



presents

# HYDRO POWER 2011

Host Partner State  
**Himachal Pradesh**

**26-27 April 2011**  
Hotel Peterhof, Shimla, Himachal Pradesh

6th International Hydro Power Convention :  
**“Speedier Harnessing of Hydropower Potential in Northern Himalaya”**



## Corporate Support (A partial list)

Diamond



Gold



Silver



ABIR Infrastructure



लक्ष्मी-रत्न-MINI RATNA



**INDIA-TECH**  
*presents*

# HYDRO POWER 2011

6th International Hydro Power Convention :  
**“Speedier Harnessing of  
 Hydropower Potential  
 in Northern Himalaya”**

**26-27 April 2011**

Shimla, Himachal Pradesh



Himachal Pradesh-Chief Minister P. K. Dhumal inaugurating the Convention by lighting the traditional lamp as MD-Jaypee Karcham Hydropower Corpn., D. P. Goyal; ITF-President, Indra Mohan; Former Secretary-Power, R. V. Shahi, J&K State Power Minister, Shabir Ahmed Khan; Former Secretary-Power, V. K. Pandit and Himachal Pradesh-Chief Secretary, Rajwant Sandhu look-on.

A Report on the recently concluded 6th International Hydropower Convention

**B**eing one of the most beautiful, popular and crowded hill-stations in India, Shimla is the perfect getaway for anyone belonging to any of the heat-scorched states of North and Central India. Situated in the north-west Himalayas, this city presents a brilliant amalgamation of scenic beauty and architectural wonders, as the buildings are

styled in tudorbethan and neo-gothic architecture, reminiscent of the colonial era. Earlier pronounced as Simla, it was once declared as the summer capital of the British Raj in India.

It is Shimla that India-Tech Foundation selected as its destination for the two-day 6th Hydropower Conference 2011 – ‘Harnessing Hydropower in Northern Himalaya.’

It is understood that the total hydropower potential of the country has been assessed at 84004 MW. So far only 25 per cent of the potential has been exploited thereby

leaving 75 per cent of the total potential being untapped. The Hydropower potential in the Northern Himalaya states is also tremendous. The state-wise break up of these states is as follows. Himachal Pradesh 2268.41 MW, Uttarakhand 1609.25 MW and Jammu & Kashmir 1411.72 MW.

Inaugurating the two-day conference, Chief Minister Prof. Prem Kumar Dhumal says, “Our priority is to expeditiously harness out balance potential in a manner that optimizes returns to the state. With a view to achieve this we began the process of involving both Central Government



## EXPERT TALK



**Shabir Ahmad Khan,**  
Minister of State for  
Power, Govt. of Jammu  
& Kashmir

“We need to understand that hydro-electric power projects require substantial investments.

Power is the critical infrastructure on which socio-economical development of the country depends. It plays a prime role in life and therefore it is imperative to make availability of electricity for growth of infrastructure, economy and quality of life of people of the nation,” he added.

**Mrs Rajwant Sandhu,**  
Chief Secretary,  
Government of  
Himachal Pradesh



“Transmission system requires adequate and timely investments and also efficient and coordi-

nated action to develop a robust and integrated power system for the country. Distribution is the most critical segment of electricity business chain. The real challenge of reforms in the power sector lies in efficient management of the distribution sector.”



**R. P. Singh,**  
CMD, SJVN Ltd

“I trust the conversation between government of North Eastern states and developers will help to resolve issues and to ensure stable result and framework for project development. It's a win-win situation for both and we should work together so that north becomes the 'Power House' of the nation.”

**D. P. Goyal,**  
MD  
Jaypee Karcham  
Hydropower  
Corporation Ltd



“In the free power concept, developers should know that out of the

12 per cent, at least 3 per cent of funds every year, after the commissioning of the project should be utilized for the development of that area so that people can proactively take initiatives for the speedier development of the project located in that area.”

PSUs and private sector developers in a big way in Hydropower development.” The proposed distribution of nearly 23000 MW, in various sectors is likely to be 17 per cent state sector, 39 per cent Central/Joint Sector, 38 per cent private sector and remaining 5 per cent is less than 5MW.

These efforts are now bearing fruit. In the current financial year 2011-12, Government of Himachal Pradesh expect to add 2090 MW in the system with the commissioning of the thousand MW Karcham Wangtoo, Malani-2 (100 MW), Budhil (70 MW), Chamera – 3 (231 MW), Parvati (520 MW) and some other small Hydel projects. By the end of the twelfth plan, Himachal Pradesh expected to have over 17000 MW of generating capacity. Their emphasis shall be on closed monitoring of all hydel projects so that they achieve the goals they have set for themselves.

“To embark upon our ambitious programme in Hydel generation, Himachal Pradesh formulated its own Hydropower policy in 2006. We have improved further on this policy in the last three years. This policy seeks to safeguard the interest of the people of the state and safeguard our delicate ecology and environment,” observed the Chief Minister.

On the other hand, to ensure development of local area, during the construction stage mandatory provision of 1.5 per cent of the project cost has been kept in the state policy and in the post commissioning scenario, a provision of one per cent additional free power has been year

marked for development of local area in line with the national hydro policy.

“Among the steps we have taken in recent years is to introduce competitive building for all project of above five megawatt potential. The bidding condition for allotment of projects have been simplified and made more transparent to encourage competitiveness for allotment of projects,” he added.

The milestones for the implementation of projects have been rationalized and time lines for achieving the set milestones have been fixed as per the actual inputs from the projects under implementation. The provision of imposition of penalties has also been added in case of non achievement of milestones. The government sector gas also been made more accountable by fixing the timelines for accordance of TEC at state level.

The condition of government's right to participate up to 49 per cent of equity in projects above hundred MW on selective basis has been removed to give more clarity to the expected bidders. The condition for mode of sale of power generated from projects above five MW has been redrafted such that the developer has more option to market the generated power.

“After implementation of these modifications we have recently allotted 13 projects with aggregate capacity of 1304 MW. The entire bidding process was completed in the period of nine weeks. Compared to over a year in earlier rounds of allotment,” said Dhupal.





**Dr. Refaat Abdel-Malek**  
- President,  
**International Hydro  
Power Association**

“India has one of the largest hydro potential that has to be exploited and we believe India will

exploit this very soon. Time has come now when India has to start giving it to create 1000MW development projects and this brings lot of challenges and requires interest by the larger developers which is really something India should have because of economical viability that India is enjoying at the moment. Hydro power is critical energy resource. Though, sustainability is the prime focus but we don't ignore virtual policy, climatic changes, market investment etc.”

**Subhash Gupta**  
Chief Engineer-Energy,  
Govt. of HP



“The geological challenges covers rock slope security, foundation, construction material and also most of the projects suffer because the coal is not available. You find there is a good volume of, in the deep yard regarding the availability of coal but when you really go at the site either it is less in number or some other problem crops up.”



**J.K. Sharma - Director -  
Projects, NHPC Ltd.**

“Energy security has come into the main focus due to the challenges and threats possessed by global warming.

Therefore, perspective of policy makers and developers in the energy sector is the key factor for meeting the increasing demand of power under the clean development mechanism. India is fortunate with modest economical and viable with a hydro potential of 1.5 lac MW.”

**G. Ramakrishna, AGM,  
Teesta Urja Ltd.**



“We are following the pre-injection technology for tunnel evacuation in one of the mega projects for the state of Sikkim. It

is one of the 3 biggest projects with capacity of 400 MW. There are two types of injection Pre and Post. The basic difference in pre-injection is the advancement of tunnel phase is included in pre-injection.”



“In spite of all our efforts on these fronts we have not been able to harness the potential as speedy as envisaged. The major concern areas are in three segments i.e; clearances, construction issue and inadequate transmission system.

The TECs for the projects at CEA are taking much longer than the required as the central electricity authority is overburdened with the task of clearing a large number of projects. This can be resolved if the state are empowered to give TEC for projects costing upto Rs 2500 crore,” he added. “If this delegation is not feasible than the central electricity authority should be strengthened and its performance monitor to ensure adherence to national timetables for project clearance,” pointed out Dhupal.

Hydro projects invite immense environmental convert as the result project development is often held up due to delay in environmental and forest clearances. There is need to consider ways to streamline these processes if we are to harness this valuable renewable resource in the foreseeable future.

Since the number of projects are coming up simultaneously in the same river basin of the MOEF has added the requirement for basin studies / carrying capacity studies of the rivers/ streams.

These studies are essential in the present context but it is also a fact that these are time consuming and implementation of project should not be held up while these are completed. Himachal has already taken a lead in this by starting the basin studies for Satluj basin and also started the process

for initiating the action of conducting the simpler studies in other basins.

Speaking as the Guest of Honour Shabir Ahmad Khan, Minister of State for Power, Govt. of Jammu & Kashmir said, “J & K has an estimated hydro potential of 20,000 MW out of which 16,000 MW has been identified so far. Hydro power harnessed so far in J & K is 2456 MW.

J & K government is giving significant importance to the peak requirement of hydro power potential in order for the smooth and speedier development of State, economy and power situations.” “We need to understand that hydro-electric power projects require substantial investments. Power is the critical infrastructure on which socio-economical development of the country depends. It plays a prime role in life and therefore it is imperative to make availability of electricity for growth of infrastructure, economy and quality of life of people of the nation,” he added.

Speaking on the occasion, Mrs Rajwant Sandhu, Chief Secretary, Government of Himachal Pradesh said, “Electricity is a critical input on which social, economic development of the country depends. Supply of electricity to rural population at reasonable rate is essential for progress. Equally important is the availability of reliable and quality power at competitive rates to Indian industry to make it globally competitive.”

Hydro power is environment friendly, can supply peaking power without any problem, doesn't contribute to depletion of fossils-fuels with ever increasing prices. Keeping in view the challenges and costs





associated with the other sources of energy, the country's total hydro potential of 1.5 lakh MW may have to be utilized so as to narrow the gap between the demand and supply.

However, "This is a sector marked by time and cost overruns. Delay of several years and jacking up the cost by 100-150 per cent is all too common," she observed.

The Electricity Act 2003 provides an enabling framework for accelerated and more efficient development of power sector. The Act seeks to encourage competition with appropriate regulatory intervention. Competition is expected to yield efficiency gains and in turn result in availability of quality supply of electricity to consumers at competitive rates.

"Transmission system requires adequate and timely investments and also efficient and coordinated action to develop a robust and integrated power system for the country. Distribution is the most critical segment of electricity business chain. The real challenge of reforms in the power sector lies in efficient management of the distribution sector," said Sandhu.

In his welcome address, R. P. Singh, Chairman and Managing Director, SJVN Ltd said, "We have now ventured abroad along with the 900MW three hydro-electric projects in Nepal and we will be commissioning them during the 13th five year plan. The government of India has already allocated two more projects in Bhutan of 650 and 600 MW respectively."

" I trust the conversation between government of North Eastern states and

developers will help to resolve issues and to ensure stable result and framework for project development. It's a win-win situation for both and we should work together so that north becomes the 'Power House' of the nation."

On the day 2 of the conference, the first session on 'Hydro potential in northern Himalaya' was chaired by J.K. Sharma, Director, Projects, NHPCL Ltd. In his address Sharma said, "Energy security has come into the main focus due to the challenges and threats possessed by global warming." "Therefore, perspective of policy makers and developers in the energy sector is the key factor for meeting the increasing demand of power under the clean development mechanism. India is fortunate with modest economical and viable with a hydro potential of 1.5 lakh MW." He added.

While doing his lead presentation on 'A world view of Hydropower development and overview of latest technologies and management practices' Dr. Refaat Abdel-Malek, President, International Hydro Power Association said, "India has one of the largest hydro potential that has to be exploited and we believe India will exploit this very soon."

He added saying that the time has come now when India has to start to create 1000MW development projects and this brings a lot of challenges and requires interest by the larger developers which is really something India should take interest for her long time economic growth. Hydro power is critical energy resource."

Chairing the session on 'Integration on

advanced technologies in Hydropower sector', D. P. Goyal, Managing Director, Jaypee Karcham Hydropower Corporation Ltd said, "In the free power concept in the developing countries, developers should know that out of the 12 per cent, at least 3 per cent of funds every year after the commissioning of the project should be utilized for the development of that area so that people can proactively take initiatives for the speedier development of the project located in that area."

While presenting the paper on 'Engineering challenges of building large Hydropower projects,' K. K. Roy, President, Energy Infratech Pvt Ltd said, "Hydro Power is one of the potential source for meeting the growing demand of energy needs of the country especially in the Himalayan regions like Indus, Ganga, Brahmaputra river basins where some of the largest hydro power projects is yet to be taken out. But the construction of the largest hydro power projects in Himalayas is full of complexities and challenges."

Talking on the 'Innovative model for speedier execution of Hydropower projects,' Amit Gupta, Civil Engineer, Hydro Electric Power Projects, WAPCOS said, "While talking about the hydro power projects of a huge magnitude of around 7.6 KM long the words 'Challenge' and 'Speedier' finds its main importance. While implementing projects ranging from 5 to 5000 MW it is obvious the amount of speed and challenge increases exponentially. Working on Hydro power projects is like 'Race against Time.' Implementation of activities in a concurrent move will prove to be the key factors in mitigating the problems." ■■

