

IPPAN

Message from IPPAN President



● **Khadga B. Bisht- President, IPPAN**

MISSION OF IPPAN

- ▶ Lobby for private sector friendly policies, regulations and their prompt and effective implementation.
- ▶ Disseminate information through media, seminar, conferences to political parties, government, Officials, civil societies and the people.
- ▶ Build capacity of IPPs and related stakeholders.
- ▶ Develop linkages for regional co-operation in power Sector.
- ▶ Create an atmosphere of friendly cooperation between the government and private sector.
- ▶ Build capacity of IPPs and related stake holders.

Much has happened during the last few months in hydropower sector of Nepal in comparison to past few years. An umbrella power trade agreement has been signed between Nepal and India, a framework on regional energy trade agreement has been inked among SAARC nations. Project development agreement with two projects with a total capacity of 1800MW has been concluded. Government of Nepal is to be praised for these historical achievements but in all these happenings, IPPAN was at the centre-stage. PTA and PDA was what IPPAN started talking in 2008. In domestic fronts thanks to the ministry of Energy, we have been successful in obtaining some concessions from the government in terms of VAT subsidy, posted PPA rates for some IPPs and hopefully we will soon obtain waiver from hydrology penalty which we are strongly pursuing and Ministry of Energy has already recommended the waiver. However, there are serious new challenges that has slowly creped in, the conditional and take-and-pay basis PPA by NEA, delay penalty, delay of transmission line construction in comparison to the power plant construction, ministry's dilly-dallying of offering BOT model transmission line has put private sector in difficulty. Amidst this generally good news, the most distressing is the government's total ignorance on making conducive environment for the rehabilitation of the Upper Bhotekoshi 132kV transmission line which has been blocked by the a struggle committee formed by the cadres of ruling parties demanding share distribution. We strongly urge government to show its presence so that Bhotekoshi Power Company can rehabilitate the towers as soon as possible. Another distressing news is the recommendation by Commission for Investigation of Abuse of Authority to cancel more than 13 projects on different grounds. IPPAN feels that, CIAA action was unilateral, did not provide opportunity for explanation and puts matter of delay entirely on the shoulder of hydropower developer whereas delay is

mostly linked to government approval and clearance. We strongly request government to take its part of responsibility for the delay and not punish the sincere developers.

As the IPPAN committee completes a year of its work, I think it has been a year of action, a year of taking IPPAN to a greater height. As we move forward the committee is geared up to take challenges and among few crucial elements that we will work is removal of arbitrarily introduced PES (pay for environmental services), offering BOT model of transmission line, mechanism for guaranteeing space for domestic hydro projects vis-a-vis development of large projects, sectoral reform in the sector such as establishment of national grid company, power trading company, enactment of new electricity act and establishment of independent regulator.

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VISION OF IPPAN

To be the umbrella organization of IPPs that advocates for an investor-friendly environment for power development in Nepal.

IPPAN ACTIVITIES

SAARC Conference on “Harmonizing Regulations and Policies for Cross Border Power Trade”



SAARC Energy Centre (SEC) Islamabad together with Independent Power Producers' Association, Nepal (IPPAN) and Independent Power Producer's Association of India (IPPAI) as knowledge partner organized two-day conference in Kathmandu on “Cross Boarder Power Trade: Harmonizing Regulations and Policies” on June 26-27, 2014.

Primarily the conference was organized to suggest ways to remove policy and regulatory disconnects for power trading between the countries of the SAARC region; and secondly to prepare a commercially viable roadmap for the power trade, keeping in mind the respective legislative regimes, balancing policy imperatives and regulatory frameworks with market needs.

The Conference was participated by policy makers, regulators and other stakeholders from public and private sectors of SAARC region. Ministers/Secretaries of Ministries of Energy, Chairmen of Electric Power Regulatory Authorities, Diplomats and senior representatives of Power Industry in South Asia as well as IFIs participated. The Conference was addressed by leading experts and key stakeholders from the Region. The conference was inaugurated and addressed by Honorable Energy Minister Ms. Radha Kumari Gyawali. Nepal's imminent personalities such as Mr. Sriranjjan Lacoul, Secretary, WECS, Mr. Rajendra Kishor Kshatri, Secretary, MoEn, Mr. Radesh Pant, CEO, IBN, Mr. Shear Singh Bhat, NEA, Dr. Sandip Shah, Country Director, Startkraft, Mr. Gyanendra Lal Pradhan, Surendra

Rajbhandary, NEA, Mr. Bishal Thapa, Mr. Khadga Bisht, President, IPPAN and various international energy experts shared their views and ideas in the conference.

The content of the conference was designed to cover all the major areas such as energy trade in other regions of the world, Emerging Asian and South Asian growth paradigm, experience of projects in supporting policy/regulatory infrastructure, impact of national policies on international power trade, impact of regulatory issues and sanctity of contract and dispute resolution. Two days event was divided into technical sessions, panel discussion and plenary session.

IPPAN Press meet to discuss on CIAA Recommendation

Independent Power Producers' Association Nepal (IPPAN) on 17 Sept, 2014 Wednesday organized a press meet to discuss on CIAA action against the Power Producers. IPPAN asked for a revision of the order given by the Commission for Investigation of Abuse of Authority (CIAA) to scrap survey and construction license of 10 hydropower projects.

On September 6, the anti-graft body (CIAA) ordered the Ministry of Energy to scrap survey licenses of three companies for failing to conduct the survey, and power generation licences of seven companies for failing to carry out construction work despite completing the survey.

IPPAN President Mr. Khadga B. Bisht addressing the press meet said a proper study on the projects has to be carried out before imposing such a “harsh” decision. “The CIAA decision has put these projects under a big trouble. These projects have already



made an investment ranging from Rs 60 million to Rs 250 million," said IPPAN President Khadga Bahadur Bisht. "Such a 'carpet' decision should not be implemented." He said the government should look at the projects all individually before taking decision and decision cannot be based on perception but fact.

The ministry has been recommended by CIAA to scrap power generation licenses of 50MW Karuwa Khola, 6MW Buku Khola, 45MW Lower Indrawati, 175MW Chahare Khola, 400MW Lower Arun, 3.4MW Midim Khola, 14.3MW Upper Mailum Khola, 18MW Upper Solu Khola and 6.8MW Upper Khoranga Khola projects. Those facing annulment of survey licences are 36MW Karuwa Khola, 60MW Bhotekosi-5 and 6MW Buku Khola projects.

Representatives of the companies facing the CIAA action highlighted problems they face to carry out work on the projects. Rameshwar Rijal, promoter of 14.3MW Upper Mailum Khola Hydropower Project said that before CIAA started its investigation, the National Vigilance Centre (NVC) had also probed the projects, but it was satisfied with the performance.

"We have already constructed 12km access roads apart from completing several other tasks," he said.

Article 49 (5) of the Electricity Act has provisioned the survey has to be completed within five years after the issuance of the license. Based on the same legal grounds, the anti-graft body instructed the line ministry to scrap the license.

Legally, hydropower firms have to complete survey-related tasks like environment impact assessment, feasibility study, and design drawing during the five-year period by any means, and those firms with generation license should start the work immediately after the license issuance.

Sthir Babu Ghimire, Managing Director of Midim Hydropower Project, said his company was scheduled to complete the financial closure by mid-December 2014.

Other project developers were of the view the CIAA has to make a rational decision by studying each and every project separately.

IPPAN and CNI organized an interaction program on "PTA and PDA"



IPPAN together with Confederation of Nepalese Industries (CNI) organized an interaction program on "PTA and PDA for Energy Development: Opportunities and challenges" on 14 September, 2014 at Hotel Everest. The program included a presentation on "PTA and PDA for Energy Development: Opportunities and challenges" which was presented by IPPAN President Mr. Khadga B. Bisht.

Ms. Radha Kumari Gyawali, Honorable Energy Minister, Minister for Energy was the chief guest for the program along Govinda Raj Pokharel, Vice- Chairman, National Planning Commission, Member of Parliaments Mr. Gagon Thapa & Mr. Top Bdr. Rayamajhi along with IPPAN President Mr. Khadga B. Bisht, Mr. Binod Chaudhary, President Emeritus, CNI and Mr. Narendra Basnet were the speakers of the program.

IPPAN Executive Committee members, IPPAN members along with CNI members had participated in the program.

IPPAN President Mr. Khadga B. Bisht presented a presentation on topic PTA and PDA for Energy Development: Opportunities and challenges. His presentation basically highlighted on

- PDA and its issues
- Why Power Trade ?
- Power Sector Reform Issues
- Opportunities & Challenges

IPPAN President Mr. Khadga B. Bisht said the coverage and scope of PTA signed between Nepal and India covers all aspect in general; however as we move ahead taxes, duties, quota and licenses shall be removed and explicitly written which now seems a bit ambiguous. Also third country access through India shall also be clearly highlighted and he also highlighted the importance of PDA as in the absence of an independent sector regulator PDA provides contractual protection against most non-commercial risks to the producers. Hence the recent PDA is a great step forward, However all

hydropower projects are of very specific nature and their financial viability is based on natural factors so Upper Karnali project cannot and should be taken as the benchmark for give-and-take conditions of future PDA. Only rate of return on investment should be the governing criteria otherwise no new PDA would be possible.

Energy Minister Ms. Radha Kumari Gyawali addressing an interaction program said that the Mohan Baidyal communist party of Nepal was showing double standard by burning copies of Power Trade agreement (PTA) initialed by Nepal and India. She said discussed with issues on Nepal-India power trade deal with CPN-Moist leader Dev Gurung soon after the three-party panel prepared the draft of the PTA.

Energy Secretary Mr. Rajendra Kishore Kshatri and his Indian counterpart Mr. Pradeep Kumar Sinha initialed the Power Trade Agreement in the

Indian capital of New Delhi on 4th Sept, 2014. Implementation of the 25 year agreement, which will be automatically renewed every 10 years, will pave the way for Nepal to purchase electricity from India when production here falls and sell power to the India where whenever there is a surplus energy. This deal would also provide access to domestic and international hydropower developers to vast market in the south where they can sell electricity generated here said by Honorable Energy Minister.

National Planning Commission Vice Chairman Dr. Govinda Raj Pokharel told that the country should focus on strengthening energy security, instead of bickering on small issues that have forced people to reel under the problem of load shedding. The new nationalist theme should be reducing our dependence on imported fossil fuel by allowing country to harness its hydropower potential and generating income by selling the surplus energy.

Nepal Infrastructure Summit 2014 and IPPAN's: Hydropower Sector Reform



IPPAN joined hand with Confederation of Nepalese Industries (CNI) as a knowledge partner for the Infrastructure summit 2014. A special panel discussion session was organized by IPPAN on Sectorial Reform Post PTA & PDA which was chaired by Mr. Rajendra Kishore Kshatri, Secretary, MoEn. Mr. S. G. Tenpe, Vice

president, Business head was the main presenter for the program. Mr. Khadga B. Bisht, IPPAN President, Dr. Sandip Shah, Advisor, IPPAN, Mr. Sher Singh Bhat, DMD, NEA, Mr. Harvinder Monocha, Incharge, GMR Group were the panelist. The primary objective of the summit was come up with the recommendations on policy



reforms necessary to hasten the pace of hydropower development.

Nepal has recently entered into bilateral Power Trade Agreement with India and PDAs with large projects. Owing to these agreements, Nepal will require large transmission lines with cross border connectors. It will have to establish wheeling charges and also should work for a non-discriminatory open access to transmission line user as well as independent dispatch based on certain criteria. It has worked towards establishing power trading institutions and capacity building gearing up for 2022 vision where Nepal wants to graduate to a developing nation.

Program on Sectoral Reform Post PDA & PTA



IPPAN together with Niti Foundation had recently organized an interaction program on "Sectorial Reform in Power sector" on 13th November, 2014 at Hotel Yak & Yeti, Kathmandu. The members of parliamentary Agriculture and Energy Committee including the chair Honorable

Gagan Thapa were the invitees of the program. This program included a presentation from IPPAN and Power Exchange India Limited (PXIL) that provided the necessary expertise in establishing a national grid company similar to PGCIL in India.



Speaking at the program IPPAN President Mr. Khadga B. Bisht highlighted that Nepal embarked on its market economy immediately after the restoration of democracy in 1990; it was almost with the path India had taken in 1990s. However, the changes fell short in addressing the complete supply chain so the electric market remained distorted. Added to this was a decade long internal insurgency and very long transition period that took toll on the efficacy of state machinery at the center and delivery in the ground. India took a second phase of market reform with Electricity Act 2003 that fundamentally revolutionized the sector and now about to take the third phase of reform.

The objective of the program which was Reform in Electricity Act 2049 and what can we learn from Electricity Act 2003 of India, a national Grid company independent of power generator, establishing power Trading companies and their roles: What Nepal should do, Pre-requisites for setting up a power exchange market.

ICH-IPPAN training on "Operation & Maintenance Management of the Hydropower Plants"



IPPAN together with International Centre for Hydropower (ICH) had organized a training course on "Operation & Maintenance Management of the Hydropower Plants" from 24-27 November in Dhulikhel, Kavra. The program was supported by NORAD. ICH jointly with IPPAN had conducted several trainings for capacity building in the hydropower sector.

Twenty participants including four from Nepal Electricity Authority (NEA) from operated power plant, Plant Managers/Maintenance Manager/ Plant In charges participated in the residential training. The resource persons were from ICH and some were locals. IPPAN secretariat was involved with the logistics management as well. The program was inaugurated and addressed by Joint Secretary, Mr. Udaya Raj Sapkot, Ministry of Energy, Nepal and also addressed by ICH and IPPAN.



The course was a tailor-made for Plant Managers and/or Maintenance Managers which enable a sound knowledge on Importance of planning of Maintenance Outages vis-à-vis Load Dispatch, HSE & Availability, HSE in Operation & Maintenance phase, Safety Induction, Maintenance Mythology, Condition Monitoring, PFA in Maintenance – Preventive Maintenance of the Transformer Oil and power transformer, Budgeting

and implementation of annual maintenance plans and Sediment management systems. The participants along with some Executive Committee members of IPPAN had also visited the Khimti plant having world-class O&M activities, excellent support to community gave a very positive reputation to participants too. Himal Power Limited had also organized a grand party for the participants those visited to Khimti Power Plant.

Establishing Electricity Sales Rates for above 25MW Project



IPPAN through a letter from Power Trade Department, Nepal Electricity Authority (NEA) and other stakeholder. Power Trade Department, NEA was requested to provide recommendation on establishing electricity rates for projects above 25MW. IPPAN after a detailed study

and two rounds of presentation to NEA has submitted a Draft Final report to NEA for establishing electricity purchase rate for RoR projects between 25 MW to 100 MW. IPPAN feels that NEA as a buyer and the IPPs as seller should agree on the key principles of electricity

pricing and must have principal understanding on considering key parameters of the project evaluation so that the differences are systematically narrowed down and the final outcome from a computational model is nearer rather far.

Nepal Chamber of Commerce honored IPPAN



Nepal Chamber of Commerce (NCC) has honored IPPAN in recognition of its outstanding work for promoting the private sector in the economic development during its (NCC's) 62nd Anniversary award ceremony program on 13 Oct, 2014.

The honored was received by IPPAN Vice-President Mr. Shailendra Guragain which was awarded jointly by Chief Guest Mr. Bhes Basnet, Honorable Industry Minister with the NCC President Dr. Rajesh Kazi Shrestha. Mr. Kumar Pandey, Secretary General, Mr. Narendra Prajapati, Treasurer, Dr. Subarna Das Shrestha, IPP and Mr. Pashupati Dhungel, EM, IPPAN had participated in the award receiving ceremony.

Meeting of the Steering Committee of Nepal Business Forum

The meeting of the Steering Committee was held on 29 Ashad, 2071 at Ministry of Industry, Sindhudurbar. The meeting was chaired by Honorable Minister Mr. Karna B. Thapa, Minister, Industry. The co-chair of private sector Infrastructure Group Mr. Khadga B. Bisht, co-chair of Public and Private sectors along with relevant ministries representatives, senior government officials, leaders of business and private sector umbrella organizations and IFC Nepal were present at the meeting.

The issues from Infrastructure Group was raised by co-chair Mr. Khadga B. Bisht among them were private sector engagement in domestic transmission line under BOT mode, removing Pay for Environment Services (PES), Implementation of increased posted PPA rate and level playing field for private hydropower developers.



Meeting with Mr. Mahesh Acharya, Honorable Minister for Forest and Soil Conservation.



On 19th June, 2014, IPPAN team lead by President Mr. Khadga B. Bisht met with Mr. Mahesh Acharya, Honorable Forest & Soil Conservation minister. IPPAN president congratulated the minister and wished him success. After the handover the "Hydropower Nepal" book he highlighted the status of the projects in Nepal and made everyone aware about the issues faced by the power developers. Some of the issues put forth by the President were as follows:

- Removal of "Pay for Environmental Services" fees (1%)
- Forest Land replacement (replacement with similar eco-system) and within prescribed area
- Forest Land lease issue

Responding to the issues raised by IPPAN team, Honorable Minister reiterated that Government of Nepal is determined to work seriously with IPPAN on the issues on forest for the hydropower projects in the most effective manner.

Rehabilitation of the landslide affected projects



On 12th Aug, IPPAN team lead by President Mr. Khadga B. Bisht, met with Ms. Radha Kumari Gyawali, Honorable Minister for Energy to discuss on Jure landslide. Seven Hydroelectric Project with total capacity of 67 MW have been out of Nation Grid due to damage of their transmission line by massive slide at Mankha VDC in Sindhupalchowk district

on 2nd Aug, 2014, Saturday morning. Sanima owned 2.6 MW Sunkoshi plant was submerged due to the blockage of Sunkoshi river whereas Upper Bhotekoshi (45MW), Chaku Khola(3MW), Lower Chaku Khola (1.76 MW), Middle Chaku (1.8MW) and Bhairab Kunda (3MW) transmission line have been damaged due to landslide.

Reversing the decision taken by CIAA



On 15th Sept, 2014 IPPAN team lead by President Mr. Khadga B. Bisht, met with Ms. Radha Kumari Gyawali, Honorable Minister for Energy for a revision of the order given by the Commission for Investigation of Abuse of Authority (CIAA) to scrap survey and construction license of 10 hydropower projects and

later 3 hydropower projects. The anti-graft body (CIAA) ordered the Ministry of Energy to scrap survey licenses of three companies for failing to conduct the survey, and power generation licenses of seven companies for failing to carry out construction work despite completing the survey including the Kabeli 1 HEP.

Meeting with H.E. Mr. Kjell Tormod Pettersen, Norwegian Ambassador to Nepal



A meeting with H. E. Mr. Kjell Tormod Pettersen, Norwegian Ambassador to Nepal was held at Hotel Annapurna, Durbar Marg. Mr. Khadga B. Bisht, President, along with full executive committee members of IPPAN along with Advisors of IPPAN participated in the meeting.

Mr. Khadga B. Bisht, on behalf of IPPAN appreciated the Government of Norway and His Excellency for their continuous support that IPPAN is getting from the very beginning of establishment of IPPAN. IPPAN President made a presentation on Hydropower Sector: Challenges & Opportunities and Mr. Kumar Pandey, Secretary General, IPPAN presented the IPPAN recent activities. IPPAN President also handed over "Hydropower Nepal" books to H. E. Kjell Tormod Pettersen and Mr Jan Eriksen, Counsellor (Energy), RNE.

Meeting of the Infrastructure Working Group of Nepal Business Forum

The meeting of the Infrastructure Working Group of Nepal Business Forum was held on 1 June, 2014 at NBF Secretariat, Tripureshwor. The Co-chair of Public Sector Mr. Rajendra Kishore Kshatri, Secretary, Ministry of Energy (MoEn) and the co-chair of Private Sector Mr. Khadga B. Bisht, President, IPPAN chaired the Infrastructure Development Working Group Meeting on the day.

The meeting reviewed the key issues private hydropower developer's engagement in domestic transmission line network, levies put as Pay for Environment Services (PES) issue, Implementation of posted PPA rate and level playing field for private hydropower developers. The meeting also decided to submit the issues on the complete elimination of the PES as there is no legality of the fee being imposed by the Ministry of Forest and Soil Conservation in the Steering Committee meeting.



“Electricity Demand: A Total Energy Perspective”

Prof. Dr. Amrit Man Nakarmi
Professor & Coordinator Energy Systems Planning and Analysis Unit Center for Energy Studies, IOE/TU Pulchowk, Lalitpur

Per capita electricity consumption of Nepal is lower in the SAARC region. Nepal's investment in the energy sector is also one of the lowest in the region, standing at 0.3% of GDP compared to 16% in Bhutan and 3.4% in India. Only 2% of the total energy supply in the country is from hydropower.

If we look back 15 years into the energy consumption history of Nepal, kerosene was the cheapest fuel, followed by LPG and electricity was the most expensive one. However, today, electricity is the cheapest fuel in



the country, following by LPG and kerosene stands as the most expensive one. Interestingly, tentatively 54% of the total household energy consumption is for cooking. Thus, there is a huge market for hydroelectricity if we can tap into the prospects.

A stakeholder survey shows that by 2050, the expected over 60% of the total fuel supply to come from electricity. By this time, all major sectors including agriculture, commercial, industrial, residential and transportation are expected to be electrified. Unlike NEA forecast if a scenario is developed based on the medium level economic growth and partial replacement of imported fuel and biomass energy, around 4500MW of capacity will be required domestically by 2020.

“Innovative Approaches to Mitigate Slope Stability and Landslide Problem in Hydropower Projects in Nepal”

Dr. Ranjan Kumar Dahal
Associate Professor
Department of Geology, Trichandra Collage

Geo-disasters such as landslide, debris flow and flood are usual phenomenon in mountainous area. In Nepal where 83% of its territory is covered with mountains, geo-disasters are much more prevalent than any other disaster. Every year in monsoon, more than 100 people will surely lost their life and tens of million Nepalese Rupees will be lost due to infrastructures damage. Road, bridge and hydropower stations are highly affected by geo-disasters in Nepal. For example: 2012 Mahakali flood and landslides washed out major section of Dharchula Road, huge debris flow and landslide in 1993 were responsible to decrease the Kulekhani Hydropower capacity by 50 %. Recently, reactivation of large scale landslide in Sunkoshi River valley at Ramche, near Lamosanghu, Sindhupalchowk created a landslide dam and till date, huge amount of water is accumulated in the reservoir and hydropower station at Bahrabise is submerged under water. The Sunkoshi Hydropower Station is also damaged partly from this landslide. In



fact, construction of mitigation measures and preventive measures to reduce the impact of geodisaster, if installed properly can save lives and millions of economic damage, never falls in our national priority. Even in cases where the problems are chronic and preventive measures are necessary, most of the time we use low cost technology such as bioengineering and gabion structures. Concept of long term sustainable structures is yet to be developed. We are still using the technology that we learned from Dharan-Dhankuta and Baitadi-Dadelhura roads which is less effective and needs to be replaced by newer, innovative and sustainable techniques. On the other hand, Nepal is now in developing phase and mega projects such as Express Highway, Fast Track, Tunnel Road and Railways are going to start. These mega structures when constructed through the fragile mountains of Nepal numerous geo-hazard problems will arise. Do we still think that those mega scale geo-hazard problems will be possible to mitigate with low cost technology such as gabions and bio-engineering? Therefore, we need to change and try to incorporate new techniques and this is the right time.

Consortium Power Developers (Pvt.) Ltd. is ready for construction of Kharekhola Hydroelectric Project (24.1 MW)

Consortium Power Developers (Pvt.) Ltd. (CPD) has completed the preparation stage of Kharekhola Hydroelectric Project (24.1 MW) (KHEP), which is being developed in Dolakha district, after it signed a syndicate credit facility agreement (SCFA) with a consortium of ten

commercial Banks led by Machhapuchhre Bank Ltd.; Nabil Bank Ltd. and Everest bank Ltd. as co-leads and seven other participating Banks, regarding debt funding of 75% of the total project cost (almost 4.0 bl NPR) on 21st October, 2014 amidst a function at Hotel Annapurna in Kathmandu. It is the second project to complete financial closure among the Super Six hydro projects. It is also second biggest in terms of capacity and promoted by domestic entrepreneurs/developers



to secure loan funding through consortium of national commercial Banks.

All legal documents required prior to financial closures such as; connection agreement, power purchase agreement (PPA), generation license (GL), environmental clearances, industry registration etc. have been obtained. In technical terms, DPR and the detailed engineering design (DED) are also complete. Project has adequate local support. Access up to Head

Works has been already opened. Company is now carrying out the procurement process and intends to initiate construction from January, 2015 with the targeted schedule to complete it within October, 2017.

Project's key features are; a) catchment area 150 km², b) Q 40% exceedance, c) design discharge 8.43 M³/Sec, d) rated net head 332.02 m. Project elements constitute; a) 26.8m long and 2.25m high diversion weir, b) 2 side inlets, c) gravel trap, d) box type approach canal, e) overflow spillway, f) surface desanding basin, g) 4780 m long head race tunnel, h) semi underground surge shaft, i) 870 m long penstock pipe, j) surface power house and k) 100m long tail race. Riparian flow of 0.278 m³/sec (10% of the minimum mean monthly flow) is ascertained. Average annual energy amounting to 139.218 GWh (as agreed in PPA document) produced by 2 units of vertical axis pelton turbines and compatible generators is evacuated through its GIS Switchyard at Chamar to NEA owned Singhati Sub-station by constructing a 8.81 km long 132 kV Transmission Line. Distribution to national grid is through a trunk transmission line that NEA is building from Singhati to Lamosangu.

216 MW Upper Trishuli – 1 Hydro-electric Project waiting for Green Light to implement the project

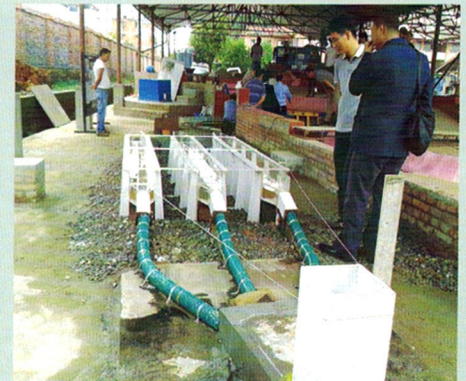


Electricity to be generated within September, 2020, if PPA and PDA are signed in time

Nepal Water and Energy Development Company (NWEDC) is going to develop the 216 MW Upper Trishuli - 1 (UT-1) Hydro-electric Project (Rasuwa District) with equity investment from Korean Consortium of KOSEP, Daelim and Kyeryong and IFC and loan investment from IFC, ADB, DEG, Proparco, FMO and CDC. The project will generate 1456 GWh

of energy every year. The project is expected to start commercial operation by September, 2020.

The projects have already completed assignments like approval for EIA, procurement and use of explosives materials tree cutting, IEE Report of transmission line, completion of detailed design, drilling and drafting works and track opening, land acquisition of all the land required for project use, Financial Agreement of equity capital, connection



Agreement with NEA, and CIA Report, Project Development Agreement (PDA) almost at final stage, and PPA Negotiation with NEA is underway.

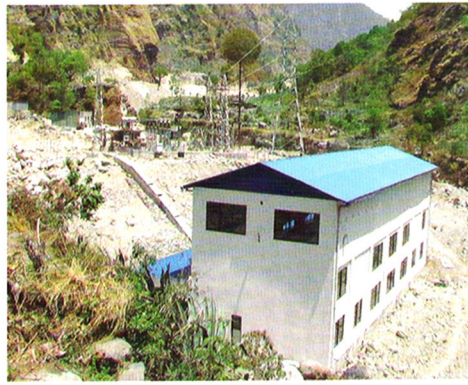
So far, the company has invested nearly 2 billion Rupees in detailed engineering design, land acquisition report, CIA report, access road construction, hydraulic modelling etc.

Mailun Khola Hydropower Project started Generation

With an objective of generation of 5 MW capacity electricity from Mailun River situated in Rasuwa District; Mailun Khola Hydropower Company was incorporated as a private limited company on Shrawan 7, 2059 (July 23, 2002). PPA was signed at the rate of NRs. 3.00 and NRs. 4.25 on Shrawan 9, 2058 with COD of Chaitra 18, 2060 and received extension of one year being COD of Chaitra 18 2061 but canceled one year's increment.

Undergoing the political uncertainties and shifting of the Project site due to the heavy landslide, Mailun Khola Hydropower Project has been constructed in Haku and Dadagau VDC of Rasuwa District. The Project has started its commercial generation with COD of Asar 19, 2071.

The installed capacity of the project is 5MW+20% COL (Continuous over load) with corresponding design discharge of 5.2 m³/s and gross head of 153 m. It consists of 2 units of Francis Turbine and 2 units of synchronous generator with brushless excitation system. The water passes through Desander basin, Forebay and Penstock pipe before striking the turbine.



Jade Consult Recent Activities



Budhi Gandaki Draft FS report submission to BGHEPDC

- Tractebel Engineering in association with Jade Consult Pvt. Ltd. has submitted Draft final Feasibility Study report to BGHEPDC on 3rd of Nov. 2014. The report consists of 16 Volumes and is supported with field investigations reports/appendices.
- Power Grid Corporation of India Limited in association with Jade Consult Pvt. Ltd. has signed the Contract With Asian Development Bank on 12th Aug. 2014 for SASEC (South Asia Subregional Economic Cooperation) Power System Expansion Project. The scope of services includes assist NEA in preparing designs, technical specifications and bidding documents of 400 kV and 220 kV Transmission Lines.
- Power Grid Corporation of India Limited in association with Jade Consult Pvt. Ltd. has signed the Contract With Nepal Electricity Authority on 26th Sept. 2014 for Tamakoshi (Khimti) – Kathmandu 220 kV/400 kV Transmission Line Project. The scope of services includes preparation of technical specifications and bidding documents, Support in bidding process, Supervision during construction, testing and commissioning.

Bhairabkunda Small Hydropower Project successively restored the damage transmission line



Bhairabkunda Small Hydropower Project has started generation from 9th March 2014. Project is a run of river with installed capacity of 3 MW with design discharge 1.70 m³/sec and gross head of 226.77 m. On 2nd August, 2014 Bhairab Kunda including six hydroelectric projects with total capacity of 67 MW have been out of Nation Grid due to damage of their transmission line by massive landslide at Mankha VDC in Sindhupalchowk district. Sanima 2.6 MW Sunkoshi Hydro have been submerged due to

blockage of Sunkoshi River. Whereas Upper Bhotekoshi (45MW), Chaku Khola (3MW), Lower Chaku Khola (1.76 MW), Middle Chaku (1.8MW) and Bhairab Kunda (3MW) transmission line have been damage due to landslide. The Jure Landslide knocked off 11 sets of their telescopic double poles used for their transmission line and has disrupted energy evacuation and project interrupted for 60 days. Damage transmission line was successively restored on 28th September, 2014 and till date it is running successfully.

PHOTO GALLERY



Meeting with Honorable Vice Chairman, NPC



Meeting with Agriculture & Water Resources Committee of Parliament



Meeting with Royal Norwegian Embassy



Mr. Jan Bjornar at O & M training at Dhulikhel



O & M participants visited Khimti I HEP



Nepal Chamber of Commerce Honored PPAN



IPPAN press meet



Meeting with NEA, MD



Meeting with Honorable Energy Minister



Token of Appreciation to Immediate Past President



Token of Appreciation to Honorable Energy Minister



Turbine Testing Lab Visit- KU (O & M training Participants)

LIST OF IPPAN MEMBERS

Corporate Members

S.No.	Name of Company	Tel/Fax	S.No.	Name of Company	Tel/Fax
1	Bhote Koshi Power Co. Pvt. Ltd.	4270027/ 4273516	46	Synergy Power Development Pvt. Ltd.	4440433/9851003846
2	Butwal Power Co. Ltd.	4784026/ 4780994	47	Energy Engineering Pvt. Ltd.	4478225/9851015956
3	Himal Power Limited	5521864/ 5536411	48	Upper Mai Hydro Devt. Pvt. Ltd.	5010631/5522869
4	Himtal Hydropower Company Pvt. Ltd.	5260259/5260773	49	GMR Upper Karnali Hydropowr Ltd.	5260259/5260518
5	Lamjung Electricity Devt. Company Ltd.	4232748/ 4232749	50	Lower Arun Hydro Electric Pvt. Ltd.	4247237
6	Molnia Power Ltd	4436027/ 4419703	51	Sinohydro-Sagarmatha Power Co. (P) Ltd.	4284418
7	Sanima Hydropower (P) Ltd.	4446442/4441277	52	Essel - Clean Solu Hydropower Pvt. Ltd.	4423286/4260266
8	Annapurna Renewable Energy (P) Ltd.	4414519	53	Chirkhwa Hydropower Pvt. Ltd.	4033016
9	Khudi Hydropower Ltd.	2053003	54	Mailun Khola Hydropower Co. Pvt. Ltd.	2001348/4419703
10	Himalayan Hydropower Pvt. Ltd	4015805/4015806	55	Liberty Energy Hydropower Co. Ltd.	4238241/4226946
11	Rairang Hydropower Devt. Co. Pvt. Ltd.	9757009243/5111015/5111016	56	Sikles Hydropower Pvt. Ltd.	061-523557/061-523593
12	Mai Valley Hydropower Pvt. Ltd.	2052566/ 5522869	57	Hira Ratna Hydropower Pvt. Ltd.	4424619/4226330
13	Manang Trade Links (P) Ltd.	4441131/	58	Ambeshwor Engineering Hydropower Pvt. Ltd.	5000075/5000300
14	Balephi Hydropower Company Ltd.	4224074/4266133	59	Alliance Power Nepal (P) Ltd.	4233318/4425363
15	IDS Energy Pvt. Ltd	4169116/4238496	60	Jumdi Hydropower (P) Ltd.	9841447281
16	PAN Himalaya Energy Pvt. Ltd.	4244352/4225685	61	Mount Kailash Energy Company Pvt. Ltd.	4387869/4350870
17	Pashupati Energy Dev. Co. (P) Ltd.	4422803/4433610	62	Daraudi Kalika Hydro P. Ltd.	4439152
18	Tundi Power Co. Pvt. Ltd.	5548573/5555574	63	C.E.D.B. Hydro Fund Ltd.	4261827/4260266
19	Muktishree Pvt. Ltd.	4258339/4258338	64	Nepal Water & Energy Development Company	4412257/4412557
20	Cemat Power Dev. Co (P) Ltd.	5539891/5539792	65	Kalanga Hydro Pvt. Ltd.	4377462/5551546/5552905
21	Ru Ru Jalbidhyut Pariyojana Pvt. Ltd.	4357563/4389703	66	Eastern Hydropower (Pvt.) Ltd.	5550587
22	Radhi Bidyut Company Ltd.	4364299/4387299	67	Sanvi Energy Pvt. Ltd.	4415513
23	Upper Maiwa Hydropower Pvt. Ltd.	4033750/4033755	68	Dovan Hydropower Pvt. Ltd.	016624401/ 985112516
24	Upper Madi 0 Hydro Pvt. Ltd.	4033750/4033755	69	Triyog Energy and Development Pvt. Ltd.	5528571
25	Super Khudi Hydropower Pvt. Ltd.	4033750/4033755	70	United Modi Hydropower (P) Ltd	4770886/4770884
26	Unique Hydrel Co. (P) Ltd.	4033750/4033755	71	Bhairabkunda Hydropower Pvt. Ltd.	4418319/ 4420108/4418131
27	Shikhar Hydropower Co. Pvt. Ltd.	4033750/4033755	72	Tamor Sanima Energy Pvt. Ltd.	4415022
28	Ankhu Hydropower (P) Ltd.	4033750/4033755	73	Panchthar Power Co. Pvt. Ltd.	5251003/5251004
29	Annapurna Group (P) Ltd.	4229222/	74	Idi Hydropower Company Pvt. Ltd.	9851018118
30	Grid Nepal Company Pvt. Ltd.	4442049/4436585	75	Ankhu Khola Jalvidhyut Co. Ltd.	4429789
31	Welcome Energy Devt. Co. (P) Ltd.	9851095497	76	Sunrise Hydropower Pvt. Ltd.	91-11-47624100
32	Nepal Hydro Developer Pvt. Ltd.	4441131/4441973	77	Consortium Power Developers Pvt. Ltd.	4462856/4462856
33	Dordi Khola Jalabidyut Co. Ltd.	4234849/ 4234850	78	Chhyangdi Hydropower Pvt. Ltd.	4265146/4259582
34	Himalayan Power Partner Pvt. Ltd.	4002801	79	Salankhu Khola Hydro Power Pvt. Ltd.	4390240/4390239
35	Naulo Nepal Hydroelectric Pvt. Ltd.	4428299/4428299	80	Trade Link Global Pvt. Ltd.	4244408
36	Numbur Himalaya Hydropower Pvt. Ltd.	4225009/4248695	81	Puwa Khola One Hydropower Pvt. Ltd.	016911637/4417121
37	Global Hydropower Associate Pvt. Ltd.	4268589/4248695	82	Madi Power Pvt. Ltd.	4437305/4417372
38	Nasa Hydropower Pvt. Ltd.	4244352/4225685	83	Hydro Venture Pvt. Ltd.	4015805/4015806
39	Rara Hydropower Devt. Co. Pvt. Ltd.	4033016	84	Terathum Power Company (P) Ltd.	4240661
40	Sanima Mai Hydropower Pvt. Ltd.	4446442/4441277	85	Peoples Hydropower Co-operative Ltd.	4781891/4785671
41	Tara Energy Pvt. Ltd.	5555707/5555701	86	Bindhyabasini Hydropower Development Co. Pvt. Ltd.	4781891/4785671
42	Nimrung Hydropower Co. Pvt. Ltd.	4102651	87	Jhyamolongma Hydropower Devt. Co. Pvt. Ltd.	5520254/5012027
43	River Falls Hydropower Devt. Pvt. Ltd.	16219566			
44	Nyadi Group Pvt. Ltd.	4102651			
45	Baishno Devi Hydropower Co. Pvt. Ltd.	4228816			

Associate Members

S.No.	Name of Company	Tel/Fax	S.No.	Name of Company	Tel/Fax
88	Shangrila Energy Ltd.	4431545/ 4439267	104	ACE Development Bank Ltd.	4441110/4445554
89	Clean Energy Development. Bank Ltd.	4671444/ 4277013	105	Feedback Ventures Nepal Ltd.	4169104/4169106
90	Klen Tech Pvt. Ltd.	4218888/ 4430396	106	Qiankang Allonward Hydro-Equipment Co. Pvt. Ltd.	4228816/4223570
91	STATKRAFT HOLDING SINGAPORE PTE. LTD.	5521864/ 5536411	107	Structo Nepal (P) Ltd.	5521192/5542118
92	Nepal Hydro & Electric Ltd.	4785136/ 4781851	108	Siddhartha Bank Ltd.	4442919/4442921
93	ICTC Pvt. Ltd	4434895/ 4434937	109	Laxmi Bank Ltd.	4444684/4444640
94	Himal Hydro & General Construction Ltd.	4038030/ 4038026	110	Grand Bank Nepal Ltd.	4168605/4168609
95	Hydro Solutions Pvt. Ltd.	4033751/4033755	111	K-water (Korean Water Resources Corporation)	4442117
96	Jyoti Bikash Bank Ltd.	4411116/4442192	112	Jade Consult Pvt. Ltd.	4247237/4232171
97	Nabil Bank Ltd.	4227181/4226905	113	Mahavir Shreee International Pvt. Ltd.	4110860/4110855
98	Himalayan General Insurance Co. Ltd.	4231788/4241517	114	GCE Group Pvt. Ltd.	4222202
99	Standard Chartered Bank Nepal Ltd.	4782333/4780762	115	Ghatal Trading & Suppliers Pvt. Ltd.	4467461
100	Bank of Asia Nepal Ltd.	4263212	116	NRNA NCC Russssia	7255093999
101	Sanima Bank Ltd.	4428979/4428969	117	Jin Long Hydropower Equipments Co. Pvt. Ltd.	5013037
102	Sunrise Bank Ltd.	4004560/4422475	118	Chongqing Savan Electromechanical Equipment Co. Ltd.	4620235
103	Nepal Investment Bank Ltd.	4225273/4245688	119	Pioneer Law Associates	4221340/4261000

INDEPENDENT POWER PRODUCERS' ASSOCIATION, NEPAL (IPPAN)

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