



GOOGLE EXPANDS UTILITY DEALS TO CURB DATA-CENTER POWER USE DURING PEAK DEMAND

Google (GOOGL.O), has signed agreements with five U.S. electric utilities in states from Arkansas to Minnesota to curtail its electricity use during periods of peak demand, the company said on Thursday, in its latest effort to secure power for fast growing data centers amid slow additions of new supply. Immediate access to large amounts of electricity has become one of the biggest obstacles in Big Tech's race to expand artificial intelligence technologies, which are developed in energy intensive server warehouses known as data centers.



With power supplies running short in some regions of USA, and New infrastructure often taking years to build, technology companies have recently taken unusual steps that have included constructing new power plants or bringing closed down nuclear units back online. Under the "demand response" agreements, Google will reduce electricity consumption at some data centers when demand on the grid is exceptionally high.

"This is a really important tool for meeting future demand," said Michael Terrell, Google's head of advanced energy. Power demand typically spikes on very hot or cold days, when homes and businesses ramp up cooling or heating, increasing the risk of rolling blackouts. Utilities and grid operators maintain extra reserves and have long contracted with large energy users — including manufacturers and cryptocurrency miners — to scale back consumption during peak periods.

Read More: <http://bit.ly/4bIDupj>

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GLOBAL STORIES ON SMART GRID

CEA Issues National Generation Adequacy Plan for 2026-27 to 2035-36

The Central Electricity Authority (CEA) India has issued the national generation adequacy plan for 2026-27 to 2035-36. The CEA has projected deployment of 80 GW of battery energy storage systems by 2035-36 as part of India's long-term generation planning framework. The plan targets a total installed capacity of 1,121 GW and envisages storage as a key enabler for integrating large-scale renewable energy into the grid. The plan projects solar and wind capacities of 509 GW and 155 GW respectively by 2035-36, alongside a total energy storage buildout of 174 GW/888 GWh, including 94 GW of pumped storage capacity.

Read More: <https://shorturl.at/hRdpq>

Philippines Secures Funding for USD 5 Billion Pumped Storage Hydropower Projects

The Philippines has secured funding for two pumped storage hydropower projects with a combined investment value of about USD 5 billion. The projects form part of the country's efforts to strengthen energy security, support renewable energy integration and improve grid stability. The planned facilities are expected to provide large-scale storage capacity by enabling surplus electricity generated during low-demand periods to be stored and dispatched during peak demand, helping reduce dependence on coal and support the country's broader energy transition strategy.

Read More: <https://shorturl.at/6GocM>

Grid EDGE DERMS: The Ultimate Enabler of The Decentralized Grid

DERMS form the foundation for real-time visibility and localized control of DERs. Beyond conventional demand response, these systems leverage predictive and self-learning algorithms to optimize performance, increase photovoltaic hosting capacity and support resilience-oriented microgrid operations. When integrated with advanced distribution management systems, utilities can manage DERs at scale and explore non-wire alternatives to costly infrastructure upgrades.

Read More: <https://tinyurl.com/5cv6t5j6>

Batam-Bintan-Karimun Corridor to Anchor Indonesia-Singapore Clean Energy Partnership

Batam-Bintan Karimun corridor is advancing plans to export clean electricity to Singapore for green industry and sustainable technology development. The initiative builds on the bilateral understanding between the two countries on cross-border clean energy cooperation and the development of sustainable industrial zones in the Riau Islands. The proposed partnership extends beyond electricity exports and is expected to support the development of green industrial zones, renewable energy-linked manufacturing and broader cooperation on low-carbon technologies.

Read More: <https://shorturl.at/J9P2n>

Hyundai Motors to Invest USD 6 Billion in Hydrogen, AI and Solar Hub in South Korea

Hyundai Motor Group is set to invest USD 6 billion to develop a high-tech innovation hub in Saemangeum, Gunsan, focused on hydrogen production, artificial intelligence and renewable energy. The project will include a 200 MW proton exchange membrane electrolyser plant to produce clean hydrogen using locally sourced renewable energy, with supplies targeted at buses, trams and other mobility applications. The group also plans to develop a gigawatt-scale solar portfolio by 2035.

Read More: <https://shorturl.at/5GhxB>

CES 2026: Showcasing Next-Gen AI Employee Robots

The Consumer Electronics Show (CES), held January 6-9 in Las Vegas, became a focal point for robotics news, highlighting how AI Employee systems and humanoid machines are moving beyond prototypes toward real work roles. Hyundai and Boston Dynamics publicly demonstrated the Atlas humanoid robot, showcasing its human-like movement and laying out plans for industrial deployment in automotive assembly by 2028 — a significant milestone in embodied robotics at a major tech showcase. Industry announcements also featured accessible household and service robots. SwitchBot's Onero H1 humanoid base — marketed as an AI household assistant capable of tasks like laundry — underscored the expanding role of robotics in everyday environments.

Read More: <https://tinyurl.com/336brxkr>



GLOBAL STORIES ON SMART GRID

The AI Revolution In January 2026: Next-Generation Technologies to Transform Manufacturing

On January 5, 2026, at CES 2026 in Las Vegas, NVIDIA CEO Jensen Huang declared, "The ChatGPT moment in robotics has arrived. This announcement marked the tipping point at which AI will move from virtual space to the physical world in earnest. NVIDIA has announced a new set of open models for physical AI. Of particular note are the "Cosmos" series, which has the ability to understand the world and make inferences and action plans, and the Isaac GR00T N1.6, which is dedicated to humanoid robots. These models show the way for robots that have been limited to a single task and difficult to program to evolve into general-purpose robots with reasoning capabilities.

Read More: <https://tinyurl.com/4stkfk7j>

Brazil Advances Energy Storage Regulation and confirms Dual Grid tariffs for BESS

Brazil's ANEEL established an "Autonomous Storage Agent" category, confirming a dual grid tariff structure for Battery Energy Storage Systems (BESS). While BESS operators must pay standard network tariffs when charging, the regulation offers strong incentives for co-located hybrid renewable projects to contract grid capacity 20% below their installed capacity, rewarding their ability to smooth injection peaks.

Read More: <https://tinyurl.com/y9bez5w3>

Google and Tesla Lead Coalition for Grid Optimization

The Utilize coalition wants to address the energy crunch by maximizing the power grid's efficiency through software tools, battery storage, and virtual power plants. Google, Tesla, Carrier, and other tech-focused companies believe the answer to meeting the growing energy demand is to maximize the existing power grid. They have formed Utilize, a coalition aimed at bringing together industry leaders, utilities, and think tanks to find ways to increase grid efficiency while avoiding costly new infrastructure. The coalition plans to use software-driven grid management, storage batteries, and virtual power plants to meet peak demand periods and balance the load. The group claims its efforts will allow faster grid connection for new AI data centers and manufacturing facilities and save consumers \$100 billion in electricity costs over the next decade.

Read More: <https://tinyurl.com/2asskez3>

Schneider Expands Grid Operations Stack With Digital Twin

Schneider Electric has rolled out a coordinated set of software updates and integrations aimed at how utilities prepare for, respond to, and recover from large-scale grid disruptions. The company unveiled the systems at DTECH 2026 in San Diego. The updates combine updates to Schneider's operational grid software with a new physics-based digital twin developed with ETAP, tying together planning models, real-time operations, and geospatial data.

Read More: <https://tinyurl.com/5fe5tbnj>

COP30 secures Carbon Neutrality Certification

Organizers of the upcoming COP30 climate summit in Belém, Brazil, announced the successful acquisition of ISO 20121 certification for Sustainable Event Management and ISO 14068 for verified carbon neutrality. The summit offset its carbon footprint through the voluntary cancellation of 130,000 Certified Emission Reduction (CER) credits generated by a UN-registered solid waste management project, establishing a precedent for sustainable execution in global diplomatic events.

Read More: <https://tinyurl.com/ycx4wjeb>

World leaders discuss AI future at India's global summit in New Delhi

The fourth, and most high-profile, day of a global artificial intelligence summit in India is under way with world leaders such as United Nations chief Antonio Guterres and French President Emmanuel Macron taking the floor to discuss how to handle the fast-advancing technology that is prompting investment enthusiasm and deep concern in equal measure. The huge gathering in New Delhi is the fourth in a series of international AI meetings that have been taking place since 2023 in France, South Korea and the United Kingdom. Job disruption, child safety and regulations have topped the agenda of this year's edition.

Read More: <https://tinyurl.com/ys7ku5s2>





US UTILITIES SCALE UP GRID-BOOSTING TECH TO MEET SURGING DEMAND

As demand for new U.S. power generation surges, rising grid congestion and the slow expansion of transmission capacity has spurred investments in grid-enhancing technologies that squeeze more capacity from existing infrastructure. Technologies including Dynamic Line Rating (DLR), Advanced Power Flow Control (APFC) and Virtual Power Plants (VPPs) are more economical and faster to deploy than new transmission infrastructure, which often takes decades to permit and build.

New transmission lines often face opposition from local communities or government authorities as well as supply chain challenges. The U.S. would need roughly 5,000 miles of new high-capacity transmission per year between 2025 and 2035 to ensure grid reliability but only 888 miles were built in 2024, according to the Department of Energy (DOE).

Grid-enhancing technologies could unlock over 80 GW of incremental peak capacity by reducing grid congestion and connection delays, according to research by RMI. "With energy demand projected to grow quickly, there's a need to expand transmission capacity in the near-term, which these technologies provide," said Adam Winer, Communications Managing Director at Advanced Energy United, an advocacy group that represents advanced energy and transportation businesses.

A wide range of grid-enhancing technologies are being developed and some are already being rolled out on a large scale. Dynamic line rating can optimize transmission rates based on weather conditions and is currently among the fastest-scaling technologies. A 2021 federal mandate requiring transmission providers to implement ambient-adjusted line ratings "created a clear compliance pathway, accelerating deployment relative to other technologies," Winer told Reuters Events. Topology optimization software, which allows transmission operators to re-route power around bottlenecks, has also been widely rolled out within wholesale markets, in part due to a relatively low cost of implementation, Winer said.

"Hardware-based upgrades—such as modular power flow control devices or advanced conductors—tend to scale more selectively," he added.

Read More: <https://bit.ly/4rReVww>

Article Contributed by India Smart Grid Forum





STRENGTHENING CAPACITY FOR GREENHOUSE GAS MITIGATION: PJCI'S COLLABORATIVE EFFORTS IN INDONESIA

January 2026 — Perkumpulan Jaringan Cerdas Indonesia (PJCI), also known as the Indonesia Smart Grid Association, reaffirmed its commitment to advancing sustainable energy systems by participating in a capacity-building program on greenhouse gas (GHG) mitigation for the industrial sector. The program was organized by the Center for Human Resource Development for Electricity, New and Renewable Energy, and Energy Conservation (PPSDM KEBTKE), under Indonesia's Ministry of Energy and Mineral Resources, in collaboration with the Indonesia-Denmark Energy Partnership Programme (INDODEPP).

PPSDM KEBTKE plays a pivotal role in strengthening the competencies of government professionals in electricity, renewable energy, energy conservation, and emissions control. Through structured training initiatives, it supports Indonesia's broader energy transition goals and its commitment to reducing greenhouse gas emissions.

PJCI's participation reflects its strategic focus on enhancing knowledge exchange, capacity building, and cross-sector collaboration in GHG mitigation. The organization recognizes that effective emission reduction extends beyond industrial processes and is closely linked to the integration of renewable energy, deployment of smart grid technologies, grid flexibility, and the adoption of energy storage systems. Representing PJCI, Ms. Istifa Shania Putri contributed to technical and policy discussions on clean energy technologies, emission accounting, and the role of smart grids in enabling low-carbon energy systems. In addition, Mr. Jimmy Agung, a PJCI VIP Member, brought valuable industry perspectives, highlighting the importance of collaboration between policymakers, technology providers, and the private sector. The four-day program, held from 12–15 January 2026 in Jakarta, combined classroom sessions, interactive discussions, and knowledge-sharing exchanges designed to address both conceptual and practical aspects of GHG mitigation. A key highlight of the program was a field visit to PT Ceres in Bandung, where participants gained first-hand insights into industrial emission management practices.

This training builds upon earlier capacity-building initiatives, including the Energy Efficiency in Industry program conducted in September 2025, and forms part of the broader Indonesia-Denmark energy cooperation framework set to expand from May 2026 over the next five years. Through its active engagement, PJCI continues to strengthen its role as a catalyst for innovation and collaboration in the energy sector. The knowledge and partnerships developed through such initiatives are expected to contribute meaningfully to Indonesia's transition toward a sustainable, low-carbon energy future.

Article Contributed by Perkumpulan Jaringan Cerdas Indonesia (PJCI)



AMI RANSOMWARE CYBER ATTACK



AMI is typically the first introduction to smart grid. They offer an easier business case to lower meter reading costs, collection costs, remote connect/disconnect mechanisms, and TOU tariff adoption. While they have often been discussed as easy prey to cyber-attacks such discussions have been dismissed as localized and without high impact.

Utility related global cybersecurity market is forecasted to grow at 18% per annum due to AMI, distributed RE, EV charging, and behind the meter prosumer devices. Cyber threats and attacks on utility infrastructure

are a recurring subject in the minds of experts. New attack modes are thwarted by new defense measures. The explosive growth of IoT devices and connectivity has often raised the need for overreaching cyber system protection.

Utilities use many digital platforms using both wired and wireless backhubs. Over 25 years, such digitalization efforts have led to platforms like AMI, ADMS, NMS, OMS, FLISR, VOLT-VAR, and GIS. The use of customer owned PV and energy storage is bringing a new retail dimension such as retail power trading. While the telecom trunk lines are typically fiber-optic network, the lateral branch and grid-edge data acquisition points are often wireless.

The cybersecurity industry works on an impact-based probabilistic model. The expensive and critical assets with damaging or longer restoration/recovery times get the maximum protection. At the grid-edge it is often relegated to third-party/vendor offered built-in security, with the premise being that any damage will likely be localized and not expensive to restore. While smart meters and wireless gateways are designed against cyber threats, they are not "end-to-end proofed" across millions of such data acquisition points. It is not practical.

The cyber protection track record thus far appears good. Despite millions of cellular and Wi-Fi networks in homes over two decades (garage door openers, sentry locks, CCTV cameras, Bluetooth, Alexa/Google assistants) there is little evidence of neighborhood wide disruptions. Rarely has a garage door opener been opened unauthorized or a Bluetooth access or a CCTV camera been hacked. Most such cybersecurity violations occur due to divulgence of personal security data to unsuspecting criminal elements.

A ransomware attack on Canada's Nova Scotia Power AMI system took place on March 19, 2025, and was detected only on April 25, 2025. The breach did not result in any power outages but affected 280,000 smart meters (later revised to 377,000). The breach included theft/compromise of customer personal and banking data with a few claims of bank accounts being cleaned out. The utility has not shared details, and no threat actor has taken credit for this ransomware attack.

The smart meters involved were latest generation smart meters. Per the utility statement, "the breach has impacted on the utility's ability to get readings directly from the smart meters attached to homes". In June 2025, the utility began issuing estimated bills. This angered some residents alleging inflated estimation and lack of credit for rooftop PV generation. In a side bar revelation, it appears the breach may have impacted part of the contractor bill-payment system resulting in delayed payments of thousands of dollars over a few months.

The Nova Scotia Energy Board has formally opened a review into this breach to examine (a) the breach itself; (b) fairness and legalities to estimated billing methodology; and (c) policies for collecting and retaining personal data. Seeking confidentiality, the utility submitted a redacted incident report on Dec 23, 2025. The AMI restoration may take till end-March 2026 to complete this task fully.



The above incident, its scale and reach into smart meters, telecom backhails and the AMI system, begs the question, whether the least suspected area of the grid-edge has now become the most vulnerable area for high impact cyber-attacks. A full analysis will reveal which areas in the AMI network were impacted. The impact on the affected rate payers is likely to be far higher on a personal basis than the millions the utility may spend to fix this. These are:

1. Rate-Payer – (a) monthly cashflows due to inaccurate overbilling estimates and lack of PV credit offsets; (b) banking credit issues related to account and identity theft; and (c) future vulnerability due to compromised personal data.
2. Regulatory – (a) future vulnerabilities; (b) whether costs to fix the breach should be borne by rate-payer; and (c) the risk associated with personal data held by the utility (an asset or a liability).
3. Utility – (a) re-architecting cyber security at the grid-edge; and (b) whether a catastrophic loss insurance would now be prudent to obtain.

In my view, a new set of questions needs to be asked, not so much from a technological standpoint but more from an everyday human impact standpoint, i.e. (a) what criteria would limit people data from being collected; (b) what mechanisms would limit individual hardship and financial losses; and (c) can the regulatory or the utilities themselves offer such risk assurance.

The time for simplicity may have arrived. It may not always be about productivity, cost optimization and value release to the utilities themselves, but potential consequences and resultant harm to ordinary customers.

I would argue that such incidents impact rate payers (on a personal basis) far more than the millions the utility may spend to fix this.

Article contributed by Ravi Seethapathy, GSEF Ambassador for Americas

International Smart Grid Action Network



The 12th ISGAN Awards of Excellence

COMPETITION THEME
Excellence in Long-Term Planning of Smart Distribution Grids under Uncertainty

ELIGIBLE PROJECTS
Eligible projects must demonstrate a clear focus on long-term planning of smart distribution grids under uncertainty, showing how they have contributed to improving planning processes that lead to informed real-world decisions, investment priorities, or operational strategies. Under this condition, eligible projects include:

- Adaptive or Scenario-Based Distribution Network Planning
- Distributed Energy Resource (DER) Hosting Capacity and Interconnection Assessment
- Digitalization of Distribution Network Infrastructure
- Integrated Non-Wires Alternatives (NWA) Evaluation and Deployment
- Resilience Enhancement and Climate Risk Mitigation
- Asset Health-Based Optimization and Reinforcement Planning
- Stakeholder Engagement and Policy Alignment
- Cost Efficiency and Tariff Impact Assessment

IMPORTANT DATES

- DEADLINE FOR SUBMISSION OF APPLICATIONS
: 31 MAY 2026
- NOTIFICATION OF ASSESSMENT RESULTS
: 20 JULY 2026
- AWARDS CEREMONY:
• DURING THE 17th CLEAN ENERGY MINISTERIAL (CEM17)
• OCTOBER 2026, RIYADH, KINGDOM OF SAUDI ARABIA
- PUBLICATION: IMMEDIATELY FOLLOWING THE CEREMONY AND THEREAFTER

FOR MORE INFORMATION, VISIT: WWW.IEA-ISGAN.ORG







International Events

02nd – 05th February 2026

Distributech International, San Diego, CA, USA
<https://www.distributech.com/>

04th - 06th February 2026

Korea Smart Grid Week 2026, COEX in Seoul, South Korea
<https://www.ksga.org/eng/business/KSGW/about.do>

10th - 14th March 2026

12th India Smart Utility Week (ISUW 2026), New Delhi
<http://www.isuw.in/>

17th - 19th March 2026

EN26 Conference & Exhibition, Adelaide Convention Centre, South Australia
<https://www.energynetworks.com.au/events/en26-conference-exhibition/>

24th - 25th March 2026

Lisbon Energy Summit & Exhibition 2026, Lisbon, Portugal, www.lisbonenergysummit.com

30th March – 1st April, 2026

Egypt Energy Show – Egypes, Cairo, Egypt
<https://www.egypes.com/>

26th – 30th April 2026

25th WPC Energy Congress, Riyadh Saudi Arabia,
<https://wpcenergy.org/>

19th–21st May 2026

World Utilities Congress, Abu Dhabi,
<https://www.worldutilitiescongress.com/>

20th -21st May, 2026

ADELATAM 26
Buenos Aires, Argentina
www.adelataamconferencia.com

26th - 28th May, 2026

Japan Energy Summit & Exhibition, Tokyo Japan,
<http://japanenergyevent.com/>

08th - 11th June, 2026

Asia Clean Energy Forum (ACEF) 2026, ADB Headquarters, Manila
<https://asiacleanenergyforum.adb.org/>

9th - 10th June 2026

CIREC Brussels Belgium
<https://2026brussels.cired.net/>

22nd - 23rd June 2026

Iredonline 2026: Battery Energy Storage Plants in Power Systems – Markets, Technologies and Regulation
<https://ired-online.der-lab.net/>

23rd - 28th August 2026

CIGRE, Paris Session 2026, Palais des Congrès, Paris, France,
<https://session.cigre.org/>

1st - 3rd September 2026

Middle East Energy Dubai World Trade Centre, Dubai,
<https://www.middleeast-energy.com/en/home.html>



October, 2026

17th Clean Energy Ministerial (CEM17),
October 2026, Riyadh, Kingdom
of Saudi Arabia
<https://www.cleanenergyministerial.org/>

6th - 7th October 2026

18th Latin American Smart Grid
Forum, São Paulo, Brazil,
<https://www.smartgrid.com.br/eng>

12th - 15th October, 2026

World Energy Congress
Riyadh
<https://worldenergycongress.org/>

26th - 30th October 2026

Singapore International Energy Week
2026 Singapore, Marina Bay Sands,
Singapore.
<https://www.siew.gov.sg/>

2nd - 5th November, 2026

Future Power Expo Riyadh Front Exhibition
& Conference Center ADIPEC, Abu Dhabi,
United Arab Emirates,
<https://www.adipec.com/>

9th - 20th November 2026

COP 31- UN Climate Change Conference,
Antalya, Türkiye,
<https://unfccc.int/cop31>

10th - 12th November, 2026

Enlit Europe
Vienna, Austria
<https://www.enlit-europe.com/>

12th - 14th January 2027

World Future Energy Summit (WFES),
<https://www.worldfutureenergysummit.com/> ADNEC Centre Abu Dhabi,

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