hurdle in construction of 200 kVA transmission line, also called Koshi Corridor Transmission Line – a national pride project.

The 105-kilometer power grid, which starts from Inaruwa of Sunsari to Tumlingtar of Sankhuwasabha district, is important to evacuate power from the Koshi River basin including Arun III. Ghising reached Dharan on Sunday to resolve problems that the project has been facing.

The sub-metropolis and the locals of Ward 20 have been arguing that the transmission line would make adverse impact on tourism potentials of the area. They have suggested that the transmission line be shifted toward west so that tourist sites are not affected.

Ghising's proposal to build a substation that will bring in 100 MW of electricity to the city has excited people of the area. He proposed to build the sub-station after hearing complaints of frequent power cuts from the local people.

"When I was on my way to Dharan, I saw that there was no additional line to bring electricity to the city and the electricity demand in the city is far higher than the supply," Ghising said, adding that the NEA would put its effort to build a sub-station and provide electricity to the city.

Adequate power supply is one of the cornerstones to development of the area as key sectors and industries cannot function smoothly without electricity. Industries and manufacturing plants only move to areas having adequate power supply which is necessity for smooth operation, said Ghising.

However, some section of the public suspect that the proposal to build a substation is a clever strategy employed by Ghising to divert attention, and contain dissatisfaction and anger of the people due to the transmission line project.

Jaya Kumar Rai, a parliamentary member of Province 1, said he was not sure whether NEA will supply 100 MW of electricity to Dharan. He further raised an important issue regarding the adverse impact that the proposed transmission line would have on the thriving tourism sector.

"Is the proposal just to divert attention of the people? We will have to hold further discussions with Ghising to discuss the matter," added Rai.

The sub-metropolis is facing acute shortage of electricity. Rai further added that the industrial areas in Tinkune are not receiving adequate power supply.

Secretary for Sunsari Chamber of Commerce and Industry, Mahendra Pradhan, said: "We have to bear a lot of trouble in doing business in the region due to lack of necessary infrastructure."

Similarly, chairman of Dharan town committee of Nepali Congress, Tilak Rai, said that a sub-committee should be formed to research viability of the claims to bring the much-needed electricity into the region.

"Industrial development in Dharan is stagnant as cost of operation of factories is. The power supply offered by NEA is very important for the development of the city's economy," he added.

Taskforce formed to help clear transmission line hurdles

KATHMANDU, Jan 14: A taskforce has been instituted to resolve local hurdles in Koshi Corridor Transmission Line.

Chief District Officer of Sunsari, Prem Prakash Upreti, is the coordinator of the taskforce. Chairperson of Dharan Sub-Metropolitan City Ward 20, project chief of the transmission line project, engineer of Dharan sub-metropolis, a representative of stakeholders' committee formed by the locals, contractor and consultant of the transmission line project, and local representative of major political parties are members in the taskforce.

The taskforce, which was formed in presence of Chief Minister of the Province 1 Sherdhan Rai, has been asked identify problems as well as measures to resolve them. It has been given seven days to submit its report to the Chief Minister.

The sub-metropolis has stopped the project works in Ward 20, arguing that high-tension electricity wires will make adverse impact on areas have tourism potentials. It has asked the NEA to shift the right of way of the transmission line westward by 200 meters.

However, Nepal Electricity Authority (NEA), the project implementing agency, has been maintaining that it is almost impossible to shift the right of way and that it would cause huge cost and time overruns as well as delay in power evacuation of plants under construction in the Koshi corridor.

Source: The Kathmandu Post; 15 January 2019

Trades in Upper Tamakoshi shares cancelled after surge

Rajesh Khanal

The Nepal Stock Exchange on Monday cancelled trades in Upper Tamakoshi shares after prices rose more than 50 percent exceeding limits set by the bourse. As per Nepse rules, a circuit break is applied and trading is halted for the rest of the day if the price of a company's shares increases or decreases by more than 10 percent.

Upper Tamakoshi shares were valued at Rs224 apiece when trading opened Monday. Investors rushed to purchase the company's shares by posting purchase orders for 243,000 units. As a result, the price surged to Rs336 per unit.

Nepse spokesperson Murahari Parajuli said the bourse annulled the transaction of 259 units of the company's shares after the abnormal rise in prices. According to him, a technical flaw at Nepse is the main reason behind the price surge.

Stockbrokers blamed Nepse for negligence by placing the wrong range for the company's share price for the day. "It has affected a large number of investors at a time when they are having low confidence in the secondary market," said a source. "Based on the opening price, the share price could go up to a maximum of Rs246.40 per unit."

Nepse has been undergoing bear trend recently. While the index has been hovering around 1,100 points, average daily transactions have also dropped to as low as Rs250-300 million.

Nepse listed 105.9 million units of Upper Tamakoshi shares on Thursday, following which transactions went online from Sunday. On the first day of trading, Nepse had provided an opening range of Rs74.89 to Rs224.67 per unit.

Upper Tamakoshi is a 456 MW national pride project located in north central Nepal. It is being developed by a subsidiary of the Nepal Electricity Authority, the state-owned power utility. The hydropower company made its initial public offering of 15.89 million shares on November 1 which was oversubscribed fourfold.

Officials of the Securities Board of Nepal (Sebon) were skeptical about the functioning of the newly launched online trading platform. "As investors have been suffering from technical glitches since Nepse launched online trading on November 6, such new problems will further hit the trustworthiness of the system," said a Sebon official who asked to be unnamed.

As per the source, Sebon suspects that similar problems have occurred with regard to stocks of other companies too. "The regulator will launch an investigation into the issue," the source said.

Despite the suspension of trading in Upper Tamakoshi shares, the market on Monday surged 11.74 points to close at 1,186.80 points. Trading groups except commercial banks posted gains in their stock prices.

Source: My Republica; 15 January 2019

Nepse cancels some Upper Tamakoshi share transactions

Nepal Stock Exchange (Nepse) has canceled share transactions of Upper Tamakoshi Hydropower Project traded above 10 percent price increase on the base price of Rs 224 per unit on Monday. Technical error in stock trading system had allowed trading of shares of the hydropower company even after price increased by up to 50 percent to Rs 336 per unit on Monday.

The stock exchange company said that such transactions happened because of a technical error in the system and was immediately corrected.

Shares of the hydropower opened for trading in the secondary market from Sunday.

Murahari Parajuli, the spokesperson for Nepse, said that Nepse immediately corrected after the technical glitch came into its notice. "Only 259 transactions, including those which have been declared invalid now, had happened by that time," Parajuli said.

Nepse had allowed the shares to be traded in the price band of Rs 100 to Rs 300 on Sunday. However, last traded price on Sunday was Rs 224 per unit. Parajuli said that the price range for the first day was set based on net worth of the company.

Nepse clamps individual circuit breaker if share price of listed company goes up or falls by more than 10 percent.

The hydropower company had issued public shares in three phases. All the primary shares were listed for trading on Sunday. It had issued primary shares to employees of promoter companies and members of Employees' Provident Fund three years ago, while shares for project-affected locals and general public were issued earlier this year.

Source: The Himalayan Times; 18 January 2019

Hydro exhibition

The second edition of the Himalayan Hydro Expo, which is being organised by the Independent Power Producers' Association, Nepal and Expo and Event Management Services will be inaugurated on Friday. The exhibition, which is being held at Bhrikutimandap, Kathmandu, is scheduled to be inaugurated by Vice President Nanda Bahadur Pun, as per a statement released by the organisers.

The statement adds that more than 85 exhibitors have booked over 100 stalls for the event. Organisers expect more than one lakh visitors at the exhibition.

The event will see participation of various stakeholders like hydropower developers, solar power developers, equipment manufacturers, financing agencies, insurance companies, consulting firms, contractors and engineers.

Source: The Kathmandu Post; 19 January 2019

Tanahu Hydro asks firms to start work

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Tanahu Hydropower Limited has given a contract commencement date to the two companies hired for the execution of the 140MW Tanahu Hydropower Project.

The project developer, a subsidiary of the state-owned Nepal Electricity Authority, on Wednesday directed CMC Ravenna of Italy and Sinohydro Corporation of China to mobilise workers for the project within 28 days.

Despite issuing the commencement date, Tanahu Hydropower Limited (THL) is doubtful if the construction of the storage project will begin on the time as CMC Ravenna, the Italian contractor has landed into a liquidity problem.

After THL signed the contract with the Italian and Chinese firms back in October to execute two packages of the hydropower project, the Italian company landed into serious liquidity problems. As per the contract, CMC Ravenna has to implement the first package of the hydropower plant, which includes the formulation of a detailed design and the construction of the headworks while Sinohydro Corporation has to execute the hydromechanical and electromechanical works under the second package.

“As we have already signed a contract with CMC Ravenna, it was our contractual obligation to give them the commencement date although we are doubtful if the Italian contractor will actually start working,” said Pradeep Kumar Thike, NEA appointed managing director at the THL. “However, if the contractor fails to start construction by the commencement date, we will initiate the process to terminate their contract.”

Also, the project developer is paying close attention to CMC’s case in an Italian court. On December 7, the Court of Ravenna gave 60 days to CMC Ravenna to settle its debts. In case it fails to settle its debts, the contractor will be declared insolvent, paving the way for the THL to terminate the contract, according to Thike. “However, if CMC Ravenna isn’t declared bankrupt, the THL will take further steps based on the Italian contractor’s action,” he said.

The THL has also denied advance payment to the Italian contractor as the developer fears the contractor might flee the country without executing the work. “Unless CMC deposits a performance guarantee at one of the Nepali banks, we will not release the advance payment,” Thike said.

The Tanahu Hydropower Project will be one of the biggest reservoir-type projects in the country, with an estimated annual energy generation capacity of 587.7 gigawatt hours in the first 10 years of operation. The project can generate energy for six hours daily during the dry season.

The THL is developing the project using a credit facility extended jointly by the Asian Development Bank, Japan International Cooperation Agency and European Investment Bank. The project is estimated to cost \$550 million.

Source: My Republica; 19 January 2019

Kulman Ghising recognized for ending power crisis in country

Kulman Ghising, Managing Director of Nepal Electricity Authority, has been felicitated for his significant work to resolve the acute power crisis ailing the country for over a decade.

Vice-president Nanda Prasad Pun provided a certificate of appreciation to Ghising in Kathmandu on Friday, amid a function organized at the Himalayan Hydropower Expo, 2019.

Ghising was felicitated on behalf of Independent Power Producers Association of Nepal (IPPAN), who is

the organizer of the expo that started at Bhrikutimandap in Kathmandu on Friday.

The electricity shortage ended after Ghising was appointed as the managing director of NEA in August 2016.

When Ghising assumed the post, the NEA was suffering an annual loss of Rs 8.89 billion. Ghising is credited for administrative and financial reforms that overturned the situation for the NEA that started making profits, while the perpetual power cuts across the country ended.

“The government is targeting to produce 15,000 Megawatt (MW) of electricity with the next ten years,” Ghising said on the occasion. “The NEA is working to promote investment environment in the power sector.”

Source: My Republica; 19 January 2019

Sinohydro completes work at Upper Tamakoshi powerhouse

Sinohydro Corporation Ltd, the contractor for the powerhouse of Upper Tamakoshi Hydropower Project, has completed the civil works of the underground powerhouse.

The contractor handed over the project to the executives of Upper Tamakoshi Hydropower Limited amid a function held in Dolakha on Thursday.

With the last tank of concrete casting in the powerhouse gate, works assigned to Sinohydro on the Upper Tamakoshi Hydropower Project was successfully completed, the company said issuing a press release on Thursday.

“It also marked the completion of all civil works of the powerhouse, nearly one year ahead of the expected generation target of the employer,” the press release stated.

CEO of Upper Tamakoshi Hydropower Limited Bigyan Prasad Shrestha, chairman of Bigu Rural Municipality Yudhisthir Khadka, and officials of the contractor company had attended the handover ceremony.

Sinohydro officials said that the construction works went smooth, despite facing many difficulties such as earthquakes, oil shortages, and road obstruction in the past few years.

Speaking at the handover ceremony, CEO Bigyan Shrestha said: “In the past eight years, we saw the completion of one node after another, and witnessed the deepening friendship between China and Nepal.”

Source: My Republica; 19 January 2019

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Source: The Kathmandu Post; 21 January 2019

Arun III Hydropower Project about 15 percent complete

Progress Report

DEO NARAYAN SAH

The Arun III Hydropower Project in eastern Nepal is about 15 percent complete. Construction of the \$1.4 billion plant began on May 12 last year. India's SJVN Arun III Power Development Company is building the 900 MW run-of-the-river type project on the Arun River in Sankhuwasabha district.

SJVN has been carrying out construction work at the plant at a fast pace after Prime Minister KP Sharma Oli and Indian Prime Minister Narendra Modi jointly laid the foundation stone for the project remotely in May during Modi's Nepal visit.

More than 2,400 workers are currently working on the construction site. Among them, 1,700 are Nepali workers and technicians. SJVN is constructing the tunnel and powerhouse of the project simultaneously. The dam will be 70 metres high and the headrace tunnel will be 11.7 km long. SJVN said that workers were digging a 393-metre diversion tunnel to channelize the water from the river to the dam at Fyaksinda Dobhan.

The project has awarded the contract to construct the diversion tunnel and the dam to Jay Prakash Associates, an Indian company. Ajay Prasad Gupta, senior vice-president of Jay Prakash Associates, said that the construction of a 62-metre diversion tunnel at Chisopani, Nayabasti of Makalu Rural Municipality 3 had been completed. "We have been working 24/7 to complete the tunnel," he said. "We have targeted to complete it by March and construct a temporary dam to channelize the water from the river to the dam by April."

Satish Kumar Sharma, CEO of SJVN Arun-3 Power Development Company, said that digging had started to build an underground powerhouse. The underground powerhouse will be 179.5 metres long, 22.5 metres wide and 49.5 metres tall. "Along with the powerhouse, a transformer house will be constructed. All explosions are being carried out under the supervision of the Nepal Army," he said. A track from Chhyangkuti to Pakhuwa of Diding was opened last week to begin work at the powerhouse site. "Work will go into full swing after the road is constructed by March." The construction of a bridge over the Khaguwa River on the Chhyangkuti-Diding road is at the final stage of completion. "Once the road becomes fully operational, it will enable us to work 24 hours a day by increasing the workforce to 6,000 individuals," said Sharma.

The project has acquired 175 hectares of land for the project, including 48.87 hectares of private land and 123 hectares of forest land. The project has distributed Rs1.22 billion in compensation to the owners of the private land. The power generated by the plant will be evacuated via a 217-km, 400 kV double circuit transmission line. The estimated cost of erecting 501 towers for the power line that will be connected to the Dhalkebar-Muzaffarpur transmission line is Rs19.77 billion.

"We have submitted the details for the construction of the transmission line by clearing all land hurdles in Sankhuwasabha, Bhojpur, Khotang, Udaypur, Siraha and Mahottari districts," said Sharma. "But the government has been delaying issuing the permit for the construction of the lines."

Investment Board Nepal and SJVN, an Indian government-owned entity, signed an agreement for the development of the Arun-3 project in November 2014. The project is slated to start producing energy by 2020, but that is unlikely to happen as the financial closure deadline has been pushed back twice by one year and six months. Nepal will receive Rs348 billion over 25 years from the project. The project developer will also provide 21.9 percent of the energy free of cost, which is worth Rs155 billion, plus another Rs107 billion in royalties.

Source: My Republica; 21 January 2019

NMB sings PPA for unique solar roof-top model

NMB Bank Ltd has signed a private power purchase agreement (PPA) with Saral Urja Nepal Private Limited (SUN) for a 50-KW grid-tie solar roof-top with net metering.

The agreement was signed in Kathmandu on Sunday. According to a statement issued on Sunday, the grid-tie solar roof-top will be placed at NMB Bank's head office in Babarmahal, Kathmandu. Under the agreement, SUN will install, own, and operate the solar roof-top for 15 years.

NMB Bank will purchase all the electricity generated from the solar roof-top at a price lower than their retail grid electricity tariff with no up-front investment, added the statement.

Source: My Republica; 22 January 2019

Solar over hydro

Sukhdev Shah

Without a massive and concerted effort to develop solar power, unmet electricity demand will continue to plague the energy sector, the economy, and the nation at large

Nepalis have always prided in the country's abundance of hydropower potential that will someday lead to national prosperity. Surveys have established that Nepal has 83,000 megawatts of hydropower capacity of which approximately half is commercially viable. General logic and the resulting government policy has dictated that even if just a reasonable portion of available capacity gets successfully harnessed, it would light up the country, fuel its industries, and leave a huge surplus for export, with potential annual revenue in the billions of dollars, as well as and boundless ancillary benefits to its citizens.

With this premise of 'affluence for all' in view, the government has declared the period between the year 2019 to 2029 as the energy

decade, and those extraordinary efforts will be made to supply modern energy to every household across Nepal in three years and meet all households' electricity demand within five years. In fact, the latest budget (2018/2019) provides a huge part of its capital budget of \$3.15 billion for hydropower projects to expedite efforts to make 3,000 MW in new capacity available over the next few years. However, this is not the first time such promises have been made. In fact, every National Development Plan since 1956 has made the harnessing of hydropower potential a top priority, and huge sums have routinely been allocated to finance various hydro projects, with the premise of huge increases in generating capacity over the planned period. With such seemingly irrefutable government commitment to hydropower development over the past several generations, it is then utterly bewildering that so little has been accomplished in the energy sector as far as hydropower is concerned.

Situation of hydro

The latest data on hydro capacity of government-owned projects stands at just 757 MW, less than one percent of total assessed national capacity and less than two percent of utilizable capacity. In addition, some 200 MW in hydro capacity has been added to total capacity by private power producers since the first private hydropower project went online in 2000, which is commendable but insufficient to meet the nation's unmet and ever-growing demands. As a measure of comparison, the closest neighbor to compare this performance to would be Bhutan, which has increased its hydropower capacity from a zero-MW level in the early 1980s to over 5,000 MW today, amounting to about a fourth of its commercially usable capacity.

More generally, a regional comparison of the growth of total electricity generation in Nepal also tells part of the story. Based on data available for the latest years—2010 through 2018—total electric generation capacity per capita from all sources increased from 27 KW to 35 KW in Nepal, the lowest in South Asia. Comparatively, per capita capacity grew from 42 KW to 96 KW for Bangladesh from a low of 173 KW to 2,563 KW for India; and for Bhutan, from 2,000 KW to 6,500 KW.

This poor performance has certainly not been a result of a lack of monetary investment. Although no firm data are available on budget allocations for hydro over long periods, preliminary data suggest the equivalent of at least \$10 billion was spent over the past half century, or approximately \$13 million per MW unit capacity while industry consensus pegs the typical cost of hydro development per MW at closer to \$2 million. Even accounting for advances in technology or cost reduction over the years, this incredibly large differential brings up a serious case of mismanagement of development funds in the energy sector and, most likely, elsewhere in the economy where government has been entrusted with large amounts of public money for investment.

Explore alternatives

In view of this magnitude of failure to realize the country's hydro potential, it is now time to look for alternative solutions. Further, these solutions should severely limit reliance on government management, and should also consider alternative approaches to funding and implementation that are also not so reliant on government so as not to repeat the mistakes made with hydro 'development' over all these years.

The search for additional resources for self-sufficient power generation capacity would need to focus on renewable sources as Nepal is not endowed with traditional natural energy supply sources such as coal, fossil fuels, and natural gas. Of the potential renewable resources, wind, bio-gas, and waste-to-energy sources remain at the margin of accessibility because of their low supply potential and uncertain cost advantages.

This then leaves solar energy as the primary challenger to traditional energy sources in terms of accessibility and cost advantages. Regarding accessibility, Nepal presents the ideal conditions for receiving plenty of sunshine, especially in the country's low plain areas that have only a few months of partial cloud cover, and then cloudless skies with strong sunrays akin to a tropical country. In terms of cost, an initial analysis of solar vs hydro-generated electricity shows solar gaining advantage in the range of 20 to 25 percent of what Nepal Electricity Authority (NEA) quotes as sales price per unit. Further, it is worth noting that the cost of photovoltaic systems shrank by a factor of five from 2010 to 2017 and continues to decrease substantially.

While the private sector has been active in the development of solar energy for at least a decade, primarily in urban centers as a supplement or stand-by to NEA-supplied electricity, projects have been at a relatively small scale and remain inadequate for meeting the country's continually expanding energy needs that now exceeds domestic supply by more than a third.

The industrial-scale development of solar power projects should therefore become the primary source of new supply to the national grid as these larger projects would also substantially benefit from scale related to costs associated with logistics, transport, construction and installation. Further, regarding speed of implementation, a prominent distinction of solar parks is that while conventional industrial-scale plants including hydro can take many years from concept/design to commissioning, solar parks of industrial-scale (10 MW and above) can be completed in turnkey fashion within a matter of months. Without a massive and concerted effort to develop solar power, unmet electricity demand will continue to plague the energy sector, the economy, and the nation at large. This drive for large-scale size investment in the solar sector should have an objective of supplying needed to meet energy demand of 1,000MW capacity in short order that would help cover the current supply gap of about 600MW and rising, and then continuing to add at least 200MW capacity per year for the immediate foreseeable future, through 2030.

Private sector onboard

Also, much of the financial resources for this additional solar power capacity should come from other than the traditional sources, assumed to be government funding, foreign grants, and loans. One potential source that has been largely unfamiliar to Nepal is private equity, through firms that typically purchase equity shares of existing or planned companies or projects on a majority interest basis and engage domestic partners in management and marketing support.

Participation by established private equity firms will require that new solar power firms operate under NEA supervision and that their share value is protected by government guarantees. For making government guarantee more secure, NEA can and should arrange a second layer of guarantee from international development institutions, mainly the World Bank and the Asian Development Bank which typically work with client countries for loan securitization of targeted projects.

Funding of solar projects with private finance sources operating in international capital markets will be a significant departure from the established practice of international loan funding that, as noted above,

ends up in project delays, high cost of production, and unwanted government interference that tends to undermine efficiency and reduce the credibility of decision-making for private sector firms.

Globally, solar has been the fastest-growing source of new energy since 2016, outstripping the growth in all other forms of power generation for the first time that the leading experts hail it as a “new era”. The Paris-based International Energy Agency (IEA) has also predicted that solar’s global capacity in five years’ time is expected to be greater than the current combined total power capacity of India and Japan. It is time that Nepal and its citizens join in and benefit from this global phenomenon.

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Source: The Himalayan Times; 22 January 2019

Construction work of Chilime-Trishuli transmission line halted

The Division Forest Office of Rasuwa district has halted the construction work of the 220 KVA Chilime-Trishuli transmission line that falls in the forest area under its jurisdiction. Shova Subedi, head of the Division Forest Office, has accused the project of not getting the required approval from the office to use the forest area to build the transmission line.

According to Kedar Silwal, head of the Chilime-Trishuli Transmission Line Project, they have already submitted the proposal of forest clearance to the Cabinet. The Cabinet is yet to decide on the proposal. Silwal claimed that there are no trees in the forest area where the project has been erecting the poles for the construction of the transmission line. "In fact, the whole area where the poles are being set up is devoid of any trees."

"In such a scenario I see no justification in the construction works being halted by the division forest office," he stated.

However, Subedi said that even if there are no trees in the area it is mandatory for the project to receive forest clearance approval before starting any construction activity.

Meanwhile, Silwal informed that the transmission line is being built at a high altitude, so construction works need to be completed within the dry season. "If we are unable to build the transmission line on time then energy being generated by different hydropower projects in the area will go to waste."

According to him, almost 170 megawatts of electricity could go to waste if construction of the Chilime-Trishuli transmission line is delayed. The project has set a target to finish building the 27-kilometre long transmission line by the end of this fiscal year.

Silwal further added that the delay will directly affect the 110-megawatt Rasuwagadhi hydropower, 42.5-MW Sanjen hydropower and 14.8-MW Upper Sanjen hydropower projects. Moreover, there is also a provision whereby Nepal Electricity Authority could fine the project for not completing construction works on time.

Meanwhile, the project has already distributed the entire compensation amount that needs to be paid for acquiring land for the project from private land owners.

The 220 kVA Chilime-Trishuli transmission line project is being jointly constructed by the European Union, German Development Cooperation/KfW, European Investment Bank and the Nepal government at a total cost of about 65 million euros.

The project will also include the construction of the 220/132 kV Trishuli 3 B Hub Substation.

Source: My Republica; 23 January 2019

Upper Tamakoshi to complete by 2019-end

Works of Upper Tamakoshi Hydropower Project (456 MW) will be complete by the end of 2019 if the project maintains the current pace of works for the remainder of the year, project officials say.

Unlike past schedules, all six units of the project will start generation almost at the same time. “The project will start power generation if everything goes as planned by the end of this year,” Ganesh Neupane, the spokesperson for Upper Tamakoshi Hydropower Limited – a subsidiary of Nepal Electricity Authority (NEA), told Republica.

“Both the contractors are working as per the reassignment of the works for fixing penstock pipes made last month. They will complete works by the deadline if work pace is not affected,” said Neupane.

At present, the contractor is busy fitting penstock pipes at the end of the tunnel to channel water into the underground powerhouse. It is one of the most difficult tasks of the project, according to officials. The project has assigned the task of fitting penstock pipes in the most difficult stretch of 367 meters to Austrian firm Andritz Hydro, while Indian firm Texmaco is fitting pipes work on the remaining 367-meter segment.

Texmaco had received contract for both the sections. However, project officials had to rearrange works as the Indian contractor remained idle for months.

“Both the firms are working on their full capacity. We are hopeful that the penstock pipe works will be completed by November or early December,” added Neupane.

The supply of penstock pipes to the project site from Sunkoshis as well as the import and supply of remaining pipes is also going on smoothly, according to project officials.

The project, which is expected end electricity imports at least during the wet season, has seen multiple delays after the 2015 earthquakes and the subsequent Indian blockade. The project was initially expected to be completed by the end of 2015.

According to the project, all six units will come into generation within a period of six months, or one unit every month.

The delay means the project will have to pay interest on loans worth Rs 31 billion without earning even a penny. The project’s revised estimated cost is Rs 49 billion. But total investment in the project will soar to Rs 70 billion if bank interest is counted. The project is paying an average interest rate of 11 percent. The developer has borrowed Rs 10 billion from Employees’ Provident Fund, Rs 6 billion from Nepal Telecom and Rs 2 billion each from Rastriya Beema Santhan and Citizen’s Investment Trust. Similarly, it has borrowed Rs 10.8 billion from the government.

Many are worried that the project no more remains lucrative because of cost and time overruns. There were also some rational grounds for cost overruns due to realignment of the tunnel.

The company is in negotiation to borrow an additional Rs 8 billion from EPF and other lenders.

“The project cost, including the interest rates till the end of 2019, will be close at Rs 70 billion,” added Neupane.

Source: My Republica; 23 January 2019

‘Forest office halts work on transmission line’

Division Forest Office (DFO), Rasuwa, has instructed Nepal Electricity Authority (NEA) to stop transmission line construction work in forest areas of the district.

Kulman Ghising, managing director of NEA, said that officials of the Division Forest Office, Rasuwa, have stopped works to lay foundation stone for Rasuwa-Trishuli 220 kV transmission line. “They have asked us to stop works on even bare hills which fall under their jurisdiction,” he added.

If the transmission line is not built on time, a total of 167.3 MW of hydropower generated by Rasuwagadhi (110MW), Sanjen (45.2 MW) and Upper Sanjen (14.8 MW) projects – the subsidiaries of Chilime Hydropower Company – will go to waste. NEA will have to pay compensation to these projects if it fails to evacuate energy generated by these projects.

After realizing that there will be delay in getting go-ahead to clear forests from authorities concerned, NEA had decided to start works from barren areas of Ghaledarbar between Gatlang and Grebich.

Kedar Siwal, chief of the transmission line project, said that all works had to be stopped after Shova Subedi, chief of Division Forest Office, warned the project officials to stop work or face consequences until a decision is made on the use of land for the purpose. “If work in geographically-difficult areas is stopped now, it will be difficult for us to meet the construction deadline,” he added.

The project submitted a proposal to the cabinet to cut down around 4,000 trees in 41 hectares of forest areas for the transmission line about a week ago. It will take around two months to get the go-ahead to clear forest area for the transmission line.

The project is estimated to cost US\$ 35 million. German Development Bank (KfW) and European Investment Bank are financing the project.

Source: The Himalayan Times; 24 January 2019

India agrees to sell additional 100 MW power

The Indian government has agreed to provide additional 50 to 100 megawatts of electricity to Nepal to meet the growing energy need of its neighbouring country. India had agreed to sell more electricity to Nepal during the ongoing Nepal-India energy secretary-level talks, also called the Joint Steering Committee (JSC) meeting, in Pokhara. The issue was raised during the joint secretary level joint working group (JWG) meeting held today. The JWG has agreed to forward Nepal's proposal to the JSC meeting scheduled for tomorrow.

“The Indian government has agreed to provide additional 50-100 megawatts of electricity to Nepal from Tanakpur and Dhalkebar cross-border transmission lines,” a high-level government source told The Himalayan Times. “The JSC meeting will finalise the additional quantum of electricity that India will sell to Nepal.”

At present, state-owned Nepal Electricity Authority (NEA) is importing 521 megawatts of energy from India. Nepal's peak electricity demand stands at 1,105 megawatts. This means Nepal is meeting about half of its energy needs through India's support.

This situation will likely change once 456MW Upper Tamakoshi hydroelectric project comes online. Once this project and couple of other smaller projects start generating electricity, Nepal is expected to become an energy surplus nation during the rainy season. This will enable Nepal to export electricity during the wet season. Nepal has thus floated the concept of forming an energy bank with India to swap electricity.

The joint-secretary meeting held today has recommended that a joint technical team, comprising officials of Nepali and Indian ministries, be formed to make arrangements to push forward the concept of energy banking. The issue will be discussed during tomorrow's JSC meeting.

The JSC meeting will be attended by the Nepali delegation led by Energy Secretary Dinesh Kumar Ghimire and the Indian team led by Ajay Kumar Bhalla, secretary of the Ministry of Power.

Tomorrow's meeting is expected to review the construction modality of Butwal-Gorakhpur cross-border transmission line that is being built jointly by NEA and Central Electricity Authority of India. India has shown keen interest to build the cross-border transmission line and has assured to bear the total construction cost, according to the government source.

Discussions on construction of two more cross-border transmission lines — Duhabi-Purnia and Lamki-Bareilly that are included in the energy master plan of the two countries – will also be held tomorrow. Tomorrow's meeting will also review the work progress of 900MW Arun III hydropower project and hold discussion on construction of 900MW Upper Karnali hydropower project.

The meeting will also review the study report of 132 kVA and 33 kVA transmission lines in Dhangadhi, Nepalgunj and Bhairahawa.

Source: The Himalayan Times; 24 January 2019

Japan urged to invest in Nepal's hydel sector

Minister for Energy, Water Resources and Irrigation Barsha Man Pun, has urged the Japanese government to increase investment in the energy and hydropower sector. During a meeting with a delegation led by the deputy director looking after international affairs of the Agriculture and Forests Ministry of Japan, Takami Nakada, today, Minister Pun thanked the Japanese government for its technical and financial support to different projects.

He also expressed the belief that Nepal would get additional support in the days ahead. Citing that Japan is an old development partner country of Nepal, Minister Pun thanked the Japanese government for its support in Nepal's development, as per Minister Pun's secretariat.

Minister Pun further said that the role of irrigation was important in the development of the agriculture sector of Nepal, adding that the government has been moving ahead with some big projects including Bheri Babai and Rani Jamara Kulariya for the same.

Similarly, Deputy Director Nakada said that the Japanese government was ready to provide further support in the days ahead, mentioning that Japan has been providing economic and technical support to Nepal.

“We have come here to carry out a study and research about possibilities in Nepal. Japan's private sector is willing to invest in Nepal.”

Japanese Ambassador to Nepal Masamichi Saigo was also present on the occasion.

Source: My Republica; 24 January 2019

Minister Pun urges Japan to further invest in Nepal's hydropower sector

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