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# REDEFINING ELECTRICAL SYSTEMS IN MODERN BUILDINGS

## OTHER STORIES:

- **INSIGHTS:** Electrical Safety in Large Commercial Buildings; Electrical Systems for Hospitals That Cannot Fail
- **FOCUS:** Creating Adaptable Power Allocation Systems; Electrifying India's Data Centre Revolution
- **INTERVIEWS:** Schneider Electric; Havells India; Lucy Electric India



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## COVER STORY

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The integration of technological advancements and digitilisation in electrical systems has given a 'smart' makeover to buildings. Together, they have reimaged how traditional buildings function, to make them more energy-efficient and secure with IoT devices. Green building rating systems are also now placing a strong emphasis on electrical efficiency. In this story, IEEMA Journal explores current trends shaping electrical designs in smart buildings, efficient and grid-responsive infrastructures, further delving into future of net-zero and self-sustainable buildings.

For suggestions and feedback, please write to us on [editor.ieemajournal@ieema.org](mailto:editor.ieemajournal@ieema.org)



## SPECIAL FEATURE

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Unlocking the potential of five high-growth countries, this feature highlights demand opportunities with key strategies for success and India's competitiveness to become their preferred trade partner.



## FOCUS

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As our buildings evolve into intelligent ecosystems, there is a pressing need for new protocols that allow consultants, developers and utility regulators to work in sync, creating adaptable power allocation systems that meet safety, efficiency and sustainability goals together, writes **Ar. Bhagyashri Varma, Founder, Noesis Services Consultant**.

## MEP in Construction with Reliability, Safety and Sustainability

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Efficient and safe electrical system design in MEP works is critical for ensuring sustainable development, writes **Chandrashekhar GN, MEP Technical Lead, Azim Premji Foundation**.

## Electrifying India's Data Centre Revolution: The Decade of MEP Transformation

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India's MEP specialists now stand among the world's best, not just delivering projects but engineering reliability, uptime and safety at scale, writes **Sandeep Dandekar**.

## SPECIAL REPORTS

<b>India's Power Capacity Hits 5.05 Lakh MW</b>	<b>60</b>
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The country's total installed generation capacity has reached 505,023MW, with the share of non-fossil fuel exceeding that of fossil fuel sources.

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In the last 11 years, the country's solar capacity has grown from 2.8 GW to around 130 GW – a rise of more than 4,500 percent.

# Transient and Lightning Protection Systems



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- Lightning Protection System



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## INSIGHTS

**Electrical Safety in Large Commercial Buildings: A Neglected Dimension of Design and Compliance** 28

Er. Narendra Divedi, Chairman, IEEMA MEP Division, provides a roadmap for strengthening compliance through design verification, third-party audits, and capacity building within the electrical fraternity.

**Power, Responsibility & Recovery: Designing Electrical Systems For Hospitals That Cannot Fail** 48

This article by **Madhava Narasimha Murthy Nedunuri**, a senior MEP leader, explores the critical difference between standard commercial electrical design and high-reliability systems required for modern hospitals. The article outlines disciplined design principles essential for hospital resilience.

## INTERACTIONS

**“Continuous investments in Industry 4.0 practices, robotics and smart manufacturing ensure precision, consistency and cost efficiency.”** 63

- **SANDEEP AGARWAL**, Senior Vice President, Havells India Limited

**“The most promising opportunities lie in intelligent power distribution, green mobility, advanced automation and renewable-ready grid infrastructure.”** 75

- **Udai Singh**, Managing Director & CEO, Schneider Electric Infrastructure Ltd and Vice President-Power Systems, Schneider Electric India

**“We are investing in capacity expansion, digital platforms and product innovation.”** 77

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Themed 'Made in India for Global Market', the 13<sup>th</sup> edition of TRAFOTECH GLOBAL provided a dynamic forum for cross-sector dialogue, practical innovation and future-ready thinking.

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- Efforts on to reduce power transmission losses.
- Odisha to get 1.5 lakh rooftop solar units under new utility-led aggregation model.
- Rs37,000 crore released under RDSS.
- AI, ML-based applications to play pivotal role in transforming India's power sector: Shri Manohar Lal.
- 4.76 crore smart meters installed so far.
- Boost to RE ecosystem with green hydrogen.
- PM Surya Ghar reaches 23.96 lakh households, nearly one-fourth of target.

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- IndiGrid to acquire ReNew's Gadag ISTS project for Rs3.72 billion.
- NLC commissions second phase of 300 MW solar project in Rajasthan.
- APTRANSCO awards VGF funding tender for 1 GW/2 GWh standalone BESS.
- Telangana approves 3 GW solar bidding in phases.
- RVUNL awards VGF tender for 500 MW/2,000 MWh standalone BESS.

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- CNE to invest over USD 1 billion investment in Asian renewables.
- Kalpataru Projects International secures orders worth Rs20.03 billion.
- Brookfield makes first renewable energy investments in Southeast Asia.

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- Avaada Group to invest Rs1 trillion in RE projects by 2031.
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- Adani Group set to invest USD 75 billion for energy transition in five years.
- Tata Power commissions 400 kV Koteshwar-Rishikesh transmission line.

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