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# ieema journal

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# ENERGY METERS

## USD 2 BILLION DOMESTIC DEMAND OPPORTUNITY BY 2034



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- **INSIGHTS:** Energy Companion Smart Meter; Renewable Integration Challenges and its Metering Perspective
- **SPECIAL REPORTS:** India meets Highest Peak Power Demand; Rajasthan's First Semiconductor Plant
- **FOCUS:** Smart Meters – Driving Sustainable Energy Transition; Electrical Design for Net-Zero Buildings

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## COVER STORY

**Metering Infrastructure: Enabling India's  
Digital Energy Ecosystem** 12

India's energy metering industry has witnessed a 100-percent growth y-o-y, with 3.7 crore smart meters sold from April 2025 to February 2026, and smart meters accounting for ~79 percent of the total meters sold, signalling a structural inflection point for India's energy metering industry. While the country has made significant progress in deploying smart meters at scale, the next phase of growth will depend on focused R&D, technical innovation, increased capacity utilisation, indigenisation, and backward integration to make smart metering infrastructure even more resilient and a key pillar of the country's digital energy future.



## SPECIAL REPORTS

**India meets All-time Highest Peak  
Power Demand** 30

India recently met its highest peak power demand of ~256 GW without shortage, surpassing the previous record of 250 GW in 2024.

**Rajasthan gets its First Semiconductor Plant** 59

India recently witnessed the inauguration of its first SME-led semiconductor facility in Bhiwadi, Rajasthan, along with an Electronics Manufacturing Cluster at Salarpur.

## CASE STUDY

**Empowering Consumers Through Smart-  
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(AMI) Learnings** 38

This paper by **Mukesh Hingar, Bhavik Talesra and Lokesh Devpura of Secure Meters Limited** presents a technology-enabled model and implementation-ready plan derived from the North Bihar AMI rollout programme at scale.

## INSIGHTS

**Energy Companion Smart Meter: A Consumer-  
Centric Evolution of Smart Metering** 32

**Vipin Kumar Mishra, Technical Convener, IEEMA Meter Division and Vice President-Technology, Capital Power Systems Ltd**, introduces the concept of the energy companion smart meter, which redefines the smart meter as a secure, interactive, and predictive system.

**Renewable Integration Challenges and its  
Metering Perspective** 45

**Sushil Kumar Jangir and Shafik Ahmad of Secure Meters Ltd** highlight the need for ongoing technical innovation to enhance the reliability and flexibility of power systems with high RE penetration.



## FOCUS

### Smart Meters: Driving Sustainable Energy Transition

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Smart meters have emerged as a critical enabler for effective distributed energy resources management, writes **Dasarathy Govindarajan, Head-Design & Development, Schneider Electric, Mysuru.**

### Electrical Design for Net-Zero Buildings: Stability is the New Sustainability

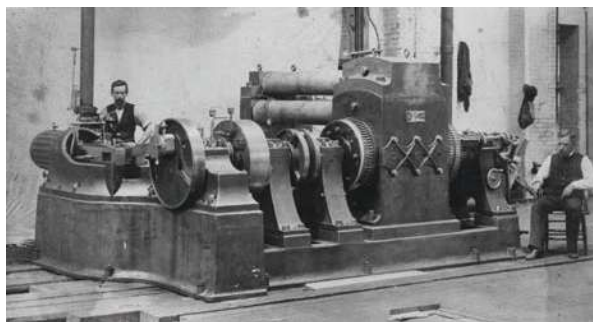
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As net-zero buildings scale in size and complexity, those designed with electrical stability as a primary objective will prove resilient, trustworthy, and durable writes senior **MEP leader Madhava Narasimha Murthy Nedunuri.**

### Evolution of Electric Power Generation and Utilisation

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This article by **Prof Dr Ambarnath Banerji** and **Prof Dr Tirthankar Datta** traces the technical, economic, and social evolution of electric power generation from the 19<sup>th</sup> century to the contemporary state of the art (2025).



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- MHI extends bid submission timeline for global tender under REPM scheme.
- US delegation discusses private investment opportunities in India's nuclear sector.

- NITI Aayog launches DPI @2047 roadmap to advance inclusive and productivity-led growth.
- Updated ALMM List-I (Manufacturers and Models of Solar PV Modules) under ALMM Order, 2019.
- 10<sup>th</sup> India-Kenya Joint Trade Committee meeting held to strengthen bilateral trade and economic cooperation.
- CEA seeks comments on framework for rationalising fixed charges and tariff redesign.
- MHI holds high-level meeting on financing mechanisms for e-buses and electric-trucks.
- CERC issues staff paper on 'Capacity Market for Electricity in India'.
- DPIIT Secretary reviews NICDC projects in Haryana and Rajasthan.
- India, Norway deepen strategic science and innovation partnership through new bilateral agreements.

## NEWS

### NATIONAL

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- MNRE issues operational guidelines for small hydro power development scheme.
- IndiGrid, AmpereHour Energy commission 180 MW/360 MWh BESS project in Gujarat.
- Ministry of Finance approves Rs55 billion floating solar BESS scheme.
- PFC board clears proposal for REC merger.
- MoP revises local content norms for HVDC substations.
- Maharashtra cabinet approves Rs123.03 billion MAGESTIC scheme.
- CEA issues technical specifications for CRGO core distribution transformers.
- PFCCCL incorporates SPVs for two intra-state transmission projects in Maharashtra.
- CEA releases report on insulator failures in transmission lines.
- NTPC to set up 1,400 MW nuclear power project in Bihar.
- Noida power department to install 250 transformers to improve supply reliability.

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- ADB launches financing facility for critical mineral supply chains.
- Tata Power signs MoU for clean energy skill development in Bhutan.
- Indonesia, Malaysia to develop waste-to-energy, RE projects.
- Bhutan Government, World Bank sign financing agreements for Dorjilung HEP project.
- Inox Clean Energy acquires US-based Boviet Solar in USD 750 million deal.

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- L&T secures significant EPC orders in Middle East.

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- Fujiyama commissions 2,000 MW solar module manufacturing facility in MP.
- Bondada Engineering secures Rs8.16 billion solar EPC order from NTPC.
- Waaree Renewable Technologies to acquire 55 percent stake in APSPL for Rs12.25 billion.
- Vikran Engineering commissions 5 MW solar plant under PM-KUSUM.
- ReNew to set up 6.5 GW solar ingot-wafer facility in Andhra Pradesh.
- Solex Energy signs Rs40 billion MoU for solar cell and BESS manufacturing in Gujarat.
- AMPIN commissions 500 MWp wind-solar hybrid project in Rajasthan.
- TPREL approves plans for ingot and wafer manufacturing business.
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