Source: New Business Age; Feb 2016

Internal Resource Mobilization for HEP

--By Prof Dr Kamal Raj Dhungel

Nepal is enriched by four river basins- Kosi in the east, Gandaki in the west, Karnali in the mid-west and a border river Mahakali in the far west. A sloppy mountain topography facilitates these rivers to make numerous falls, as seen in the pictures, providing an ample opportunity to generate electricity to the tune of 42 GW (see table). A tiny portion, nearly 2 percent of the total, is being exploited. The rest is yet to be developed.

This represents a huge resource provided by nature at free of cost to develop, use, sell and export. Full development of this endowment will not only help Nepal turn into a dignified country but also lay the foundation stone towards a drive into prosperity. But there are a number of constraints in the way when it comes to converting this endowment into a profitable commodity.

Among them capital constraint is vital. The revenue of the government of Nepal does not exceed 10-15 percent of GDP. It is barely enough to cover the recurrent expenditure of the government. Saving is a source of investment. But the propensity to consume (ratio of additional consumption to additional income) is high, meaning that the propensity to save (ratio of additional saving to additional income) is low making a huge gap between saving and investment. It indicates a poor investment situation for capital. Thus, for a poor economy like Nepal, capital constraints is a critical and crucial issue to address for the development of hydropower projects.

Unemployment and outmigration

Unemployment in Nepal is rampant and is pegged at over 46 percent. This is mainly because of the lack of employment opportunities in the domestic sector. It has long been realised that Nepal's development hinges on proper management of its immense water resources. It can be the basis for the country's future prosperity. A rational utilisation of water resources will open up numerous opportunities for both skilled and unskilled labour forces, and domestic and foreign capital.

Hydropower development is the best option for utilising water, human and financial resources. This would provide opportunities to the nation's unemployed and disenchanted population. But, if the policy of sending our productive labour to the richest countries continues, development of any kind in our country in the future is hard to imagine. Qatar had a GNI per capita ($92,200), 126 times more than Nepal's GNI per capita ($730) in 2014.

Since the beginning of the 21st century Qatar has been a major hub for Nepali labour. The per capita income of Qatar implies that a migrant worker from Nepal can earn as much as he/she would earn in the US, Japan, Australia and Europe. The growth of Qatar's economy has been a major contributor to Nepal's GDP, as 2013 showed with remittance covering 29 percent of Nepal's GDP.

A study conducted by the World Bank reveals that along with the pull factors stemming from the growth of Qatar's economy, notable push factors driving migration from Nepal include: continued poverty, high levels of unemployment, political instability, and sluggish economic growth. The combination of push and pull factors has resulted in Nepalis becoming the second largest migrant group in Qatar.

Many of these workers are employed in the construction and manufacturing industries as unskilled labourers. Their salaries vary according to their skills and the industry where they work, but on average they seem to receive lower salaries than those of other migrants for the same work. This reveals that Nepali migrant workers in Qatar have earned less than what other migrant workers coming from other countries have earned from the same or similar job.

The reason for the lower income of Nepali migrant workers in Qatar, among other things, is the lower opportunity cost at home. People will be able to get numerous employment opportunities if Nepal is

able to mobilise the funds particularly for the development of hydropower projects in the days to come. There are three sources of funding, all of which require the fulfillment of basic prerequisites.

The political factor

Mobilisation of resources for the development of hydropower requires a number of things. An unstable government among other things, is a curse when mobilising internal and external resources. Political stability is an essential part of mobilising scarce resources and in turn investing it in hydropower projects. Instability prevents good things from happening and encourages bad things such as fraud, corruption, cheating and distortion. Both private and public sectors, in their efforts to mobilise domestic resources to develop hydropower projects, would be unsuccessful.

Assuming that the political factor in Nepal is getting stable and assuming that the government is committed to keep up good governance and to carry out development to make the country prosperous and competitive, and that it is engaged in formulating suitable policies which will help to mobilise the necessary resources and in turn channelise them to develop the untapped resources, assuming that everything mentioned above is set to work, then internal resource mobilisation would be effective in order to invest in the hydropower projects.

Hydropower projects with Local fund mobilization

Investors or independent power producers consider hydropower to be a promising sector for investment. In spite of the discouraging situation, efforts are being made to develop hydropower projects from both the public and private sector. They have mobilised local funds to develop a number of hydropower projects. Consequently, a small number of hydropower projects with varying capacities ranging from a kW to 22 MW were constructed with the help of local funds. In addition, the under construction Upper Tamakosi hydropower project with an electricity generation capacity of 456 MW is the big project initiated through the mobilisation of domestic resources. Independent power producers also have constructed a number of small size hydropower projects through mobilising domestic funds. They are still working on this line. They are mobilising funds through banks and different kinds of shares through IPO (initial primary offering)

Way forward

Most of Nepal's resources coming from the migrant workers still continue to be diverted into unproductive sectors; 79 percent of the total remittance received is used for daily consumption. Consumerism, if not discouraging, would stop generating savings both in private and public sectors needed for further investment in the economy.

Consumerism, in Nepal's particular case, is not the stimulating factor for producing goods and services domestically. Instead, it encourages imports to go up. All successful economies devote part of their current income to investment rather than consumption, so as to expand their future ability to consume. The real estate sector, which is less productive, absorbs a large portion of the investments. An ideal government and favorable investment policies help to transform unproductive investment into productive ones.

Infrastructure projects such as hydropower need a comfortable amount of money to be commissioned. Saving is necessary to create such funds. Saving in a poor economy would be possible only by curtailing consumption and encouraging people to save a part of their income to help their motherland develop and become prosperous. Despite this, hydropower in Nepal is commendable and sustainable. But mobilisation of domestic funds alone would be insufficient to develop large hydropower projects. It is because of the resource/capital constraint. If Nepal internalises the ground reality, it should have to seek alternative sources of funding to develop large hydropower projects to export surplus energy to needy neighbours.

The author is retired Professor of Economics, Tribhuvan University

Source: My Republica; 28 Feb 2016

Energy mix plan will discourage RoR projects

The master plan to end power crisis and generate 10,000 MW by 2026, which has capped generation by run-of-river (RoR) projects at 30 percent or 3,000 MW, is likely to affect hydropower generation based on utilization of water flow in real time.

Nepal Electricity Authority (NEA) has already signed Power Purchase Agreement (PPA) with RoR projects having combined capacity of 2,600 MW. This means there is space for projects with combined capacity of 400 MW. But projects with combined capacity of more than 1,000 MW are waiting to sign PPA with NEA. Similarly, projects with capacity of more than 10,000 MW are under different phases of study.
RoR projects are designed on the basis of the flow of river. These projects generates only around one-third of the installed capacity during dry season when demand hits peak.

The energy mix outlined in the master plan, which was unveiled last week, gives 20 to 30 percent of the pie to RoR, 40 to 50 percent to reservoir projects, 15 to 20 percent to peaking RoR projects and 10 to 15 percent to renewable energy sources like of wind and solar for balanced energy development.

But this has become another constraint for hydropower projects in pipeline as most of them are RoR projects, said Khadga Bahadur Bisht, president of Independent Power Producers' Association. Bisht said that they will soon raise the issue before officials of the Ministry of Energy.

This will give a valid ground for NEA not to sign Power Purchase Agreements (PPA) with RoR projects. NEA, which is the lone single energy buyer in the country, has inserted 'conditional purchase' clause in PPA of 24 projects with combined capacity of about 300 MW since September 2013, making them impossible to achieve financial closure.

Prior to that, there used to be a 'take or pay' clause in PPA that made projects bankable.

Good thing, according to power developers, is that the master plan promises to lift all those conditional PPAs. Sanjay Sharma, spokesperson of Energy Ministry, said that it won't be practical not to buy energy from projects which are under study.

Nepali independent developers have, so far, focused on RoR projects only as they are cheaper. They don't have any immediate plan to build peaking RoR projects which can generate electricity in peak hour by storing water during off-peak hours. Also the government doesn't offer separate rate for such projects

However, the master plan states that separate seasonal PPAs for peaking and reservoir projects will be introduced within three months.

PPA SIGNED WITH LOWER MODI-2

NEA has signed PPA with United Modi Hydropower to purchase power generated by Lower

Modi-2 (10.5 MW) hydropower project. The project will be developed as a cascade project of Lower Modi -1.

Sudhi Prasad Timalsina, managing director of United Modi Hydropower and Acting Deputy Managing Director of NEA Rajiv Sharma signed the agreement.
The PPA rate has been set at Rs 8.40 per unit for dry month and Rs 4.80 during wet months.

Nabil-led consortium to finance Super Dordi
KATHMANDU (REPUBLICA): A consortium of banks led by Nabil Bank Ltd has agreed to finance Super Dordi Hydropower Project-B.

The total cost of the project is estimated at Rs. 8.3 billion.

The consortium, which includes Everest Bank Ltd, Global IME Bank Ltd, Rastriya Banijya Bank Ltd, Prabhu Bank Ltd, Employees Provident Fund, Hydroelectricity Investment and Development Company Ltd, Triveni Bikas Bank Ltd and Deva Bikas Bank Ltd along with Nabil, are financing Rs 5.8 billion,

The project located in Phaleni and Dhodeni VDCs in Lamjung district has installed capacity of 49.6 MW. It is being developed by People's Hydropower Company.

Issuing a statement, Nabil Bank said this is the largest hydropower project being built by Nepali developer and financed by domestic banks.

Source: My Republica; 28 Feb 2016

Govt serious to reduce power outage: Energy Minister

Deputy Prime Minister and Minister for Energy, Top Bahadur Rayamajhi, has said the government has been making all possible efforts to end power crisis.

At a programme organised by the All Nepal National Independent Union (Revolutionary) of Butwal Multiple Campus on Sunday, DPM Rayamajhi said the government was serious to cut load shedding hours, as the general people and industries have been hit hard due to this.
He further mentioned that new projects have been forwarded in order to make the country load shedding free within a year.

The country has now been getting 600MW electricity; and the country could free of load shedding if 1,500MW electricity was generated, said Minister Rayamajhi.

On a different note, DPM Rayamajhi, also the Secretary of the UCPN (Maoist), said coordinator of the New Force Dr Baburam Bhattarai has made a great mistake by quitting Marxism.

Arguing that the country has now moved in line with UCPN (Maoist)'s agenda, he claimed that the UCPN (Maoist) would be largest party once again.

Meanwhile, he inaugurated the 42nd anniversary of the Sainamaina Higher Secondary School of Sainamaina Municipality.

Source: My The Rising Nepal; 2 March 2016

Pancheshwar Governing Council to meet on Friday

A meeting of the secretary level Governing Council has been slated for Thursday to forward the works on the Pancheshwar Multi-purpose Hydroelectricity Project to be constructed on the Mahakali River that forms the western border between Nepal and India.

The meeting of the Energy Secretaries of Nepal and India has been convened after the two countries agreed to speed up works on the project during Prime Minister KP Sharma Oli's recent state visit to India.

Although the meeting was said to be held for two days on Thursday and Friday, the programme has been set to hold discussions on the main agenda only on Friday. The joint meetings of the Council set for January 7-9 and February 3-4 before this were postponed.

Energy Secretary Suman Prasad Sharma said that it was agreed in talks between Prime Minister Oli and his Indian counterpart Narendra Modi and the Indian Energy State Minister Piyush Goyal to speed up the works on the Pancheshwar Project.

He said the progress on the DPR of the Pancheshwar Project, the programme and budget for 2016 and the framework of the Authority are to be discussed in the meeting. The project has the installed capacity of generating 6,690 megawatts power besides providing irrigation facilities to Kanchanpur district on Nepal side and some Indian territory.

Source: My The Rising Nepal

Hydropower Development Policy Of Nepal An Overview of Its Implementation : Hari Bahadur Thapa

After the restoration of democracy in 1990, the state's efforts were focussed on participatory development with a liberal economic policy. Considering the potentiality of harnessing the vast natural water resources, hydropower sector was given priority, and a Hydropower Development Policy, 1992 was announced by the government. After nine years of its implementation, the then government approved and implemented a new policy, Hydropower Development Policy, 2001, which is still in practice. In this context, it is already late in reviewing and updating the policy in the new changing environment.

Limited scope

The Hydropower Development Policy, 1992, which was formulated for the first time, was quite limited in scope. Yet it was able to involve the private sector in hydropower development in the country. With the lessons learn from this policy implementation and incorporation of the latest legal provisions like Environmental Protection Act and Rules (1997) and Local Self Governance Act (1999), the government formulated the Hydropower Policy in 2001 by incorporating all new criteria and private sector demands as well.

The provisions made in the policy emphasised generating electricity at low cost by utilising the water resources available in the country, extension of reliable and qualitative electricity service throughout the country, tie-up of electrification with economic activities, rendering support to the development of the rural economy by extending rural electrification and development of hydropower as an exportable commodity. However, research shows that the policy has been unable to achieve its objectives as targeted.

Nepal's hydropower policy notes that generation and consumption of electrical energy in Nepal is minimal. The major sources of energy are still agriculture and forest-based resources. Despite the abundant possibility of hydropower generation as a renewable energy source, it has not been harnessed to the desired extent. Industrial enterprises have not developed at the desired pace due to the lack of electricity. An opportune hydropower policy is, thus, seen as a prerequisite for the supply of energy at a reasonable price, which has the pivotal role in the development of rural electrification, supply of domestic energy, creation of employment and in the development of industrial enterprises.

Based on the experiences gained in the course of implementing the principles followed by the Hydropower Development Policy, 1992, emerging new concepts in the international market and their impacts, technological development, possibility of exporting hydropower energy, possibility of foreign investment and commitment to environmental protection, the revision and improvement of the hydropower policy has become imperative with a view to making it clear, transparent, practical and investment-friendly.

The new hydropower policy should clearly reflect the direction on vital issues such as development of multipurpose plans for maximum utilisation of available water resources, appropriate sharing of benefits, role of public and private sector, utilisation of internal as well as external market, and clarity and transparency in the activities of government with the private sector.

Study shows that there have been a few and remarkable achievements from the implementation of the hydropower policy in the form of power generation, royalty collection, private sector encouragement in hydropower development and capacity building. This has ultimately contributed to social and economic transformation of the country.

However, on the other side, there are many gaps in the policy due to which the private sector and international investors are in a wait and see position. The policy is unable to harmonise with the strategies set by the Water Resources Strategy, 2002 and targets set by the National Water Plan, 2005.

The main gap is found in policy and legal harmonisation and regular updating of the policy as per the requirement.

According to the study, the following scenario appears to be the impact of the Hydropower Development Policy:

Up to the year 2014/15, a total of 733.557 MW of hydropower has been produced, of which 255.647 MW has been generated through private sector investment. Some 83 projects with an installed capacity of 1,521.28 MW are in the construction phase. In addition to these, 33 hydropower projects of 532.542 MW installed capacity are in different stages of development. This has opened the door for national and international private sector investment, but the government should do more to convince the private sector to lure foreign investment.

Nepal's hydropower policy has strongly recommended rural electrification, meeting the domestic needs and exporting energy, but still the country is facing an acute power outage even in the summer season. The policy has clearly made provisions about royalty collection, energy quality, energy inspectors, institutional arrangement, but still no clear guidelines and implementation plans are in operation to realise them.

The policy has strongly recommended the regulatory body, Nepal Electricity Regulatory Commission (NERC), for regulating electricity, but the council is yet to be established. The bill is still pending in Parliament. Due to this reason, monitoring and regulation of the electricity sector is weak and like a ship without a captain.

The Department of Electricity Development (DoED) and Water and Energy Commission (WEC) have been established as per the policy, which can be considered a good initiation, but both the organisations are not functioning as per the mandate, due to which energy planning and private sector promotion in hydropower development are not being effective. Institutional strengthening and capacity building of these organisations are essential.

Conflicts, both violent and non-violent, social movements, financial structure, political instability and a multi-window process for approval of projects are other factors leading to the delay in identification, study/investigation and construction of projects.

o address these issues and challenges, Nepal's hydropower policy should be updated, harmonised with the prevailing laws/plan/strategy while the enactment of a new electricity act and regulatory body act is essential. The private sector is not fully encouraged and convinced by the current policy. The policy lacks clear provisions and an operational mechanism for the projects which will be handed over by the private sector developers to the government after their license period expires.

As the private sector has already achieved significant progress in hydropower development, the Nepal Electricity Authority needs to be reformed. A master plan for hydropower development of the country has become most urgent. As The Water Resources Strategy, 2002 and National Water Plan, 2005 give emphasis to basin planning and adoption of an Integrated Water Resources Management approach for the holistic development of water resources, the policy has not recognised these provisions.

As multipurpose and reservoir projects are different from conventional run of the river and daily peaking power plant in view of construction technology, coverage and financial investment, the policy has no such provision to attract private sector investment. Due to the load pattern and current situation, multi-purpose and reservoir projects development is essential for the long run.

Various government agencies are involved in the sector, however the policy does not emphasise on collaboration and coordination mechanism among them. For the fast and sustainable development of hydropower, a single window policy and effective coordination between all the agencies are necessary.

Social and political problems

The policy does not foresee social and political problems, which are major issues and concerns in recent days. The private sector is a profit making sector, hence the private sector always seeks profit and investment assurance. Private hydropower developers are seeking clearer provisions and assurances

against their investment in projects like hydropower. The policy, however, fails to give such assurances to international developers/multi-national companies. If assurance is there and ambiguous legal provisions are removed, huge investment is possible in mega hydropower projects in Nepal.

Thapa is Senior Divisional Engineer,
National Vigilance Centre.

Source: My Republica; 2 March 2016

Pancheshwar Governing Council to meet Friday

A meeting of the secretary level Governing Council has been slated for Thursday to forward the works on the Pancheshwar Multi-purpose Hydroelectricity Project to be constructed on the Mahakali River that forms the western border between Nepal and India.

The meeting of the Energy Secretaries of Nepal and India has been convened after the two countries agreed to speed up works on the project during Prime Minister KP Sharma Oli's recent state visit to India.

Although the meeting was said to be held for two days on Thursday and Friday, the program has been set to hold discussions on the main agenda only on Friday. The joint meetings of the Council set for January 7-9 and February 3-4 before this were postponed.

Energy Secretary Suman Prasad Sharma said that it was agreed in talks between Prime Minister Oli and his Indian counterpart Narendra Modi and the Indian Energy State Minister Piyush Goyal to speed up the works on the Pancheshwar Project.

He said the progress on the DPR of the Pancheshwar Project, the program and budget for 2016 and the framework of the Authority are to be discussed in the meeting. The project has the installed capacity of generating 6,690 megawatts power besides providing irrigation facilities to Kanchanpur district on Nepal side and some Indian territory.

The project had remained stalled for the last 23 years. RSS

Source: My The Himalayan Times; 3 March 2016

Pancheshwar's installed capacity revised

The previous estimate of 5,600 megawatts has been lowered to 4,800 megawatts

A company appointed to prepare the detailed project report (DPR) of Pancheshwar Multipurpose Project has revised the installed capacity of the hydroelectric-cum-irrigation project to 4,800 megawatts.

The figure on installed capacity of the project, being developed jointly by Nepal and India, was derived through latest hydro-meteorological data gathered by WAPCOS Ltd, an Indian state-owned company hired to prepare DPR. WAPCOS submitted the final draft of the DPR to the Pancheshwar Development Authority (PDA) which is implementing the project two days ago, PDA CEO Mahendra Gurung told The Himalayan Times.

Although the proposed installed capacity of the project is lower than the previous estimate of 5,600MW, the power generation capacity is still more than three times Nepal's existing peak electricity demand of around 1,300MW.

Officials at the Ministry of Energy said the installed capacity of the project, being built on the Mahakali River in far-western Nepal, was revised downwards due to change in pattern of river flow over the years and availability of water in the river, among others.

Earlier, both Nepali and Indian governments had come up with their own estimates on installed capacity through their own DPRs. The findings mentioned in the two previous DPRs have now been synthesised in the latest report prepared by WAPCOS.

"The final draft of the DPR will now be handed over to the governments of Nepal and India for consultation. We will incorporate the recommendations and prepare the final DPR in the next one to two months," said Gurung.

Along with final draft of Pancheshwar DPR, WAPCOS has also prepared a report on development of a re-regulating dam at Rupaligad to regulate the flow of water released by Pancheshwar project. This dam has the capacity to generate another 240MW of electricity.

Together, Pancheshwar and Rupaligad projects can generate 12,000 gigawatt-hours, or 12 billion units, of electricity per year, according to Gurung.

Also, Pancheshwar project can be used to irrigate 93,000 hectares of land in Nepal and another 1.6 million hectares of land in India.

"What is important to note here is that Pancheshwar project can be brought into operation only during times when demand for electricity is at its peak. So, very little electricity generated by this project will go to waste.

Also, we can regulate the water flow for irrigation purpose because of construction of re-regulating dam," Gurung said, adding, "Both the governments are keen on completing this project at the earliest."

If the project is developed without any delay, it can satiate the needs of power hungry country, which is making attempts to become self-sufficient in the energy sector.

Management structure, budget finalised

The third meeting of the governing body of Pancheshwar Development Authority (PDA), which kicked off here today, has finalised the management structure of the PDA and budget for 2016, among others.

“The meeting took place in a cordial manner and most of the outstanding issues were resolved today,” Energy Secretary Suman Prasad Sharma told The Himalayan Times. “If things go according to plan, we will sign the minutes tonight and wrap up the meeting. Otherwise, we’ll wait until tomorrow morning.”

The two-day meeting was co-chaired by Sharma and Secretary at the Indian Ministry of Water Resources, River Development and Ganga Rejuvenation (MoWRRDGR), Shashi Shekhar.

Today’s meeting decided to allocate a budget of Rs 400 to 500 million for PDA for 2016. “We will settle on the exact amount at a later date,” PDA CEO Mahendra Gurung said.

The meeting also decided to limit the size of the management team at 55, of which 30 staff will be of officer level. “This number does not include CEO, additional CEO and six directors of the executive committee,” Gurung said.

Also, today’s meeting of the governing body formally gave legitimacy to the executive committee of the PDA and works it had performed since its establishment several months ago.

In first meeting of governing body of PDA in September 2014, Nepal and India had agreed to form an executive committee comprising a CEO, an additional CEO and six directors.

The meeting had also agreed to appoint the first CEO and three directors from Nepal, and additional CEO and three other directors from India.

Since then Nepal has appointed all executive committee officials, including the CEO and three directors. India had also appointed additional CEO and a director but had failed to appoint finance and rehabilitation cum resettlement directors.

“Today, the Indian team informed that it has appointed finance and rehabilitation cum resettlement directors as well,” Gurung said, without revealing the names.

The meeting of the governing body of PDA was held to discuss issues related to implementation of Pancheshwar Multipurpose Project being built on Mahakali River in far-western Nepal.