

presents



Transmission & Distribution

13 & 14 May 2014

Hotel Orchid, Mumbai

Theme :



- The "LAST (Crucial) Mile"
for a "Sustainable" Power Sector

Supported by:



Ministry Of Power
Government of India

“Round Table Meet”

A ‘Brain Storming’ Session on
“A Healthy T&D Sector for
a Sustainable Power Sector”

Knowledge Partner



Corporate Partners



Associate Partners





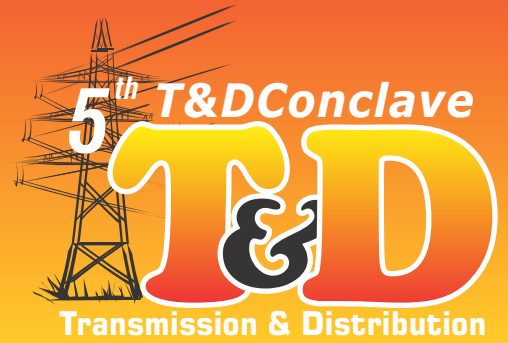
Presents...

"Round Table Meet"

A 'Brain Storming' Session on

T&D - The "LAST (Crucial) Mile"
for a "Sustainable" Power Sector

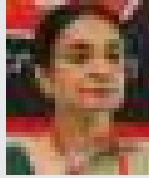
13 & 14 May 2014 - Hotel Orchid, Near Domestic Airport, Mumbai



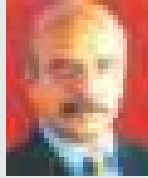
Some Prominent Speakers



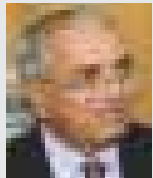
Shri P. Uma Shankar
Former Secy – Power,
Govt. of India



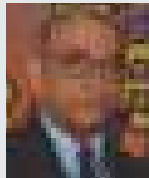
Smt. Neerja Mathur
Chairperson,
Central Electricity Authority



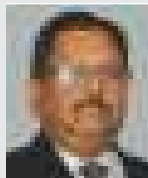
Dr. Pramod Deo
Former Chairman
CERC



Dr. M. R. S. Murthy
Chairman
KERC



Shri V. K. Pandit
Former Secy – Power
Govt. of India



Shri Devendra Chaudhry
Addl. Secretary- Power
Govt. of India



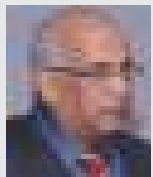
Shri S. K. Negi
Managing Director
Gujarat Energy Transmission
Corp. Ltd.



Shri R. N. Nayak
Chairman & MD
Power Grid Corp. Ltd.



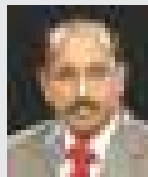
Shri Ajoy Mehta
Chairman & MD,
Maharashtra State Electricity
Distn.Co. Ltd.



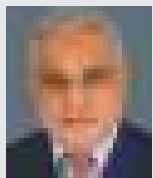
Shri V. S. Verma
Former Member
CERC



Shri P. J. Thakker
Director - Technical
Rural Electrification Corp. Ltd.



Shri I. S. Jha
Director – Projects
Power Grid Corp. (I) Ltd.



Dr. I. A. Khan
Member
BERC



Shri Ramesh Chandak
Mg. Director & CEO
KEC International Ltd.



Dr. Katsutoshi Toda
Chairman & MD
Toshiba T&D Systems
(I) P. Ltd.



Shri Ajit Kumar,
ED - BD & C
NTPC Ltd.



Shri R. K. Verma
Chief Engineer
Central Electricity Authority



Shri C. Gangopadhyay
Executive Director & CEO
PFC Consulting Ltd.

The Programme

2.30-5.00 pm Tuesday, 13th May, 2014 - "Day I - ROUND TABLE MEET"

Keynote Address: Dr. Pramod Deo, Former Chairman, Central Electricity Regulatory Comm.

Moderator: Shri V. S. Verma, Former Member- Technical, CERC

Panelists(a partial list):-

Shri P. Uma Shankar, Former Secretary-Power

Shri Ajoy Mehta, C&MD, Maharashtra State Electricity Distn. Co. Ltd.

Dr. M. R. Shrinivasa Murthy, Chairman,

Karnataka Electricity Regulatory Commission

Dr. I. A. Khan, Member, Bihar Electricity Regulatory Commission

Shri. P. J. Thakker, Director-Technical, Rural Electrification Corp. Ltd.

Topics for Panel Discussion:-

- Timely Issuance of Orders by the Regulators & How to Make Them Accountable?

- Need to Define & Streamline the Selection Process of Regulators.

- Need for Abolishing the Practice of Creating Regulatory Assets by Regulatory

Commissions/Govt. – For Freeing the Distribution Companies from Adopting

Malpractice in Dues Recovery.

- Need for Providing Transparency & Dynamic Mechanism for Subsidy of Tariff.

- Role of Regulators in Determining Multi- year Tariff.

- Is There a Need for Overseeing the Functioning Regulatory Commissions to Achieve

the True Spirit of Electricity Act 2003?

- Separation of 'Content & Carriage' in Power Distribution- Technical, Commercial &

Political Issues.

- Need for Prepaid Meters, Smart Distribution Grid for Elimination of Power Theft.

- Whether Restructuring of SEBs has been done in the True Spirit of Electricity Act 2003?

5.00-5.30 pm: Networking Tea Break

5.30 -7.00 pm: Inaugural Session

**Welcome Address: Shri V. K. Pandit, (Former Secretary - Power),
Convener, 5th T&D Conclave**

Special Address I: Shri V. S. Verma, Former Member, CERC

Japan-India Techno-economic Co-operation in Power Sector

Special Address II: Dr. Katsutoshi Toda, CMD, Toshiba T&D Systems (I) Pvt. Ltd.

Opening Address: Need for Support from States & Central Govt. for Common Infrastructure

Projects & Need to Define & Maintain Time Line.

-Smt. Neerja Mathur, Chairperson, Central Electricity Authority

Vote of Thanks: Shri Indra Mohan, President, India-Tech Foundation

7:00pm - 8:00pm Networking Reception

Wednesday, 14th May, 2014 - Day II - "T & D CONCLAVE"

10:00am - 2:00pm **Keynote Session - I : Transmission**

Session Chair: -Smt. Neerja Mathur, Chairperson, Central Electricity Authority

Opening Address: Planning & Development of Inter State Transmission System
and General Network Access

Keynote Address: Challenges & Opportunities in Transmission Sector

-Shri Devendra Choudhry, Addl. Secretary – Power, Govt. of India

Constraints in Development of Transmission Systems :

-Shri Y. K. Sehgal, Chief Operation Officer

(Central Transmission Utility), Power Grid Corp. (I) Ltd.

National Grid- Operational Challenges :

-Shri Abhimanyu Gartia, Deputy Gen. Manager, POSOCO.

National Grid – Availability Challenges :

-Shri P. B. Behere, General Manager, NTPC Ltd.

Bidding for Transmission Systems & Tariff Based Standard Bid Documents

-Shri C. Gangopadhyay, CEO, PFC Consulting Ltd.

Status of Implementation of Smart Grid in India (Including Pilot Projects)

-Shri S. K. Negi, Managing Director, GETCO,

Some New Technologies & Management Practices in Transmission Sector

-Dr. Katsutoshi Toda, CMD, Toshiba T&D Systems (I) Pvt. Ltd.

-Shri E. V. Rao, Vice President, KEC International Ltd.

2:00pm - 2:45pm Networking Lunch

2:45pm - 5:30pm **Keynote Session - II : DISTRIBUTION:**

Session Chair: Shri P. Uma Shankar, Former Secretary – Power, Govt. of India

Opening Remarks : by Session Chairman

An Overview of Distribution Sector

& Integration of Renewable Energy in State & National Grid

-Shri R. K. Verma, Chief Engineer-Grid Ops., CEA

Smart Grid, Smart Meters- For Improving Distribution

-**Shri Prabhakar Shinde**, Director - Projects,

Maharashtra State Electricity Distribution. Co. Ltd.

-**Shri Kumar Arvind**, Sr. Vice President,

BSES Rajdhani Power & BSES Yamuna Power Ltd.

Incentivizing Investments in Distribution Sector through 'National Electricity Fund'

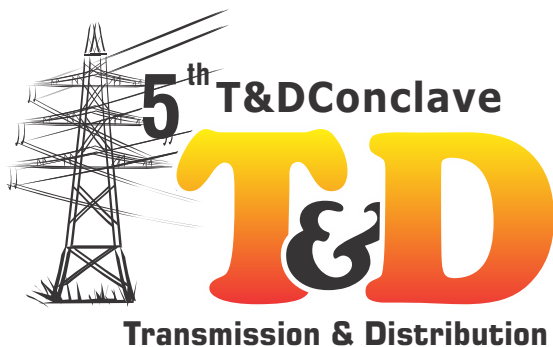
-Shri S. K. Gupta, GM - T&D, Rural Electrification Corp. Ltd.

Integration of Renewable Energy in State & National Grid

-Shri Chandra Prakash, Dy. Director, Central Electricity Authority



Smt. Neerja Mathur, Chairperson, Central Electricity Authority, Lighting the traditional lamp at the Inaugural Function of 5th T&D Conclave 2014, while **Shri V. S. Verma**, Former Member- Technical, Central Electricity Regulatory Commission, **Shri P. Uma Shankar**, Former Secretary – Power, Govt. of India, **Shri V. K. Pandit**, (Former Secretary - Power), Convener, 5th T&D Conclave, **Dr. Katsutoshi Toda**, CMD, Toshiba T&D Systems (I) Pvt. Ltd. & **Shri Indra Mohan**, President, India Tech Foundation look-on.



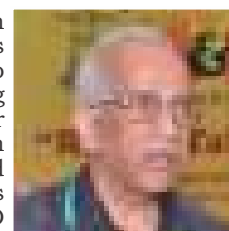
A Report

As the Indian Transmission and Distribution sector faces serious issues in addressing the constraints of 24 hours power supply to the Indian population, the major hurdles such as financial health of the state electricity boards and lack of confidence of lenders to lend to the sector were some of the hot topics of discussion at the 5th T&D Conclave organized by the India Tech Foundation in Mumbai from 13th to 14th May at the Orchid Hotel near the Mumbai Airport.

The first day of the event was moderated by V.S. Verma and chaired by P Umashanker, the Power Secretary, government of India. Some of the other dignitaries on the dais were Ajay Mehta, Dr. M. R. Shrinivasa Murthy, Dr. I. A. Khan, Shri P. J. Thakker. The event on the first day focused on how to achieve the target of 4 lakh MW of T&D capacity by 2020 and put India on par with the best in the world. There was complete consensus amongst the participants that the entire power sector has to grow fast with equal emphasis on all forms of power generation including renewables for providing equitable and sustainable power for the future growth of the country. Under the 12th Five Year Plan government has set a target of 75,000 MW of power generation along with growth in the development of T&D network to evacuate the power generated and distribute to the last mile.

In a special address V. S. Verma, founder member of CERC, said there are various constraints in the development of alternative source of power generation, such as hydro, gas based power plants, nuclear or renewables. The hydro power has suffered in the last few decades as it falls under the state subject and there has not been enough work done to fast track the projects in terms of providing environmental and forest clearances. He also brought to forefront the issues of costly

imported gas and substantial decline in the production of KG D6 gas which has kept infrastructure such as pipelines to bear minimal. Similarly, there is strong protest for the installation of Nuclear Power Plants. The only option left with power producers is to set up coal based thermal power plants. Unless there is substantial power generation the T&D capacities would either lie unutilized or they would not be created. India today has an installed capacity of about close to 2,44,000 MW, it is pre-dominantly thermal about 70%, Hydro about 16.5%, Nuclear capacity at about 2% while renewables at 32,000 MW constitutes around 12%.



V. S. Verma



Neerja Mathur

Inaugural Speech: Neerja Mathur, Chairman of Electricity Authority of India (CEA), highlighted the importance of technology such as smart grids in making the entire T&D segment efficient and effective as it is the backbone of the Indian economy. She also brought to our notice, the information furnished by various state load dispatch centers (SLDCs) were not accurate in terms of load shedding and peak shortages. We have identified the issues and very soon we are going to ask

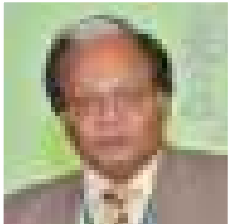
the SLDCs to put the information on their websites to let people know that actual power cuts were same as projected by them.

Ms Mathur further highlighted the importance of technology in improving the efficiency of generation by focusing more on hydro and renewables and also by installing more and more super critical coal based power plants which help in conserving the precious coal as well as reducing pollution. Since the beginning in December 2010, now there are 25 super critical units operating in the country, totaling around 17,000 MW. Under the 12th five year plan the government aims to develop around 24,000 MW through super critical technology.

Vote of Thanks: Shri Indra Mohan – Indra Mohan, President of India-Tech Foundation in a vote of thanks acknowledged the support of Ms Neerja Mathur, Chairperson of CEA and Dr. K. Toda, Chairman & Managing Director of Toshiba T&D (India) who accepted the invitation at a short notice. He also thanked the members of 'National Advisory Council' for planning this programme and the support from the industry experts as speakers for the event. Mr Mohan also acknowledged the



Inaugural Session From L to R: Indra Mohan, President, ITF, V. S. Verma, Former Member- Technical, CERC, P. Uma Shankar, Former Secy. – Power, GoI, Neerja Mathur, Chairperson, CEA, V. K. Pandit, (Former Secretary - Power), Dr. Katsutoshi Toda, CMD, Toshiba T&D Systems (I) Pvt. Ltd.



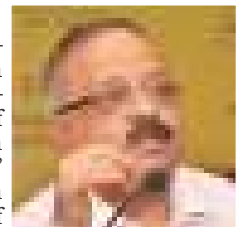
Indra Mohan

support from the co-sponsors – Crompton Greaves, NHPC, NTPC, Power Finance Corporation. Power Grid Corporation, Toshiba T&D Systems (India) Private Ltd, and the Rural Electrification Corporation.

would lie idle.

Quotes from the Speakers

Y. K. Sehgal, Chief Operations Officer – (CTU–Planning) – Power Grid Corporation of India Ltd. – Y. K. Sehgal – (CTU – Planning) – Power Grid Corporation of India, while talking on “Constraints in Development of Transmission System” said there has been tremendous growth in the power sector, synchronization of Sholapur as One Grid has opened 11 high excess corridors of 32,000 MW at a cost of Rs 33,000 crores.



Y. K. Sehgal

Day 2 – 14th May 2014:

Keynote Session I: Transmission

The day two of the event was divided under two sessions where the first session focused on the transmission segment while the second session focused on the distribution segment.

In a keynote address Neerja Mathur, the chairperson of CEA said T&D is the lifeline of the power sector as it facilitates the power to flow from the generator to the ultimate consumer. It is also responsible and instrumental in keeping the grid operations secure. She stated that secure grid operations is an integral part of transmission planning and it should be seen as that. Highlighting the importance of open access in transmission she said if the cost of power has to come down open access will have to be promoted and brought into reality. She also addressed the importance of congestion in network due to shortage of transmission networks leading to lack of transaction volumes on the energy exchanges and increase in supply cost. The congestion also leads to tendency amongst states to overdraw power endangering the security of the grid. Besides, there should be creation of additional transmission network to evacuate power generated from the renewable sources of power, as renewable takes an important position in India's portfolio of power generation.



P. B. Behere

P. B. Behere, General Manager, NTPC spoke on the subject: “National Grid – Availability”. He explained that NTPC being the major power producer in India with plants located across the country, it is also tapping global businesses and has future plans for accelerated growth under the 12th five year plan. He highlighted the importance of generation and inability of the transmission network provider to meet the transmission line targets. Besides that he emphasized the issues of congestion in power exchanges and the shortage of power in the southern region of the country.



Devendra Choudhary

Addressing the audience on “Challenges & Opportunities in Transmission Sector” – Shri Devendra Choudhary, Additional Secretary, Power, Government of India, said, it is important to take such deliberations to the regional levels as speaking from platforms in urban centers like Mumbai would not address the issues in the T&D segment. He stated T&D is not the last mile but the life line of

the industry as without the transmission lines the generators

C. Gangopadhyay, CEO, PFC Consulting spoke about “Bidding for Transmission Systems & Tariff -Based Standard Bid Documents.” He explained the key provisions of the bidding guidelines, billing process, role of bid process coordinator, apart from preparation for project specific request for qualification (RFQ) & request for participation (RFP), the role of RFQ, Role of RFQ Stage, Responsibilities of Successful Bidder, Time line of Bid Process, Credentials of PFCCCL and Revision of the standard bidding documents (SBDs) by Ministry of Power.



C. Gangopadhyay

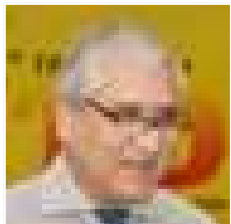
Surender K. Negi, Managing Director, Gujarat Energy Transmission Corporation Ltd.: spoke on the “Status of Implementation of Smart Grid in India (Including Pilot Project), stated the relevance of Smart grids as a concept which integrates, the entire process of transmission and distribution



A view of the audience in rapt attention



Round Table From L to R: P. J. Thakker, Dir. -Tech., Rural Elec. Corpn. Ltd. Dr. I. A. Khan, Member, Bihar ERC, Dr. M. R. Shrinivasa Murthy, Chairman, KERC, Dr. Pramod Deo, Former Chairman, CERC, P. Uma Shankar, Former Secretary – Power, GoI, V. S. Verma, Former Member- Technical, CERC, Ajoy Mehta, C&MD, MSEDCL



Surender K. Negi

through information technology (IT) and use of advanced communication network to make the entire process efficient and sustainable. He suggested adoption of technologies that are scalable and can be implemented for a long run that would make the cost of the power cheaper.

Dr. Katsutoshi Toda, Chairman and Managing Director - Toshiba T&D Systems (I) Pvt. Ltd. – “Some New Technologies Practices in Transmission Sector” – Suppliers of Gas Insulation Transformer, Switchgear to Indian customers which is not only for domestic market but also for commercial purposes. Size of the substations can be reduced dramatically, it is non inflammable and explosion proof which is self perfect sub-station, this compact substation saves on land space, it can be located underground of the building.



Dr. Katsutoshi Toda



E. V. Rao

E. V. Rao, Vice President, KEC International spoke on the “Latest Trends in Transmission Lines Towers & Foundation Designs, Profiling, Right of Way Optimization”.

Keynote Session II - Distribution

The highlight of the second session on distribution was former power secretary, P Uma Shankar's call for improving the financial health of state electricity boards (SEBs). He stated that despite the bailout of some of the discoms in 2003, the situation has not improved. Most of these SEBs are constrained by continuous borrowings from lenders and surviving by borrowing from one bank to pay the other. The existing tariff structure is not able to



P. Uma Shankar



Prabhakar Shinde

Prabhakar Shinde, Director Projects of the Maharashtra State Electricity Distribution Company said, from a distribution company, the consumer wants power at an affordable rate to reduce their billing charges. However, the challenges of poor infrastructure, pending applications especially agriculture applications, poor consumer services and high financial losses have affected the Indian power distribution sector. The investment plan in MSDL was about Rs 12,000 crores, which was successfully completed. The

12,000 crores, which was successfully completed. The

meet the cost of generation hence distribution companies are forced to subsidise power to the customers. The state governments will have to take logical decision of reviving the health of these distribution companies also by reducing the AT&C losses.

In order to benefit the state distribution companies the government has initiated schemes as National Electricity Fund to attract investments in the distribution sector. Only those SEBs, who meet certain criteria in terms of reducing the distribution losses and increasing tariffs, would be considered for allocation of funds. Besides, the government has also initiated plans to restructure the health of the SEBs, through restructured financing, where the SEBs get moratorium on interest and principal payment for three years. It is expected things would start to look up in coming years, if these policies are implemented properly and the state governments provide its continued support.

R. K. Verma, Chief Engineer, CEA said, the distribution sector that acts as an interface between the consumer and the government has been neglected over the decades. It has to be redefined through regulatory changes. The sector needs a definite form of investment to augment and strengthen the system. Smart grids are expected to improve the system over the coming years. It is a two way communication technology to get data to the highway system and at the same time information is passed on to the device to function either in a pre-programmed manner or in a need based manner where the device is remotely controlled. It has been finalised for use in meters. A defined smart meter will be used in the country which would be remotely controlled.



R. K. Verma



A view of the audience in rapt attention



Keynote Session - I : Transmission (L to R): C. Gangopadhyay, CEO, PFC Consulting Ltd., Y. K. Sehgal, Chief Operation Officer, (CTU), Power Grid Corpn. (I) Ltd., Dr. Katsutoshi Toda, CMD, Toshiba T&D Systems (I) Pvt. Ltd., Neerja Mathur, Chairperson, CEA, Devendra Choudhry, Addl. Secy. – Power, Gol., S. K. Negi, Managing Director, GETCO, P. B. Behere, General Manager, NTPC Ltd., E. V. Rao, Vice President, KEC Intl. Ltd.

company has added 55% additional transformers and sub-stations in 3 years. We have also reduced our distribution losses to 14.5% from 30%.



S. K. Gupta

SK Gupta, Executive Director, T&D at REC too spoke on the relevance of the National Electricity Fund in a scenario where the transmission and distribution sector has not kept pace with the power generation in the country. Stating there are 'different categories of consumers in the country commercial, agriculture, domestic, rural, rural household and rural agriculture and to layout the distribution network like veins and arteries to each nook and corner would be

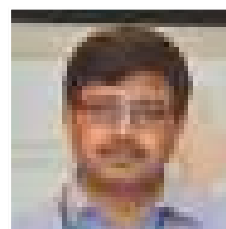
the real challenge for the country. If one has to deliver electricity to the last mile, we will have to build the inter-state transmission networks with investments running in thousands of crores. We need new sub-stations, new distribution lines, new capacities and new IT systems. The NEF or the National Electricity Fund can be of great help to the SEBs, if they meet the set parameters.

Arvind Kumar, Sr Vice President of BSES Rajdhani Power and BSES Yamuna Power Ltd, said that challenges in distribution are more than those in generation. Generation companies realize money from the transmission and distribution companies, but distribution companies have to get money

from the consumers, which is the biggest challenge. Distribution is the last and most crucial link in the power sector. However, the investment in the sector has failed to provide returns or dividends to investors. Regulatory assets have exceeded Rs 20,000 crores and it is difficult to recover the losses. He questions how would private sector companies work under such conditions? He said consumers, decision makers and politicians have to be educated on cost of tariffs.



Arvind Kumar



Chandra Prakash

Chandra Prakash, Deputy Director at CEA highlighted the potential of Solar power in India at 2800GW, he stated that while there are plans for Solar UMPP in deserts of 300 GW utilizing 5-15% of desert area and 1000MW of wind generation, at the end of 12th plan, it goes without saying that the transmission system has to be strengthened. There should be energy storage solutions – large battery banks, compressed air system, renewable energy management centers equipped with advanced weather monitoring systems and RE generation forecasting tools for effective development of the sector.



ITF President, Indra Mohan presents a Memento to Ajoy Mehta, C&MD, MSED Co. Ltd.



ITF President, Indra Mohan presents a Memento to Dr. Pramod Deo, Former Chairman, CERC



ITF President, Indra Mohan presents a Memento to V. S. Verma, Former Member- Technical, CERC



A view of the audience in rapt attention



Keynote Session - II : Distribution (L to R): S. K. Gupta, GM - T&D, REC Ltd., Chandra Prakash, Dy. Director, CEA, P. Uma Shankar, Former Secretary – Power, GoI., Prabhakar Shinde, Director - Projects, MSSEDCL, Arvind Kumar, Sr. Vice President, BSES Rajdhani Power & BSES Yamuna Power Ltd., R. K. Verma, Chief Engineer-Grid Ops., CEA



ITF President, Indra Mohan presents a Memento to Neerja Mathur, Chairperson, Central Electricity Authority



Neerja Mathur, Chairperson, Central Electricity Authority presents a Memento to Devendra Choudhry, Addl. Secy – Power, GoI



ITF President, Indra Mohan presents a Memento to I. A. Khan, Member, Bihar Electricity Regulatory Commission



ITF President, Indra Mohan presents a Memento to Dr. Katsutoshi Toda, CMD, Toshiba T&D Systems (I) Pvt. Ltd.



P. Uma Shankar, Former Secretary – Power, Govt. of India presents a Memento to R. K. Verma, Chief Engineer-Grid Ops., CEA



Neerja Mathur, Chairperson, CEA presents a Memento to P. B. Behere, General Manager, NTPC Ltd.

INDIA-TECH Events during Year 2014-15

-16th Year of Service to Energy & Infrastructure Sectors



Theme:

**"Future of Oil & Gas
in India's Energy Security"**

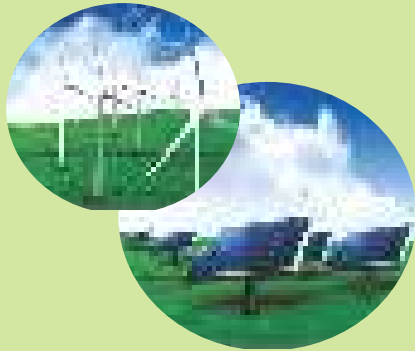


powering nations growth India 2014

3rd National Convention

20-22 August 2014

Hotel Sahara Star,
Near Domestic Airport, Mumbai



Theme:

**Renewables for
India's Energy Security**

Special Focus:

- Solar
- Wind
- Biomass
- Co-generation

7th International Expo & Summit



renewtech

India 2015

9-12 February 2015 • Mumbai



Special Focus:

- Hydro
- Thermal
- Nuclear
- Fuels
- Plant & Machinery

16th World Innovation Summit & Expo

POWERTECH

INDIA 2015

9-12 February 2015 • Mumbai

Theme: Clean Energy for Sustainable Power



Special Focus:

- Housing
- Urban Infrastructure
- Urban Transport
- Roads & Highways
- Ports & Shipping
- Civil Aviation

16th World Innovation Summit & Expo

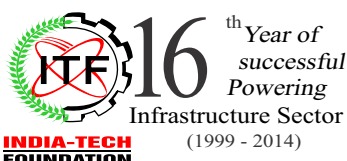


CONSTRUTECH

INDIA 2015

9-12 February 2015 • Mumbai

Theme: Smart Cities & Connectivity



Head Office Mumbai : B-702, Dheeraj Heritage Residency - I, Shastri Nagar,
Linking Road Extn., Santacruz (W), Mumbai - 400 054.
Phone : +91-22-2660 5550 / 7755 Fax : +91-22-2660 3993
Email : itf@india-tech.com

Regional Offices Delhi: 1205, Nirmal Tower, Bara khamba Road, New Delhi - 110 001.
Phone : +91-11-4151 4955 / 5549 Fax : +91-11-4151 4956
Email : delhi@india-tech.com

for further information please log on to www.india-tech.com