Source: The Kathmandu Post, July 5, 2014

Govt to purchase solar power from pvt sector

SANJEEV GIRI

KATHMANDU, JUL 04 -
With load-shedding unlikely to be eliminated at least for the next three years, the government is coming up with a solar power initiative to fill the energy gap.

As per the government's plan, it will purchase solar power from the private sector by signing power purchase agreements (PPA) with them. "There have been talks about making a policy statement through the budget on purchasing solar power from the private sector," said Natinal Planning Commission (NPC) Vice-chairman Govinda Raj Pokharel.

With many foreign companies proposing to invest in Nepal, the government has planned to adopt a policy under which it should not the bear the risk.

As per the planned policy, the government will call a tender and "the PPA will be signed with the company that offers the lowest rate", said Pokharel. He said there are many companies that have proposed supplying solar power at less than Rs 10 per unit. Currently, the Nepal Electricity Authority (NEA) purchases power at Rs 8.40 per unit from private sector hydropower developers in the winter and Rs 4.80 per unit in the rainy season.

However, the PPA rate for solar power might be a little higher than what the NEA pays to private sector hydropower developer. "But some donors have expressed interest in bearing the additional costs the NEA faces," said Pokharel.

"Although solar power is not an alternative to hydropower projects, the energy from hydropower projects can be saved for night and evening times by supplying solar power during the day time," he said.

According to Pokharel, they are yet to estimate the amount of solar energy to be supplied. "We also have to calculate how much cost the country has to bear for not having energy, and for getting energy from solar plants at a relatively higher price," he said.

Companies that have expressed interest in investing in solar plants have sought some incentives from the government. Pokharel said they have demanded the construction of transmission lines from the plant to evacuate the generated power to the national energy grid, value added tax and customs duty waiver on equipment they import for the plant, and exemption of environment tax as solar plants do not affect the environment.

"It is in fact attractive offer from the solar companies as the government should not provide cash incentives to them like it is offering to the hydropower developers," he said.

Energy Minister Radha Gyawali has also recently announced establishing six big solar plants across the country with an aim of generating 325MW energy in the next three years.

As per the plan, the private sector will be asked to install six plants having capacity of at least 25MW each, while the government will install two plants having capacity of 50MW each. The World Bank has also pledged to build a separate solar plant having capacity of 25MW, according to the Energy Ministry.

Source: Republica, July 5, 2014

New public-private model for hydropower development in offing

RUDRA PANGENI

KATHMANDU, July 4 : The government, which is in the last leg of detailed engineering of Madi hydropower project in Rolpa and Maiwa hydropower in Taplejung, is mulling over a new model for the projects, under which the projects will be jointly developed by the government, general public, cooperatives and the local bodies. Combined production capacity of the two projects is 25 MW.

New model of hydropower development is under preparation in the Ministry of Energy after the Department of Electricity Development (DoED) forwarded the proposal.

Information Officer of DoED Gokarna Raj Pantha said that they have forwarded the model that envisages 50 percent investment from the local government, private sector, local cooperatives and local residents and another 50 percent by DoED, Nepal Electricity Authority and other government agencies.

Officials said that the model is coined as ´Janatako Jalvidhyut Janatakai Lagani´ and it is said to be extended from ´Janatako Jalvidhyut´ endorsed by erstwhile government of UCPN-Maoist Chairman Pushpa Kamal Dahal in 2008.

Photo Courtesy: Ministry of Energy

Energy Minister Radha Gyawali explained that the model to empower the local people, bring in resources earned from the foreign employment into the hydro sector.

Gyawali also wanted to expand the model to larger projects to make a total of 300 MW within three years.

The policy and program of the government unveiled last week also has mentioned of hydropower development in that model.

Pantha said that the detailed engineering study of first two projects will be completed within six months and they will go to the implementation to be led by DoED itself. But Minister Gyawali said that NEA will lead the implementing agency to develop the projects.

The idea of collecting investment from local bodies is aimed at bringing royalties collected from the hydropower companies to new hydropower projects.

Fifty percent of royalty received from hydropower projects is given to the local bodies. Hydropower projects are to pay 2 percent of total income for the first 15 years and 10 percent in the second 15 years and Rs 100 per KW installed capacity for 15 years and Rs 1000 per KW installed capacity and 20 percent income tax.

Pantha added that Ikhuwa (8 MW) of Sankhuwasabha, Kabeli (12 MW) of Taplejung, Chepekhola (8 MW) of Lamjung, Dotigadh (5 MW) of Dadheldhura will be included in the second phase. The DoED has already carried out pre-feasibility studies for these projects.

Former energy secretary Balananda Paudel said that the model will be useful to finance projects but he expressed doubts on implementing agencies.

"The DoED is not capable enough to carry out projects and NEA´s track record of implementing projects speaks of its inefficiency," charged Paudel.

However, the model needs to be approved by the Ministry of Finance and National Planning Commission.

Member of NPC Chandra Mani Adhiakari said that the model can be feasible if proper implementing mechanism is instituted. "Generation unit as envisioned by the government through policy and programs by unbundling NEA can be helpful in this regard," added Adhikari. However, he said DoED should not be the implementing agency.

Source: The Kathmandu Post, July 6, 2014

Solar energy to get major priority

KATHMANDU, JUL 05 -
Solar energy will be given a major priority in the budget for the next fiscal year, with the National Planning Commission (NPC) proposing a number of initiatives in the sector.

According to NPC officials, the budget is expected to announce interest subsidy on bank loans taken to install solar plants with capacities enough to meet the demand of a household.

A senior NPC official said the scheme has been proposed to promote rooftop solar plants in urban areas, which would help save energy from hydropower projects.

"The government will provide interest subsidy to some extent on loans taken from the banks to install the solar plants," said the NPC official. "As it is costlier to install solar plants with higher capacities, the government has planned to subsidise interest."

The official said the scheme has been proposed to be launched under the slogan "Ujyalo Ghar, Ujyalo Nepal".

After Govinda Raj Pokharel's appointment as vice-chairman of NPC, the solar energy sector is getting major government priority. Pokharel had earlier served as executive director of Alternative Energy Promotion Centre (AEPC).

Another imitative proposed by the NPC is offering subsidy on solar pumps used to irrigate farms. There have been talks about providing subsidy up to Rs 500,000 on the pumps.

Pokharel said the budget would focus on solar energy as an alternative source of power. "Obviously, there will be incentives for solar energy in the new budget," he said.

Meanwhile, the government has also planned to purchase solar power from the private sector through the process of signing power purchase agreement (PPA).

Solar power is expected to help reduce load-shedding by saving hydroelectricity for peak hours in the evening.

According to NPC, some international companies have proposed solar power at less than Rs 10 per unit, which is quite high compared to what Nepal Electricity Authority pays to private sector hydropower developers in the dry season.

NPC, however, said a few donors are also interested in covering some losses NEA bears for purchasing solar power.

Source: The Himalayan Times, July 7, 2014

Imported power wasted while east faces loadshedding

Himalayan News Service

Biratnagar, July 6

Lack of coordination between Nepal Electricity (NEA) Grid and Load Dispatch Centre in Duhabi of Sunsari is causing wastage of imported electricity at a time of power crisis.

Nepal has failed to avail of 90-megawatt electricity imported from India's Kataiya powerhouse meant for the east of Koshi. If all of the imported power is supplied, load-shedding could be cut down by four hours in the east.

At present, industries and households are facing 12 and 10 hours' power outage respectively in the eastern region. Increasing power cuts are pushing factories and industries to the verge of closure.

An NEA source said that there was lack of coordination after Load Dispatch Centre started making load-shedding schedule which was earlier prepared by the Grid.

Logbook at NEA shows that imported power was used to its fullest only for two days which was three months ago, and for the last two months the energy is being wasted , Duhabi Grid source said.

According to NEA employees, if loadshedding schedule is prepared in coordination, current outage hours could be halved.

Industry Organisation Morang Energy Coordinator Rakesh Surana said that all 90-megawatt electricity could be supplied if power distribution was made separating areas that take maximum and minimum load.

Duhabi Grid Chief Prakash Narayan Singh, however, refuted the allegation of lack of coordination and said that his office was coordinating with Load Dispatch Centre.

"I cannot store electricity. Power supply is in proportionate to load carrying capacity," Singh added. He said that adjustment of the load pattern could increase power supply and reduce power outage.

Source: Republica, July 7, 2014

PTA high on agenda during upcoming talks with Modi, Swaraj: Officials

RUDRA PANGENI

KATHMANDU, July 6 : Power Trade Agreement (PTA) will be high on agenda during the upcoming talks with India´s External Affairs Minister Sushma Swaraj and Prime Minister Narendra Modi, according to government officials.

The energy trading agreement is said to open Nepal´s energy market to the southern neighbor and also draw investment in the country´s hydropower sector.

Swaraj is visiting Nepal in the third week of July. Similarly, Modi is visiting Nepal in August.

"PTA will be beneficial for both Nepal and India. It will create a foundation for hydropower development in the country," Energy Secretary Rajendra Kishore Kshatri told Republica.

The government has included PTA with India in its policies and programs for the upcoming fiscal year. The agreement will provide a ground for free energy trade between the two countries. Also with the market assured, it will open new avenues for hydropower development in the country rich in water resources.

"PTA with India should be in the top of priority list as it guarantees market for hydropower generated in the country and will pave the way for power trading, like other commodities, between the two countries," Radhesh Panta, CEO of Investment Board Nepal, said. "The agreement will assure and encourage financing institutions, both national and international, which are still hesitant to invest in Nepal´s hydropower sector saying that there is no market assurance."

For trading of power between the two countries, the Dhalkebar-Mujaffarpur transmission line is under construction. Similarly, another cross-border transmission line that links Bardaghat of Nepal to Gorakhpur of India is currently under study.

Nepal had sent a proposal of Memorandum of Agreement (MoU) for signing PTA with India in 2010. But India remained silent on the proposal for four years. However, Nepali officials are excited after India recently forwarded a proposal document from India that says of ´energy cooperation´. They have described the proposal as a gesture for energy cooperation.

When asked whether Nepal will request India to develop any mega projects during the bilateral talks, Secretary Kshatri said that they will be ready to take the Pancheshwar Multi Purpose (PMP) Project forward.

Pancheshwar is to be developed with equal investment from Nepal and India. As per the agreement, the two countries will share water and power equally.

After attending Modi´s inauguration, Prime Minister Sushil Koirala had said that India wants to support Nepal to develop a mega project.

Works on Pancheshwar is not gaining pace, as India has not approved Terms of Reference (ToR) of Project Development Agreement prepared by Joint Standing Technical Committee (JSTC) in 2009. The ToR has already been approved by Nepal.

Talking to Republica, Energy Minister Radha Gyawali said that Indian Ambassador to Nepal Ranjit Rae recently told her that India wants to speed up the works by establishing joint project implementation office in Kanchanpur.

Nepal and India are also conducting joint study for Saptakoshi High Dam Project in the Koshi River. The study, however, is going on a slow pace. Similarly, India has decided against continuing the

Naumure Hydropower Project after Nepal wanted to include irrigation component in the project. The Indian government had agreed to develop the project on grant and agreement to this effect was signed in New Delhi in 2008.

Rahughat Hydropower Project (30 MW) is being developed in Myagdi under grants from India. However, the project is also getting delayed because of various reasons.

Source: The Kathmandu Post, July 7, 2014

Six hurt while digging hydro project tunnel

KATHMANDU, JUL 06 -

At least six workers, including one Chinese national, were injured while digging a tunnel of the Upper Madikhola Hydropower Project in Kaski district on Sunday.

Two of the injured are receiving medical treatment at Manipal Teaching Hospital in Pokhara while the rest have returned home after receiving primary medical attention.

According to Gun Prasad Baral, chairman of the All Nepal Revolutionary Trade Union, the hydropower project workers were injured when a boulder fell down on them during tunnel construction at Sildujure-7. Santosh Lama of Makwanpur and Himal Rai of Khotang are undergoing treatment at Manipal Hospital.

Project Coordinator Bir Bikram Rana said he has no knowledge of the incident

as he is currently on leave to attend a wedding ceremony.

Earlier, 16 workers were trapped after the tunnel of the under-construction hydel project collapsed on April 25. Three workers had lost their lives while 12 Nepalis and a Chinese national were among those rescued safely. One technician was also killed in a landslide at the same site on September 5, 2013. The hydropower project plans to generate 25MW electricity.

Source: The Rising Nepal, July 7, 2014

Dhalkebar-mujaffarpur transmission line works to begin from Monday

By Ramesh Lamsal, Kathmandu July 6: The works of the Dhalkebar-Mujaffarpur Transmission Line said to be important for resolving energy crisis of the country are to begin from Monday delayed by three months.

There were procedural or technical reasons and due to customs clearance for the delay. The materials stranded in Birgunj customs have reached the site and works will begin from Monday, project chief Badri Narayan Shah told RSS.

The formal laying of foundation will be after some time and the Nepal Electricity Authority (NEA) has been urged for the same, said Shah.

The project has already notified landowners for compensation for 159 families of ten VDCs of Mahottari district. They will get compensation for three dhurs to maximum of 17 dhurs of land.

Locals are excited after notice was published for compensation by the District Administration Office, said Shah, informing that there will be no problems on compensation.

Compensation will be distributed in Bhangahan, Singpahi, Dhamaura, Ramgopalpur, Sahasaul, Sonoul, Manara, Ikdarabela, Sahashram, and Bathnaha VDCs in the first phase. RSS

Source: Republica, July 8, 2014

ADB giving $180m to tackle power shortage

REPUBLICA

KATHMANDU, July 7: The Asian Development Bank (ADB) has approved a $180 million loan to help Nepal to overcome its crippling power shortages and export surplus power to neighboring India.

Issuing a press release, the Manila-based multilateral donor said the loan will help Nepal Electricity Authority (NEA) to finance a substantial upgrade and expansion of transmission and distribution lines and substations, allowing the transfer of up to 2,000 megawatts of power to main load centers in the Kathmandu Valley.

"The network expansion will give the ability to export at least 1,200 MW of electricity to India, once a second 400 kv cross-border transmission line from Bardaghat to Gorakhpur in India is complete," the statement added.

The transmission line is under study in support of ADB.

With six new hydropower plants due to come on stream over the next three to six years, Nepal expects to have a substantial wet season supply surplus for export by 2018.

"The limited generating capacity and weak power transmission and distribution networks mean two-thirds of the households in Nepal have no electricity," the press release quoted Lei Zhang, Energy Specialist with ADB´s South Asia Department, in the statement.

The project will also help Alternative Energy Promotion Centre (AEPC) to provide electricity to the hard-to-reach rural communities, with mini-grid renewable energy systems, including mini hydroelectric, solar and wind generation, through provision of an ADB credit line and the ADB-administered Strategic Climate Fund.

"Through an associated capacity development technical assistance, the project will support AEPC to develop a feasibility study for a large-scale wind farm," the statement added.

Since 2009, ADB has helped Nepal reform and overhaul its power sector and the new assistance will aid the government´s target of providing grid power to 75 percent of the population, with off-grid energy for the remaining 25 percent, by 2027.

Source: Republica, July 8, 2014

PTA with India

REPUBLICA

Serious initiation necessary

With the much-awaited visit of Indian foreign minister and prime minister to Nepal being worked out, the government officials here are expecting a major cooperation between the two countries in the hydropower sector which would benefit the both. The Indian envoy to Nepal, Ranjit Rae, has already begun his homework to facilitate the visit by meeting concerned government officials in which he has assured of a major economic package. The booming economy of our close neighbor India has become one of the most important topics of discussions lately as we believe that Nepal could benefit a lot from it. Due to its strategic location too, Nepal has no other option than to find ways to further its cooperation with the southern neighbor and begin charting the course to build a prosperous Nepal. And, development of one key sector that could benefit both Nepal and India is the hydropower sector, as Nepal has immense potential but has not been able to harness it. Along with the economic growth, India will need a huge amount of energy in the immediate future and Nepal has the capacity to fulfill that need. Therefore, any cooperation between the two countries in the hydropower development would be beneficial to both the countries.

Good news is that cooperation in the hydropower sector has already begun, as few Indian companies have already received the licenses to survey and build different hydropower projects. However, due to the lack of Power Trade Agreement (PTA) between the two countries, the investors are yet to be assured of the outcome. Hence, the government officials, while talking to this daily, have put the signing of PTA high on the agenda for the Indian dignitaries' visits. PTA would not only open Nepal's energy market to the southern neighbor but also attract investment from multi-national companies. Thus, the government officials here expect that the visit of Indian foreign minister Sushma Swaraj in the third week of July and Prime Minister Narendra Modi's likely visit in August would help create an environment to move further ahead in the much-needed cooperation in the hydropower sector. And the signing of PTA would be a good beginning.

The government has even included PTA with India in its policies and programs for the upcoming fiscal year. Those in the know believe that PTA would not only pave the way for power trading, but also assure and encourage investors who are still hesitant to invest due to lack of market assurance. Though Nepal sent a proposal for PTA in 2010, India remained silent. However, India has recently forwarded a proposal saying that it is ready for 'energy cooperation', according to government officials. Dhalkebar-Mujaffarpur transmission line is already under construction while another cross-border transmission line linking Bardaghat of Nepal to Gorakhpur of India is currently under study. And the Indian ambassador Rae is known to have told our energy minister that India wants to speed up the works on Pancheshwar Multi Purpose Project by establishing a joint project implementation office in Kanchanpur. These are some of the positive indications coming from the Indian side which could actually kick off the much-needed cooperation in the hydropower sector. One thing is sure. Signing of PTA could boost the much-needed confidence between the two countries, as both sides need to work out the details by guaranteeing a mutual benefit. The upcoming visits of the Indian dignitaries are definitely a good opportunity to begin this cooperation in earnest.

Source: Republica, July 8, 2014

End of load-shedding

BISHAL THAPA

Load-shedding or the rolling electricity blackouts that have been in place over the last few years could come to an end with a single stroke of the "Delete" key. For that, we'll need to take a deep breath, believe in ourselves and strike the "Delete" key with conviction.

Load-shedding in Nepal could come to an end if Nepal Electricity Authority (NEA) stops doing two things: First, it must stop planning for load-shedding; and second it must "Delete" or stop publishing the load-shedding schedule. This wouldn't immediately bring demand and supply into balance—after all, the current load-shedding is because of insufficient supply.

NEA would still need to resort to load-shedding to bring supply and demand into balance. It would have to continue resorting to load-shedding, except it would have to do it randomly across circles, rather than using a pre-determined rolling weekly load-shedding schedule for each circle.

If NEA were to actually stop publishing the load-shedding schedule and start to randomly enforce rolling blackout, there is a real risk that a large number of people may gather outside NEA offices around the country in protest. People could pelt stones, barricade NEA offices, even burn it down, in which case there will be no NEA left at all, no electricity supply at all and, therefore, no blackouts to contend with.

But the Nepali people are smarter than that.

Having lived through a long and violent uprising in the expectation of a better future only to be denied one, they now realize that pointing the gun at each other, or resorting to gunda-gardi (hooliganism) may not always get you what you want. Rather than barricade NEA offices, protest or cause mayhem, the Nepali people will instead groan, moan, curse under their breath and get on with their lives. The cleverer ones will find a way to coax donors into supporting even more conferences on improving electricity supply. Life will go on.

And that is the point at which load-shedding will begin to disappear and the space for innovative distributed solutions that isn't reliant solely on NEA will open up.
Every country goes through shortages and surpluses in electricity markets much like the fluctuations of a business cycle. Nepal is no exception. But different countries have different ways of responding to an imbalance between demand and supply in electricity market.

In the United States, for example, electricity markets went through a period of sustained shortages in the mid-to-late nineties. This was followed by an equally long and sustained period of surpluses.

There are several competitive power markets in the United States. In those markets, shortages were expressed through power prices which routinely exceeded $10,000 per mega-watt hour (or NPR 1,000/unit). Generators demanded this price and buyers paid it. Attracted by these prices many new generators flooded into the market. Within a few years there was excess generation capacity. Electricity prices slumped and generators were unable to recover their costs.

US electricity markets responded to the slump, this time with bankruptcies and closures. Many energy companies went broke, others were forced to merge and several billions of dollars of investments sank. There was plenty of heartache, plenty of finger pointing but at the end, the markets had adjusted demand and supply. Life went on.

Like in the US, a period of shortages in generation as Nepal is experiencing is not abnormal. The question is how we respond to it.

US has robust competitive markets, at least in some of the key states. Shortages and surpluses are expressed through changes in prices, which provide the incentives to correct the imbalance. On the other hand, Nepal's response to power shortages was a weekly schedule of load-shedding that said when power would go off and for how long.

The purpose of the analogy is not to contrast the market and institutional framework of Nepal against that of the US. That would be irrelevant. The point of the comparison is to illustrate the real tragedy of Nepal's load shedding.

The second worst thing that NEA did was incorrectly judge demand and supply a few years ago. For that it can be forgiven. But the absolute worst thing it ever did—for which it cannot be forgiven—was to have a system of announced rolling power cuts, the weekly load-shedding schedule. The tragedy in Nepal's power crisis is not that we have electricity shortages. The real tragedy with Nepal's current power crisis is how we responded to those shortages.

The load shedding schedule forced consumers to respond. Armed with the weekly schedule, people began to reorient their lives. Batteries and inverters, most of them of poor quality, sold briskly. People woke up at odd hours to iron their clothes. Children were taught by their parents to switch off their computers, stop reading and instead to go to sleep early or loiter in the neighborhood with their friends.

With the load-shedding schedule, Nepal didn't respond to the electricity crisis, it simply forced everyone to adapt to it. It snubbed Nepal's psyche and killed her hopes of a recovery or if not that, set it back several decades.

Nepal's ongoing electricity crisis may have cost it several percentage points in its economic growth. But that's not where it should hurt. Even a flood or an unexpected calamity can cause a large economic loss. The question is how we respond to a crisis and build the basis of a recovery.

The easy convenience of a load-shedding schedule has paralyzed our chances for a recovery. People have adjusted. They are willing to wake up at three am to iron their shirts. Businesses have learned to adjust. Hotels are prepared to tell their guests, "Sorry, the air conditioner won't work because there is no electricity."

There is no urgency for improvement—just a decline to adjustment. With 18 hours of power cuts, an improvement to 16 hours in the next few years will still seem like a good thing—but is it really?

NEA's forecast that there will be a surplus supply of electricity by 2017-2018 is in part a direct bias of the load-shedding schedule. The reason there could be a surplus is because there is hardly any demand growth. And the reason there is no demand growth is because everyone—people and industries—have adjusted to life with the load shedding schedule.

If you have learned to live with 18 hours of power cuts, nobody can quite imagine what they would do with 24 hours of continuous reliable power supply. If you can't imagine it, you certainly won't demand it.

Rather than the load shedding itself, it is the use of the load-shedding schedule as the response strategy that has killed Nepal's long-terms prospects for improvement.

In this crisis, the government has missed an opportunity to allow for some fresh out of the box thinking on Nepal's energy issue. It has continued to promote the same tired-out solutions: more plants, bigger plants, longer transmission lines and deeper grid extension. Nepal needs a broader portfolio of smarter energy use, distributed solutions, micro-grids, smaller-scale diffuse applications, diverse collaborative business models and broader technology options to end load-shedding and address the energy aspirations of its people.

bishal_thapa@hotmail.com

Source: The Kathmandu Post, July 8, 2014

ADB okays $180m loan to ease power shortages

POST REPORT

KATHMANDU, JUL 07 -
The Asian Development Bank (ADB) has approved a $ 180 million loan to help Nepal overcome crippling power shortages and export surplus power to neighbouring India. The loan, from the ADB's concessional resources, will be complemented by a co-financing loan of $ 120 million from the European Investment Bank, a $ 60 million grant from the government of Norway, and a $ 11.2 million grant from the ADB-administered Strategic Climate Fund.

The loan will help the Nepal Electricity Authority (NEA) finance a substantial upgrade and expansion of transmission and distribution lines and substations, allowing the transfer of up to 2,000 MW of power to main load centres in the Kathmandu valley.

This network expansion will also give Nepal the ability to export at least 1,200 MW of electricity to India, once a second 400 KV cross-border transmission line from Bardaghat to Gorakhpur in India is complete.

With six new hydropower plants due to come on stream over the next three to six years, the country expects to have a substantial wet season supply surplus for export by 2018.

"Right now, limited generating capacity and weak power transmission and distribution networks mean two-thirds of households in Nepal have no electricity and many of those who have power suffer power cuts for up to 12 hours a day during the dry season," said Lei Zhang, Energy Specialist with the ADB's South Asia Department, in a press statement. "There's a pressing need to provide more energy to domestic customers and harness more clean energy for sale overseas when the country has surpluses."

The project will also help the Alternative Energy Promotion Centre (AEPC) provide electricity to hard-to-reach rural communities with mini-grid renewable energy systems, including mini hydroelectric, solar and wind generation, through provision of an ADB credit line and the ADB-administered Strategic Climate Fund.

Through an associated capacity development technical assistance, the project will support the AEPC to develop a feasibility study for a large-scale wind farm.

Since 2009, the ADB has helped Nepal reform and overhaul its power sector, and the new assistance will aid the government's target of providing grid power to 75 percent of the population with off-grid energy for the remaining 25 percent by 2027.

The project is also a priority initiative of the broader South Asia Subregional Economic Cooperation Programme, which aims to expand power and other cross-border exchanges and connections around the region.

The projects are expected to be completed by the end of 2021.

Source: The Rising Nepal, July 8, 2014

Darkhola mini hydro project in dilapidated condition

Myagdi, July 7: The First Darkhola Mini Hydro Project of 50 kilowatt in Muna VDC of the district remains in a dilapidated condition due to lack of timely maintenance.

Constructed in 2057 BS, the hydropower project remains neglected for the past few years.

Furthermore, the project remains closed for the past four days as a tunnel supplying water was blocked due to landslide.

As long as 472 meters of the 980 meter-long canal remains blocked, said Damber Bhandari, chairman at the hydropower management committee.

As a result, locals in the area have been deprived of power supply for four days, making daily life difficult.

Source: The Kathmandu Post, July 9, 2014

Construction of cross-border power line begins

dhalkebar-muzaffarpur transmission line

SANJEEV GIRI

KATHMANDU, JUL 08 -
The construction of Nepali portion of much-touted Dhalkebar-Muzaffarpur cross-border transmission line began on Tuesday, with the Power Transmission Company Nepal Limited (PTCNL) laying foundation of the transmission towers at Manohar VDC of Mahottari district.

The 140 km transmission line is being constructed to facilitate power trade between Nepal and India. The 40-km portion of the transmission line on the Nepali side will have 115 towers. The PTCNL was formed in 2012 to build a 400 KV transmission line linking Dhalkebar-Muzaffarpur from the Nepali side.

The Nepal Electricity Authority (NEA) owns 50 percent of the PTCNL, while India's Hydroelectric Investment and Development Company (HIDC) has 14 percent. Two Indian companies Power Grid Corporation and IL&FS Energy of India have 26 and 10 percent stake in the company respectively.

The construction on the Indian side has already started. A parallel company, Cross-Border Power Transmission Company Limited (CPTCL), has been set up in India to develop the transmission line for the purpose.

The project is expected to be completed by August 2015. "As we are ready with required logistics,

the project is expected to move ahead as per our plan," said Badri Narayan Shah, project director at the PTCNL.

Barring a few place in Dhanusha district land acquisition is almost complete, Shah informed. "The project will require around three bigas of land in Dhanusha," said Shah. Of the 115 towers to be erected, 81 falls in Mahotari and rest in Dhanusha district.

The transmission line on the Nepali side is estimated to cost Rs 1.5 billion, which is being build by Indian contractor Tata Projects Ltd.

The completion of the cross-border transmission line will facilitate power trading between Nepal and India once both countries sign Power Trade Agreement (PTA). The PTA agreement is expected during Indian Prime Minister Narendra Modi's visit to Nepal in November.

Once the project is completed, it will establish a cross-border transmission capacity between the two countries of about 1200 MW. It is expected to increase power import from India by at least 100 MW.

Although the transmission line will initially be used to import electricity from India to meet the power deficit in Nepal, it will be used to export surplus power to India after large hydropower projects in Nepal come online.

The idea of cross-border transmission line between the two countries took shaped in the mid-2006 when India's IL&FS and Power Trading Corporation India and NEA decided to construct the line. the two countries signed a memorandum of understanding in 2009 to develop the project on a fast-track mode. And a year later, the World Bank agreed to provide $99 million in loan to expedite the project. The bank recently extended $39 million in additional assistance under the Nepal-India Electricity Transmission and Trade Project.

Source: The Rising Nepal, July 9, 2014

Rs. 50 million allocated for pancheswor project goes on freeze

By Ramesh Lamsal, Kathmandu, July 8: The amount received for the Pancheswor Multipurpose Hydel Project to be developed in Mahakali River is to go on freeze.

The government had provided Rs. 50 million for this year. The amount was to be spent in road construction, feasibility study, and Environmental Impact Assessment (EIA). Rs. 4.3 million allocated for EIA for Nepal portion of the project is going on freeze.

Likewise, the amount allocated for construction of road from Patan of Baitadi to the project site, Rs. 9.5 million will also go on freeze, said Project Chief Chiranjibi Chataut. Only half of the total 64 km has been opened track and no works moved ahead in other places.

There is no easy road to reach the site from Nepal side. As the same amount goes on freeze, the project is pushed to further delay. Likewise, the Rs. 1.5 million allocated for feasibility study of the river bank route from Bramhadevpuri of Mahakali is also in the condition of going to freeze.

Project Chief Chataut says although the road had to be built by a multi year contract of Patan-Pancheswor road to the site, it could not happen. Although the EIA was completed technically, the report was not submitted, he added.

There is no dialogue even if it was discussed in 2013 November between Nepal and India. Although the government has set up a separate office for the project, no progress has been recorded so far.

Although various governments have made commitment for developing it, no progress has been made for its implementation. Despite no physical progress, more than Rs. 20 million has been spent in office, staff salaries, and vehicles annually.

There is a target of generating 6,720 mw of electricity from Mahakali river, the border river between the two countries and will irrigate land in both countries.

The project is ten times cheaper than the 70 mw mid- Marsyangdi, and six times cheaper than West-Seti in average.

It is bigger in terms of displacement of people per mw by 25 percent than West Seti and 22 percent in inundation, and 45 percent bigger by production.

Its production cost is Rs. 2.55 per kw. The total investment of the Pancheswor High Dam and the Rupaligad Regulating Dam is Rs. 336 billion or 4, 475 million US dollars. Nepal will have to invest about Rs. 126- Rs. 130 billion in the project.

If the construction period is 10 years, Nepal will have to invest Rs. 13 billion per year, and if that is more than that, Nepal will have no difficulty in investment.

Nepal will have Rs. 34.50 billion annually from the project and will have advantage in fisheries, carbon, trade, irrigation, and eco-tourism, herbs, and fruits. From the revenue of the project, Dadeldhura district will receive Rs. 560 million, Darchula, Kailali, Doti, Bajhang, Bajura and Achham will receive Rs. 230 million annually.

The project dam site was identified by India in 1956. In the beginning, it was estimated to generate only 1,000 mw, and in 1991 it was projected to generate 6,480 if a 315 m high dam was built.

The DPR of the project was prepared in 1995. As it was a border river and bilateral agreement had to be signed, there was no progress even if talks were held in various rounds.RSS

Source: The Himalayan Times, July 10, 2014

'Solar energy must to address energy crisis'

HIMALAYAN NEWS SERVICE

KATHMANDU: Generating solar photovoltaic power to address the existing energy crisis could save the government around Rs 50 billion, which is being spent annually as subsidies for petroleum products, experts working on the alternative energy sector said.

In a workshop organised today in the Capital to discuss the scope and policy constraints of solar energy generation from photovoltaic system, representatives from the government and private developers opined that solar energy is the most basic means to solve the power crisis as well as lowering the escalating cost of petroleum products.

As addressed in the programmes and policies of the government for fiscal year 2014-15, the government is now preparing to introduce a policy statement, incorporating it in the new budget, for purchasing solar power from the private sector to meet the energy needs of the country.

“There will be some provisions regarding promotion of solar energy as addressed recently in the national policy and programmes,” said National Planning Commission Vice-chairman Govind Raj Pokhrel. He opined that hydropower is still a mega dream for Nepal, but that tapping its full potential will require at least a decade.

“So, the other alternative source is solar,” said Pokhrel, informing that the private sector has been proposing to supply solar power at Rs 10 per unit to make it affordable.

Bankers and private sector players urged the government to implement favourable policies and make appropriate provisions for subsidies in bank loans regarding solar energy to attract investors.

Highlighting the growing cost in importing petroleum products, Amrit Man Nakarmi, professor at Institute of Engineering, Pulchowk, argued that the government could avoid spending Rs 26 billion in petro products being used to generate electricity and Rs 23 billion from LP gas imports, once the need is replaced by solar power.

“Installing solar power systems to fill in the energy gaps will cost an estimated total of Rs 34 billion, with a payback period of less than two years. This will save the fuel cost amounting to Rs 528 billion over the next 20 years,” said Nakarmi.

According to studies, every household from mid-hill and high-hill regions of Nepal can generate an average of 5 KW of solar electricity. Initially, the government is encouraging private developers and investors to install solar panels in households within Kathmandu Valley. The government is trying to introduce this programme through a public-private partnership model.

“We are trying to make energy more accessible, affordable and sustainable,” said Krishna Chandra Paudel, secretary at Ministry of Science, Technology and Environment.

Source: The Rising Nepal, July 10, 2014

Nepal's Power Sector: A Review – I :Rabindra B. Shrestha

The power sector consists of mainly three components, or activities, i.e. electricity generation, transmission and distribution. All these activities are carried out simultaneously in parallel operation and can't be separated. But currently Nepal's power sector is in disarray due to alienation of power generation from transmission and distribution activities. Why such ambiguity in the country's power sector? Is this the outcome of mismanagement, rampant corruption or just a case of ignorance? If it's ignorance, the way out is straight forward. Therefore, all the stakeholders, including foreign donor agencies, should understand the uniqueness and distinct technical features of the Nepalese power sector.

Integrated National Power System/Grid (INPS)

Most nations in the world have their own independent Integrated National Power System/Grid (INPS) under the control of a central Load Dispatch Centre (LDC), which is the apex body to ensure integrated operation of the power system. The INPS and LDC are always under the aegis of the government or the state.

The INPS is there for the smooth evacuation of power from the generating stations to the consumers, i.e. taking care of the overall reliability, security, economy and efficiency of the power system. Power generation in the INPS is mostly done by thermal, hydro and nuclear power, depending on the availability of the resources in each nation

Nepal also has its own Integrated Nepal Power System (INPS), and its generation is based entirely on hydropower plants. The government has authorised Nepal Electricity Authority (NEA) to plan, develop/execute, operate and maintain the INPS, mandating it with the study, design and construction of hydropower projects as well.

The modalities, process and cost for the various types of power generation in the INPS are as follows:

Hydropower:The head (water pressure) created by the construction ofthehydraulic structure in the river turns the turbine and generator to produce electricity. The process of generating electricity from a river's water is simple and clean. Hydropower plants can supply or take out large amounts of energy in/from the INPS in a very short (few second/minute) time. Whereas, in a thermal or nuclear plan, the switching on and off process takes hours or days.

Due to its capacity/flexibility of providing peaking and emergency power supply, a hydropower plant has a very important role in balancing power, energy, voltage and frequency of an INPS.

The topography and hydrology of Nepal are suitable for the construction of cost effective (levelised energy cost 2-3 US cents per kWh) hydropower projects. The construction cost of a hydropower project is about US$ 1,000 to 1,500 per kW, and the annual operation and maintenance cost is about 2-3 per cent of the total construction cost. Due to multipurpose (electricity, irrigation and water supply) use of the river, most of the major hydropower projects are undertaken by the public sector.

Thermal and nuclear plant: In a conventional thermal plant, coal and other fossil fuels are used to heat the water, and in a nuclear plant heat is produced by nuclear reaction. The heated water produces large quantities of steam, whose pressure is used to run or rotate the turbine and generator to produce electricity in both thermal and nuclear plants. The cost of producing electricity from thermal plants varies from Rs. 6-12 per kWh depending on the availability of raw materials (coal and other fuel).

Compared to hydropower, the operating cost of a thermal plant is very high, and competitive management skills are required to control the cost. As such, thermal plants are built and operated by the private sector in most countries. However, due to security and safety concerns, nuclear plants are still managed by the government.

Without any coal reserves, thermal plants will be quite expensive for Nepal. For example, to generate power from a 300 MW thermal plant, daily about 4,000 tons (200 railway wagons) of coal are required. Like petroleum products, Nepal will need to depend on imports for the supply of coal. Therefore, power supplied by a thermal plant in Nepal will not be regular and reliable. If it is ever built, the thermal plant should be managed and operated by the private sector.

Diesel plant: Diesel or petrol is used in an Internal Combustion Machine (ICM) to generate electricity from a diesel plant. The ICM in a diesel plant is similar to the engine of a car; the difference is that in a car it turns the wheel, whereas in a diesel plant it rotates the generator. The electricity generated from diesel plants is very expensive (Rs. 30-40 per kWh), therefore, it is used only for short periods as captive power. Due to the high running cost, diesel plants are not used in the INPS even in the oil rich Gulf countries.

But in the 1990s, some vested interest group created confusion by naming the diesel plant (in Biratnagar) as a 'multifuel plant', and the government imported six diesel plant units of 6.5 MW each made in Finland. The NEA is incurring a loss of about US$ 3 million every year just to generate 13 GWh (about 0.36 per cent of the total annual energy). As such, installation and operation of a 325 MW diesel plant – 50 units of 6.5 MW each - will incur an annual loss of about US$ 200 million to the NEA. Therefore, the government should stop adding new diesel plants in the INPS, and the existing so-called multifuel (diesel) plant should also be hand over to the private sector.

River basin master plan

Hydropower projects are very site specific. A master plan is necessary for the optimum utilisation of the existing potential. Similarly, master plans for the transmission and distribution network should also be carried out concurrently. Accordingly, the INPS owner, NEA, prepared master plans for the generation, transmission and distribution of power in the late 1980s. The important socio-economic development indicator, annual per capita electricity consumption in Nepal (170 kWh), is one of the lowest in this region (Pakistan 410, Sri Lanka 450, India 550, China 4,000). India has to add about 100,000 MW of power to achieve double digit growth like China, and Nepal needs 3,000 MW to reach the level of other south Asian nations.

But the Electricity Development Department, a regulatory body of the Ministry of Energy, obtained the generation master plan from the NEA and commenced the feasibility study of hydropower projects without taking into account the INPS or the country's power requirement. Currently its main focus is on providing licenses to foreign companies to build hydro projects to export power. The master plan never anticipated leasing the country's precious rivers to a foreign company. The Electricity Development Department, or the ministry, is promoting this strange concept of leasing rivers practised nowhere in the world.

The Ministry of Energy and the Investment Board are also involved in the construction of hydropower projects. This has caused duplication of work and confusion. As such the Ministry of Energy deviated from its responsibility of preparing a sound policy, regulations and monitoring them strictly. The ministry shouldn't be indulging in feasibility study, construction and operational activities, which are the responsibility of the concerned technical department or authority.

Therefore, all feasibility study and construction work undertaken by the Investment Board/Electricity Development Department should be handed over to the NEA, and the Ministry of Energy should focus on regulating and monitoring the job. It is surprising that the World Bank and the ADB, the creators of Nepal Electricity Authority, have so far been tight-lipped on the mismanagement of the power sector in Nepal.

(Shrestha is a hydropower engineer, rabinamir@hotmail.com)

Source: The Kathmandu Post, July 10, 2014

Call for tapping solar power at commercial scale

KATHMANDU, JUL 09 -

Experts have said solar energy can be extracted at commercial scales by installing photovoltaic (PV) solar panels. They opined the power generated from sun could complement to the energy generated from hydropower projects to meet the growing demand of energy-hungry Nepal.

However, the use of solar as an alternative energy to mitigate the ongoing energy crisis is possible only if the government formulates appropriate policies and subsidy mechanisms with proper financing models from the financial institutions, including banks and development partners.

"In the present scenario, where the electricity consumers' are facing daily power outage of up to 16 hours in the dry season, there is growing understanding to generate electricity from other feasible and alternative sources, including solar," said Siddhant Pandey, chairman of White Lotus Centre, during the "National Workshop on Industrial Scale Solar PV Electricity Generation as Alternative Source to Mitigate Energy Crisis" here on Wednesday.

However, issues like high upfront costs and maintenance, and lack of adequate information on availability of proper financing models wh-ich are affordable and accessible to consumers at all levels —household, commercial and industrial scale—are affecting the overall promotion of solar energy, Pandey said.

He said the workshop, jointly organised by White Lotus Centre and Alternative Energy Promotion Centre, aims to help to broaden the understanding on the use of solar PV as an alternative source of energy among key business in the private sector.

Despite bright potential, the exploitation of sun's energy for industrial and commercial electricity generation through installation of solar panels continues to be a pipe dream for Nepal that is facing critical power crisis, said Ram Prasad Dhital, officiating executive director at AEPC.

However, the policies and programmes made public this month has prioritised the promotion and development of solar energy technologies including rooftop solar PVs to meet the energy demands of all, from businesses, banks and manufacturing industries to the government and the general public.

Barsha Shrestha, deputy chief executive officer at the Clean Energy Development Bank (CEDB), said the banking sector is eager to enter the market of renewable energy development by financing feasible, innovative and affordable projects. She said CEDB has around 150-200 roof top solar PV projects which are being financed without collateral. "We have provided finance between Rs 30,000 to Rs 100,000 to the viable solar projects both at household and commercial purposes."