16th Annual Conference on

HYDRO POWER IN INDIA

New Policy, Changing Role in Energy Mix and Cross-border Challenges

January 21-22, 2019, Le Meridien, New Delhi

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HYDRO POWER IN INDIA

Mission

- It has been another tough year for the hydropower segment. Capacity additions in the last fiscal were less than even 1 GW and the segment missed the annual target by almost 40 per cent. With around 45 GW of installed capacity, its current share in the total installed capacity has been reduced to just around 13 per cent, much below that of renewables (at over 20 per cent). Its share in power generation has remained the same since the last year (over 10 per cent), vis-à-vis renewable energy generation, which is now set to overtake it.
- The private sector's share in installed hydro capacity is still at an insignificant 7 per cent. The total exploited potential is only 30 per cent, significantly lower than other hydro-rich nations. The upcoming project pipeline remains weak (12.2 GW) and stranded at various stages of project development, leading to time and cost overruns. A recent positive development though was the Supreme Court allowing the construction of stalled hydropower projects in Uttarakhand.
- While there have been discussions on getting hydro back on the policy agenda, the segment is yet to witness any significant development. The new hydropower policy, which promises to address a number of challenges, is yet to be announced. Among other things, it proposes to declare hydro as a renewable energy source, remove restrictive clauses like mandatory free power sales to states and provide softer loans for such projects for longer periods.
- That said, while on the one hand, hydro power has been losing ground to more competitive renewable energy sources, it is gaining importance in meeting the changing grid requirements on the other. Greater renewable energy penetration has increased the need for balancing power. Hydro power is being increasingly seen as being best suited to meet these requirements. In fact, the black start capability of hydropower stations has been acknowledged to be strategic from the point of grid resiliency by regulators.
- With hydropower stations' fast-ramping capability and the ability to respond more quickly than thermal stations, storage and pondage hydropower stations are proposed to be gainfully utilised for regulation services to meet the system requirements. Recently, hydro has been brought under the fast response ancillary services ambit to handle grid intermittency issues.
- In order to facilitate hydropower stations to work efficiently with other renewable technologies, existing plant owners are embracing digitalisation and new operations and maintenance (O&M) practices to improve the performance of turbines and equipment, and optimise asset management.
- Hydro power can also play a key role in promoting India's plans of strengthening cross-border ties. A significant number of transmission interconnections are already being planned with Bangladesh, Nepal and Bhutan to support evacuation and import of power from future hydro projects planned in the SAARC region.
- **The mission of this conference is to analyse the key issues, challenges, opportunities and outlook for the hydropower segment in India. The conference will also provide a platform to showcase new technologies, construction methods and noteworthy projects.**

Target Audience

The conference is expected to draw participation from executives, managers and decision-makers from:

- Central public units
- Private power producers
- Regulatory institutions
- Civil work contractors
- Interstate hydro projects
- Financial institutions
- Technology providers
- Consultancy organisations
- State electricity boards
- State/Central government agencies
- Equipment manufacturers
- Legal firms

Previous participants

*The companies that participated in our previous conferences on "Hydro Power in India" included: **ABB, Adani Power, AECOM, Afcons, Allain Duhangan HEP, Alps Energy, Amberg Engineering, Ambuja Cement, Anandsheel Hydraulics, Andritz Hydro, Aon Global Insurance Brokers, APGENCO, ATB Riva, ATB Riva Calzoni India Ltd, Atlas Copco, Axis Bank, Bauer Kompressoren India Pvt Ltd, BBMB, BC Technomation, BHEL, Bhilwara Energy, BHPC, Bhutan Electricity Authority, Bhutan Hydropower Services, Birla Corporation, Blue Energy, BMD Group, Bosch Rexroth, C&S Electric , Carpi, CEA, CESC, CH2M Hill, Chenab Valley Power Projects, CLP Power, Crompton Greaves, Dans Energy, DCM Shriram, Dextra, Druk Green Power Corporation, DSD Noell GmbH, Dynavec, Eaton Fluid Power, Eaton Technologies, Eimco Water Technologies, EKI Energy Services, Elcome Technologies, Elgi Sauer Compressors, Elkem, Emco Energy, Essar Projects, Essar Steel India Limited, Exide, Federal Mogul, Flovel Energy , Fortum, Gammon, Gates, Gati Infrastructure, GE Power, Giertsen Tunnels, GMR, GMW, GRDICO, GSECL, HCC, HIDCL, Hilti, Himachal Baspa Power Company Ltd., Himachal Pradesh Power Corporation, Hindustan Construction Co Ltd, Hydro Tasmania, Hydroelectricity Investment and Development Company, Hyosung, ICICI Bank, ICRA, IDBI, IDFC, IFC, IFCI, IFS Solutions India, IIFCL, Indus Law, Indus Renewable Energy, Industrial Processors & Metallizers, IRCON, ISRM, ITD Cementation, IVRCL, J&K State Power Development Corporation, J.B. Boda Insurance Brokers, Jacob Ballas Capital, Jaiprakash Power Ventures , Jindal Power, JSE PTC, JSW Energy, JVM Marketing, Kalpataru Power Transmission, Keeezharkuthu Power, KEI Industries, Kerala State Electricity Board, KfW, Kirloskar, KSK, L&T, Lanco, Lombardi, MahaGenco, Malana Power, Marsh, Matcos Consulting Services, McNally Bharat Engineering, Mecon, Meggitt, Mitsui, MPGENCO, MPPGCL, Murasit Bauchemie, Nagarjuna Construction, Nagarjuna Hydro Energy, NEEPCO, Neora Hydro (A Unit of Texmaco Infrastructure & Holding Ltd.), Nepal Electricity Authority, NHDC, NHEL, NHPC, NHPC Limited, Normet, NPTI Nangal, NTPC, Odisha hydropower Corporation, Om Energy Generation, Om Metals, Paschim Hydro, Patel Engineering, PES Engineers, PFC, Phelps Dodge, PHPA-II Bhutan, Power Grid Corporation of India, Powergas Energy, Poyry Energy, Poyry Switzerland , Pratibha Group, Precision Infratech, PSPCL, PTC, PTCUL, Punj Lloyd, REC, Reliance Energy, Robbins, RPG, Safire, Sai Disha Engineers & Consultants, Salzgitter, Sandvik, SBI Capital Markets, Schwing Stetter, Seli Hydro Electric Power, SEW Energy, Sharika Enterprises, Shri Saravana Industries, Shri Saravana Industries , Siemens, Sika, Simplex, SJVN , SMEC, SN Power, Statkraft, Tanahu Hydropower, Tangsibji Hydro Energy , Tata Power, TCE, Telangana State Power Generation Corporation (TSGENCO), Teesta Urja, THDC, The Associated Chambers of Commerce and Industry of India, The Tata Power Company Limited, TPSC, Tractebel Engineering, Tranter, Tranter India , UJVNL, Ultratech Cement, Uttar Pradesh Jal Vidyut Nigam, VA Tech Hydro, Velcan Energy, VishnugadPipalkoti Hydro Electric Project, Voith Hydro, Volvo, Wapcos, WBSEDCL,** etc.*

AGENDA/STRUCTURE

KEY TRENDS AND OUTLOOK
- What have been the key trends and developments in the hydropower segment?
- What are the key issues and challenges?
- What is the segment's outlook going forward?

GOVERNMENT PERSPECTIVE
- What is the government's perspective on the growth of the hydropower segment so far?
- What are some of the policy steps being proposed for reviving the segment?
- What is the outlook for the segment? What are the key issues and concerns?

DEVELOPER PERSPECTIVE
- What are the developers' views on the current state of the hydropower segment?
- What are the key issues and concerns impacting the growth of the segment?
- What are their future capacity addition plans? What is the outlook for the segment?

LOAD BALANCING AND STORAGE
- What role can hydropower plants in storage and load balancing?
- What are some of the technical and non-technical barriers which would be need to addressed?
- What are the technologies and solutions available?

REGULATORY PERSPECTIVE
- What are some of the regulatory risks and concerns for the hydropower segment?
- What is the likely impact of the recently issued regulations for utilising hydro as a fast response ancillary service?
- What are the regulatory steps required to promote hydro power?

CROSS-BORDER COLLABORATIONS
- What is the development potential of cross-border hydropower projects in the SAARC region?
- What is the status of cross-border hydropower projects? What has been the experience so far?
- What is the future project pipeline in neighbouring countries?

COST AND TARIFFS
- What have been the construction cost trends in the recently completed projects?
- What have been the tariff trends for hydropower plants?
- What are some of the proposed changes in the tariff norms for the next control period?

STATE INITIATIVES
- What has been the trend in hydropower development in hydro-rich states? What are the various policy and regulatory incentives offered to developers?
- What are the key issues and concerns? What is the upcoming capacity?

PUMPED STORAGE PROJECTS
- What is the potential of pumped storage hydro capacity in India?
- What is the current and upcoming pumped storage hydro capacity in India?
- What are the key issues and challenges? What is the outlook for this segment?

CONTRACTUAL AND LEGAL ASPECTS
- What are the current contracting practices in hydropower projects?
- What are the challenges involved in managing hydropower project contracts?
- What are the steps that developers can take to improve contracting practices?

STRESSED ASSETS
- What is the current stance of lenders and investors for hydro projects?
- What is the current status of stressed asset resolution?
- What is the outlook? What are the key areas of concern?

O&M NEEDS AND REQUIREMENTS
- What are the O&M needs and requirements for hydropower plants?
- What are the best practices in O&M?
- What are the new and emerging technologies and solutions?

CIVIL ENGINEERING: DESIGN AND CONSTRUCTION CHALLENGES
- What are the key design issues in hydro project construction?
- What are some of the advances in equipment and methods in design and construction?
- What are the promising technologies and solutions available in this regard?

TURBINES AND GENERATORS
- What are the new advances in turbine and generator technologies for hydropower plants?
- What are the advantages, outcomes and cost savings achievable?
- What has been the experience so far?

CONTROL AND AUTOMATION
- What are the new and promising C&I solutions?
- What are the advantages, outcomes and cost savings achievable?
- What are the key challenges?

ROLE OF DIGITALISATION
- What are the most promising digital technologies for hydropower plants?
- What has been the experience so far?
- What are the future digitalisation plans of gencos?

WATER INTAKE AND CONDUIT SYSTEMS
- What are the trends in the design and development of water intake and conduit systems?
- What are the best practices related to O&M?
- What are the key issues and challenges?

SILT EROSION MANAGEMENT
- What is the impact of silt erosion on the performance of hydropower projects?
- What are the best practices in managing silt erosion?
- What are the new and promising technologies in this regard?

PROJECT SHOWCASE
- What are some of the noteworthy hydropower projects?
- What are the key features, construction experience and success factors?
- What were the key issues in execution?

Organisers

*The conference is being organised by **India Infrastructure Publishing**, the leading provider of information on the infrastructure sectors. The company publishes **Power Line, Indian Infrastructure** and **Renewable Watch** magazines. It also publishes a series of reports on the energy sector including **Hydropower in India, Power Transmission in India,** and **Power Distribution in India**. The company also publishes the **Power Line Directory and Yearbook**.*

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1	20,000	3,600	23,600	393	25,000	4,500	29,500	492
2	32,000	5,760	37,760	629	40,000	7,200	47,200	787
3	44,000	7,920	51,920	865	55,000	9,900	64,900	1,082
4	56,000	10,080	66,080	1,101	70,000	12,600	82,600	1,377

- There is also a 20 per cent "Early Bird" discount for those registering before December 28, 2018.
- There is a special low fee of Rs 6,000 per participant for state utilities, regulatory authorities, academic institutions and government agencies (not public sector corporates).
- Registration will be confirmed on the receipt of payment.
- To register online, please log on to http://indiainfrastructure.com/conf.html

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