

2nd Edition

# TRAFOTECH DT

May 6, 2022

Hotel Taj Palace, New Delhi



**National Conference on Distribution Transformers:  
USAGE, REGULATION and INNOVATION**





## ► INTRODUCTION

The first edition of the TRAFOTECH-DT conference was held on 12th June 2019 at India Habitat Centre, New Delhi. It witnessed participation of over 300 delegates, with 22 papers/ case studies was presented. It got very encouraging response from all its stakeholders across the nation.

The Second edition of the TRAFOTECH-DT Conference will be held on 6th May 2022 at New Delhi. The conference aims to build up a healthy ecosystem hand holding all stakeholders i.e. manufacturers, users, regulators, testing labs, academia, institutions etc. for building up the electrical infrastructure more reliable to support the growing economy.

### **Theme:**

### **"Distribution Transformers: USAGE, REGULATION and INNOVATION"**

India is on the verge of becoming a major power nation among developing economies. Electricity is a key constituent for the economic growth of the country and is directly linked to the GDP of the country. There has been a surge in demand for power in India due to an increase in capacity utilisation, industrialisation, urbanisation and population.

The conference will address and highlight the challenges faced by the industry in terms of excessive ATC losses because of systemic issues, linkage between DT failures and higher ATC losses, Non-standardization on repairs, lesser/ poor maintenance, Dual certification, Standard specs across States and Country, volatility in raw material prices etc. It will also focus on upcoming innovations & technologies for future transformers





## ► Objective:

Distribution Transformer is the heart of the Distribution Network. In the past, many steps were taken towards improvements in transformer design and manufacturing for its efficiency and reliability. To get the benefit from these measures, the distribution sector needs some changes and improvements too. The objective of this conference is to align transformer specifications, manufacturing and site maintenance strategies for safe and reliable grid operation, and to prepare for future long term planning of the retirement and replacement of the ageing distribution transformer by utilities and transformer manufacturers before failure occurs.

The conference will further focus on demands for present and future networks, changes in technological trends, use of smart components for better preventive diagnostics, transformers for specific applications, distribution transformers trends and life cycle management and standardizing erection, commissioning and maintenance of transformers.

This conference will provide a common platform for exchanging knowledge, sharing experience and building a roadmap for ideas generated of the topics mentioned.

## Sessions and Topics:

The following sessions will be conducted during the conference

### SESSION-1

#### USAGE

The session will focus upon excessive ATC losses, Pros and cons of Own Your Transformer, Repairs of Transformers After warranty, Higher Warranty periods leading to poor maintenance etc.

### SESSION-2

#### REGULATION

The session will cover Dual Certification, Regime of SHORT CIRCUIT TEST, Common Standard Bidding Documents across India, etc.

### SESSION-3

#### INNOVATION

This session will discuss latest innovation on distribution transformers like SMART Transformers, Ester Fluids, Monitoring Systems, Protection Systems etc.

## Session-1: USAGE

### i. Excessive ATC Losses:

- Difference of ATC Losses in Pvt Utilities V/s Govt. Utilities
- Urban areas V/s Rural areas of same Discoms
- Linkage between ATC losses, Transformer failure and Power Theft, Political interventions etc.

### ii. OYT:

- Pros and cons of OYT (OWN YOUR TRANSFORMER) in rural areas
- Separate feeders for pump sets and domestic supply
- Limitations of SCADA and /or Smart Metering in arresting power theft etc.

### iii. Repairs of Transformers after warranty:

- Understanding scale of problem.
- Entrenched corrupt practices.
- Threshold of repair cost.
- Difficulty of repair due to specs not being standardised.
- Increased losses to reckon.
- Best models for efficient repairs.
- Recycling of materials.

### iv. Higher Warranty period leading to poor maintenance:

- Present maintenance practices in Discoms
- Life of asset
- Experience of Private Utilities
- Best practices.
- Advance diagnostic techniques to prevent failure

## Session-2: REGULATION

### i. Dual Certification:

- Has QCO led to lower failures in Rural Areas?
- Reduced Losses versus cost benefit analysis.
- BEE table without public participation since 2014
- Uncertainty after withdrawal notice w.e.f. 31.12.2022



- Comparative study of efficiency requirement globally

### ii. Regime of SHORT CIRCUIT TEST:

- Study of advantages of SCT in comparison to costs.
- Practice in other countries.
- Repetitive tests for minor changes.
- Why Type Test validity is only 5 years.
- Comparison of costs between Indian & International labs
- Formulation of acceptable calculation and design review procedures in lieu of SC tests as per IEC criteria of comparison of similar transformers and CIGRE Reports

### iii. Pan-India STANDARD BIDDING DOCUMENTS:

- Need of Pan-India Same TECHNICAL SPECIFICATIONS.



## Session-3: INNOVATION

### i. SMART Transformers:

- Study with respect to Indian Conditions.

### ii. Ester Fluids:

- Review of progress in technology and usage and Way forward.
- Retro filling with ester oil

### iii. Monitoring Systems:

- Recent innovations.
- Applicability for urban systems and Power Quality.
- Applicability for rural areas.

### iv. Sturdy Protection Systems:

- Review of past practices for Meter Boxes, ICB, MCCB. Anti-theft protection, etc.



## Conduct of the Conference

The language of the conference is English. Active participation is expected from all delegates through contributions and interactions to make this conference a great success and to make our distribution network safe, reliable and economic.

This is one-day conference comprises of three interactive sessions and one panel discussion. Each session will be chaired by renowned industry expert and respective authors will present their respective papers. Individual session shall be concluded with Q&A from delegates to authors. Session chairman will complement interactive sessions with their views and also give concluding remarks.

**Papers/Case studies are purely on invitation basis**

## Concluding Session:

The concluding session will summarise the key learnings from the sessions and way-forward.

## Rewards

- Best papers / case studies shall be rewarded.

## Delegate Contribution

Sr. No.	Category	Delegate Contribution
1	Industry Participants	Rs. 5000
2	PSU's and Testing Labs	Rs. 5000
3	Government Utilities/ Discoms/ Educational Institutions/ Students <b>For every single registration one delegate will be complementary registered</b>	Rs. 5000
4	International Participants	USD 250

Note: Bulk discount (up to 10%) in case of 5-10 delegate nominations from single organisation and 15% in case of 10+ delegate nominations from single organisation, applicable to all categories

Delegate Contribution Charges includes the cost of Delegate Kit, Technical Papers, Lunch and Tea/ Coffee of one-day conference. Please note that this is a non-residential conference.

## Co-Host Opportunities

Category	Co-Host Contribution	
Diamond	Rs. 3.0 Lakh + GST	USD 4500
Gold	Rs. 2.0 Lakh + GST	USD 3500

## Co-Host Benefits:

Benefits	Diamond	Gold
Number of complimentary Delegates	4	2
1-2 minutes non-commercial video to play during Lunch & Tea/Coffee breaks	Yes	---
Display of Standee/ brought by Co-host at Registration area	Yes	Yes
Logo in Promo Mailers	Yes	---
Conference Backdrop/Banners	Yes	Yes
Brochures for distribution at registration desk	Yes	Yes
Thank you Co-Host at the Registration Area	Yes	Yes
Logo on kits	Yes	Yes
Advertisement on Bound Volume	Full	Half
Company MD/ CEO Interview in Bound volume	1 Page	---



## WHO CAN ATTEND:

- Central / State / Private / Utilities / EP contractors responsible for the installation, operation and maintenance of Distribution systems and life cycle management of Distribution Transformers.
- Manufacturers & Supplier of Distribution Transformers/ Raw materials/ Components/ Accessories.
- Energy Planners, Energy Auditors and Industrial Consultants.
- Research organizations, laboratories, standardization bodies and academic institutes.
- Engineers, Experts, Analysts from various sectors like Power, Cement, Oil and Gas, Refineries, Water and Waste Water Management, Food and Dairy, Metal and Mining, Pharma, Textiles, Chemicals, Papers, Lifts and Escalators, Transportation Segment (Railways, Hybrid Electric Vehicles) Venture Capitalists, Institutions, Academics etc.

## About IEEMA:



Indian Electrical & Electronics Manufacturers' Association (IEEMA) is the apex association of manufacturers of electrical, industrial electronics and allied equipment in India.

Founded in 1948, IEEMA has a pan India presence with its corporate office at New Delhi, registered office at Mumbai and regional offices at Kolkata and Bangalore. IEEMA has its State representatives at Lucknow, Chandigarh, Jaipur, Srinagar, Guwahati, Raipur, Bhubaneswar, Gujarat and Hyderabad.

IEEMA members encompasses of complete value chain in power generation, transmission and distribution equipment. Its membership base ranges from public sector enterprises, multinational companies to small, medium and large companies. IEEMA members have contributed to more than 95% of the power equipment installed in India. The Indian electrical equipment industry size in 2019-20 was in excess of USD 50 billion with exports of USD 6 billion. The industry provides direct and indirect employment to over 1.5 million people, and to over 5 million across the entire value chain.



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