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TRAFOTECH Global

2023

23 - 25 November 2023

Manekshaw Centre, New Delhi, India

Indian Electrical & Electronics Manufacturers' Association

Established in 1948

The TRAFOTECH Global Conference

We are thrilled to announce the highly anticipated TRAFOTECH Global Conference, a flagship event where industry leaders, researchers, and enthusiasts, gather to explore cutting-edge technologies and innovative solutions in the transformers' eco-system for a sustainable future. Since 1982, TRAFOTECH, a quadrennial conference on transformers providing a platform to the industry for the past 4 decades. Following the successful transition to an online format for the previous conference in 2020 due to COVID-19 protocols, we are excited to present to you the 12th edition of TRAFOTECH Global which will be held in physical form with all its past glory.

Over the years, TRAFOTECH has established itself as a premier platform for knowledge exchange, fostering collaboration, and driving innovation in the transformer technology space. The active participation in TRAFOTECH from across the globe has made it one of the most anticipated Power Transformer conferences in the world. This time again, we seek your support and wholesome participation to discuss the trends, issues and bring forward solutions to help industry brace for the forthcoming challenges. We would along with you like to continue this remarkable journey that TRAFOTECH has provided all of us in the past decades.

Apart from the technical sessions, keynote addresses and discussions, this year the conference will have a panel discussion on state of industry with global experts, sessions and discussions on Industry, utility and academia collaboration and way forward and innovation and startup activity on transformers industry.

The Theme *"Transformers for Sustainable Future"*

This year's conference revolves around the theme ***"Transformers for Sustainable Future,"*** focusing on the pivotal role of technological advancements in fostering sustainable development across various domains.

In the quest for a sustainable future, the focus extends beyond the function of transformers in the electric grid to the concept of sustainable transformers themselves. Sustainable transformers go beyond their traditional role of efficient power conversion and transmission; they embody environmental consciousness, resource efficiency, and long-term sustainability.

Sustainable transformers are designed with the following key principles in mind:

- Solutions and products for sustainable applications
- Energy Efficiency
- Environmental Impact
- Resource Efficiency
- Life cycle Considerations
- Smart Grid Integration

At the TRAFOTECH Global, focus is to explore the latest advancements, best practices, and case studies in sustainable transformer technologies. Experts, researchers, utility professionals and industry leaders will share their insights on innovative design approaches, new materials, eco-conscious manufacturing processes, and energy-efficient solutions.

Day 1: 23rd November 2023

Session I: Sustainability and reliability through new solutions applications, and specifications

- New products and processes, developments, and challenges in applications like mobile substations, unitized substations, renewable energy, etc. (VSR, PST Statcom T/f, Subdivided T/f, GIS T/f, Traction T/f, Rolling Stock Applications)
- Specifications and trends in new applications (Renewables, Wind, Solar, Micro Grid, Green Hydrogen etc.)
- Standardization: Specs across customers, challenges in implementing CEA transformer manual
- Reduce failures – improve reliability through specification reinforcement, robust design/manufacturing and discuss ways to tackle alarming failure rates in renewable applications.
- Design and development of distribution transformers for smart grid and the technical challenges
- Special design considerations for collector transformers for Solar and Wind park pooling sub-stations and optimisation strategy

Session II: Best practices in manufacturing, quality & testing

- New trends in manufacturing to improve quality and productivity
- New insights on tests such as DGA, SFRA, partial discharges and localisation techniques, modern moisture measurement methods such as FDS and PDP, and diagnostic testing.
- Experience sharing on online/ virtual FAT and new trends to further improve effectiveness
- Evaluation of the contribution of Short Circuit testing towards reliability improvement
- Best practices in manufacturing, quality and testing such as long-term corrosion protection and painting life, MTBF statistics and bid evaluations, digitalization of documents etc.
- Artificial Intelligence in Power Transformer manufacturing and statistical approach for quality

Day 2: 24th November 2023

Session III: Challenges in transportation, storage, installation, & commissioning

- New trends in site testing for effective diagnosis
- Special challenges in safe and reliable transportation (road/ rail/ barge) of power transformers from factory to the foundation (road surveys, lashing points, unloading, best practices in impact measurement etc.).
- Reliable and safe storage (long term and short term) practices of power transformers till commissioning
- Criticality during installation and commissioning process and special care during installation of accessories and components at site
- Reduce non-usability- monitoring, storage, site tests etc
- Improving reliability through operation, maintenance, repair and refurbishment

Session IV: Reliable O&M practices & life cycle management

- Latest advancements in online monitoring and condition assessment techniques to improve effectiveness
- Environment, health and fire safety standards for sub-stations
- Reduce & reuse through uprating existing unit, universal spares, high temperature insulation/ester oils to extend insulation life/overload, mobile substations, and reclaimed oil
- Challenges and improvements in asset health indexing and RLA (Residual life assessment)
- Modern trends in asset management, O&M practices, site dryout and online filtration techniques
- Life cycle-based sustainability standards and guidelines as per ISO standards
- Transformer failures data by CEA
- Challenges of refurbishment/retrofit of large rating transformers on existing substation
- Sustainable disposal practices

Session V: Emerging trends in transformer input material and accessories

- New development and trends in all input material such as insulation, conductors, magnetic and structural steel etc & oils (Esters/ mineral)
- New development and trends in transformer accessories viz. bushings. tap changers, monitoring instruments, pressure relays, fibre optics etc.
- New testing trends and certification of material such as BIS certification for new CRGO grades 0.2mm thick laser scribed material
- New trends in OLTC for distribution applications
- Carbon footprint of transformers and design of transformers to reduce the carbon footprint and improve environmental impact

- Design criteria, materials and additional testing requirements for enhanced reliability and sustainability of transformers
- New trends and experiences in sealing methods
- Standardization and improved aesthetics of transformer tank

Session VI: Innovation and futuristic trends in the industry - Futuristic Transformers for 2030

- Disruptive technologies for power transformers
- Use of existing units for reverse power flow for renewable application
- New and advanced dielectric design concepts and techniques, compact units using high temperature insulation, dead front bushings instead of cable box etc
- Advances in transformer analytics, Thermo-Hydraulic Network (THN), Modelling & Computational Fluid Dynamics (CFD) study.
- Design of dry type transformers using emerging materials such as self-healing insulation, non-conducting heat pipes, carbon nano tube etc.
- Designs to withstand system-generated stresses: Switching transients, harmonics, emergency overloading, reverse - flow, frequent short-circuits, response of transformers to VFTO
- Onsite assembly of new transformers, assembly to site transformers
- IoT based sensor applications

Day 3: 25th November 2023

New ideas in startup domain for transformer industry:

Technical presentations from Startups focusing on cutting-edge technologies and novel engineering approaches to enhance the performance, reliability, and environmental sustainability of the power transformers by combining digitalization, materials science, and intelligent design. Experience the startup ideas to redefine the capabilities of power transformers in the modern energy landscape.

Key areas of innovation

- Smart grid ready transformers
- High efficiency transformers
- Compact and lightweight designs
- Environmentally friendly solutions
- Condition monitoring and predictive maintenance

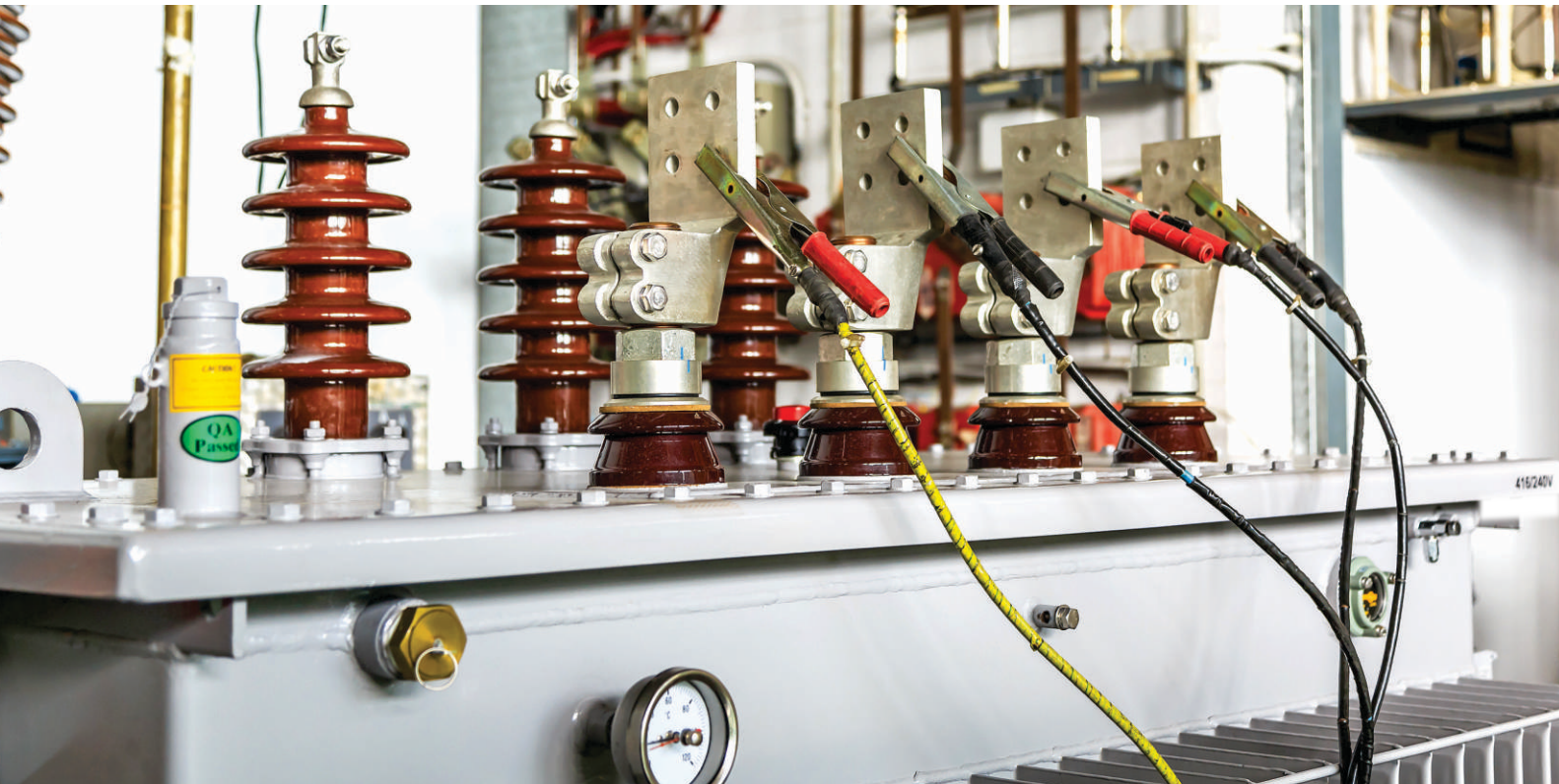
**The topics mentioned above are indicative, not exhaustive*

Concluding and Valedictory Session

At the end of the three-day event, the chairman will wrap up the main insights, outcomes, and next steps from the intensive sessions.

Conduct of the Conference

- The language of the conference is English
- During the six technical sessions of 90 minutes each over the three days of the conference, the authors will make a summary presentation of the papers in respective sessions. There will be a dedicated 15 minutes allotted for the Q&A by the delegates at the end of each session.



Event Highlights

- Multiple technical tracks covering a wide range of domains to gain invaluable insights from renowned experts, practitioners, and visionaries shaping the future.
- Renowned keynote speakers sharing their views and experiences on critical aspects to address the pressing challenges, countermeasures, and way forward.
- Panel discussion with global experts, to contemplate on the status of the industry and way forward.
- Invite speakers from industry and academia to foster sustained collaboration.
- Invite promising startups to discuss innovative business ideas in transformers industry.
- Networking opportunities.

Call for Papers

We cordially invite papers/ case studies from researchers, regulators, utility & industry professionals and visionaries to participate in the esteemed TRAFOTECH Global, where transformative technologies and their potential for sustainability will be explored under the theme **"Transformers for a Sustainable Future".** Submissions of research papers are encouraged, focusing on valuable insights, novel approaches, and breakthrough findings in sustainable applications.

Interdisciplinary contributions from diverse backgrounds are highly welcomed as they enrich discussions and solutions towards a greener and more sustainable future. Join us in this vibrant gathering to share expertise, engage in meaningful discussions, and contribute to the global pursuit of sustainability, as we eagerly await your valuable contributions. Together, let's make a positive impact on our planet's future

Important Dates

Abstract & full text paper submission	**10th October 2023**
Notification to authors of acceptance/ rejection/ revision with comments	**17th October 2023**
Final paper submission	**25th October 2023**
Paper acceptance with comments	**3rd November 2023**
Final PPT submission	**10th November 2023**

Sponsorship Opportunities

Sponsorship Category	INR	USD
Platinum	INR 10,00,000	USD 20,000
Diamond	INR 7,00,000	USD 15,000
Gold	INR 4,00,000	USD 10,000
Dinner (Day-1) Sold out	INR 10,00,000	USD 20,000
Dinner (Day-2) Exclusive	INR 8,00,000	USD 17,000

**GST/ TAX as applicable*

Category	Complimentary Delegates	Corporate Video	Logo Display During Conference	Logo on website, Promo Mailers & Social Media Posts	Company Standee	Advertisement in TRAFOTECH Bound Volume	CEO Interview
Platinum	12 **(including 6 VIP reserved seats)**	Y	Main Backdrop, Delegate Kits, Thank You Sponsors Backdrop, Sponsor Panel, **Delegate Badge & Podium Banner, Invitation letters**	Y	Y – 3 Nos. **At Entry locations**	**2 (Inside Gatefold: Front & Back Cover)*** on first confirmation basis	**TRAFOTECH Bound Volume & Social Media Byte**
Diamond	8 **(including 2 VIP reserved seats)**	Y	Main Backdrop, Delegate Kits, Thank You Sponsors Backdrop, Sponsor Panel, **Delegate Badge**	Y	Y – 2 Nos. **At Entry locations**	2	**Social Media Byte**
Gold	4	N	Main Backdrop, Delegate Kits, Thank You Sponsors Backdrop	N	Y – 1 No	1	N
Dinner (Day-1) Sold out	12	Y	Main Backdrop, Thank You Sponsors Backdrop, **Exclusive banner at Dinner Area (Day-1), Logo in Dinner Invitation Card**	Y	Y – 1 No. **Prime Location 2 at Dinner Area (day-1)**	2	**TRAFOTECH Bound Volume & Social Media Byte**
Dinner (Day-2) Exclusive	8	Y	Main Backdrop, Thank You Sponsors Backdrop, **Exclusive banner at Dinner Area (Day-2), Logo in Dinner Invitation Card**	Y	Y – 1 No. **Prime Location 2 at Dinner Area (day-2)**	1	**Social Media Byte**

Delegate Participation

CATEGORY	DELEGATE FEE*
IEEMA Members	Rs. 12,500
Non IEEMA Members	Rs. 15,000
Utilities/ PSUs/ Govt. Officials & Academia	Rs. 10,000
International Delegates	USD 300

*GST of 18% will be applicable on the delegate fee for Indian Delegates
*For International Delegates Tax as Applicable
*Even if you attend one session of the conference, full delegate fee is applicable.

GROUP DISCOUNT

for 5-9 delegates **10%**

for more than 10 delegates **15%**

Who Can Attend

- Central/ State/ Private/ Utilities/ EP contractors who are responsible for the installation, operation and maintenance and life cycle management of Transformers.
- Manufacturers & Supplier of Transformer/ Raw Materials/ Components/ Accessories.
- Energy Planners, Energy Auditors and Industrial Consultants.
- Research Organizations, Laboratories, Standardization Bodies and Academic Institutes.
- Startups in Transformers Eco-system
- Engineers, Experts, Analysts from various sectors like Power, Cement, Oil & Gas, Refineries, Water & Waste Water Management, Food & Diary, Metal & Mining, Pharma, Textiles, Chemicals, Papers, Transportation Segment (Railways, Metro, Hybrid Electric Vehicles) Venture Capitalists, Institutions, Smart City Officials, Academics etc.

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To register

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To Visit website

https://trafotechglobal.ieema.org

ABOUT IEEMA

The Indian electrical industry is represented by Indian Electrical and Electronics Manufacturers' Association (IEEMA), which was established in 1948, comprising of all segments of electricity from source to socket i.e. generation, transmission, distribution to last mile connectivity/ usage and allied components & accessories. IEEMA members are also active in new energy space like EV components/ E-Mobility, Battery storage, Renewable Energy and Green Hydrogen value chain etc. More than 90% of the installed electrical equipment in the country have been contributed by IEEMA members. Combined turnover of the members is in excess of USD 50 bn exporting goods of over USD 10 bn.

Recognised as the first point of reference for anything pertaining to Power and Electrical Equipment, IEEMA plays a primary role to facilitate creation of a conducive environment for the growth of electrical industry by providing key services like Policy Advocacy. The Government officials laud IEEMA for its data backed representations. It also continues to represent the interests of its members, in consonance with National interest.

A prominent size and space is occupied by the Electrical Equipment and Machinery in the Capital Goods Sector, which is more than 45 percent of the entire Capital Goods Sector. The industry is 6.8% of the manufacturing sector in terms of value and 1.07% of the NDP. It also provides direct and indirect employment to 1.5 million people and over 5 million across the entire value chain.

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