2nd Annual Conference

TRANSMISSION LINES, TOWERS AND SUBSTATIONS

December 16-17, 2014, The Imperial, New Delhi
The transmission sector in India has seen rapid advancements in technology in lines, towers and substations. Most of these have been in response to the challenges involved in transmission line construction in the country.

Right of way (RoW) is the key challenge facing the transmission sector. A number of projects are delayed or stuck due to these issues. Tower designers are trying to address this challenge by designing compact towers which need less RoW. This has led to the development and deployment of towers such as monopoles and multicircuit towers. Guy-type and chainette towers are also becoming popular.

Further, tower design is governed by terrain considerations. Various types of tower designs have evolved to meet the requirements for installing towers in varied terrain such as hills, forests, deserts, etc. Erection of towers in such diverse terrain presents its own set of challenges. New types of tower foundations such as pre-cast foundation, augur foundation, grillage foundation, etc. are being tried.

Tower testing has assumed greater importance to gain greater understanding of the behaviour of towers/structures under various loading conditions. Testing also helps in making improvements in the design and to achieve economies by optimising tower weight.

Conductor technology has also been changing to address the needs of transmission utilities and the industry has seen innovations in conductor designs. New alloys have also been developed to provide thermal stability, increased conductivity, vibration resistance and other specific characteristics. High performance conductors that can transfer up to twice the power using the same towers and line corridor are being increasingly used as they make the best use of the available corridor. Reconductoring, or enhancing the current carrying capacity of conductors, is also being done to transfer more power without the need for additional towers. Modern equipment is being used in the installation of transmission lines.

Transmission utilities are focusing on constructing compact substations such as gas-insulated substations (GIS), especially in urban areas. These substations have lower space requirements than the air-insulated substations. Advanced technology is also being deployed by utilities for substation automation, which increases the reliability and reduces the need for manpower at the substations.

The mission of this conference is to provide a platform to discuss the latest advances in design and installation of transmission lines, towers and substations. The conference will focus on the emerging requirements of transmission utilities and the solutions being developed by the industry.

The conference is targeted at senior officials and managers from:

- Transmission companies
- Private utilities
- Transmission structure manufacturers (towers and substations)
- Research and development organisations
- State electricity boards
- Private developers
- Conductor manufacturers
- Design and consulting organisations
- Technology providers
- Interstate transmission operators
- Transmission line manufacturers
- Steel companies
- Foundation and piling companies
- Etc.

The delegate fee is Rs 22,500 for one participant, Rs 37,500 for two, Rs 52,500 for three and Rs 67,500 for four.

There is a special low fee of Rs 5,000 per participant for the state electricity boards and their successor units (state-owned gencos, transcos and discoms), regulatory authorities and academic institutions.

Service tax of 12.36 per cent is applicable on the registration fee.

AGENDA/STRUCTURE

KEY TRENDS IN TRANSMISSION
- What are the key trends in the power transmission sector?
- What are the key challenges?
- What is the outlook for the sector?

TOWER DESIGN
- What are the key considerations in transmission tower design?
- What are the emerging new designs to cater to the changing requirements (space constraints, RoW, etc.)?
- What are the specific requirements of transmission towers for different terrain?
  What is the adoption level of monopole and multicircuit towers?

DESIGN OF TRANSMISSION LINES
- What are the key considerations for the design of transmission lines?
- What are the new and emerging requirements?
- What are the key challenges in this regard?

TECHNOLOGY TRENDS: CONDUCTORS AND CABLES
- What have been the key developments in conductor technology?
- What is driving the shift to HTLS and other high performance conductors?
- What has been the impact of UHV on conductor technology?
- What are the advantages of reconductoring and uprating of transmission lines?

TOWER TESTING
- What are the key trends in the testing of transmission towers?
- How are testing requirements changing with the changing tower types?
- What are the key challenges?

TOWER FOUNDATIONS
- What are the key trends in tower foundations?
- What are the foundation load tests for different types of towers?
- What are the new developments in foundation designs for different soil types?

TRANSMISSION LINE CONSTRUCTION: CHALLENGES AND BEST PRACTICES
- What are the challenges involved in the construction of transmission lines?
- How are developers and contractors dealing with the risks involved in transmission line construction?
- What are the best practices in construction?

ADVANCES IN TOWER ERECTION METHODS
- How are tower erection methods evolving?
- What are the recent advances in tower erection methods?
- What are the key challenges involved and how are these being addressed?

INSTALLATION OF TRANSMISSION CONDUCTORS
- What are the key challenges in the installation of transmission conductors?
- What have been the advancements in stringing technologies?
- How are changing conductor types impacting the installation methods?

MONITORING AND MAINTENANCE OF TRANSMISSION LINES
- What is the role of preventive maintenance?
- What are the trends regarding hot line maintenance?
- What is the adoption level of robotic maintenance of transmission lines?

SUBSTATION DESIGN
- What are the key design criteria for substations?
- What are the emerging new designs to cater to the changing requirements?
- What are the challenges faced in substation design?

SUBSTATION AUTOMATION
- What are the key developments in substation automation?
- What are the plans of transmission utilities in this regard?
- What are the solutions and technologies being utilised for substation automation?
Registration Form

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