

Banker's Perspectives on Hydropower Development in Nepal: Problems & Prospects

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Abstract. Nepal is currently facing a power shortage that, it is feared, will get worse if we do not start working to enhance our capacity for energy generation. Hydropower, as a clean and renewable source of energy, is the right solution for our country, with its topographical advantage and the availability of more than 6,000 rivers. In addition to local demand, there is ample scope for export of electricity to India. The process has already begun for infrastructure development to pave the way for export. This is the right time to move forward for the development of this sector by all involved stakeholders; viz., investors, financiers, government, the local public, political parties, etc. This combined effort will give momentum for further developing the hydropower sector.

The financial sector must work on building in-house expertise as well as developing coalitions with other experienced international financial institutions to enhance the knowledge base and the lending capacity for project financing. Several tools for financing, including debentures, bonds and mutual fund, etc., can be introduced. We must now move forward to enhance our strength and mitigate the risks involved to realize: *Nepal ko pani, pragati ko khani* (literally: 'Nepal's water, source of national development').

Key words: Hydropower development, hydropower financing

Nepal as a country is facing power shortage and we now realize that if the scenario of energy generation remains *status quo* we may shortly be facing load shedding of 12 hours or more per day.

Energy is a basic requirement for economic development. Every sector of the national economy needs energy, be it agriculture, industry, trade, transport, tourism, health, or service sectors. Planned economic development about to be implemented demands increasing energy inputs. As a result, the consumption of energy in all forms has been steadily rising all over the country.

The growing consumption of energy has resulted in increasing dependency on fossil fuels such as coal, oil and gas. Rising prices of these fuels along with their short supply are, together, causing concerns about the continuation of energy supply for sustainable economic growth. Environmental hazards due to increased use of fossil fuels are also attracting public concern, both on local as well as global scales.

Against this background, there is an urgent need for the country to develop a sustainable path for the generation of energy.

The financial sector has identified hydropower development as a lucrative financing opportunity. The success stories of few hydropower projects developed by independent power producers in the recent past have also helped to create positive market interest and response. On the other hand, the risk is relatively high in this sector due to its technical nature, the necessity of huge funds and longer gestation as well as repayment periods. The financial sector is entering the energy sector gradually by taking small exposure, preferring to share the risk amongst various banks and developing consortium financing.

Various national and international level seminars, as well as a few small exposures mainly in small hydropower projects, have imparted some experience to various commercial banks.

Prospects

Nepal has more than 6,000 rivers and rivulets with an overall average annual run of 225 billion cubic meters of water flowing to the south. The gradient of Nepal, which varies from 200m above sea level in south to 8,848m in the north, enables considerable hydropower potential. We have hydropower generation capacity of above 43 GW, which is economically viable. The actual capacity, however, is much higher than this.

Currently, we are facing load shedding, which shows that the electricity supply is not enough to meet demand. Furthermore, the annual country demand is increasing at about 50 MW per annum, which further increases the demand/market. In addition to current demand, there is every possibility that huge industries like cement, steel rod manufacturing, trolley bus and cable cars, etc., each of which needs high energy input, may develop once peace prevails in the country. This will further increase the demand of electricity.

In addition, we have a power hungry giant neighbor, India, where there is also a high demand. India's installed capacity is reportedly 135,000 MW. Peak demand is 105,000 MW and peak availability is only 86,000 MW. Thus, there is a huge demand/ supply gap. Further demand is growing at 8-9% per annum, which is widening the gap every year.

One of the major hurdles seen for export to India is a lack of transmission lines. Recently, the Nepal Electricity Authority and the International Leasing & Finance Services (IL&FS) of India have entered into an agreement to form joint venture companies (JVCs) for development of the following transmission links infrastructure development :

- 95 Butwal-Gorakhpur: 400 kV T/L to be completed by the end of 2008/09.
- 95 Duhabi-Purnea: 400 kV T/L to be completed by the end of the 2008/09.
- 95 Dhalkebar-Muzaffarpur : 400 kV T/L to be completed by the year 2010/11
- 95 Anarmani-Silgudhi: 400 kV T/L to be completed by the year 2010/11.

The funds available in the local market are able to support projects with a capacity of 20-50 MW only; for mega projects we will have to seek help from foreign institutional investors. As such, a new market for debentures, bonds or even mutual funds will open up. This will spread the return to the mass. In the event of an open market, by the year 2010 international banks will also enter Nepal. This, in turn, will increase the capacity of the financial sector. Therefore, now is the right time to start lending in this sector to gain required experience and hold in the market.

Nepalese Banks have also started to make alliances with Indian counterparts who will not only increase their capacity to lend but will also provide the technical expertise. Recently, PTC India, Ltd., has agreed to enter into an agreement to work together with Nabil Bank Ltd. for power sector development in Nepal. They have further appointed Nabil Bank Ltd. to liaise with other local banks to enter into similar agreements, which they intend to sign up with Nabil Bank Ltd. This has opened up a new avenue for sharing of expertise and has also increased the total capacity to lend.

Furthermore, a memorandum of understanding has been signed to establish an Infrastructure Development Bank, which will focus on project/infrastructure financing. This has brought a ray of hope both to the financiers and the entrepreneurs.

Our Central Bank, Nepal Rastra Bank, has recently increased one obligor limit and has also provided some relaxation on provisioning of loans sanctioned to hydropower projects. This has increased the financing capacity of commercial banks and has also created a favorable market for new financing, by lowering provisioning requirement in genuine cases.

Problems

Despite of various benefits to the financial sector, to developers, and to the entire nation in the form of the development of infrastructure, education, economic standard upliftment, employment generation, and the like, there has been very slow growth in hydropower sector. Only a few new projects have come up.

Hydropower projects can be developed by the NEA, local independent promoters and foreign direct investments (FDIs). In any case, improvement in the law and order situation in the country is a must. Our country is facing political turmoil that must be settled if we are to attract FDIs. An example can be taken from the Russian government, where they have provided their own political risk cover to projects with the aim of increasing outside investments in the country. Furthermore, there should be a one window policy or easy procedures for implementation of the project licensing, etc., to attract more FDIs.

Another problem is the requirement of huge capital investment and financing. Project financing is a relatively new concept in our country, as collateral and personal guarantee-backed lending are mainly done. It will be meaningless to ask for additional comfort in the form of properties (land and building) for any project whose cost is NRs 1 billion and above. As such, limited recourse financing or project financing is only possible. There is lack of transparency in accounting due to various reasons; e.g., banks are finding it very difficult to go for project financing. Furthermore, there is a lack of expertise. Financial institutions must gradually increase their expertise, either through hiring of consultants or making coalitions with foreign (mainly Indian) financial institutions for sharing of expertise.

Matching funds are also problematic. Since banks collect major deposits for short periods of one to two years only, it is very difficult for them to finance a fixed rate for an entire loan tenure of 10 to 15 years for hydropower projects. Therefore, floating interest rates are offered to minimize the risk on the part of the financiers, which leaves the developer with a higher risk.

Banks also face problems due to inexperienced promoters who tend to hire lesser numbers of technical consultants for cost reduction purposes. This ultimately leads to major cost/time overruns due to technical deficiencies in the project. Promoters also tend to compromise on quality for cost minimization, which may also jeopardize viability of the project.

Another hurdle is related to problems created by local communities. As soon as some developers start survey works, local community members tend to come forward with various demands, such as donations to the local schools and temples, for building roads, etc. Various clubs and other parties treat developers like milking cows. At present it has been almost impossible to construct projects without satisfying such local demands. Therefore, promoters are left with no other option but to satisfy their demands, in order to complete the project in time. This is one of the reasons why some promoters have become shy on development.

Various ministries, departments and other government authorities are involved in granting approvals and licenses at various stages of project development. This results in a lengthy decision-making process, which ultimately translated into time/cost overruns. Banks fix their commitment of finance and tenure of loan repayment at the time of financial closure. Any rescheduling of repayment attracts higher provisioning as per regulations of the central bank. Bureaucratic delays as well as delays due to various strikes and *bandhs* are also major causes of time overruns. This is a serious issue that many small hydropower financiers are facing. While fixing loan provisioning, the central bank should consider the issues on a case-by-case basis for viable projects, noting logical reasons regarding project delays.

Way forward

Despite of all above cited problems, a conducive environment has been created for developers, financiers. Every political party as well as the government has recognized development of the hydropower sector as a key for country's development. Now, the need is to identify the barriers to the development of hydropower resources, followed by a development strategy and a set of activities to remove those barriers. This is possible through extensive consultations with all the relevant stakeholders, including government authorities, local and international financing institutions, bilateral donors, hydropower companies and end users of electricity.

More specifically, the following steps are suggested to be taken by the concerned stakeholders:

1. Demonstrate economic, financial and environmental feasibility for developing hydropower in Nepal. This should be done through one or two pilot projects.
2. Assist in developing supportive legal and an institutional framework to develop hydropower.
3. Involve local and international financing institutions to support development and implementation of a supportive financing mechanism for hydropower financing.
4. Train local stakeholders to develop project proposals.
5. Train the owners and personnel of the hydropower companies to manage and operate their enterprises on a commercially viable basis.

Expected Outcomes

1. Successful implementation of pilot projects, thereby demonstrating feasibility of such projects.
2. Supportive legal and institutional framework in place, creating more confidence.
3. Supportive financing mechanism in place, enabling hydropower investments with reasonable terms and, thus, reducing the risk of potential investors and financial organizations to finance the hydropower development in Nepal.
4. Local stakeholders trained in project management and business skills.
5. All of the above leading to increased power generation in Nepal. This will improve electricity supply to all parts of Nepal, including the rural and remote areas. Power export will also be feasible. The result will be an increase income generation and economic development at a faster pace to built the 'New Nepal'.

The local as well as the export market is readily available and infrastructure required for export is also being constructed. This is the right time to start financing hydropower projects. Banks should move forward by financing small hydropower projects in consortium and gradually go for financing middle-sized

projects, joining hands with foreign financing institutions. Initially, some consultants can be hired for cross verification on technical aspects. This will gradually build up expertise and confidence of the banking sector. After the year 2010, when international banks will be allowed to work here, the capacity of the financial sector will increase immensely. Nepalese banks should be prepared for financing big projects by that time.

Let us all work together to make Nepal's water a source of national development (*Nepal ko pani, pragati ko khani*) a reality.

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