ISGF
India Smart Grid Forum

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Inauguration of Kerala's First Vehicle-to-Grid (V2G) Demonstration Project

India Smart Grid Forum (ISGF) and Agency for Non-Conventional Energy and Rural Technology (ANERT), have successfully launched the Vehicle-to-Grid (V2G) technology Project in Kerala - a landmark achievement as South Asia's first V2G pilot project.

ISGF installed a bidirectional V2G-enabled charger at ANERT Headquarters in Thiruvananthapuram which is now live, with retrofitted Tata Nexon EVs capable of both drawing power from the grid and feeding it back, a first in the region.

The project was formally inaugurated on July 4, 2025, by Shri K. Krishnan Kutty, Hon'ble Minister for Electricity, Kerala, and presided over by Shri V.K. Prasanth, MLA. The welcome address was delivered by Shri Narendra Nath Veluri, CEO, ANERT. The details of the V2G project were presented by Shri Reji Kumar Pillai, President, ISGF, who explained the technical innovation and significance of the pilot in the context of India's clean energy transition.

The event was graced by Shri K.R. Jyothilal IAS, Additional Chief Secretary (Finance, Taxes, Excise and Registration); Shri Puneet Kumar IAS, Additional Chief Secretary (Power); Dr. R. Harikumar, Director, Energy Management Centre (EMC); Vinod R., Chief Electrical Inspector; and Mary Pushpam, Ward Councillor. The vote of thanks was delivered by Sri Manoharan J., Technical Manager, ANERT.

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This milestone marks a significant move toward India's clean energy future, where EVs serve as flexible grid-connected assets, enabling solar power storage during the day and reliable power delivery at night.

International Delegation to the 17th Latin American Smart Grid Forum from 04th to 08th August, 2025, São Paulo and Rio de Janeiro, Brazil

ISGF and Global Smart Energy Federation (GSEF) in partnership with Ecoee – Brazil have the pleasure of inviting you to be a part of the International Delegation to the Latin American Smart Grid Forum scheduled on 04th- 05th August, 2025 at the Frei Caneca Convention Center, in São Paulo, Brazil.

This edition will have the theme of: "Advanced Technologies Innovating Energy Businesses and Markets". The Latin American Smart Grid Forum aims to put into practice and accelerate the introduction of new technologies and innovations, in a sustainable way, in energy services in Brazil and in other Latin American countries. This edition will focus on the outstanding participation of market leading companies, not only in the B2B relationship, but also in the B2C approach, bringing together a distinguished number of professionals, utilities and technology companies interested in advancing the agenda of the forum, focusing especially on those related to smart buildings. It will also cover technologies beyond the meter, such as solutions for smart homes, with a wide range of innovations that make up smart buildings. ISGF and GSEF International Delegation will be visiting State University of Campinas and Electric Utilities in Rio de Janeiro on 6-8 August 2025. To join the Delegation please contact: Ms Aashima: Aashima@indiasmartgrid.org

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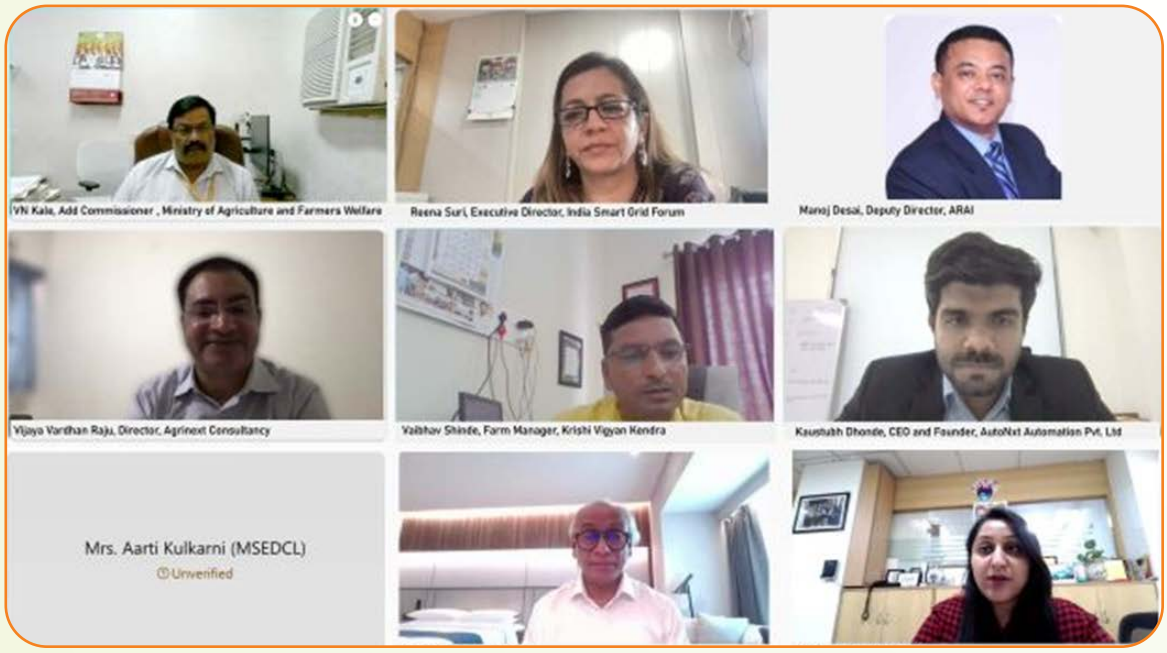
ISGF Webinar: Electrifying Agriculture - A Roadmap for the Adoption of Electric Tractors in India



India is witnessing rising interest in electric tractors, driven by supportive government policies and private sector innovation. In Maharashtra—home to diverse farming systems and a strong agri-machinery market—electric tractors hold great promise but face challenges like limited charging infrastructure, high upfront costs, and low farmer awareness. To address these, India Smart Grid Forum (ISGF) conducted a feasibility study outlining a practical roadmap for accelerating electric tractor adoption through technical, economic, and policy interventions.

In this context, ISGF hosted a high impact webinar titled "Electrifying Agriculture: A Roadmap for the Adoption of Electric Tractors in India" on 03 July 2025, exploring the transformative potential of electric tractors in advancing clean and sustainable farming. President, ISGF, Reji Kumar Pillai, opened the session by emphasizing the role of electric tractors in decarbonizing agriculture and aligning with India's broader sustainability goals. VN Kale, Additional Commissioner (Machinery), Ministry of Agriculture and Farmers Welfare, delivered the special address, reaffirming the government's commitment to clean technology in agriculture and shedding light on supportive policies.

Key insights from ISGF's newly released study "Electrifying Agriculture: A Sub-National Roadmap for the Adoption of Electric Tractors" were shared by Disha Khosla, AGM, ISGF. The report presents actionable strategies to overcome technical, financial, and awareness barriers and outlines a stakeholder-driven approach for scaling electric tractor adoption. Access the full report here: https://lnkd.in/gCJiREWv.

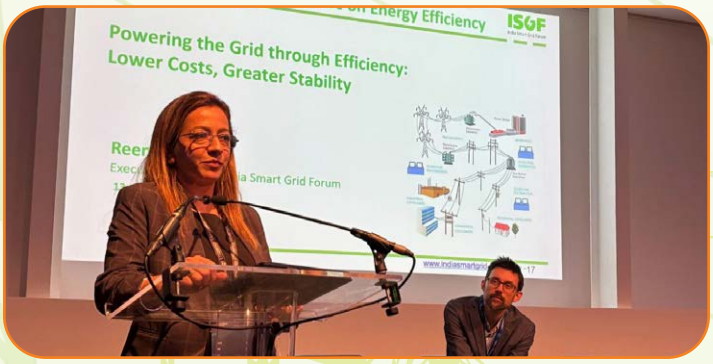
A compelling panel discussion moderated by Reena Suri, Executive Director, ISGF, brought together thought leaders to delve into feasibility, crop compatibility, infrastructure needs, business models, and policy frameworks for electric tractors. The distinguished panelists included:

- V. N. Kale – Ministry of Agriculture & Farmers Welfare
- Manoj Desai – The Automotive Research Association of India (ARAI)
- Vaibhav Shinde – Farm Manager, Krishi Vigyan Kendra, Maharashtra
- Kaustubh Dhonde – CEO & Founder, AutoNxt Automation Pvt. Ltd.
- Vijaya Vardhan Raju – Director, Agrinext Consultancy

This engaging session marked a significant step toward building a clean, efficient, and tech-enabled agricultural ecosystem in India — with active participation from an enthusiastic audience who raised thoughtful questions during the Q&A, making the discussion even more insightful and forward-looking.

Join ISGF Training Programs

ISGF Highlights Critical Role of Grid-Interactive Efficiency and Smart Appliance Policies at IEA's Global Conference on Energy Efficiency



ISGF represented India at the 10th Global Conference on Energy Efficiency, organized by the International Energy Agency (IEA) held from 11–13 June 2025 in Brussels, Belgium.

Ms. Reena Suri, Executive Director, ISGF, participated as a speaker in two key thematic sessions, highlighting the importance of smart grid readiness and flexible demand-side solutions in India's clean energy transition.

In the session titled "Efficiency Meets the Grid," organized by by European Council for an Energy Efficient Economy (ECEEE) in collaboration with IEA, Ms. Suri emphasized the strategic role of energy efficiency in enhancing grid reliability and reducing costly infrastructure investments. She stressed that energy efficiency must be central to grid planning, with every 1 GW avoided through efficiency measures equating to nearly USD 720 million in savings on generation and transmission capacity.

In the session on "Future-Proofing Appliance Policy," she shared India's experience in integrating demand-side flexibility into appliance regulations. She underlined the urgent need for grid-interactive, energy-efficient appliances and the importance of open-source communication protocols to enable scalable demand response and seamless grid integration.

Through these sessions, ISGF brought India's voice to a global platform and reinforced its commitment to driving innovation in smart energy systems, digital infrastructure, and policy frameworks that enable sustainable, resilient, and inclusive energy transitions.

New Reports by ISGF

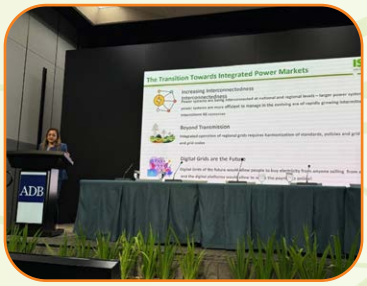
ISGF Report on Pilot Demonstration and Design of Framework for National Solar Registry of Solar Rooftop PV

ISGF Report on Electrifying Agriculture: A Sub - National Roadmap for the Adoption of Electric Tractors

ISGF Welcomes its New Member

Madhya Gujarat Vij. Co. Ltd (Vadodara) has become a Utility Member

ISGF and AIDA Delegates Participated at the Asia Clean Energy Forum 2025



ISGF continued to play a prominent role on the international stage at the 20th Asia Clean Energy Forum (ACEF) 2025. This year, ACEF celebrated its 20th edition, which was held from 2–6 June 2025 at the Asian Development Bank (ADB) headquarters in Manila, Philippines, under the theme "Empowering the Future: Clean energy innovations, regional cooperation and integration, and financing solutions."

ACEF served as a dynamic platform for stakeholders to explore strategies, forge partnerships, and exchange knowledge to accelerate the clean energy transition in the Asia-Pacific region.

During the event Mr. Reji Kumar Pillai, President of ISGF, moderated the Thematic Track Session 2.1 on "Regional Energy Planning and Grid Integration" held on 3rd June, contributing insights on cross-border collaboration and the importance of integrated energy markets in advancing regional energy security and transition goals. He also participated as a keynote speaker in Deep Dive Workshop on Ecosystem Readiness Assessment for Production and Utilization of Green Hydrogen on 6th June. He shared his insights on Ecosystem Readiness Assessment for Production and Utilisation of Green Hydrogen in India and globally.

Ms. Reena Suri, Executive Director of ISGF, was a speaker for the Thematic Session 2.3 on "Enhancing Regulatory and Policy Frameworks for Power Trade," and also participated in a Deep Dive Workshop on "Digital Innovations for a Just Energy Transition." Her sessions highlighted ISGF's pioneering work in promoting smart grid technologies, digitalization, and e-mobility infrastructure for inclusive and sustainable energy transformation.

The All India DISCOMs Association (AIDA) (https://www.aida-india.org/) in collaboration with the India Smart Grid Forum (ISGF), successfully led an International Study Tour to Manila, Philippines, from 1–7 June 2025. The tour was centred around participation in the 20th Asia Clean Energy Forum (ACEF 2025), organized by the Asian Development Bank (ADB). A key highlight of the tour was the visit and meeting with the senior management of Manila Electric Company (Meralco) on 2nd June, 2025.

ISGF's participation at ACEF 2025 highlighted its leadership in the global clean energy space and showed how India is playing an important role in shaping the future of sustainable energy.

Leadership Updates and Institutional Developments

Brajesh Kumar has been appointed as a Chief Operating Officer, BSES Yamuna Power Ltd

Riya Kejriwal has been appointed as a Managing Director, Madhyanchal Vidyut Vitran Nigam Ltd.

Pogaku Pulla Reddy has been appointed as a Chairman & Managing Director, Central Power Distribution Company Of Andhra Pradesh Limited

Jenu Devan, has been appointed as a Managing Director, Madhya Gujarat Vij. Co. Ltd

N. F. Chaudhari has been appointed as a Managing Director, Uttar Gujarat Vij Co Ltd.

Ashok Kumar Garg has been appointed Managing Director, Dakshin Haryana Bijli Vitran Nigam Ltd, Hissar, Haryana

The Future of Power Conversion: A Deep Dive into Solid-State Transformers

As global power systems evolve under the pressures of decarbonization, digitalization, and decentralization, the transformer—one of the grid's most fundamental components—is getting a transformative upgrade. Enter the solid-state transformer, a smarter, more compact, and more capable alternative that could redefine the electrical landscape.

Introduction: Rethinking the Transformer

For more than a century, transformers have been the bedrock of power distribution. Their basic design—relying on copper windings and magnetic cores to transfer electrical energy between circuits—has remained largely unchanged since the days of Nikola Tesla and George Westinghouse.

But our world is no longer defined by a one-way flow of electricity from power plants to homes. Renewable energy, electric vehicles, and smart grids have introduced new complexity into the power ecosystem. These modern requirements demand not just transformation of voltage, but transformation in functionality. That's where solid-state transformers (SSTs) come in.

What Is a Solid-State Transformer?

A solid-state transformer is a power electronic-based transformer that uses semiconductor components to perform voltage transformation, isolation, and advanced power conditioning. While conventional transformers operate at grid frequency (typically 50 or 60 Hz), SSTs operate at much higher frequencies—ranging from several kilohertz to even megahertz—which allows for smaller magnetic components and greater dynamic control.

SSTs are often composed of three primary stages: an AC-DC converter that rectifies the incoming alternating current, a DC-DC converter that steps voltage up or down at high frequency through a compact transformer, and a DC-AC inverter that recreates the desired AC output. All of this is managed by a digital controller that allows for fine-tuned operation and integration with smart grid infrastructure.

Conventional vs. Solid-State Transformers

The shift from conventional to solid-state transformers is more than a matter of component replacement; it represents a leap in how electricity is controlled, delivered, and integrated with digital infrastructure.

Conventional transformers are passive devices. Once installed, they perform their function without adjustment or awareness of system conditions. They cannot respond to changing load profiles, integrate intermittent renewable energy sources, or communicate with grid operators. Solid-state transformers, in contrast, are intelligent devices. They offer real-time control over power flow, voltage, frequency, and even power quality, making them invaluable in complex modern grids.

Key differences include size and weight—SSTs are significantly smaller and lighter due to high-frequency operation—as well as bidirectional power flow, communication capabilities, and adaptability to non-traditional power sources.

Core Technologies Behind SSTs

At the heart of SST development lies a convergence of several advanced technologies. The most critical among them is the emergence of wide-bandgap semiconductors such as silicon carbide (SiC) and gallium nitride (GaN). These materials allow for higher voltage operation, faster switching speeds, and improved efficiency over conventional silicon-based devices.

High-frequency transformers are another essential component. Because magnetic size decreases with increasing frequency, these transformers are much smaller, lighter, and more efficient than their low-frequency counterparts. However, they require advanced insulation and cooling strategies to handle concentrated thermal loads.

SSTs also rely on sophisticated digital control systems. These processors constantly monitor voltage, current, temperature, and grid signals to ensure optimal operation, fault tolerance, and compliance with regulatory requirements. Combined with communication protocols, these systems allow SSTs to become interactive nodes in a smart grid network.

Applications of Solid-State Transformers

Solid-state transformers have far-reaching potential across multiple sectors of the power industry. Their unique capabilities enable new use cases that traditional transformers simply cannot support.

In smart grids, SSTs enable two-way communication and dynamic load management. They allow grid operators to respond in real time to changes in demand, reroute power around faults, and integrate distributed energy resources like rooftop solar panels and battery storage systems.

In electric vehicle infrastructure, SSTs can act as the backbone of fast-charging stations. Their compact form factor and ability to manage high power levels make them ideal for urban environments. Additionally, SSTs enable vehicle-to-grid (V2G) technology, allowing electric vehicles to feed power back into the grid during peak demand.

In renewable energy, SSTs facilitate smoother integration of variable sources like wind and solar. Their advanced control systems can

compensate for frequency variations, voltage sags, and reactive power requirements, ensuring grid stability even as traditional power plants are phased out.

Other promising applications include traction systems in electric railways, data centers with high uptime requirements, and remote microgrids in off-grid or disaster-prone regions.

Advantages of Solid-State Transformers

The benefits of SSTs are extensive and closely aligned with the future needs of energy systems.

They offer high efficiency across a wide range of load conditions, unlike traditional transformers that are optimized for full load and lose efficiency at lower levels. SSTs also provide superior power quality, actively correcting issues like harmonic distortion, voltage imbalances, and reactive power consumption.

Their modular design and high frequency allow for a significant reduction in physical size and weight. This makes them well-suited for applications with space constraints, such as urban installations or onboard electric transportation.

Perhaps most significantly, SSTs bring intelligence and programmability to the edge of the grid. With integrated sensors, control logic, and communication protocols, they can become active agents in demand response programs, fault isolation, and grid resilience efforts.

Challenges and Barriers to Adoption

Despite their potential, SSTs face several technical and economic challenges that have limited their widespread adoption to date.

The first is cost. Wide-bandgap semiconductors and high-speed digital controllers remain expensive, especially at the power levels required for grid-scale deployment. As manufacturing processes mature and economies of scale develop, prices are expected to drop, but for now, SSTs remain a premium technology.

Thermal management is another issue. High switching frequencies generate more heat in a smaller volume, necessitating complex cooling systems to ensure reliability and longevity.

Reliability itself is also a concern. Conventional transformers can operate for decades with minimal maintenance. SSTs, by contrast, contain sensitive electronic components that are more vulnerable to transient events, electromagnetic interference, and environmental conditions.

Additionally, the control complexity of SSTs demands highly skilled personnel for installation, operation, and maintenance. Power utilities will need to invest in training and system redesigns to accommodate this shift.

The Role of SSTs in the Energy Transition

As countries around the world pursue aggressive decarbonization targets, the role of transformers is being reimagined. The future grid will be distributed, renewable, digital, and resilient—and SSTs are one of the few technologies that align with all of these goals.

Solid-state transformers can help utilities integrate solar and wind power more effectively by managing voltage and frequency fluctuations. They can enable microgrids and off-grid systems in developing regions or during natural disasters. They can facilitate electric vehicle adoption by supporting bi-directional charging and fast-charging infrastructure. And they can reduce transmission and distribution losses through better load balancing and real-time system optimization.

Governments and corporations alike are beginning to recognize this potential. Research programs funded by the U.S. Department of Energy, the European Union's Horizon 2020 initiative, and China's State Grid Corporation are all exploring pilot deployments and commercial scaling strategies for SSTs. Major players like ABB, Siemens, Hitachi Energy, and Schneider Electric are investing in research and development to refine the technology and bring costs down.

Conclusion: A Smarter Path Forward

Solid-state transformers are more than just an engineering upgrade; they are a strategic response to the challenges and opportunities of the 21st-century power grid. By replacing passive metal cores with intelligent silicon, SSTs transform the way energy is moved, managed, and monetized.

There are still hurdles to overcome—cost, reliability, and technical complexity chief among them—but the trajectory is clear. As the grid becomes cleaner, more distributed, and more dependent on real-time data, the case for solid-state transformers will only grow stronger.

The question is no longer whether SSTs will be part of the future grid, but when and how quickly they will scale. In a world that increasingly demands flexibility, intelligence, and resilience in every infrastructure layer, solid-state transformers may soon become as indispensable as the ones they were designed to replace.

Source: ***https://electronicsbuzz.in/the-future-of-power-conversion-a-deep-dive-into-solid-state-transformers/***

Smart Grid Updates: Policy, Regulatory Innovations, and Market Reforms

CEA Notifies Draft CEA (Measures Relating to Safety and Electric Supply) (1st Amendment) Regulations, 2025

The Central Electricity Authority (CEA), Government of India has notified the draft CEA (Measures relating to Safety and Electric Supply) (First Amendment) Regulations, 2025. The amendment introduces a new Chapter X-A that outlines additional safety requirements for battery energy storage systems (BESS). It includes technical and operational standards covering system design, installation, ventilation, hazard detection, fire suppression, security, and emergency protocols. It also includes specifications for container safety and spacing, installation of hazard detection and suppression systems and guidelines for electrolyte spill management.

Read More: https://shorturl.at/6qaOS

California Approves 4,600 MWh Darden Battery Energy Storage Project

The California Energy Commission (CE) has approved the Darden Clean Energy Project's 4,600 MWh battery energy storage system (BESS) in Fresno Country's western region. The BESS is owned by IP Darden I, a subsidiary of Intersect power. The project will be established on 9,500 acres of land that is unfit for agricultural production. It will include a 1,150 MW solar system comprising approximately 3.1 million panels. The BESS will be set up under California's Opt-In Certification program. It provides a consolidated permitting option for eligible clean energy projects supporting the states transition to 100% zero carbon retail electric sales by 2045.

Read More: https://shorturl.at/9L4Dk

Bihar Electricity Regulatory Commission Approves Tariffs for 238 MW Solar Projects Under KUSUM

The Bihar Electricity Regulatory Commission (BERC), Bihar, India has approved tariffs ranging from INR 2.77 (~$0.032)/kWh to INR 3.48 (~$0.04)/kWh for 238.15 MW of solar power from grid connected projects under Component C of the Pradhan Mantri Kisan Ujra Suraksha Evam Utthaan Mahabhiyan (PM-KUSUM) program. The power acquisition for 25 years will help Bihar meet its Renewable Purchase Obligation (RPO).

Read More: https://shorturl.at/5lA6y

HDBank Extends VND2,000 Billion Green Loan for LNG Projects

Vietnam's Ho Chi Minh City Development Bank (HDBank) has granted a VND2,000 billion green credit facility to PV Power in order to support the country's clean energy transition through LNG powered projects. The funding will help finance LNG imports for the Nhon Trach 3 and 4 power plants. Together, the two plants are expected to deliver 1,624 MW and produce 9–12 billion kWh annually. Nhon Trach 3 is set for commercial operations in 2025, followed by Nhon Trach 4 in the next quarter of 2025.

Read More: https://shorturl.at/wfLnK

India Plans INR 530 Billion Ultra-High Voltage AC Transmission System by 2034

The Ministry of Power, Government of India is enhancing India's power transmission infrastructure with an ultra-high voltage alternating current transmission (UHVAC) system. Nine 1100 kV lines and ten substations have been identified for development by 2034, with an investment of INR 530 billion (~$6.2 billion).

Read More: https://shorturl.at/JkZkC

Indonesia Plans to Add 69.5 GW of New Green Energy by 2034

Indonesia has unveiled its 2025–2034 Electricity Supply Business Plan, outlining the addition of 69.5 GW in new power generation, with 76 percent of the capacity sourced from renewables and storage. The plan supports Indonesia's 2060 net zero emission goal and aims to meet rising urban energy needs. The first phase (2025–2030) will see 27.9 GW added, including 12.2 GW from renewables, 9.2 GW from gas, 3.5 GW from existing coal projects, and 3 GW in energy storage. The second phase (2030–2034) will focus heavily on green energy with 37.7 GW from renewables and storage, and only 3.9 GW from thermal sources. Key components include 17.1 GW solar, 11.7 GW hydro, 7.2 GW wind, 5.2 GW geothermal, 0.9 GW bioenergy, and two 250 MW nuclear reactors in Sumatra and Kalimantan.

Read More: https://shorturl.at/PUOb3

MHI, India Launches Application Portal under SPMEPCI Scheme

The Ministry of Heavy Industries (MHI), Government of India has launched the application portal under the Scheme to Promote Manufacturing of Electric Passenger Cars in India (SPMEPCI) to attract global electric vehicle (EV) manufacturers and boost domestic EV production. The scheme aims to promote India as a global hub for EV manufacturing with a minimum investment threshold of INR 41.5 billion for approved applicants. Under the scheme, approved companies will be allowed to import completely built electric four-wheelers with a minimum value of USD 35,000 at a reduced customs duty of 15 percent for a period of five years.

Read More: https://shorturl.at/S8oZA

World Bank Approves USD2.13 billion Green Financing for Indonesia

The World Bank has approved a total of USD2.13 billion in blended financing for Indonesia to support its push toward a low-carbon and climate resilient economy. The financing package combines loans and guarantees aimed at accelerating clean energy adoption, reducing carbon emissions, and enhancing infrastructure development. It includes funding for transmission infrastructure, renewable energy expansion, disaster preparedness, and improved access to healthcare and basic services. The package aligns with the Government of Indonesia's Just Energy Transition Partnership and its broader commitment to achieve net-zero emissions by 2060.

Read More: https://shorturl.at/AhBeb

Smart Grid Updates: Projects and Technology

Grid Modernization and Flexibility

Navigating Utility-Scale Energy Procurement Just Got Easier

The National Renewable Energy Laboratory (NREL) has launched the Procurement Analysis Tool (PAT), a free, web-based platform designed to simplify utility-scale electricity procurement for commercial, government, and institutional users. With a user-friendly interface, PAT helps organizations assess off-site energy options tailored to their goals—without requiring deep technical expertise. Key features include scenario planning, procurement comparisons, technology insights, and downloadable resources. Drawing from NREL's robust datasets, the tool delivers personalized, data-driven recommendations based on users' energy needs and locations. Since its beta release, PAT has been adopted by over 180 early users and continues to support informed, cost-effective decision-making across sectors.

Read More: https://tinyurl.com/3f8e2ray

HEDNO Advances Grid Modernization with Itron Intelligent Edge Solution in Greece

Itron, Inc. has entered into a major agreement with HEDNO, Greece's sole electricity distribution operator, to deploy its Grid Edge Intelligence portfolio and support the modernization of the country's electric grid. Signed on May 28, 2025, the contract aims to enhance customer experience through improved energy consumption insights and help HEDNO meet its long-term objectives, including the integration of distributed energy resources and achieving net-zero emissions by 2050.

Read More: https://tinyurl.com/47smhjht

Unlocking AI's Grid Modernization Potential

Surging energy demand, extreme weather events, and a fragmented regulatory landscape are straining the U.S. electric grid, but artificial intelligence (AI) offers a timely and transformative opportunity to modernize it. Drawing from the DOE's AI for Energy report, this memo highlights 14 AI use cases across grid planning, permitting, operations, and resilience—nearly half of which are ready to deploy with high-impact potential. To capitalize on this momentum, the memo urges the federal government to shift from research to deployment, prioritize mature, high-impact applications, and coordinate action among agencies like DOE, FERC, FEMA, and FPISC. Targeted investments, improved inter-agency alignment, and a national AI strategy are essential to unlock grid modernization at scale.

Read More: https://tinyurl.com/2s6a7ffn

Enhancing Power Quality in a PV/Wind Smart Grid with Artificial Intelligence Using Inverter Control and Artificial Neural Network Techniques

Inverter Control and Artificial Neural Network (ICANN) techniques to enhance power quality in PV/Wind hybrid microgrids. As the global energy landscape shifts toward renewables, managing distributed energy resources (DERs) becomes increasingly complex. The proposed ICANN-based approach addresses this by improving control over DC–AC microgrids, ensuring reliable, sustainable, and high-quality electricity. Simulations conducted in MATLAB/SIMULINK demonstrate that the hybrid system delivers stable performance and effectively enhances power quality through intelligent inverter-side control. The study also underscores AI's growing role in achieving SDG7 by enabling smarter, more resilient energy systems.

Read More: https://tinyurl.com/653t8n5y

India's Green Grid Revolution: Building 50,000 KM of Renewable Energy Superhighways

India is undertaking one of the world's most ambitious power grid transformations through its "green energy highways"—a vast network of over 50,000 circuit kilometers of transmission lines planned by 2030. These corridors will channel renewable electricity from solar- and wind-rich states like Rajasthan, Gujarat, and Tamil Nadu to high-demand urban and industrial centers. Central to this effort is the deployment of High Voltage Direct Current (HVDC) technology, which enables efficient long-distance power transfer with minimal losses. The grid upgrade also integrates smart systems, including AI-driven load management and real-time monitoring, to handle the variability of renewables.

Read More: https://tinyurl.com/bdf6tf6k

NISE Launches Incubation Program To Boost Renewable Energy Start-Ups In India

India's National Institute of Solar Energy (NISE), in partnership with NSEFI and IIT Delhi, has launched a targeted incubation program to support start-ups developing renewable energy technologies. Aimed at advancing innovations from TRL 3–4 to TRL 6–8, the initiative offers pilot testing, mentorship, and access to NISE's advanced R&D infrastructure. Eligible DPIIT-recognized Indian start-ups can apply in areas like solar, green hydrogen, battery storage, AI/ML in energy, EV integration, and circular economy solutions. Applications are due by 26 August 2025 via email, and selected start-ups will enter a two-year support program with potential for extension based on performance.

Read More: https://tinyurl.com/bdedchfm

Government Issues Terms to Designate Renewable Energy Implementing Agencies

The Indian government has laid out terms for designating Renewable Energy Implementing Agencies (REIAs) to facilitate tariff-based competitive bidding. It requires companies to register under the Companies Act, 2013, hold a Category-I electricity trading license, maintain a net worth above ₹5 billion, and secure an A-grade long-term credit rating. These agencies actively manage renewable power aggregation, oversee bidding, ensure payment security, and issue 50 GW of tenders annually on CERC-approved e-bidding platforms. The Ministry ensures that REIAs operate transparently by barring affiliated firms from participating in their tenders. If REIAs fail to comply with these standards, the government revokes their designation, though they must still fulfill existing contracts.

Read More: https://tinyurl.com/y8kbafnt

India's Energy Outlook to 2035: A Clean Energy & Grid Transformation Journey

India's energy ecosystem is on track for a sweeping transformation by 2035, anchored by renewable energy, advanced storage solutions, and grid modernization. The National Electricity Plan (2024) projects peak demand to hit 277 GW by 2027, with total installed capacity reaching 610 GW—nearly half from renewables. Key technologies like Battery Energy Storage Systems (BESS), Pumped Storage Projects (PSPs), and green hydrogen will support 24/7 clean power, especially for industrial hubs. Major investments include $28.7 billion for interstate transmission and $1.4 billion for Phase II of the Green Energy Corridor. High Voltage Direct Current (HVDC) lines and AI-driven grid operations will enhance efficiency and resilience. Strategic policy pathways emphasize integrated planning, automation, and climate risk modeling, unlocking vast opportunities for developers, operators, and investors across the energy value chain.

Read More: https://tinyurl.com/yrkewsw9

Tata Power-DDL, Nissin Electric commission micro substation under Japan's NEDO Project

Tata Power DDL partnered with Japan's Nissin Electric to commission India's first micro substation featuring a Pole-mounted Voltage Transformer (PVT) under a demonstration project supported by Japan's NEDO and Power Finance Corporation. The key highlights of the project are The PVT-equipped micro substation directly converts extra-high-voltage (EHV) transmission power into low-voltage for residential use, eliminating the need for large, costly conventional substations.

It's ideal for areas with challenging terrain or space constraints and supports stable, cost-effective supply in both remote and urban regions. The system reduces operational costs by eliminating generator refuelling/maintenance and cuts CO_2 emissions by around 45% compared to diesel generators.

Commissioned on June 18 at Tata Power DDL's Smart Grid Lab, the project is now being monitored for reliability and performance, with expansion discussions underway in Odisha and other regions. This initiative marks a significant step towards modernizing India's electrical distribution network with compact, sustainable, and efficient technology.

Read More: https://shorturl.at/X1e0s

ISGF Research Report on Security Concerns in Solar Inverters in India

Electric Mobility and Charging Infrastructure

Residential EV Charging Station Market Trajectory, from $5.4 Billion (2022) to $101 Billion (2032) with 36.1% Growth

The global residential EV charging station market, valued at $5.4 billion in 2022, is projected to surge to $101 billion by 2032 at a CAGR of 36.1%, driven by the rising appeal of sustainable homes, the cost-efficiency of home charging, and increased property values tied to EV infrastructure. While the convenience of overnight charging and off-peak incentives benefit consumers and grid efficiency, the market faces challenges such as infrastructure strain during peak usage, limited parking in dense urban areas, and risks of technological obsolescence. Segmented by charging capacity, vehicle type, and region, the market outlook is shaped by dynamic trends, emerging technologies, and competitive forces profiled in the report's comprehensive analysis.

Read More: https://tinyurl.com/3j6myusr

Judge Orders Lifting of Trump Administration's Unlawful Freeze of More than A Billion Dollars For Electric Vehicle Charging

U.S. District Judge Tana Lin has issued a preliminary injunction lifting the Trump administration's freeze on federal funding for the National Electric Vehicle Infrastructure (NEVI) Formula Program—a $5 billion initiative aimed at building a nationwide EV fast-charging network. The ruling unblocks approximately $1 billion for 14 states that challenged the freeze, including California, New York, and Washington. The court found the freeze unlawful and emphasized that executive agencies cannot override congressional appropriations. Several environmental nonprofits, including the Sierra Club and NRDC, joined the lawsuit to advocate for communities relying on NEVI's full implementation.

Read More: https://tinyurl.com/48uftk9r

EV Charging Infrastructure Market Forecast to Grow at a Robust CAGR of 20.3% Through 2032

The global EV charging infrastructure market is set to expand rapidly—from US$ 31.1 billion in 2025 to US$ 113.4 billion by 2032—driven by the accelerating transition to clean energy, rising EV adoption, and robust policy support. Fast chargers are expected to dominate with a projected 72.4% revenue share in 2025, as governments incentivize zero-emission vehicles and climate-conscious consumers fuel demand. Regionally, Asia-Pacific leads the charge, bolstered by China's aggressive push toward transport electrification and favorable regulatory frameworks.

Read More: https://tinyurl.com/4pw3rcev

Electric Utility Vehicle Market is projected to grow USD 39.4 Billion by 2034

The global Electric Utility Vehicle (EUV) market is set to grow from USD 20.4 billion in 2024 to USD 39.4 billion by 2034, at a CAGR of 6.8%, driven by the worldwide move toward cleaner mobility. A notable market shift is seen in the dominance of SUVs and MPVs, which now make up 65% of 4.3 million passenger vehicle dispatches—up from just 21% a decade ago—indicating strong momentum for utility-focused electric models. Emerging markets, especially India, are playing a key role, with EV sales surpassing 2 million units in 2024—a 27% year-on-year growth that signals rising consumer preference for sustainable and versatile transportation.

Read More: https://tinyurl.com/csc2rdne

Reporting from China, EV Powerhouse of the World – Felix Hamer from Electric Felix

Felix Hamer visited China earlier this year and found the EV infrastructure far more advanced than he had expected. During the electrive LIVE conference, he shared that chargers appeared everywhere—from airports and malls to obscure backstreets. In cities like Guangzhou, Shenzhen, and Shanghai, ultra-rapid 600+ kW chargers had already become common. Automakers operated their own charging networks and offered affordable fast-charging rates, often between 10 to 15 euro cents per kWh. He noted that NIO, for instance, had installed 60 battery swap stations in Shenzhen alone—equaling the company's entire European network. Many Chinese drivers preferred swapping to avoid the hassle of charging. Hamer emphasized how Chinese regulation—such as restricting petrol vehicles in cities—accelerated EV adoption, and how digital navigation systems, not signage, helped drivers locate chargers. While Europe continued debating OEM involvement, Chinese manufacturers had already taken the lead.

Read More: https://tinyurl.com/4ycd2v9z

India's Largest EV Charging Hub Opens In Bangalore

ChargeZone has launched India's largest EV charging hub in Bangalore, setting a new national benchmark with over 210 charging points—including 80 DC fast chargers and 50 AC units—supported by a 4-megawatt power capacity. Designed to serve passenger cars, intercity buses, and electric trucks, the facility offers 24/7 access and can fully charge vehicles in just 35–45 minutes. It features driver-centric amenities like restrooms, lounges, and ample parking, and is powered by ChargeZone's digital platform for real-time monitoring, app-based access, and secure payment integration. CEO Kartikey Hariyani described the hub as a comprehensive ecosystem that supports India's accelerating shift toward electric mobility.

Read More: https://tinyurl.com/5a4mkjxy

Tata Motors Targets 5X Growth in EV Charging Infra

Tata Motors is accelerating its electric mobility strategy with a bold plan to expand its EV charging infrastructure fivefold by 2030. The company aims to grow its public charging network from 22,000 to over 1 lakh points across 2,000+ cities and towns, while also scaling its ultra-fast Mega Charger network—featuring 120–400 kW chargers—to more than 1,000 locations. Through its "Open Collaboration 2.0" initiative, Tata will partner with charge point operators and oil marketing companies to install 30,000 public chargers and 500 Mega Chargers by 2027. Home charging will also see a major boost, with plans to increase installations from 1.6 lakh to over 10 lakh units.

Read More: https://tinyurl.com/4zum8y6w

Maruti Suzuki Unveils Alto Electric at ₹4 Lakh, Promises 560km Range

Maruti Suzuki has launched an electric version of its iconic Alto hatchback, pricing it aggressively at ₹4 lakh. The Alto Electric aims to provide an affordable option for Indian consumers looking to switch to electric vehicles (EVs). The company claims the new Alto Electric will offer a driving range of up to 560 kilometers on a single charge, placing it among the longest-range EVs in its segment. This development signals Maruti's intensified efforts to stay competitive in the growing Indian EV market.

Maruti officials say the Alto EV can be charged from 20% to 80% in under 45 minutes with a compatible fast charger. With this launch, Maruti Suzuki joins a growing list of Indian automakers expanding their electric offerings. The move is also aligned with government incentives promoting cleaner mobility and reduced carbon emissions. Experts view the launch as a strategic move to capture the budget-conscious EV buyer segment. The Alto Electric could reshape consumer expectations by delivering long range at an entry-level price point, a combination rare in the current market.

Read More: https://autoevtimes.com/maruti-suzuki-unveils-alto-electric-at-%e2%82%b94-lakh-promises-560km-range/

Smart Metering and Consumer Engagement

Maharashtra State Electricity Distribution Company Ltd (MSEDCL) has Started Installing Smart Meters in Nagpur District

Maharashtra State Electricity Distribution Company Ltd (MSED CL) has started installing smart meters in Nagpur district, with over 2.51 lakh meters already installed, including over 1.60 lakh at residential consumers. Interestingly, out of the 2.51 lakh meters installed so far, 1.60 lakh or 64% are residential ones.

Read More: https://bitly.cx/eoVBb

Madhya Pradesh - Indore Completes 65% Of Smart Meter Target

Madhya Pradesh West Zone Electricity Distribution Company is making rapid strides in modernising the region's power infrastructure by installing state-of-the-art smart meters free of cost for consumers. So far, 12.30 lakh smart meters have been installed across the Malwa-Nimar region, with Indore city alone achieving 65% completion of its smart metering target. According to company officials, the smart metering initiative is aimed at ensuring greater transparency, billing accuracy, and enhanced consumer convenience. These advanced meters also assist in calculating power factor discounts and time-of-day (TOD) based benefits, particularly during solar energy usage periods.

Read More: https://bitly.cx/sTjkb

Cybersecurity, Standards & Data Privacy in Energy Systems

Evaluating Cybersecurity Risks of Bulgaria's Energy Sector: Focus on PV and HVAC-R

Hybrid inverters, central to small-scale solar-plus-storage systems, are rapidly proliferating across energy networks, including Bulgaria's. While individual units pose minimal security threats, widespread deployment makes them vulnerable to coordinated cyber-attacks that could destabilize the grid. The technology's dual-use potential—as both a power asset and a cyber vector—raises concerns that current cybersecurity regulations inadequately address. A recent risk assessment identified this gap and proposed targeted security measures to mitigate potential threats as hybrid inverter adoption accelerates in line with broader EU energy trends.

Read More: https://tinyurl.com/3uhzsc87

As energy and AI links grow, new IEA observatory provides latest data and analysis

The International Energy Agency (IEA) has launched the Energy and AI Observatory to track and analyze the growing interplay between artificial intelligence and the energy sector. This initiative responds to the surging electricity demand from AI-optimized data centers—expected to more than quadruple by 2030—and the transformative role AI is already playing in improving efficiency, cutting emissions, and reducing costs across energy systems. The Observatory features interactive tools for visualizing regional data center energy use and includes 20 global case studies showcasing real-world AI applications, from optimizing HVAC systems in schools to improving industrial energy efficiency. Announced at the AI Action Summit and supported by global leaders, the platform aims to guide policy and investment decisions with timely, reliable insights as AI reshapes the energy landscape.

Read More: https://tinyurl.com/55mndhbw

Norms in New Technological Domains: What's Next for Japan and the United States in Cyberspace

Japan's Active Cyber Defense Bill marks a pivotal shift from a traditionally passive cybersecurity stance to a more proactive, preemptive model. The legislation empowers government agencies to monitor foreign communications and neutralize cyber threats before they cause harm, while maintaining strict oversight to protect civil liberties. This move responds to escalating cyberattacks from China, North Korea, and Russia, which have increasingly targeted Japan's critical infrastructure. However, experts stress that legislation alone isn't enough. Japan must deepen international cooperation—particularly with the U.S. and allied democracies—to align cybersecurity standards, secure global digital infrastructure, and coordinate law enforcement efforts. As cyber threats grow more transnational and sophisticated, Japan's evolving strategy could serve as a model for balancing national defense with global digital resilience.

Read More: https://tinyurl.com/23c2csdr

Cybersecurity Regulations in the Energy Industry: A Detriment or a Benefit?

A qualitative study examining the NERC Critical Infrastructure Protection (CIP) standards reveals both strengths and challenges in securing North America's electric grid. While professionals in the energy sector acknowledge that NERC CIP standards play a vital role in enhancing cybersecurity and ensuring grid reliability, they also highlight areas needing refinement. The study, based on interviews and inductive content analysis, found that the standards effectively promote risk awareness, asset protection, and incident response planning. However, participants also pointed to issues such as regulatory complexity, compliance burdens, and the need for more adaptive, outcome-based approaches. Overall, the findings suggest that while NERC CIP is foundational to grid security, evolving threats and operational realities call for continuous improvement and stakeholder-informed updates.

Read More: https://tinyurl.com/38jmzfds

200,000 Cyber Attacks On India's Power System During Op Sindoor: Minister

During Operation Sindoor—India's military response to the Pahalgam terror attack—Union Power Minister Manohar Lal confirmed that the country's power sector faced nearly 200,000 cyberattacks over an 8–10 day period. These attacks, which primarily targeted official sites in Jammu and Kashmir, aimed to disrupt critical infrastructure and public services. However, Khattar emphasized that all attempts were successfully thwarted, and the national power system remained fully operational. While some local systems are still recovering, this marks the first official acknowledgment of the scale and intensity of cyber threats during the India-Pakistan conflict.

Read More: https://tinyurl.com/a9fswwyz

Green Hydrogen and Green Ammonia Ecosystem Developments

Hyundai & IIT Madras Launch HTWO Innovation Centre to Boost Hydrogen Tech

Hyundai Motor, in collaboration with IIT Madras and the Tamil Nadu government, has inaugurated the new HTWO Innovation Centre at IIT-M's Thaiyur campus. Backed by ₹100 crore from Hyundai Motor India Foundation and government support, this 65,000 sq ft R&D facility will develop electrolysers, fuel cells, digital twins, and pilot-scale manufacturing capabilities. The centre aims to localise hydrogen production, reduce costs, and help India reach its net-zero goals by 2070 .

Read more- https://shorturl.at/L0A8M

₹10,000 Crore Green Hydrogen & Green Ammonia Plant Coming Up in Andhra Pradesh

In a major boost to India's green energy ambitions, Juno Joule Green Energy Pvt Ltd from Vijayawada has partnered with Germany's Select Energy GmbH to set up a ₹10,000 crore green hydrogen and ammonia export facility near Mulapeta port in Andhra Pradesh. The project, which will be developed in three phases, aims to produce 180,000 tonnes of green hydrogen annually by 2029, which will be converted into one million tonnes of green ammonia for global export. Construction is expected to begin in 2026. The facility will include desalination plants, electrolysers powered by renewable sources (solar, wind, and hydro), and pipelines connected to the port. The initiative will follow strict EU sustainability standards and is projected to generate 5,000–6,000 jobs while fostering technology transfer and upskilling in the region.

Read more- https://shorturl.at/owU5B

Energy Storage Systems

NLC India Renewables Secures 500 MWh Battery Energy Storage System Project in Tamil Nadu

Neyveli India Renewables Limited (NIRL), a subsidiary of NLC India, Limited has secured a 500 MWh Battery Energy Storage System (BESS) project of the Tamil Nadu Green Energy Corporation Limited (TNGECL). The award comprises the development of three standalone BESS projects with a combined capacity of 250 MW/500 MWh, to be established at Ottapidaram, Anuppankulam and Kayathur substations all located in Tamil Nadu. The project will be executed under the Build-Own-Operate (BOO) model and was awarded to NLCIL through a tariff based competitive bidding process under the state component of the Viability Gap Funding (VGF) scheme.

Read More: https://shorturl.at/SHhb4

SMUD and DESRI Execute PPA for BESS on Former California Nuclear Facility

California utility Sacramento Municipal Utility District (SMUD) and developer D. E. Shaw Renewable Investments (DESRI) have executed a long-term power purchase agreement (PPA) for a 640 MWh battery energy storage system (BESS) in California. The 160MW/640MWh Dry Creek Energy Storage project is located in Sacramento County at the decommissioned Rancho Seco nuclear generating facility. The Rancho Seco location also includes a 160 MW solar facility with sustainable land management through sheep grazing.

Read More: https://shorturl.at/EUScr

SMA Powers 228 MW Battery Storage Project in Chile

SMA will supply 67 SMA battery storage units to one of South America's largest battery energy storage systems, which is under construction in Chile's Atacama Desert. The system is being developed alongside the 220 MW Diego de Almagro Sur solar power plant, operated by Chilean utility Cobun S.A, which has been supplying solar power to the region since 2022 using SMA technology. The upcoming battery storage system will have a power capacity of 228 MW and an energy capacity of 912 MWh allowing for four hours of continuous charging and discharging.

Read More: https://shorturl.at/YERUk

Trianel, partners plan energy storage park of up to 1.5 GW in Germany

German municipal utility Trianel, Swiss energy company BKW AG and German asset manager Luxcara have joined forces to build a 900 MW/1,800 MWh battery storage park on the outskirts of the Ruhr area in Germany, with plans to increase the capacity to up to 1.5 GW. In its first stage, the storage park will consist of three battery systems, each with a capacity of 300 MW. Up to an additional 600 MW are currently in preparation. The large-scale facility will be built in the town of Waltrop on an unused site that was originally intended for a coal-fired power plant.

Read More: https://shorturl.at/sEyfb

Smart Infrastructure: Cities, Buildings, and Digital Twins

Nvidia Launches Blueprint for Smart City AI

Nvidia has unveiled a powerful new platform designed for building a physically accurate digital twin of a city and testing smart city AI agents within it to help respond to real-world challenges. It was announced at the Nvidia GTC event at Viva Technology 2025 (VivaTech 2025), Europe's biggest startup and tech event in Paris. The Nvidia Omniverse Blueprint for smart city AI is intended to be a reference framework that can incorporate several other Nvidia platforms to bring the benefits of physical AI to entire cities and their critical infrastructure.

Read More: https://shorturl.at/RGH73

Smart City Living Lab to be Created in Luxembourg

SmartSpires, a €3.1m initiative co-funded by the EU's Connecting Europe Facility (CEF), aims to turn Luxembourg's Belval Campus into a smart city living lab and a blueprint for cities across Europe. SmartSpires aims to combine densified 5G connectivity with edge computing infrastructure to enable artificial intelligence (AI) and Internet of Things (IoT) services in ultra-low-latency environments. The project will deploy at least three smart towers, each equipped with 5G for advanced connectivity, computing for local AI and edge applications, IoT sensors, and various local add-ons to support innovative use cases in the campus.

Read More: https://shorturl.at/U9G7n

Signify Launches Emergency Lighting System for Intelligent Buildings

Global lighting company Signify has launched a new wireless emergency lighting portfolio and monitoring system for intelligent buildings. The new wireless emergency lighting solution is being first made available in Australia and New Zealand through the Pierlite portfolio. It will be made available in Europe in early September 2025. Signify's new wireless emergency lighting portfolio and Interact Building Manager provides visibility and control over your emergency lighting with regular proof of performance to ensure compliance with relevant standards while reducing operational complexity and cost.

Read More: https://shorturl.at/HfmO8

Decentralized Renewables and Resilient Microgrids

Adani Commissions 5 MW Green Hydrogen Pilot Plant in Kutch, Gujarat

Adani New Industries (ANIL) announced the successful commissioning of India's first off-grid 5 MW Green Hydrogen Pilot Plant in Kutch, Gujarat, marking a major milestone in the nation's clean energy transition. The state-of-the-art plant is 100% green-powered by solar energy and integrated with a Battery Energy Storage System (BESS), enabling it to operate completely off-grid. This represents a new paradigm in decentralized, renewable-powered hydrogen production.

For more details : https://bitly.cx/IJRCN

Kerala Unveils Draft Renewable Energy Regulation 2025 for Solar, Storage, and Prosumers

The new regulation aims to create an unified regulatory framework covering tariff determination, energy accounting, billing, metering, and open access for a broad spectrum of renewable energy systems including Battery Energy Storage Systems (BESS), Pumped Storage Plants (PSPs), and emerging technologies such as Vehicle-to-Grid (V2G) systems, enabling bidirectional energy flow between electric vehicles and the grid. This regulation is a significant step towards enhancing flexibility, grid resilience, and integration of distributed renewable energy resources.

For more details : https://bitly.cx/TrLE

India sitting on 10,830 GW solar reserve—New study reveals massive untapped capacity

India is sitting on an astonishingly large solar energy reserve of 10,830 GW, according to a new reassessment by TERI—nearly 15 times higher than India's previous estimate of 748 GW. This expanded potential reflects a holistic view that goes well beyond deserts, encompassing rooftop installations (urban + rural), floating solar, agri voltaics in plantations, and infrastructure-integrated systems like those on railways and roads. The study highlights the transformative opportunity to decentralize solar generation across diverse land uses, urging detailed regional assessments, innovative policies, and targeted investments to unlock this gigantic untapped clean energy capacity.

Read Report: https://indiasmartgrid.org/isgf/public/banner_img/1750056879eaLS9iHtumjVXGfJmlSRhsTE6oWhBk0ZUNqwdA4S.pdf

Integrated Smart Water, Gas, and Energy Networks

PM LAYS Foundation for Rs 10.1 Billion Gas Project in Bengal

Prime Minister Narendra Modi laid the foundation stone of a City Gas Distribution (CGD) project worth over Rs 10.1 billion in Alipurduar, West Bengal. The project will supply Piped Natural Gas (PNG) to more than 0.25 million households and over 100 commercial and industrial users. Additionally, 19 Compressed Natural Gas (CNG) stations will be set up to cater to vehicular demand.The Prime Minister called the project a vital example of doorstep delivery of government services and a key component of India's move towards a clean, affordable, and accessible energy future. He underscored that Bengal's development is essential to India's goal of becoming a developed nation.

Read More: https://www.constructionworld.in/energy-infrastructure/oil-and-gas/pm-lays-foundation-for-rs-10.1-billion-gas-project-in-bengal/74298

India's Natural Gas Consumption to More Than Double by 2040: PNGRB Study

A PNGRB study forecasts India's natural gas consumption to surge by 60% by 2030 and double by 2040, driven by increased CNG use in vehicles, cooking, and industrial applications. India's natural gas consumption is likely to rise by close to 60 per cent by 2030 and more than double by 2040, on the back of rise in usage of the fuel as CNG in automobiles and for cooking and industrial purposes, according to a study by oil regulator PNGRB. Consumption of natural gas, which is used to produce electricity, make fertilizer or turned into CNG for running automobiles and piped to household kitchens for cooking, is expected to rise from 187 million standard cubic metres per day in 2023-24 to 297 mmscmd by 2030 under 'Good-to-Go' scenario, the study by Petroleum and Natural Gas Regulatory Board (PNGRB) said.

Read More: https://energy.economictimes.indiatimes.com/amp/news/oil-and-gas/indias-natural-gas-consumption-to-more-than-double-by-2040-pngrb-study/121778725

PNGRB Notifies Tariff Reforms; Reduces ZONES to Two, Extends Benefit to PNG and CNG Users

The Petroleum and Natural Gas Regulatory Board (PNGRB) has notified the Second Amendment to the Natural Gas Pipeline Tariff Regulations, 2025, reducing the number of unified tariff zones from three to two and extending tariff benefits to city gas users across the country. In a statement, PNGRB said the reforms, approved in its recent board meeting, aim to deepen gas penetration and reinforce the "One Nation, One Grid, One Tariff" objective.

Read More: https://energy.economictimes.indiatimes.com/news/oil-and-gas/pngrb-notifies-tariff-reforms-reduces-zones-to-two-extends-benefit-to-png-and-cng-users/122242095?utm_source=most_read&utm_medium=sectionListing

Jal Jeevan Mission Reaches 155 Million Rural Homes, Minister Reports

The government has provided tap water to over 15.52 crore rural households under the Jal Jeevan Mission, up from 3 crore in 2019, according to Union Jal Shakti Minister C R Patil. Speaking in Lok Sabha, he highlighted that 25 lakh women from 5 lakh villages have been trained to test water quality, and safe drinking water could prevent 1.36 lakh child deaths annually. He also noted that the Centre has quadrupled the budget for drinking water compared to the previous UPA regime. The House approved the Demands for Grants for the Jal Shakti Ministry (2025-26).

Government PLANS Smart Meters to Generate Correct Water Bills

Delhi govt plans to overhaul the city's water distribution and billing systems by implementing smart meters across the city to address financial inefficiencies and improve Delhi Jal Board's (DJB) operation. Officials said that the smart meter implementation will address persistent billing inaccuracies. The current practice of meter readers submitting outdated or incorrect images has resulted in inaccurate billing, which eventually has led to a compilation of underpaid bills.

Read More: https://timesofindia.indiatimes.com/city/delhi/govt-plans-smart-meters-to-generate-correct-water-bills/articleshow/121734625.cms

AI, Predictive Analytics, and Autonomous Energy Systems

Maharashtra Cabinet Approves ₹500 Crore Agri-AI Policy for 2025–29

The Maharashtra cabinet has approved the MahaAgri-AI Policy 2025–29, earmarking ₹500 crore over the next three years to integrate AI, robotics, drones, and predictive analytics into agriculture. The policy envisions establishing innovation and incubation centers at four agricultural universities, in partnership with institutions like the IITs and IISc. It also aims to develop a leading independent Agri AI center and host an annual global summit on agri-tech, rotating across the state, to foster investor engagement and drive sustainable, scalable agricultural transformation

Read more- https://shorturl.at/OHTvp

Delhi's Dwarka Expressway Launches India's 1st AI Powered Smart Traffic System

India's National Highways Authority (NHAI), through IHMCL, has rolled out the Advanced Traffic Management System (ATMS) on the 56.5 km Dwarka Expressway and an additional 28 km stretch of NH 48 near Delhi—a first for the nation. The AI enabled system includes 110 high resolution PTZ cameras placed at one kilometer intervals, real time incident detection, speed display units, variable messaging signboards, and a central control room. It can identify 14 types of violations—such as overspeeding, lack of seatbelt, and triple riding—and automatically send e challans to authorities. With tighter traffic enforcement, quicker emergency responses, and improved commuter safety, this ATMS sets a new benchmark for smart highway management in India.

Read more- https://shorturl.at/WYpLK

Uttar Pradesh Launches Drone Training & 60% Subsidy Scheme for Farmers

The Uttar Pradesh government has rolled out a new initiative to promote "smart farming" through drone technology. Under the "popularisation of aerial spray" scheme for FY 2025–26, eligible farmers, agri machine banks, SHGs, FPOs, and pesticide retailers can receive drones at a 60% subsidy (up to ₹3.65 lakh per drone). A total of 101 farmers—one from each subdivision—will also receive training worth ₹35,000 each to handle pesticide and fertilizer spraying via drones. Applications are submitted online through the OFMAS platform. This move aims to modernize agriculture, enhance productivity, reduce manual labor, and improve crop management techniques across the state

Read more- https://tinyurl.com/3acpkjtx

Web3.0, Blockchain & Digital Trust in Energy Transactions

Telangana Govt Accelerates Blockchain Adoption with Remote Voting Pilot

The Telangana government is forging ahead as a blockchain innovation hub, intensifying efforts to deploy the technology across finance, agriculture, governance, and infrastructure. Key accomplishments include the mainstream adoption of T Chits, a blockchain-backed chit-fund platform, and pilot programs for seed traceability and vehicle registration to prevent fraud. Most notably, a remote voting trial utilizing AI-driven facial recognition and blockchain security achieved near-perfect integrity, indicating strong potential for secure, decentralized elections—though full-scale implementation is expected to take more time. The state is also planning a digital asset sandbox focused on tokenizing land and IP, along with launching the TGDeX (Telangana Digital Exchange) to support secure data exchange and experiential tourism through verified heritage applications

Read more- https://tinyurl.com/5c6ttrde

RETINA: Blockchain-Based Secure Energy Trading Framework for Smart Grids

A team of researchers has introduced RETINA, a cutting-edge framework for secure and scalable energy trading in smart grid environments. Designed to address cybersecurity and infrastructure gaps, RETINA combines blockchain technology, Public Key Infrastructure (PKI), and Web of Trust (WoT) to create a decentralized and trust-based trading system. It allows smart contracts to calculate transaction costs based on factors such as trust level, energy type (green or non-green), and geographical distance. Tested on a virtual network of 500 nodes, RETINA outperformed traditional WoT setups in both scalability and resilience. The system promotes renewable energy usage while ensuring robust data protection, paving the way for next-gen, AI-compatible smart grid applications. Further enhancements will focus on real-world deployments and advanced features.

Read more- https://tinyurl.com/5eb8bnfj

Innovation Showcases, Partnerships, and Global Events

INDIA EVENTS

01st – 02nd July 2025
World Renewable Energy Technology Congress & Expo, New Delhi
http://wretc.in/about_wretc-&-expo.html

04th July 2025
8th Edition of ET Edge Global Capability Centers (GCC) Summit 2025, Pune
https://et-edge.com/conferences/gcc/

08th - 11th July 2025
India Energy Storage Week (IESW), New Delhi, India
https://www.energystorageweek.in/

28 July 2025
CII Northern Region Energy Conclave 2025, New Delhi
https://cam.mycii.in/OR/EventDetailOR.tml?id=E000070275

12th – 14th September 2025
EPS Expo 2025, Ahmedabad
https://epsexpo.com/

04th - 05th November 2025
9th Distribution Utility Meet 2025, Mumbai
http://dumindia.in/

27th - 30th January 2026
India Energy Week, Goa, India
https://www.indiaenergyweek.com

10th – 14th March 2026
12th India Smart Utility Week (ISUW 2026),New Delhi
http://www.isuw.in/

13th March 2026
10th ISGF Innovation Awards 2025,New Delhi
http://www.isuw.in/

INTERNATIONAL EVENTS

02nd -06th June 2025
Asia Clean Energy Forum, Manila , Philippines
https://asiacleanenergyforum.adb.org/

3rd – 4th June 2025
Brussels, Belgium Eurelectric 2025 Power Summit
https://www.eurelectric.org/events/power-summit-2025/

3rd – 4th June 2025
Denver, CO 2nd Annual National Virtual Power Plant Summit
https://energyconferencenetwork.swoogo.com/vpps25/6802249

16th – 19th June 2025
CIRED, Geneva, Switzerland
https://www.cired2025.org/

18th -20th June 2025
Japan Energy Summit & Exhibition, Tokyo
https://www.japanenergyevent.com/

4th -5th August 2025
17th Latin American Smart Grid Forum, São Paulo, Brazil
https://www.smartgrid.com.br/eng

27th -29th August, 2025
Clean Energy Ministerial, Busan, Korea
https://www.cleanenergyministerial.org/

9th - 11th September, 2025
Enlit ASIA, Bangkok, Thailand
https://www.enlit-asia.com/

17 – 18 September 2025
Data Center Asia, Jakarta International Expo Convention, Jakarta 2025
https://www.datacenter-asia.com/jakarta/

30th September - 02nd October 2025,
APUA Annual Event, Cairo, Egypt
https://10times.com/egypt/power-energy

07th – 08th October, 2025
Innovation for Cool Earth Forum, Tokyo
https://www.icef.go.jp/

27th -31st October 2025
Singapore International Energy Week, Marina Bay Sands
https://www.siew.gov.sg/

18th - 20th November, 2025
Enlit Europe, Bilbao, Spain
https://www.enlit-europe.com/

02nd – 05th February 2026
DistribuTech International, San Diego, CA, USA
https://www.distributech.com/

17th - 19th March 2026
EN26 Conference & Exhibition, Adelaide Convention Centre, South Australia
https://www.energynetworks.com.au/events/en26-conference-exhibition/

25th - 27th March 2026
ASEAN (Bangkok) Smart Energy & Energy Storage Expo 2026, Bangkok, Thailand
https://www.aseancleanenergyexpo.com/

30 March – 1 April 2026
Egypt Energy Show – Egypes, Cairo, Egypt
https://shorturl.at/TAhPe

Join the Indian Delegation to Enlit Asia 2025 | 9 - 11 September | BITEC, Bangkok

ISGF is pleased to invite you to be part of the Indian delegation to Enlit Asia 2025, taking place from 9 to 11 September 2025 at BITEC, Bangkok, Thailand.

Enlit Asia is ASEAN's premier power sector event, bringing together over 12,000 attendees and 350 exhibitors from across the energy value chain — spanning generation, transmission, distribution, smart grids, and clean energy solutions. More on the event at ***www.enlit-asia.com.***

ISGF will coordinate one-on-one meetings, site visits, and networking opportunities with ASEAN utilities and technology providers. Participation is complimentary for electric utilities as part of the delegation.

Please send an email with details of nominated official(s) latest by 15 July 2025. For details, contact Ms. Reena Suri (reena.suri@indiasmartgrid.org).

Announcing India Smart Utility Week (ISUW 2026)

Announcing 10th ISGF Innovation Awards 2026

Save the Date for Distribution Utility Meet (DUM 2025)

ORGANIZER

ISGF India Smart Grid Forum

SUPPORTED BY

Energy Department Government of Maharashtra

Government of India Ministry of Power Central Electricity Authority

AIDA Collaboration | Innovation | Excellence

HOST UTILITIES

MAHAVITARAN

TATA POWER

CO - HOST UTILITIES

BSES Rajdhani Power Limited

BSES Yamuna Power Limited

DISTRIBUTION UTILITY MEET DUM 2025

9th Annual Conference of Power Distribution Utilities for Collaborative Growth

04 - 05 NOVEMBER 2025

HOTEL SAHARA STAR, MUMBAI

PROGRAM AT A GLANCE

04 November 2025 | Tuesday

- DUM Conference and Exhibition
- Welcome Dinner Reception

05 November 2025 | Wednesday

- DUM Conference and Exhibition

*Optional/Invite Only

CONFERENCE THEMES

- Policy and Regulatory Interventions for DISCOMs Sustainability
- Smart Metering and Digitalization of DISCOMs
- Artificial Intelligence Applications for Utilities
- Revision of Equipment Specifications to Address Rising Ambient Temperature
- Digital Energy Grids and the Emerging Era of P2P Energy Trading
- AI Data Centers - Opportunities and Challenges
- Grid Integration of RE and EV
- PPP Models for DISCOMs Sustainability
- AIDA Vision and Roadmap

KEY HIGHLIGHTS OF DUM 2024

- 603+ DELEGATES
- 362+ UTILITY OFFICIALS
- 39 UTILITIES
- 73 SPEAKERS
- 38 PARTNESR AND EXHIBITORS

www.dumindia.in | dum@indiasmartgrid.org | @indiasmartgridforum

@DUM_India | #Distribution Utility Meet 2025 #DUM25

For Partnership & Exhibition Inquiry Email at: sneha@indiasmartgrid.org