

# IPPAN

September 2008 Vol. 2

INDEPENDENT POWER PRODUCERS' ASSOCIATION, NEPAL

## Remarks From The President



Dr. Sandip Shah

### Power Summit 2008

Power Summit 2008 is at our doorsteps! We, at IPPAN, are proud to be organizing the Power Summit for the third time in a row with PTC India Ltd. These Power Summits have been heralded as landmarks in the hydropower development history of Nepal. We have seen immense interest in these Summits on various aspects of power sector development in Nepal and the region. The Government and the Private Sectors have realized that there is a need to do a lot in this sector and that there is an urgency to do so in order to harness the hydropower resources for the economic benefit of Nepal and social upliftment of its peoples. Besides, the growing need of electrical energy to feed the "double digit" growth expectations of Nepal has mobilized the political and industrial leadership to face this challenge in a cost-track but harmonious and sustainable manner. The insatiable appetite for energy in India is another motivational factor for developing Nepal's hydropower resources as we will be able to provide respite to the capacity and energy shortages in the Indian power system.

Power Summits of 2006 and 2007 were focused towards jump-starting private sector initiative for hydropower development in Nepal. They provided valuable information on projects that are ready for development; models for projects financing; likely issues in financing; and significant risks perceptions of investors with a view to provide specific recommendations to policy makers in Nepal and India. Some of the major outcomes of these programs have been the award of development licenses for two projects through a competitive bid process by GoN; initial steps towards formation of an infrastructure development bank; construction of cross-border transmission lines, etc.

IPPAN and PTC are giving continuity to this annual event to sustain the momentum developed by the two

previous Summits and to build on their achievements. The question is what the difference is this time around. When we analyzed the outcomes of the previous Summits, it was obvious that the government sector needs to support the private sector in driving the agenda of large-scale developments in this sector and to create an enabling environment for project development to actually happen. We have seen tremendous support from the Government of Nepal in this respect, and we have also observed keen interest from the Government of India. Given this background, the focus of Power Summit 2008 is to create an enabling environment to develop the power sector with market-oriented growth. We have observed a dynamic power market system developing in India, and it is in our best interests to integrate our power system with that of India in the long run. This will require open, non-discriminatory access to the Indian power market and a level playing field for all generators from Nepal. We have also taken up other renewable energy sources, besides hydropower, in this Summit as we realize the necessity to develop these resources as well. This gels very well with one of IPPAN's objectives to develop other forms of renewable energy systems in Nepal.

We have been reading bits and pieces on the new hydropower import policy that India is mulling over. With whatever we have seen so far in news clips, there are growing concerns on issues in this policy regarding market access and tariff regimes. Since this policy may have a direct bearing on hydropower project development in Nepal, IPPAN believes that stakeholders' discussions must be carried out in order that hydropower development is not adversely affected. With the knowledge of power systems and power markets at IPPAN, we believe we should be a part of the consultation process and that we will be able to contribute positively towards development of a robust policy, if at all it is required.

The Koshi floods this year have been disastrous. With the relief operations underway, debate has again started on building of a large dam on the Koshi River mainly for flood control and land reclamation. Obviously power project development will be a bye-product of the process, but the issue needs to be studied carefully since large dams have serious technical, environmental and social concerns. The Koshi River, in particular, has major issues on sediment transport which will have a definite impact on the life of a large dam. We believe that there are other solutions to avoid a large dam in one location. These possible solutions need to be thoroughly

investigated before rushing to build a large dam that may not serve the intended purpose in the long-run.

Large dams and large hydropower projects are again under discussion in Nepal. We have heard views that small projects are now irrelevant and that the focus should be on mega projects. What needs to be realized is that small, medium and large projects have a due place in the power system. They have complementary roles in the power system and that projects need to be assessed based on system fit rather than on sentiments. We know small is beautiful, but we also know that big is more profitable. A judicious mix of such projects is the real need of the day such that the power system can grow in a prudent manner.

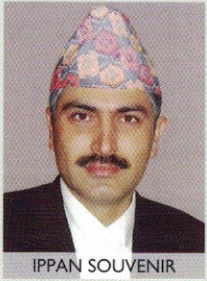
Wish you all successful interactions at the Power Summit!

### IPPAN'S Vision, Mission, Goal & Purpose

- To contribute to the development of Nepal's vast untapped hydropower potential, in line with Nepalese aspirations.
- To help mobilize private capability, both national and international, to overcome the constraints confronting hydropower development.
- To make optimal use of Nepal's water resources endowments, to serve long term national and regional needs in the context of future fresh water and energy scarcity.

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IPPAN SOUVENIR

## Interview with Mr. Shanker Prasad Koirala Secretary, Ministry of Water Resources

1. In view of the growing interests of both national and international power developers, what are the incentives that the Government of Nepal is contemplating to provide so as to make investment in hydropower more lucrative?

Normally, investment in hydropower is not made based on speculation. A project is built by the investor only after PPA is concluded, which means return on investment is assured prior to injection of major part of capital. This process itself significantly reduces the commercial risk. Once an electricity regulatory commission is in place, a rational project cost is duly recognized and accordingly, reasonable tariff is accepted. The Government of Nepal is keen to establish such a regulatory commission at the earliest through the proposed Nepal Electricity Regulatory Act.

Similarly, our prevailing Electricity Act has a provision that a developer can import necessary construction material and equipment for the power project at a custom duty of only one percent of the cost of the material and equipment, provided they are not available in Nepal. The Act has also a provision for sales tax (now VAT) and income tax exemption for ten years, which at present is superseded and nullified by other Acts. We are trying our best to restore those earlier exemption provisions. Foreign investment can be attracted in the sector only when there is comparative advantage to invest in Nepal. This is the reason why the Government has given high priority to the sector and is trying to create investment friendly atmosphere.

The Government and its concerned agencies are always available to render any kind of assistance that a developer may need in course of development and operation of a power project. These together make an investment in power sector lucrative and safe.

2. Hydropower Policy 2001 has been in existence for quite some time. However, the new Electricity Act has not been promulgated yet. The hydropower industry is facing a lot of confusion in the absence of new Electricity Act while the provisions of HDP 2001 are being enforced on New Projects. Your views on when the new EA will be enacted and what special provisions it will have?

Not that efforts were not made in the past in enactment of new Electricity Act (EA) and Nepal Electricity Regulatory Commission (NERC) Act to give effects to the Hydropower Policy 2001. The draft versions of the Acts are on the anvil for long, however, they could not be forged into effective Acts because of frequent political changes in the country. We hope that the bills will be tabled in and passed by the Constituent Assembly (CA) very soon.

There shouldn't be any confusion among the hydropower developers as to whether the new Acts will curtail some of the incentives. They are for bringing about positive changes in the industry and encouraging the developers to the extent possible. The prevailing EA, 1992 is currently effective until the new Acts are not put in place; and their provisions are applicable. If your indication is towards the royalties provisioned in accordance with the HP, 2001, in the MOUs related to some recently awarded projects, they are there based on competition and also on mutual agreements.

It'll be too early to declare the special provisions of the new Act(s) as CA reserves all the rights to accept or modify or reject the bills. Even then, exemption of license and royalty for up to 2 MW hydel projects, provisions for trading of power, ensuring of water rights, income tax holiday for some years, nominal custom duty and exemption of VAT for the imported construction materials and equipment, distribution of royalty among concerned local bodies and affected communities, indemnification from expropriation, effective one window system etc. are some of the special provisions, to mention a few, in the proposed new EA.

3. It is well known fact that the load shedding problem in Nepal is going to adversely affect the economy of Nepal, and the lives of common Nepalese people. The general feeling of the people is that the government is simply passive in the issues of load shedding. Will you please elaborate on the immediate, short term, medium term and long term plans the Government of Nepal has to solve the load shedding problems?

As regards the issue in question, one has to understand its few important aspects. Power projects, be it hydropower or any other type, are very capital intensive and they equally take a long time in conception, investigation and implementation, before they are able to generate electricity. Therefore, even if we realize the adverse impacts of power shortage at present and act immediately, it takes a minimum of five to seven years to resolve the problem effectively. The problem we're facing now is due to our myopic vision and non-action in yesteryears. Another reason for the current load shedding is a situation of armed conflict in the country in the past. Because of the difficult situation, public sector projects like Middle Marsyangdi could not be completed in time. Time overrun in Middle Marsyangdi Project has a direct implication in the project cost with a tremendous adverse impact on the financial health of NEA. The difficult situation

also discouraged many private sector developers to invest in hydropower. Now the situation has improved and we hope that things will move for the better.

Not that the Government is turning its blind eye to the problem, as is sometimes accused of. We are trying our best to help NEA complete its ongoing projects namely, Middle Marsyangdi and Chamelia and start construction of Kulekhani III. We have been facilitating NEA to establish high voltage Nepal India cross border transmission facilities at three locations so that we can import power for the short and medium term and use the same facilities to export when we'll have surplus in future. We are encouraging private sector developers to come forward and invest in hydropower projects. Similarly, we are also encouraging to develop and expand renewable energy, such as solar and micro hydro, throughout the country. Demand side management is also an area we need to focus on.

Also as a medium term measure, some more important projects are in pipeline such as Upper Tamakoshi, Upper Trishuli 3A, etc. Catering domestic power needs is the very reason why we have made provisions of free power to Nepal from the large export oriented projects like West Seti, Arun 3 and Upper Karnali, survey licenses of which have been awarded to mainly the foreign private sector investors. As a long term measure, say 10 years and beyond, the Government has already declared an ambitious target of 10,000 MW.

4. It is said that if we come up with differential tariffs, morning, day, evening, and night, we can readjust the tariff so as to make it affordable for common people, because the tariff can be made cheaper that way. Has the Government of Nepal thought in this direction?

Not the Government, but NEA had thought of differential tariff system a few years ago, when they had spill energy during monsoon, especially after the commissioning of Kali Gandaki A Hydel Project. Personally, I was not in the Ministry of Water Resources then, but I have come to know that when the plan was still being discussed, round the year load shedding was looming. At present, we not only have shortage of power during peak hours of winter, but there's a shortage of total amount of energy also. Therefore, in such situation, differential tariff could be hardly any remedy to power shortage. Otherwise, for shifting some of the loads of the peak hours to off peak hours and also for making best use of the resources, time of the day tariff system could have been a useful tool. That is practiced in several other countries, too.

5. Due to Nepal's heavy dependence on petroleum products for energy, large chunk of our export earnings has been spent for import of petroleum products. The present situation warrants that Nepal immediately switch over to hydro-electric power to run vehicles and industries. However, our Hetauda-Kathmandu Ropeway service is not functioning for long time. Kathmandu-Bhaktapur trolley bus service is simply in pathetic state. And we are planning to let construct Kathmandu-Hetauda fast track highway, instead of electric trains. Will you please comment?

Besides Nepal, there are a large number of countries, which do not produce petroleum at all. Dependence on imported oil is inevitable, at least for the foreseeable future. However, we have to make every effort in substituting energy import, which is consuming around 55% of the foreign exchange that we earn from our export. As we have tremendous potential of renewable energy, mainly in the form of hydropower, the idea of electrifying industries and transportation system, I think, is a good one. It also conserve environment also. Failure of Kathmandu-Hetauda Ropeway in recent years is primarily due to additional transshipment requirement between Raxaul and Hetauda and also between the terminal at Teku and the goods' destinations in the Kathmandu valley. To make the ropeway more effective, it should be extended from Hetauda to the dry port at Birgunj. The ropeway also suffered from management deficiencies that are inherent in a public sector undertaking. In my opinion, the management of the ropeway should be contracted out to a private company.

On highway versus railway debate, I can say that railways normally do not sustain independently; railways need parallel highways for construction, maintenance and other aspects of sustenance. Like hydropower projects, railways are also very capital intensive. Investment in railways should be justified economically, that means there should be enough men and goods to be transported. Sometimes, I also wonder why we do not construct electric railways and other mass transportation systems at all in our landlocked country.

6. The establishment of an independent Nepal Electricity Regulatory Commission (NERC) is long overdue. It is believed that the establishment will pave way for removing many hurdles in the way of hydropower development in Nepal. Will you please tell us when the NERC will see the light of the day?

Like New Electricity Act, the NERC Act, which is also for making the Hydropower Policy, 2001 effective is long overdue. Both the Acts have been prepared in consonance and their enactment will take course once the Constituent Assembly streamlines its regular business. Presently, both the Bills are under consideration of the Council of Ministers.

7. The hydropower industry needs huge amounts of investment. The local banks simply cannot afford to provide adequate capital for hydropower industries. What is the Government of Nepal planning in this regard?

You are correct to state that national capital market is not adequate enough to cater the needs of hydropower industry. The national banks are for lending to national investors involved in hydel projects with capacity in the range of 50-75 MW only, though NEA

has been able to make arrangement of financial resources from the national institutions like Employees Provident Fund for 309 MW Upper Tamakoshi Project; but it's not possible always. For additional financial resources for the power projects that will be taken up by public sector utility, we'll have look forward to multilateral donors like the World Bank and ADB. Foreign private sector investors, which are expected to develop projects of higher capacities, are encouraged to go to international financial institutions for the capital as has been doing in case of West Seti Hydel Project.



## Interview with Mr. Arun Kumar Chaudhary, President of Nepal-India Chamber of Commerce and Industry (NICCI)

1. In your opinion, what are the major hurdles that kept Nepal's hydropower largely under-utilized since last few decades?

The first and foremost problem behind the underutilization of hydropower in Nepal has to do with the mindset. The country boasts of a huge hydropower potential, but, at the same time, it is presently living with 37 hours long load

shedding in a week. Another reality is, there has to be a strong cooperation between Nepal and India to exploit this hydropower potential. Nepal has a huge supply potential, while India has a strong thirst for power. There can't be a better match. There are people who still give logics that selling power to India is a losing proposition for Nepal. But I also do not prescribe alternative to take benefits of this rich natural endowment. Absence of visionary policy also left this resource underutilized. Many people still think the lack of infrastructure is a major hurdle to harnessing Nepal's hydropower potential, but I believe it is not a big impediment. Once environment is created and big projects come, these hurdles will be overcome. After all, necessity is the mother of invention.

2. What policy changes should the Government of Nepal make in order to attract the potential investors in hydropower development?

The government must first list hydropower at the top of its development priorities. It must come up with a comprehensive Energy Policy and make subsequent changes in the policy and legal framework to enable the power sector to attract increased investment. The government must also make sure that the hydropower development licenses are in the real developers' hand. The government must also develop a fast track mechanism for the potential developers to deal with processes starting from feasibility study to power purchase agreement. The sector is a matter of great economic meaning. Hence, the greater cooperation from the government is utmost important.

3. Hydropower development requires huge investment. Nepal's local banks are not in a position to cope up with the loan requirements of the large hydropower projects. In such a scenario, what should be the financial instruments that would facilitate the flow of international capital into Nepal?

It is true that Nepal's banks may not be able to finance a great many large-scale projects. But I am also of a belief that if the projects are good and developers reliable, money will be a problem. Serious potential power producers will be able to mobilize fund from India and elsewhere. If specific financial instruments are put in place targeting power sector development, it's still better. But we will have to make sure that finances are extended in line with international norms and come with acceptable terms and conditions.

4. In your opinion, what are the implications of the previous two power summits? How such summits help create favorable investment climate for hydropower development in Nepal?

The previous two power summits have garnered two landmark achievements. First, they successfully brought together the government officials, policy makers, academia, financial institutions, banks and investors. This for the first time initiated a wider-level dialogue on the issue in Nepal and sensitized all domestic stakeholders from political leadership to the people in reaffirming the potential of the sector and realizing constraints underlying the sector, accepting domestic limitations and ways those constraints and limitations could be done away with. Secondly, the Summit for the first time brought together the private players and developers from Nepal and India in the same platform. It established the business link, which was missing previously in the country's hydropower sector. That garnered increased Nepal-India cooperation on hydropower.

The Summits like these help by genuinely bringing to the fore the key barriers to investments in the sector. It fosters understanding and help parties carrying different ideologies to converge for the sake of national development and doing justice to the people. It is because of the political will that the Summit imparted Nepal has seen unprecedented consensus among political parties towards developing the power sector. They have readily pushed hydropower out of the government realm and welcomed overseas developers. The two countries have also taken steps towards setting up of the cross-border power transmission lines and are aggressively working to tackle the practicalities of hydropower development.

5. Will you please elaborate on the notion that hydropower has the potential to kick-start the Nepalese economy?

Each and every country in this world is bestowed with natural resources of one form or the other. And our country is lucky that it has hydropower. It's needless to elaborate the importance of this sector in kick starting or transforming social and economic facet of Nepal. If we are able to harness the potential of the sector, Nepal will do equally better as the Arab world that have made their way by tapping the fossil fuel. For that to happen, however, it is important to make environment that is conducive for FDI.

6. The absence of high voltage transmission line is said to be one of the major reasons for exploring power markets. Since, Government of Nepal can not be expected to make arrangement for huge capital investment, what do you suggest to involve private sector in it?

I am of the view that private sector should be widely involved in the infrastructure development of the country. By infrastructure, I also mean the infrastructure related to the power sector. It is desirable that the private sector be responsibly involved in laying down the transmission lines and other key infrastructures so that power can be wheeled without any hindrances into India, which is our major market. The government will have to formulate clear-cut policies and legislations supporting the private sector's involvement to this front. It must implement build-own-operate-transfer Act. Long-term and predictable business environments must be ensured.

7. What do you expect as the outcome of the forthcoming Power Summit-2008?

The previous two summits have created necessary awareness about the importance and potential of hydropower in Nepal. Those also successfully instilled a change in the mindset of the stakeholders. What is good for Nepal and Nepalese people is known now. So, my expectation now is that the new edition of the Power Summit will start delivering projects and kick start hydropower development and generation. I believe things we are discussing so far on hydropower will start translating into reality. More so because the government has also set a benchmark of its own: to develop 10,000 MW of electricity in the next one decade. Power development licenses are being granted in an optimistic way. I expect still more licenses will be accorded in the days to come. Since the Summit will be a meeting point for producers, buyers and perspective partners, dreams that we saw will surely materialize in reality.

8. It is stated that large-scale hydropower development in Nepal has not happened in the past due to mistrust, geo-politics of the region and overall lack of confidence between the politicians and bureaucrats of Nepal and India. Do you think that private sector initiatives like the Power Summit will be a CBM – confidence building measure – between the two countries? What will it take to develop this CBM and whether the private sector approach will have an effect on the CBM process?

If somebody has to answer this question candidly, if hydropower wasn't developed in the country, the sole reason was hyper-politicization of this sector. Another major reason is that there were people who always related hydropower with patriotism. Let us not forget that water flowing from mountains is carrying with it millions of rupee in revenue. Each minute we are losing millions of rupee and it cannot be recaptured. Hence, rather than digging the grave, I would say we must learn from the past. Nationalism and politics must be kept in a distance from this. If we are able to do this, then only would we be able to harness hydropower and transform the country's socio-economic outlook.

9. In your opinion, how can the media, NGOs, and Civic groups of both India and Nepal facilitate in initiating a meaningful dialogue between Nepal and India, based on mutual trust, and benefits, for harnessing of hydropower for economic transformation of Nepal?

Media, NGOs and civic groups can surely play a great role by putting things in a right perspective. It should be dealt as a business and kept away from politics. It should not be related with nationalism. By selling power to India, a Nepalese will not lose or diminish his nationalism. It is very important that all of us realize it. Power is a commodity now. And it is a tradable commodity. Without wasting time, we should work to prevent this millions of rupee worth of resource going waste. Hence, Media, NGO and civil societies should facilitate meaningful dialogue. They must also seek transparency in every step of negotiations, bids, power deals, give strong inputs in the policy formulation process and monitor all to enrich trust and benefits.

## IPPAN ACTIVITIES

### Discussion with NEA: Power Purchase Policy for less than 10MW

Meeting with Minister Gyanendra Bahadur Karki was scheduled prior to the finalization of tariff policy & standard PPA on 22nd February 2008. On invitation of NEA, IPPAN participated in an interaction program regarding the Power Purchase Policy for less than 10MW on 7th March 2008. On the request of NEA, IPPAN forwarded the recommendations on 14th March 2008. IPPAN scheduled a meeting with NEA on energy rates and proposed model for Power Purchase Agreement for Power Purchase Pricing Policy below 10MW at its office on 17th March 2008.

### RESEARCH STUDY

IPPAN conducted research study on "Model PPA" under the supervision of Mr. Amar Jibi Ghimire. Another research study on "Comparative assessment of electricity legislation of Nepal, India & Bhutan" was also carried out under the supervision of Mr. Amar Jibi Ghimire. A survey on Power Crisis from the consumers' perspective was also conducted.

### Power Purchase Pricing Policy for less than 10MW

Since NEA is in the process of setting up a policy on tariff for projects up to 10MW, IPPAN has conducted extensive modeling for tariff setting based on actual project costs. At the invitation of NEA, IPPAN participated in an interaction program regarding the Power Purchase Policy for less than 10MW on 7th March 2008. On 18th March 2008 IPPAN organized a meeting with NEA, at its office, on energy rates and proposed model for Power Purchase Agreement for Power Purchase Pricing Policy below 10MW to make it more credible and practical. Discussions, in this context, continue with various levels in the Government.



### Presentation to Secretary Ministry of Water Resources

At the request of the new Secretary of Ministry of Water Resources, IPPAN presented a paper on legal and regulatory framework for hydropower development and the expectations of the IPPs. EC Member Mr. Amar Jibi Ghimire made this presentation to MoWR in September 2007.

### Power Crisis

IPPAN has initiated a project on assessing impact of power crisis and load shedding on industrial, commercial, domestic and agricultural consumers. SODEJ – Nepal (Society of Development Journalists – Nepal) is conducting this research and their draft report was presented at an interaction program at IPPAN on 15th July 2008. SODEJ has prepared a documentary based on this research. The documentary and research are in the process of being finalized.



### Tax and VAT modeling

Since the Government of Nepal has removed tax-holiday provisions and is contemplating removal of VAT exemption, IPPAN had conducted discussions on financial modeling to assess the impact of removal of tax-holidays, VAT exemption and investment tax credits. Discussions were held with officials of Ministry of Water Resources and Ministry of Finance to conduct advocacy for safeguarding these issues and to provide continuity to policies of the Electricity Act of 1992.

### Position Paper to new Government

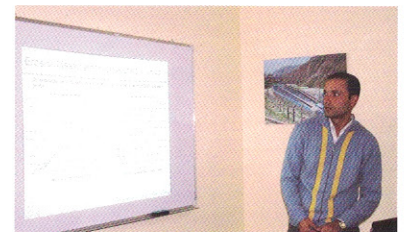
Keeping in view the vision of hydropower project development figures in various political parties, IPPAN conducted internal discussions on its position on whether these numbers are possible, and what is required to achieve these goals or part thereof. While appreciating the vision, IPPAN has stressed that the new Government will have to come up with a detailed plan, policy, program and/or an implementation model for developing this sector. This paper will be formally handed over to the Government once it is installed.

## FRIDAY FORUM

The Friday forum on "Erosion Measurement in Turbine" was organized on 21st December 2007. Mr. Ashish Subedi of Butwal Power Company Limited facilitated the forum, with intentions of studying the significance, mechanism of erosion and to analyze the implications along with finding optimum solution considering different parameters to overcome the challenges.

IPPAN has conducted a Research study on "Model PPA", which aims to study PPA and will formulate a Model Power Purchase Agreement (MPPA). The Friday forum on "Outcomes of Research study on Model PPA" was organized on 4th January 2008 and facilitated by Mr. Amar Jibi Ghimire, Consultant of the research study.

IPPAN organized a forum on "Develop Melamchi as a multipurpose model" with its members on 22nd February 2008 was facilitated by Mr. Ratna Sansar Shrestha. The forum shared the long term and regional benefits of Melamchi project as a multipurpose model.



## Hydropower Project Finance

Independent Power Producers' Association of Nepal, International Finance Corporation, a member of the World Bank Group, Nepal Banker's Association, and Nepal Hydropower Association jointly organized a workshop on "Hydropower Project Financing" to help promote investments in the hydropower sector on 21st July 2008 in Kathmandu, Nepal. Inaugurated by Honorable Minister for Water Resources, Mr. Gyanendra Bahadur Karki, the event was attended by senior government officials, infrastructure and power specialists, and private sector business associations from South Asia. Discussion topics included project financing; risk assessment, securitization, and mitigation; environmental concerns, including climate change; and international best practices and their adaptation to Nepal's context.

At the Closing Session, Vice Chairman of National Planning Commission Dr. Jagdish Chandra Pokharel reinforced the importance of international capital and international partners for harnessing Nepal's hydropower resources. Secretary Shankar Koirala

of Ministry of Water Resources reiterated Nepal Government's commitment to streamline the project development process with the introduction of appropriate legislation and regulatory framework. Secretary Rameshore Khanal highlighted the key role to be played by international partners with respect to risk assessment, project appraisal and risk securitization for large infrastructure projects. Furthermore, he also emphasized that international developers and lending agencies are welcome to introduce various financial instruments in Nepal for developing these projects.



## Seventh & Eighth Annual General Meeting

IPPAN conducted its seventh and eighth Annual General Meeting (AGM) on 23rd July 2008 at the IPPAN office. During the meeting, IPPAN President Dr. Sandip Shah elaborated some of the major activities of the previous years such as enhancement of the current activities like research and analysis, power sector financing, hydropower tariff setting, development of model PPA, power market, power sector reforms, efficient information management system advocacy and public outreach programs were being conducted continuously to adapt to the changing needs of the power industry.

Five new members - Rairang Hydropower Development Company, Himalayan Hydropower Company, Himal Hydro & General Construction, Clean Energy Development Bank Ltd and Hydro Solutions - were awarded IPPAN Membership. Dr. Shah also emphasized major activities to be carried out in the coming days, like workshops on "hydropower project financing", "power demand management", research study on "Load Flow Analysis", "updating the theoretical and economic hydropower potential of Nepal", "develop methodology to make CDM opportunities accessible to hydropower projects", "climate change and its impact on financing of hydropower projects", advocacy for "single project development license" in lieu of the present two stage licensing, "Generation license of at least 35 years for both domestic and export hydropower projects", and Intensive training for bankers.



## IPPAN PARTICIPATION

### Investment in Nepal's energy sector

Mr. KB Bisht, on behalf of IPPAN participated in a seminar on Investment in Nepal's energy sector in Oslo on 26th February 2008.

### Insurance and re-insurance Business in Hydropower

Mr. Pradeep Gangol, Executive Manager of IPPAN participated in a one day workshop on "Insurance and re-insurance Business in Hydropower" organized by Birla Insurance Advisory & Broking Services Limited (Insurance and Re-insurance Brokers, Mumbai, India) at Hotel Annapurna, Kathmandu on 10th August, 2008.

### Discussion on PINs (Project Idea Notes) of CDM Project

Mr. Pradeep Gangol, Executive Manager of IPPAN participated in a talk programme on "Discussion on PINs (Project Idea Notes) of CDM Project", organized by the Ministry of Science and Technology at Singha Durbar on 3rd September 2008.

### Budget Draft meeting of Ministry of Finance

Dr. Subarna Shrestha, EC member and Mr. Pradeep Gangol, Executive Manager of IPPAN attended the budget draft meeting at the Ministry of Finance in Singha Durbar on 4th September 2008. Attended by many representatives of commodity and sectoral organizations of Nepal, the meeting was presided over by Honorable Minister of Finance Dr. Baburam Bhattarai. IPPAN had put forward following suggestions to be incorporated into the budget of the Fiscal Year 2008-2009:

- ⇒ Resumption of Tax Holiday for hydropower project
- ⇒ Exemption from VAT and other taxes
- ⇒ Need for a high capacity 400 kV Transmission Line running from East to West along the midhills
- ⇒ Need for north-south 220 kV Transmission Line
- ⇒ Provision of a dollar account for hydropower developer to import machinery
- ⇒ De-licensing of hydropower projects up to 20 MW capacity

## News from Members

### BUTWAL POWER COMPANY

Butwal Power Company (BPC) celebrated World Environment Day on 5th June 2008 at its office premises by planting tree saplings. Also on the occasion of World Environment Day, BPC launched its new corporate identity. During the occasion, BPC adopted the slogan "Kick the CO2 Habit! Towards a Low Carbon Economy" released by United Nations Environment Program (UNEP) on the occasion of the World Environment Day 2008.

With the launch of rejuvenated corporate identity on World Environment Day, BPC has reiterated its commitment to protection of environment and the hydropower sector.



### BPC Bags BPA Third Time in a Row

BPC has been awarded the winner of Best Presented Accounts (BPA) 2007 in Manufacturing Sector for excellence in the presentation of its Financial Statement and Accounts. This is for the third consecutive time that BPC has been awarded this prestigious award, which has proved the transparent practices and sustainability capacity of BPC.

### Tree Plantation in Dhobikhola Corridor

As part of its Corporate Social Responsibility and contribution in safeguarding and promoting clean and safe environment, BPC organized a Plantation Program at Dhobikhola Corridor on Saturday, 18th Shrawan 2065 (2nd August 2008). Representatives of the Ward office, Buddhanagar Bikas Samiti, Women's group and the local community were present in the program along with the staff of BPC.

### Record Highest Generation

During the Fiscal Year 2064/65, BPC's total generation was 107.39 GWh, the highest record to date since commercial operation of the plants with an average yearly plant factor of 71.69 %. About 83.82% of total energy generated was supplied to NEA and 14.28% to BPC distribution area.

### BPC Hydroconsult in International Market

BPC Hydroconsult, the Engineering and Consultancy Business Unit, has pre-qualified for providing Consultancy Services for Feasibility Studies of Hydel power stations in Punjab and Pakistan funded by ADB.

### BPC's Future Projects

Butwal Power Company (BPC), established in 1966, is the pioneer and leading private sector hydropower developer in Nepal. BPC is involved in generation, transmission and distribution of electricity. Being a leading and responsible hydropower of Nepal, BPC has aligned its hydropower development plans to the energy requirement of the nation.

Projects with capacity of about 100MW are currently under various stages of development. The projects under development are 42MW Marsyangdi-III Hydroelectric Project, 20MW Nyadi Hydropower Project, 9.4MW Andhikhola Upgradation Project, 9MW Bhim Khola Small Hydroelectric Project and 30MW Kabeli Hydropower Project.

### New Members of IPPAN

IPPAN extends a warm welcome to three new members - East Nepal Development Endeavor (Corporate Member), Manang Trade Link Pvt. Ltd. (Corporate Member) and Hydro Solutions (Associate Member). The 35th Executive Committee Meeting approved the membership of these organizations.

### Farewell to Ms. Romy Joshi

IPPAN Acting EM Ms. Romy Joshi has left IPPAN. A farewell program was organized for her on April 2nd 2008. Ms. Joshi's contribution to IPPAN was recognized at this function.

## Sanima

Sanima Hydropower (P) Ltd. (SHPL) was established in March 1999 in Kathmandu Nepal with the main objective to promote hydropower sector of Nepal through private investment as a part of contribution to the overall development of the country. The major shareholders of this hydropower are: a group of the non-resident Nepalese (NRNs) and Sanima Hydro and Engineering (P) Ltd. represented mainly by Engineers. The 2.5MW Sunkoshi Small Hydropower Project (SSHP) was the first hydropower project of SHPL built under BOOT (Build, Own, Operate & Transfer) basis. The Project is in commercial operation since 24th March 2005.

Sanima Hydro and Engineering is the sister Organization of Sanima Hydropower (P) Ltd. The Engineering Department of SHE had undertaken the revised feasibility study of the 2.5MW Sunkoshi Small Hydropower Project (SSHP), its detailed engineering design, engineering management and construction supervision and had brought the project into successful commissioning. SHE has an in-house engineering department for the purpose of carrying out the feasibility study of small and medium hydropower projects including detailed engineering design, project management as well as construction supervision of the Projects. It also looks after the operation and maintenance issues of the power plant. Currently, the project named Middle Tamor Hydropower (57MW) is under the supervision of SHE. Feasibility study and EIA study of the project is on its way to completion. Sanima has also provided its engineering services to Sanima Bikas Bank, Khoranga Khola Hydropower Development Company (P) Ltd., Himalayan Hydropower (P) Ltd. Projects, East Nepal Development Endeavour (P) Ltd., Nikhil Jal Shakti (P) Ltd. and Mailun Khola Hydropower Company (P) Ltd. projects.



### SANIMA IN-HOUSE PROJECTS

#### Sunkoshi Small Hydropower Project (2.5 MW)

Location : Sunkoshi River,  
Sindhupalchowk District.  
Capacity : 2.5 MW  
Head : 124.5m  
Annual Energy : 14.38GWh  
Project Type : SROR  
Status : In operation from March 2005

#### Mai Hydropower Project (15 MW)

Location : Mai river, Ilam District.  
Capacity : 15MW.  
Head : 117.0m  
Annual Net Energy : 95.6 GWh  
Project Type : SROR.  
Status : Feasibility completed & EIA approved  
PPA : in Negotiation with NEA ( from 2006)

#### Mai Cascade Hydropower (5MW)

Location : Mai river, Ilam District.  
Capacity : 4.5MW  
Head : 42 meters  
Annual Net Energy : 29.66GWh  
Project Type : SROR / Cascade from MHP.  
Status : Feasibility study is completed and  
IEE study is being carried out

#### Tamor Hydropower (100 MW)

Location : Tamor river, Taplejung District.  
Capacity : 100MW  
Head : 350m  
Annual Net Energy : 702 GWh  
Project Type : ROR  
Status : Feasibility study and EIA study  
are going on

#### Middle Tamor Hydropower (57 MW)

(Sanima Hydro and Engineering (P.) Ltd.  
Location : Tamor river,  
Taplejung District  
Capacity : 57 MW  
Head : 225m  
Annual Net Energy : 401 GWh  
Project Type : ROR  
Status : Feasibility study and  
EIA study are going on

## An Introduction of Lamjung Electricity Development Company Limited (LEDSCO)

- Er. Prawin Aryal

Lamjung Electricity Development Company Ltd. (LEDSCO), established in April 1994, is a community based hydropower company in this region. The company is dedicated to develop modern forms of energy through the grassroots approach, with the objective of developing hydropower projects and rural energy schemes based on the principle of community ownership and adopted public-private partnership model for its development. LEDSCO's mission is to provide clean and reliable source of energy by tapping the natural resources in an economically viable, environmentally responsible and socially sensible manner. At present, LEDSCO has 234 shareholders. These mostly include individuals, NGOs, Village Development Committees (VDCs) and District Development Committee (DDC) of Lamjung. Supported by this base, LEDSCO aims to produce and distribute electrical power to Lamjung District as well as to the national grid.

LEDSCO's work is divided along two lines – Track 1 and Track 2. Activities under track 1 include the development of small hydropower projects, which are to supply electricity to the national grid as well as the local population. Track 1 projects are commercial ventures that aim to provide dividend to its shareholders. Track 2 activities include rural energy planning and development activities, which are implemented with social objectives of promoting rural electrification and improving the standards of living of the local population.

With significant investment from the local people, LEDSCO has already developed 183 kW Syange mini hydropower project, which is in operation since February 2000, and Khudi Hydropower a 4MW power project in Lamjung District of Nepal with the Consortium agreement between LEDSCO, BPC (Butwal Power Company, Nepal) and SCPHI of Canada. This project is in operation since December 2006. The company had also conducted a community based integrated energy planning in 2 VDCs of Lamjung

District followed by the implementation of a 10 kW Lankhar Khola Micro Hydro project in Ilampokhari VDC Lamjung.

Likewise LEDSCO is planning to develop similar mini/small hydropower projects in the near future. The status of LEDSCO pipeline projects are summarized below:

- Tatopani Mini Hydropower Project - 210 kW: Detailed feasibility study completed, Power Purchase Agreement (PPA) with Nepal Electricity Authority (NEA) is under progress,
- Nyadi Hydropower Project - 20MW, Feasibility Study and EIA completed, PPA with concerned agencies is under discussion - MoU has been signed between Butwal Power Company (BPC) and LEDSCO for further development of this project,
- Radhi Khola Small Hydropower Project - 4.4MW: feasibility study completed, application for PPA is in progress,
- Dordi - I Hydropower Project - 3.85MW: detailed feasibility study completed, optimization works to upgrade the power project in the range of 9.5MW is in progress.
- Midim Khola Hydropower Project - 3.4MW detailed feasibility study in progress.

Similarly, the company is also willing to develop its technical expertise and provide engineering services in the hydropower sector. In the past 14 years the company has developed itself as a reputed consultant in the study of Micro Hydro and renewable energy projects. Alternative Energy Promotion Centre/Energy Sector Assistance Project (AEP/ESAP) of the Government of Nepal has pre-qualified the company in the best grade consultants' list. The company is also willing to associate with other companies for providing engineering services. Likewise the company is seeking to develop other small/mini and medium hydropower projects jointly with other national and international companies.

# Himal Power Limited and its Corporate Social Responsibility Approach

Suman Basnet, Senior Manager, Relations

## Introduction to Himal Power Limited

Himal Power Limited (HPL), a joint venture company of SN Power, BKK AS, Butwal Power Company Limited, Alstom Power Norway AS, GE Energy (Norway) AS, and individual promoters owns and operates the run-of-the-river 60MW Khimti Hydropower Plant, located in Dolakha Ramechhap districts. SN Power has a majority shareholding in HPL (50.4%). The Khimti power plant, which began commercial operation in July 2000, generates about 350 GWh of electricity a year, which contributes about 10% of the nation's electricity production.

HPL has a dual focus in its operation of the Khimti power plant. Its core business is the operation of the power plant. It aims to operate the plant at high efficiency, availability and reliability and in an environmentally friendly manner. However, HPL gives equal focus to supporting development work in the surrounding area of the power plant through its mitigation activities in the project affected areas as well as fulfilling its corporate social responsibilities activities in the wider locality around the power plant.

## Approach to Corporate Social Responsibility

HPL's Corporate Social Responsibility (CSR) activities are guided by the principle that since HPL aims to make long-term profit in its operations, it is very important to support sustainable socio-economic activities in the vicinity of its area of operation. These activities help to improve the standard of living of the local communities and increase their socio-economic status. Specifically, they help to reduce the negative impact of energy use on health and local environment, increase employment (direct and indirect) on supply side (energy service delivery chain) and on demand side (rural industries, productive uses), empower women, in particular, through income generation and wide literacy programs, improve cleanliness and sanitation by providing public lighting and toilets, and enable local communities to have access to mass media through radio and television for information and entertainment. In turn, HPL gains recognition as a "good neighbor" and is seen as a "partner" in development rather than an "adversary". Furthermore, HPL receives community support (advocacy, pacifying anger towards HPL), which was especially crucial during the period of armed conflict in Nepal. In the long run, the CSR activities have proved to be a positive impact on HPL's reputation.

## Corporate Social Responsibility Activities

HPL has been an example in carrying out community development activities that support the socio-economic development of the local communities in the vicinity of the Khimti power plant. Some examples are:

- HPL has built the 630 kW Jhankre mini hydro power plant and lit about 4,400 households and facilitated many electricity-based enterprises by building a rural electrification network that is supplied power from the Jhankre power plant. HPL is currently in the process of handing over these assets and operation responsibility to the Khimti Rural Electric Cooperative (KREC), an electric cooperative that HPL helped establish. HPL has also focused on KREC's capacity building.
- HPL has established a Khimti Project School, which currently has about 400 students. About 80% of the children are locals and not necessarily related to anyone in the running projects around the area. HPL is contributing 70% of the School's running costs.
- HPL runs a Khimti Project Clinic that caters to about 12,000 patients annually. 95% of the patients are local people. HPL pays 100% of the cost to run the Clinic except for the medicines.
- HPL has supported the local communities to build vital rural infrastructures such as irrigation systems, drinking water systems, schools, toilets etc.
- HPL is currently collaborating with UNDP to implement the Khimti Neighbourhood Development Project (KiND), which aims at constructing the 400 kW Haluwa Khola hydropower project, provide electricity to an additional 3,600 households, carry out infrastructure development and income generating activities through UNDP's community mobilization process and further build the capabilities of KREC.

## Going into the Future

HPL firmly believes that all the above activities have contributed to the socio-economic development of the local communities. While it remains committed to continue supporting the local communities in such and other similar activities, HPL also believes that it needs to ensure sustainability of these activities along with providing re-assurance that the scale of activities do not reduce. The most effective means of accomplishing this, HPL believes, is by establishing sustainable partnerships with local and national partners as soon as possible.

The sustainable partnership building will be in two phases: short term and long term. In the short-term phase, HPL will continue to carry out some activities; strengthening and streamlining its collaboration with existing partners like UNDP, Khimti Rural Electric Cooperative (KREC) etc. In the long-term phase, HPL aims to work with appropriate local, district and national partners so these partners can take over the implementation responsibilities with HPL providing financial and technical assistance.

## Clean Energy Development Bank Limited - At a glance

Clean Energy is an environmentally friendly source of energy, which is renewable and non-polluting in nature. Nepal is blessed with abundant natural resources to be able to generate hydropower along with Solar, Bio and Wind energy. To address the need for proper exploitation of natural resources (water) and to ensure that every citizen is empowered with clean and renewable energy, a specialized bank by the name of "Clean Energy Development Bank Limited (CEDBL)" was established in Sitapaila, Kathmandu, Nepal in September 2006.

CEDBL has promoted itself as the only specialized bank with a primary focus in the development of clean energy and hydropower sector in Nepal. For this, CEDBL has entered into a technical collaboration with "Winrock International", an international organization working in Nepal in the energy sector with support from USAID.

## Strong player in hydropower sector

In a short span of two years CEDBL has earned reputation as a strong technical as well as a financial player in the hydropower sector in the country.

The Bank has already entered into an agreement with Nyadi Group (P) Ltd. to develop 990 kW hydropower project at Siuri Khola, Lamjung district. Besides that, CEDBL is in the final stages of an agreement with Shibani Hydropower Company Pvt. Ltd. to develop a 2080 kW hydropower project at Phawa Khola, Taplejung district. A number of other projects are under review and at different stages but expected to be completed within the next 2-3 months.

CEDBL has also been appointed as a technical appraiser of the Consortium of Banks formed to finance Upper Tamakoshi Hydro Electric Project. In addition to preparing a detailed feasibility report and overall monitoring and supervision, the Bank will also extend loans to this mega project.

## Key institutional promoters and partners

Employee Provident Fund (EPF): EPF, one of the major shareholders of CEDBL established to manage the provident fund of government, public and private sector employees and help them financially on retirement or resignation.

## FMO (Financierings Maatschappij-voor Ontwikkelingslanden), The Netherlands

FMO (supported by the Dutch Government, ABN Amro Bank, RABO Bank, ING Bank and the local business community) is the International Development Bank of the Government of Netherlands. FMO is one of the largest bilateral development banks in the world. FMO has 14% equity partnership in CEDBL.

## TRIODOS Group, The Netherlands

The Triodos Group, comprising of Triodos Bank and Triodos Investment Management, is entrusted with managing funds amounting to EUR 3.2 billion. The group has been investing in renewable energy primarily in the developing countries since 1986. TRIODOS group is a development partner of CEDBL.

## DFCC Group, Sri Lanka

DFCC Bank is one of the most successful and sustainable development financing institutions in Asia and the Pacific. The Bank has played a major role in financing renewable energy projects both in grid connected mini hydros as well as off-grid community based micro hydros in Sri Lanka. DFCC Group is a strategic partner of CEDBL.

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