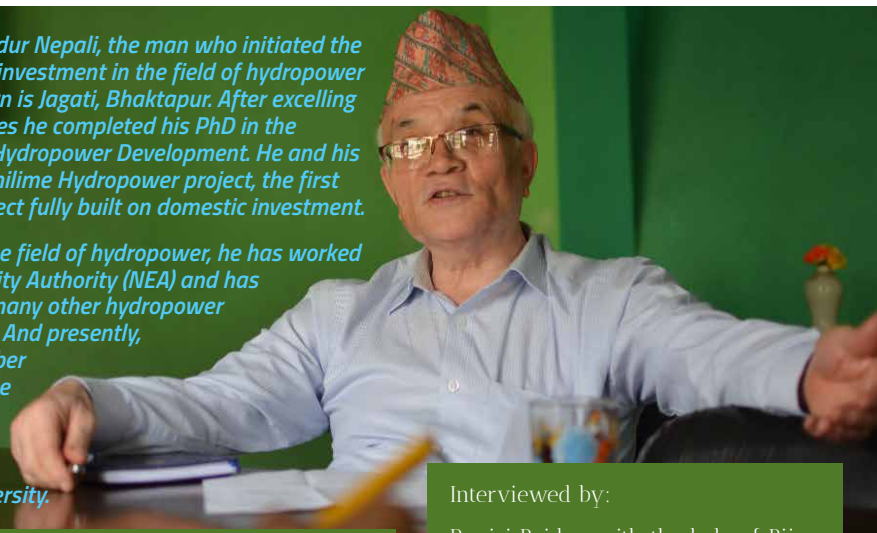


Dr. Damber Bahadur Nepali, the man who initiated the idea of domestic investment in the field of hydropower in Nepal, was born in Jagati, Bhaktapur. After excelling in his initial studies he completed his PhD in the United States in Hydropower Development. He and his team launched Chilime Hydropower project, the first Hydropower Project fully built on domestic investment.

As an expert in the field of hydropower, he has worked for Nepal Electricity Authority (NEA) and has also worked for many other hydropower projects in Nepal. And presently, he is also a member Subject committee of Department of Mechanical Engineering of Kathmandu University.



Interviewed by:

Ranjai Baidya with the help of Bijen Mali and Yaju Rajbhandari

Dr. Damber Bahadur Nepali

Hydropower development holds strategic importance for overall development in Nepal with its immense possibilities. How well do you think Nepal is currently doing in this field?

As one of the countries with highest potential in the field of Hydropower, surely development of Hydropower in Nepal holds high importance. Currently we are generating electricity hardly enough for lighting and maybe for running few electrical appliances but with our potential in this field, we need to be generating electricity enough even to export it to other countries, that is after fulfillment of all of our energy needs. So even though we can clearly see that we are lagging way behind in fulfilling our actual potential, we are definitely doing better than a few years ago.

So are there any measures that can be taken to further develop hydropower in Nepal?

The thing is that we Nepalese never believe in ourselves, in our potential. We depend on foreigners for everything. Even in the case of hydropower, foreigners invest in our projects. They develop our projects and eventually what happens is, they benefit using our resources. We don't lack skilled manpower, every year we produce a huge number of skilled engineers who move to foreign lands in search of opportunities. Neither do we lack domestic investors, EPF (Employees Provident Fund), CIT, NTC and lot of other private investors are interested in investing in Hydropower projects. So what we need to do is, mobilize our domestic manpower and prioritize domestic investors. This way we can get cheap energy and nurture the skills of our manpower.

NEA, Nepal lost 25.78% of the generated Electricity through leakage in the fiscal year 2015/16 and is listed among the top countries that has maximum energy losses. What do think are the reasons behind this? How can this problem be solved?

Basically, there are technical losses and non- technical losses in the field of Energy. The loss of energy through transformers, transmission lines, distribution lines etc. may be listed as technical. What happens is when we make decisions and plans we don't consider sustainability. Many of the equipment and electrical components such as transformers that we use are way past their expected useful life and they are used beyond their capacities. So, to reduce the technical losses, they need to be replaced by the new ones. Also, initially low capacity transmission and distribution lines were built, later when more power is generated and the power need increases, the same transmission line cannot be used and there is further loss. So, these lines also need to be upgraded. Now, leakage or hooking (stealing of electricity) may be considered as non- technical loss. Bhaktapur and Bharatpur are two places in Nepal where hooking prominently occurs. To reduce this problem, there is no other possible way but to reinforce strict laws and make people follow.

To solve the ongoing Energy Crisis, Nepal currently imports a total of 340 MW from India. What are the effects of this on Nepalese Economy?

Definitely, purchasing electricity instead of generating it causes great loss but I feel that it is better to be purchasing power than to live in load shedding. We need electricity for our daily household, our industries and our overall development and the loss that will be incurred by power cuts and its effects on our development are way greater than the loss due to the purchase of Electricity.

Apparently, there is no load shedding in most of the Major cities of Nepal and from what we have heard NEA has taken upon the AIM to free Nepal from load shedding. What will be your take on this?

NEA surely has been working more efficiently than in the past. It has been distributing more contracts to the constructors for the construction of hydropower plants, and more and more hydropower plants are coming up. Since the generated electricity is not enough to sustain our needs, it has been purchased from India. Also in the past, major industries were provided with dedicated feeders i.e. those industries got 24 hours of electricity supply but now what they have done is that they reduced the supply to those industries during the peak hours and supplied it to the domestic households. This way NEA has managed to reduce the load shedding. And if they continue in the similar way and focus on the completion of the hydropower projects they can surely make Nepal "Load shedding" free.

The cabinet on February 18, 2016 approved a National Energy Crisis Reduction and Electricity Development Decade (2016- 2026) according to which Nepal will be producing a total 10000 MW after a decade. Do you think this is possible?

It might be possible only if the government is more stable. What happens is, when there is a change in government, the people who were appointed by the previous Government will be replaced by the new ones. Now, the new ones have to start from the scratch and they need to get familiar with their surrounding, so there is delay. Also if they need to survive in their position they need to bribe people. So, they will have less money for what they were appointed for and the quality of what they were supposed to deliver will be compromised. Similar things happen in the field of hydropower. As new government appoint new project supervisor the same stories writes itself.

You have always promoted domestic investors over the foreign ones and it has been sometime since the First Hydro Power plant fully built with domestic Investment, Chilime Hydropower Plant was completed. What changes have you seen from the time you completed the challenge of building Chilime hydropower project to now?

When I got back from USA after my PhD, I felt that all we ever did was depend on foreign aid and foreign manpower. We never believed that we can do what those foreigners had been doing in our lands. I wanted people to change their mentality, so I took upon the task of building a hydropower station fully using domestic investment and domestic manpower, even if it was a small 5 or 10 MW project. I consulted with my colleagues about this and many of them didn't believe me while some even called me lunatic. But the ones who did, helped me find Chilime, a project of 20 MW capacity, which we managed to devel-

op into a 22 MW project upon its completion. We managed to find the domestic investors and we even encouraged the locals and NEA staff to invest in its share. The return from it was very good too. And now after its completion many domestic investors like Employees Provident fund (EPF), Citizens Investment Trust (CIT), Nepal Telecom (NTC), Insurance Companies etc. are interested in Hydropower, also Hydropower Companies are also employing the Nepalese Engineers.

Upper Karnali Hydropower Project which is projected to be completed by 2021, when completed will be the largest Hydropower Plant in Nepal with the capacity of 900 MW. But even when the electricity demands of Nepal are not fully met, it is said that only 12% of Electricity produced by the fore mentioned project will be used by Nepal and the rest will be exported to India and only after 25 years of its completion Nepali Government will fully own the Hydropower Plant. This is just an example of how Nepalese Policy Making works in the field of Hydropower and energy. How concrete do you think Nepalese are in Policy and Decision making?

Actually, the government still believes that the Nepalese cannot work at the highest of level. Projects are still given to the foreign companies and the result is that the foreigners gain majority of benefit from the projects. Two major hydropower projects Upper Karnali and Upper Arun were given to Indian Companies. Similarly, Budhi Gandaki was given to a Chinese Company which has not done very well in Nepal. So, I personally doubt if these decisions are made on any concrete basis. And talking about the deal on Upper Karnali Hydropower project, after 25 years the plant will be fully owned by the Nepalese Government, but 25 years is a huge period of time and it is a humongous 900 MW project, just think about the profit we could make in that 25 years of time with this project.

As an Experienced and Selfless Engineer of Nepal what suggestions would you like to hand out to the future Engineers?

We the Nepalese Engineers, not just hydropower engineers, engineers from all sectors needs to be optimistic about our career and especially about the situation of our country. We are the ones who need to develop our country, so we need to stop complaining and start working. New technologies are coming up and we need to be up to date about those. Fresh engineers need to keep their mentality strong and must not get depressed, as the beginning of their journey might be difficult. Opportunities are coming up for you to shine. So keep working hard and do not give up.