

ippan

2006, Vol. I

INDEPENDENT POWER PRODUCERS' ASSOCIATION, NEPAL

Remarks from the President



Dr. Sandip Shah

Load-shedding: Lack of Sustained Investment in Power Sector

Load-shedding is an unfortunate reality that we all have to learn to live with.

Instead of playing the blame game, it would serve us better to be introspective [t1] and develop a plan of action to ease this situation. Noise from different quarters places the onus of the current load-shedding predicament squarely on bad planning and Independent Power Producers (IPPs) but these water resources experts seem to have confused the issue.

Rather than a theoretical discussion on the definition of firm capacity, firm energy, primary energy and secondary energy, Independent Power Producers' Association, Nepal (IPPAN) would like to set the record straight with respect to assertions made in context to IPP generation and its contribution in the past, present and future.

Some of us are aware that Nepal's integrated power system is almost 100% hydro-based but the demand for electricity is not constant and changes with the time of day, the day itself and the season. This corresponds with the fluctuations in the flow of a river too. In the present Integrated

Nepal Power System (INPS), the maximum power demand occurs during periods when there is a minimum flow in the rivers. Run-of-river (ROR) projects are slotted to address the base load, where as peak load is to be met by storage projects. Theoretically, the two compliment each other to meet the system power demand.

What Nepal needs then is a proper combination of ROR and storage projects to meet short- and long-term power demands efficiently and economically. There are plenty of sites where ROR type projects can be developed in the small (1-10 MW) to medium range (10-500 MW). Since they don't require very high dams, adverse environmental effects are also minimized. However, there are a limited number of sites for storage project because some of the best agricultural land would be submerged and large-scale resettlement and rehabilitation of the

population will have to be conducted for construction of high dams for reservoirs. Adverse environmental impacts of some of the best storage projects are deemed to be insurmountable.

Looking at the load demand in the INPS, a quick assessment shows that only medium-size storage projects are required to optimize the power system in the short- to medium-term. But considering the silt flow in the rivers of Nepal, large dead volumes are required in the reservoir, making smaller storage project less cost-effective. On the other hand, enormous finances are required for bigger storage project and power markets do not exist inside Nepal to use this capacity. Surprisingly, some water resources experts in Nepal do not differentiate between ROR and storage projects. Their attempt at comparing the parameters of a 50/60 MW ROR project with a 10,000 MW storage project,

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.

To disseminate information on hydropower development, in Nepal and elsewhere.

In this issue:

Remarks from the President	1
Load-shedding: lack of Sustained Investment in Power Sector	1
IPPAN's Vision, Mission, Goal & Purpose	1
Fifth Annual General Meeting (AGM) of IPPAN	2
Talk Program	3
Farewell to Mr. Prakash Kaini	3
Activities	3
International Workshop in Lhasa	3
ICH Course	3
Meeting with ICH Director	3
Publication of Booklet on "Roadmap to Power Investors"	3
Meeting with PTC Chairman	3
Introduction of "Nepal-Energy News Clips"	3
Meeting with Prof. Nilson	3
Friday Forum	3
News from Members	4
BKPC-Upper Bhote Koshi HEP Completes 5 years of Commercial Operation	4
Detail Project Report (DPR) of two new projects of Arun Valley Hydropower Company Limited	4
DPR of a new project by PowerGen Company (P) Ltd.	4
The prestigious Blue Planet for Butwal Power Company's (BPC's) Andhikhola Power Plant	4
New Members of IPPAN	4
Inauguration of the Khimti Rural Electric Cooperative (KREC) Building	4
Members List of IPPAN	4

without understanding the project parameters and the system parameters, hinders the development of suitable projects.

After completion of the Kulekhani Projects, no other storage projects were financed despite numerous attempts by the public sector supported by the government to engage bilateral and multilateral funding agencies. Nepal's Electricity Act 1992 opened the electricity sector to private investments. It is quite natural that, under this new environment for investments, IPPs are more interested in developing ROR projects for investment flexibility and to reduce investment risks and adverse environmental impacts. These ROR projects are optimized according to site conditions and system requirements. These projects are essentially developed to meet daily base load demand at a high load factor.

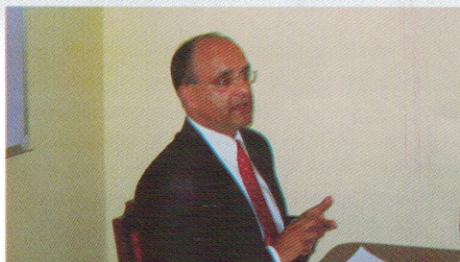
It may be worthwhile to recall that the extensive load-shedding of 1990-99 came to an end with the major IPP generation from mid-2000. Had it not been for these IPP generations, load-shedding would have continued and increased. In effect, this helped sustain INPS and avoid load-shedding for five years, from 2000-2005.

We need for more investment in power projects judging by the present load demand forecast in the INPS of an increase in capacity of 50 to 60 MW per annum. Hydropower projects are capital intensive in nature and Nepal does not have adequate financial resources to finance the development of these projects. In the past we sought international donors and multilateral funding agencies. In recent times, the private sector has become increasingly active in project development, which is encouraging.

The much talked about potential of 42,000 MW of installed capacity will require at least US\$ 100 billion. Neither the government nor the donor agencies are going to put up such large amounts for hydropower development with other competing social requirements like health, transport and education. These hydropower projects will have to be developed in a fully commercial manner and this is where the private sector has to be the engine for growth. The government now needs to create an enabling environment and improve legal and regulatory frameworks to attract investments.

The reason IPP investment has virtually dried up after the late 1990s is because of weak implementation policies for investment and poor investment climate. Unless private investments are courted, major investments are unlikely in the power sector. And as a result, the present load shedding scenario will continue for a long time and will probably worsen with time!

Fifth Annual General Meeting (AGM) of IPPAN



Dr. Shah delivering President's Annual Report

Independent Power Producers' Association, Nepal (IPPAN) conducted its Fifth Annual General Meeting (AGM) on January 13th 2006 at IPPAN Office, Kamaladi, Kathmandu. During the AGM, President of IPPAN Dr. Sandip Shah presented the annual report of IPPAN where he highlighted the activities of IPPAN during the previous year. Some of the major activities during the period were IPPAN's presence in SAREC Board Meeting & SARI/E Meeting in Colombo, participation in Regional Grantees Meeting (RGM) in Colombo, organization of continuous series of Friday Forums, participation in

Seminar on "Hydropower for Today" in China, organizing various workshops, training and seminar, including Workshop on Draft Electricity Ordinance, Seminar on "Opportunities & Challenges for Hydropower Investment in Nepal", International Training/Workshop on Small Hydropower, Talk Program on "Power Trading Opportunities with India", publication of guide book "Road Map to Power Investors in Nepal".

Dr. Shah also elaborated on some of the important activities that IPPAN plans to conduct in the future, which are also going to be included in IPPAN's next 5-year Strategic Plan, as follows:

- Establish a comprehensive power-sector database and support the incumbent power producer on information relevant to the sector;
- Publish an annual "Power Book Nepal";
- Work on Power Sector Advocacy
 - o Power Sector Road Map for IPPs, Banking, Financial Institutions and Insurance Companies;
 - o Institutional Arrangement for Power Sector Financing;
- Develop a Public Outreach/National Debate Program Power Marketing and distribution;
- Focus on Capacity Building and Empowerment of IPPs;
- Work on Renewable Energy Resources.

In conclusion, Dr. Shah expressed his gratitude for the support provided by the members of IPPAN, especially, the Executive Committee, advisors and staff members for their efforts to raise the profile of the Association. He requested and urged all corporate and associate members to enhance IPPAN's activities in the future. He reiterated the fact that IPPAN now has well defined goals and strategies and has completed most of its activities under the first two-year Strategic Plan and has already identified the objectives and key activities for the next five years. He stressed on the fact to stay committed and move at an accelerated pace to fulfill the vision, mission and objectives of the Association.

The AGM also reviewed the Executive Committee structure and two more members were added to the Executive Committee to strengthen its activities. Mr. KB Bish, a Founder Member and Mr. Guru Neupane from SHDAN were unanimously nominated. Subsequently, the structure of new Executive Committee is as follows:

1.	Dr. Sandip Shah	President	<i>Bhote Koshi Power Company</i>
2.	Mr. P.P. Adhikari	Secretary General	<i>Founder Member</i>
3.	Mr. V.N. Uprety	Treasurer	<i>Representing Molnia Power Co.</i>
4.	Mr. Amar Jibi Ghimire	Member	<i>Representing Himal Power Limited</i>
5.	Mr. Gyanendra Pradhan	Member	<i>Representing Butwal Power Company</i>
6.	Mr. Suman Basnet	Member	<i>Representing Winrock International</i>
7.	Mr. D.B. Thapa	Member	<i>Representing LEDCO</i>
3.	Mr. K.B. Bista	Founder Member	<i>Representing Himal Power Limited</i>
9.	Mr. Guru Neupane	Member	<i>Representing SHDAN</i>

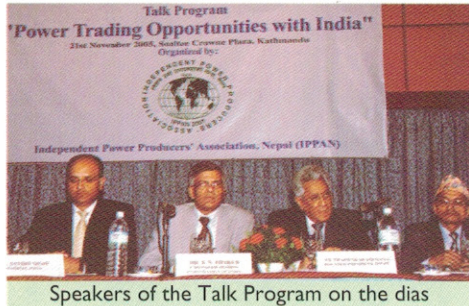
The audited financial statements (Balance Sheet and Profit & Loss Statements) for FY 2061/62 were presented to the members and approved. IPPAN members expressed their satisfaction over the growth and recognition of IPPAN as a key stakeholder in the power sector of Nepal and in the region. They also exhorted that IPPAN should get more involved in activities that would help in creating a more enabling environment for investments in the power structure.



IPPAN Members at Fifth AGM

Talk Program

IPPAN organized a talk program on "Power Trading opportunities with India" on 21st November 2005 at Hotel Soaltee Crowne Plaza, Kathmandu during which Dr. Sandip Shah highlighted the major barriers in hydropower development in Nepal and for cooperation with India in power trade. Chairman & Managing Director of PTC India Limited Mr. TN Thakur presented a paper on Power Trading Opportunities with India. Mr. Thakur highlighted the emerging power market opportunities it has



Speakers of the Talk Program on the dias

ated which can be of beneficial to Nepal in terms of cross border power trading. Mr. Rajiv Bhardwaj from PTC also talked about the opportunity and technicalities of power trading with India. The program Chairperson and the Founder President of IPPAN Mr. Prabhakar SJB Rana advised all to take advantage of this emerging opportunity for power trading with India. Secretary General of IPPAN, Mr. PP Adhikari, extended the vote of thanks to the Speaker, Chairman and all the participants for their active participation. The program identified the key issues that have limited cross-border energy trade and investment which can be listed as follows:

- Lack of political will
- Lack of infrastructure
- Lack of enabling legal and regulatory framework
- Lack of funds
- Lack of market availability
- Power as a commodity

ere were more than 90 participants in the program representing HMG/N and NEA officials, diplomatic corps, donor agencies, financial institutions, private sector developers and investors and the media.

Farewell to Mr. Prakash Kaini

IPPAN organized a farewell program with its Executive Members for the outgoing ES Mr. Prakash Kaini on 19 December 2005. His contribution to IPPAN is greatly recognized and IPPAN wishes him success in his further endeavors. On the same occasion, the new Executive Manager, Mr. Anil Neupane was given a warm welcome.



Mr. Prakash Kaini with IPPAN EC Members

Activities:

International Workshop in Lhasa

Dr. Sandip Shah attended the "International Workshop on Flash Floods & Disaster Management" organized by ICIMOD, China Meteorological Administration & World Meteorological Organization from 22-29 October 2005 in Lhasa.

ICH Course

Mr. Prakash Kaini, ES, IPPAN participated in the ICH course "Hydropower Financing & Project Economy" held in Oslo from 31 October to 5 November 2005 together with participants from India, Bhutan, Sri Lanka, Tanzania, Malawi, Ghana, Vietnam and Ethiopia. The course covered variety of topics from financial and economic analysis to addressing the current situation on Hydropower financing in the world. The course also touched upon the Norwegian perspective and practices in different countries. Mr. Kaini also presented a paper on the "Hydropower Status in Nepal".

Meeting with ICH Director

Mr. Tore S. Jorgensen IPPAN conducted a meeting with the ICH Director on 13 November 2005 at the IPPAN office. Dr. Sandip Shah, Mr. PP Adhikari, Mr. Amar Jibi Ghimire & ES Prakash Kaini also participated in the meeting. The meeting focused on the areas of cooperation between IPPAN & ICH in the near future.

Publication of Booklet on "Road Map to Power Investors"

IPPAN published a booklet on "Road Map to Power Investors" to benefit the private hydropower developers, the financial institutions and others who are interested in the issues of hydropower development in Nepal. This road map is intended to inform the developers on the development process of hydropower in Nepal, the statutory provisions, the institutions involved and their roles and related issues. The booklet will be circulated nationally and internationally. The PDF version of the Road Map is posted in IPPAN's website.

Meeting with PTC Chairman

IPPAN organized a meeting with PTC Chairman Mr. TN Thakur and IPPAN Executive Committee members on 22 November 2005 at IPPAN premises. The meeting addressed power trading



Participants of the Meeting with PTC Chairman

issues and the availability of market opportunities caused due to cross border trading.

The IPPAN Executive Committee and Mr. TN Thakur jointly visited Mr. Harish Chandra Shah Managing Director, NEA, Mr. Mahendra Nath Aryal, Secretary, Ministry of Water Resources and Dr. Rajendra Suwal, Honourable Member, National Planning Commission.

Introduction of "Nepal-Energy News Clips"

In its continued efforts towards increasing awareness and creating a better environment for investment in the power sector, IPPAN has recently launched a new publication entitled "Energy News Clips" for all members as well as other relevant agencies engaged in the energy sector. Under this section, energy news are collected, collated and disseminated electronically to all the relevant groups on a weekly basis.

Meeting with Prof. Nilson

Dr. Sandip Shah and Mr. Prakash Kaini met with Professor Nilson from NTNU Norway on 23 November 2005. Prof. Nilson showed interest to work in the field of fishery in the context of hydropower project development in Nepal.

Friday Forum

IPPAN has continued with series of Friday Forum on different pertinent issues with journalists, bankers, IPPs and PDF groups. The purpose of the meetings is to have interaction on different relevant issues of the hydropower sector and sharing experience among the stakeholders. Four such meetings have been successfully organized during this period. The first forum meeting with IPPs was held on 12 August 2005 focusing on the current issues of IPPs on developing and operating power plants. The second meeting was held with Bankers' on 9 September 2005 to discuss on the findings of the present status of hydropower projects and future prospects. The third meeting was held on 23 November 2005 with energy journalists to discuss on energy development issues and the role of media to bring about positive impacts. The final meeting was held on 11 November 2005 with PDFs and IPPs at IPPAN Office regarding PDF guidelines for loan applications.

News from Members:

BKPC-Upper Bhote Koshi HEP completes 5 years of commercial operation



Upper Bhote Koshi Hydroelectric Plant - Powerhouse

Bhote Koshi Power Company Pvt. Ltd.'s (BKPC) Upper Bhote Koshi HE Plant has completed five successful years of commercial operation on 24 January 2006.

BKPC Plant generation statistics :

Maximum Annual Deemed Generation	264.222 GWh
Estimated Average Annual Generation	248 GWh
Plant Generation in 5 th Year	235.108 GWh (94.8% of Est. Avg. Annual Generation)
Plant availability in 5 th Year	99.83%

The total generation for the fifth year is 3.37 % above the average of the last four years and it is 1.71% above previous year's.

CONGRATULATION TO BHOTEKOSHI POWER COMPANY !

Detail Project Report (DPR) of two new projects of Arun Valley Hydropower Company Limited

Arun Valley Hydropower Development Company Limited has completed the DPR of Ridi Khola (2.4 MW) and Upper Piluwakhola Project (4.5 MW) as its second and third projects. Both the projects have been applied for Power Purchase Agreement. The company has constructed a 3.0 MW project in Piluwakhola which has been running satisfactorily since September 2003. The company is planning to apply for the Power Development Fund (PDF) for the construction of Ridi Khola Hydropower Project.



Arun Valley Hydropower Company

has been running satisfactorily since September 2003. The company is planning to apply for the Power Development Fund (PDF) for the construction of Ridi Khola Hydropower Project.

DPR of a new project by PowerGen Company (P) Limited

PowerGen Company (P.) Ltd. has completed the DPR of Upper Puwakhola (1.6 MW) as its first projects. The projects has applied for Power Purchase Agreement. The company is also planning to apply for Power Development Fund (PDF) for the construction of Upper Puwakhola Hydropower Project and is currently involved in developing several other small hydropower projects which are in various stages of development.

The prestigious Blue Planet for Butwal Power Company's (BPC's) Andhikhola Power Plant

Nepal's 5.1 MW Andhikhola Power Plant located in Syangja District and built with technical and financial assistance from Norwegian Development Agency (NORAD), bagged the prestigious Blue Planet Prize of International Hydropower Association & UNESCO for the year 2005. The award is given to hydropower projects around the world that are excellent examples of sustainable hydropower development. This power plant has been recognized for its excellence in socio-economic benefits, environmental consideration and capacity building in hydropower development of Nepal. The International Hydropower Association (IHA) also

announced the other three winners of the 2005 Blue Planet Prize at an event held during the United Nations Conference of Parties on Climate Change in Montreal, Canada.

On the occasion, BPC Executive Committee Chairman, Mr. Gyanendra Lal Pradhan represented the company and received the honour its behalf. To celebrate the achievement, BPC successfully organised a press conference followed by a cocktail dinner on 5 January 2005 at the Hotel Hyatt Regency, Kathmandu. On the same day, BPC also conducted the 13th Annual General Meeting at the Birendra International Convention Centre.



Committee Chairman Mr. G.L. Pradhan during Blue Planet Ceremony in Canada)

CONGRATULATION TO BUTWAL POWER COMPANY !

New members of IPPAN

As per the decision of the 27th Executive Committee of IPPAN, Arun Valley Hydropower Company, PowerGen Company & Annapurna Renewable Energy Hydropower Company has been added as new corporate members of IPPAN.

Inauguration of the Khimti Rural Electric Cooperative (KREC) building

His Excellency Tore Toreng, Ambassador of the Kingdom of Norway to Nepal officially inaugurated the KREC building amidst a function on 22 September 2005. His Excellency was on a day visit of the Khimti project site to make an overview of the NORAD contribution on the rural electrification and development project that is funded by NORAD and Himal Power Limited (HPL). Managing Director of the

Nepal Electricity Authority (NEA) Dr. Janak Lal Karmacharya, Chairman of KREC Mr. Narayan Khadka, General Manager of HPL Mr. Tom Solberg, Second Secretary of the Royal Norwegian Embassy Ms. Marit Strand and other HPL staff and locals were present at the function.

His Excellency commended the project work and highlighted that this model of private public cooperation could be exemplary for other power development projects in Nepal. The Managing Director, NEA also praised HPL's effort in rural electrification and development. The General Manager, HPL highlighted the contribution of the two parties and also requested the locals to work with HPL on this laudable project.

HPL is carrying out rural electrification and development work as part of mitigation obligations but specifically as a social contribution in and around the areas where it is operating the Khimti I plant. Together with NORAD, HPL has spent around US dollar 3 million during the 2000-2005 period. KREC will takeover the mini-hydro plant as well as all the transmission and distribution lines that have been



constructed under the rural electrification and development project. KREC is based on a Bangladeshi model of rural electric cooperative which is the first of its kind in Nepal. Executive members have already been elected through a democratic election process. KREC has become a member of many district and national level cooperative associations.

Table: Member list of IPPAN

S No	Name	Category	Name of Project	Installed Capacity	Location	Status
1	Annapurna Renewable Energy	Corporate	Kiche Khola	500 kW	Lamjung	Preconstruction
2	Arun Valley Hydropower Company	Corporate	Piluwa Khola	3 MW	Sankhuwasava	Operation
3	Bhote Koshi Power Company	Corporate	Bhote Koshi	45 MW	Sindhupalchok	Operation
4	Butwal Power Company	Corporate	Jhimruk Andhi Khola	12 MW 5.1 MW	Pyuthan Syangja	Operation Operation
5	Himal International Power Corp.	Associate				
6	Himal Power Limited	Corporate	Khimti	60 MW	Kirne, Dolkha	Operation
7	Himal Hydropower Company	Corporate	Upper Marsyangdi(II)	85.5 MW	Lamjung	Preconstruction
8	International Resources Group	Associate				
9	LEDSCO	Corporate	Syange	183 kW	Lamjung	Operation
10	Molnia Power Supply	Corporate	Mailung Khola	5 MW	Rasuwa	Under Construction
11	PowerGen Company	Corporate	Upper Puwa	2.4 MW	Illam	Preconstruction
12	Sanima Hydropower Company	Corporate	Sunkoshi	2.6 MW	Sindhupalchok	Operation
13	Shangrila Energy	Associate				
14	Small Hydropower Development Association Nepal	Associate				
15	Swet Bhairab	Corporate	Jomsom	240 kW	Jomsom	Leased & Operation
16	Winrock International Nepal	Associate				

INDEPENDENT POWER PRODUCERS' ASSOCIATION, NEPAL (IPPAN)

Heritage Plaza II, Kamaladi, PO Box 20010, Kathmandu, Nepal,

Tel. (+) 977-1-4240975, Fax. (+) 977-1-4240975 E-mail: ippan@info.com.np, URL: www.ippan.org.np

Credits for News and Photos: Arun Valley, BKPC, BPC, HPL, PowerGen,