

Celebration of Smart Grid Innovation at CEPSI 2018 Offers A Glimpse into The Future of Energy

CEPSI is one of the biggest and most important events of the **Association of the Electricity Supply Industry of East Asia and Western Pacific (AESIEAP)** held bi-annually. This year CEPSI was held in Kuala Lumpur hosted by Tenaga Nasional Berhad (TNB). It is also the most prominent electricity supply industry conference in East Asia and the Western Pacific region.

Trends and breakthrough technologies were discussed and debated at the Conference of Power and Electricity Supply Industry 2018 (CEPSI 2018) in Kuala Lumpur from September 17th to 22nd, 2018

Innovation and greater collaboration among energy stakeholders, especially consumers, are some of the key trends predicted to shape the future of the energy sector.

2000 plus energy experts from around the world shared their insights and predictions about the energy ecosystem of the future at CEPSI.

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Global Stories on Smart Grid

ARPA-E funds research on energy storage that can last for days

ARPA-E, the US Department of Energy's blue-sky research program announced \$28 million in R&D grants for 10 projects aimed at delivering energy storage systems that can last not just hours, but potentially days. The projects being funded by ARPA-E's DAYS program — a tortured acronym of sorts standing for "Duration Addition to electricitY Storage" — are targeting "durations of 10 to approximately 100 hours, opening significant new opportunities to increase grid resilience and performance," according to this week's announcement. Importantly, all are working on systems "that are deployable in almost any location," as opposed to massive pumped hydroelectric projects that make up 95 percent of the country's total energy storage capacity today, and practically all of its long-duration storage.

Read More: <https://bit.ly/2NWQBdH>

Simec Atlantis reveals world's largest tidal turbine

Simec Atlantis Energy, the company behind the world's largest planned tidal stream project in the world, unveiled recently designs for its new 2MW tidal power turbine system – the largest and most powerful single axis turbine available on the commercial market. 2MW AR2000 is the culmination of 15 years of investment, relentless experimentation, rigorous testing, and subsea operation. More specifically, the AR2000 has been in development for over two years and is based on the success of its predecessor, the AR1500 which is in operation at the 6 MW MeyGen tidal stream array off the north tip of Scotland. Simec Atlantis Energy expect that the turbine will run with a 25-year life span and will be offered as part of a complete rotor to grid tidal generation system which includes an array architecture allowing multiple turbines to be connected in parallel which, in turn, will reduce the cost and impact of the subsea infrastructure.

Read More: <https://bit.ly/2OE3pmm>

Socomec and Energon develop a storage-based electric vehicle charging station solution for Czech Utility PRE

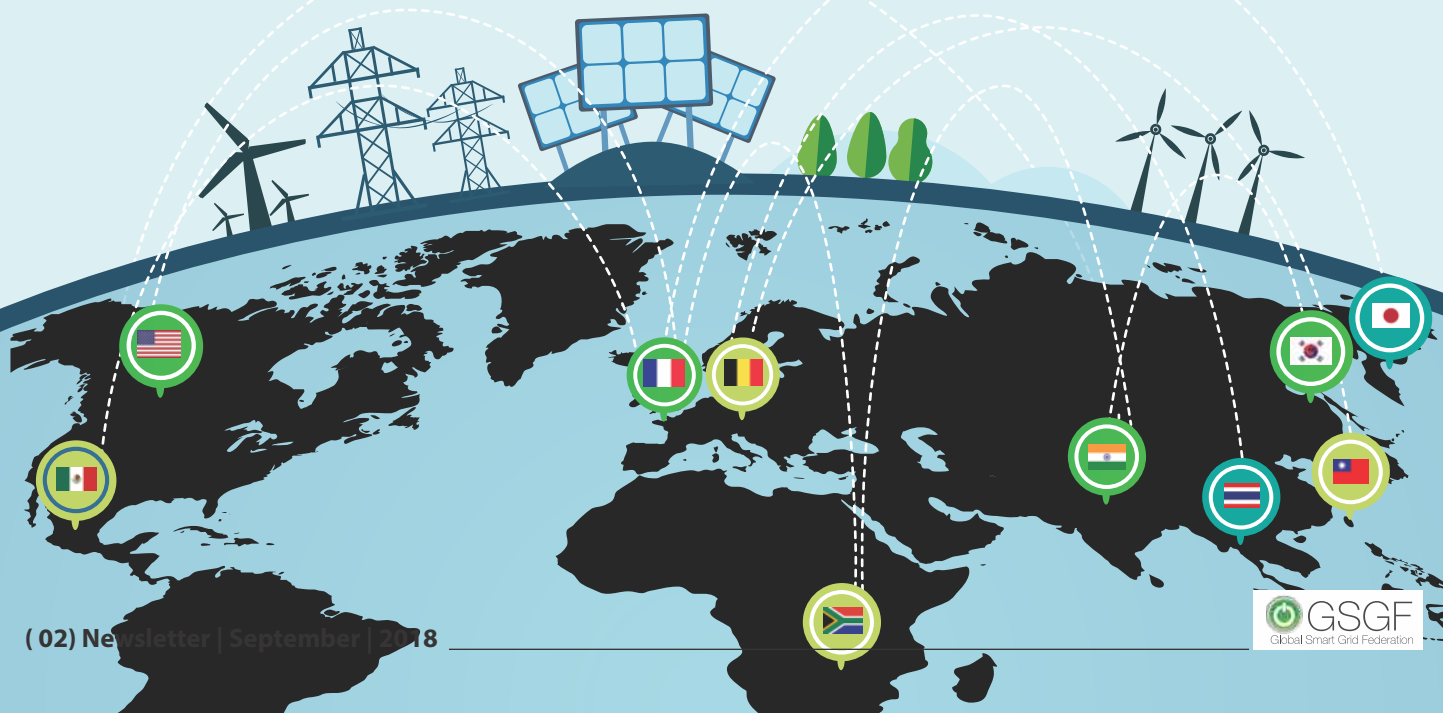
Building out an electric vehicle (EV) charging infrastructure and looking toward how the charging process can be optimised to limit the impact on the networks are issues that are being grappled with in countries across the world. Much of the focus has been on managed charging and vehicle to grid (V2G), i.e. in managing the charging at the individual vehicle level. A new solution developed for the Czech utility "PRE" takes the alternative approach of seating the management function at the charging station level. In a presentation at the first Engerati Meet on EVs and the Grid, Socomec said that there were three challenges presented for the project – that it should not lead to grid congestion, that the global infrastructure and energy costs be optimised to reduce the payback time, and that energy quality is not impacted. The solution that was implemented comprises three charging points, one DC and two AC, along with rooftop solar PV and a battery storage system.

Read More: <https://bit.ly/2PPOfKN>

IRENA publishes report titled "Offshore innovation widens renewable energy options"

Recent data and research findings confirm the rapid capacity growth, ongoing cost and performance improvements, increasing technological sophistication and continued need for international standardisation for new renewables, such as offshore wind power and nascent ocean energy technologies. This brief by the International Renewable Energy Agency (IRENA) provides background and recommendations to G7 policy makers on how to step up progress, particularly to broaden the world's future energy options and meet international climate goals. It highlights opportunities, challenges and the vital need for international co-operation to spur the global energy transformation.

Read More: <https://bit.ly/2O3JnVr>



Global Stories on Smart Grid

U.S. Department of Energy announces \$80 Million investment in Advanced Vehicle Technologies Research

The U.S. Department of Energy (DOE) recently announced the selection of 42 projects totalling \$80 million to support advanced vehicle technologies that can enable more affordable mobility, strengthen domestic energy security, reduce our dependence on foreign sources of critical materials, and enhance U.S. economic growth. This work supports DOE's goal to invest in early-stage research of transportation technologies that can give families and businesses greater choice in how they meet their mobility needs. "Improving the affordability of transportation for American consumers and businesses keeps our economy moving," said U.S. Secretary of Energy Rick Perry. "By investing in a broad range of technologies, DOE is ensuring America remains at the forefront of innovation."

Selected projects cover the following areas: Batteries and Electrification (\$31.9 million); Materials (\$8.4 million); Technology Integration (\$26.8 million); Engines and Fuels (\$10.1 million); Off-road and Fluid Power Systems (\$3.4 million)

Read More: <https://bit.ly/2Q8PgyO>

Massachusetts Deploys Utility-Scale Energy Storage

National Grid has begun operating a vanadium redox-flow battery (VRB) with its 1-MW solar PV array in Shirley, Mass., to demonstrate utility operation of storage. The company was the prime recipient of an \$875,000 Massachusetts grant awarded to an application team that also includes Vionx Energy, Worcester Polytechnic Institute and the Energy Initiatives Group. (See Massachusetts Awards \$20M in Energy Storage Grants.) Carlos Nouel, vice president of innovation and development at National Grid, revealed that "the Shirley project will serve as a test bed for integrating storage and solar through the use of flow batteries, and support the development of new frameworks for dispatching stored solar power."

Read More: <https://bit.ly/2xhfXcJ>

NY Public Service Commission approves environmental review of energy storage roadmap

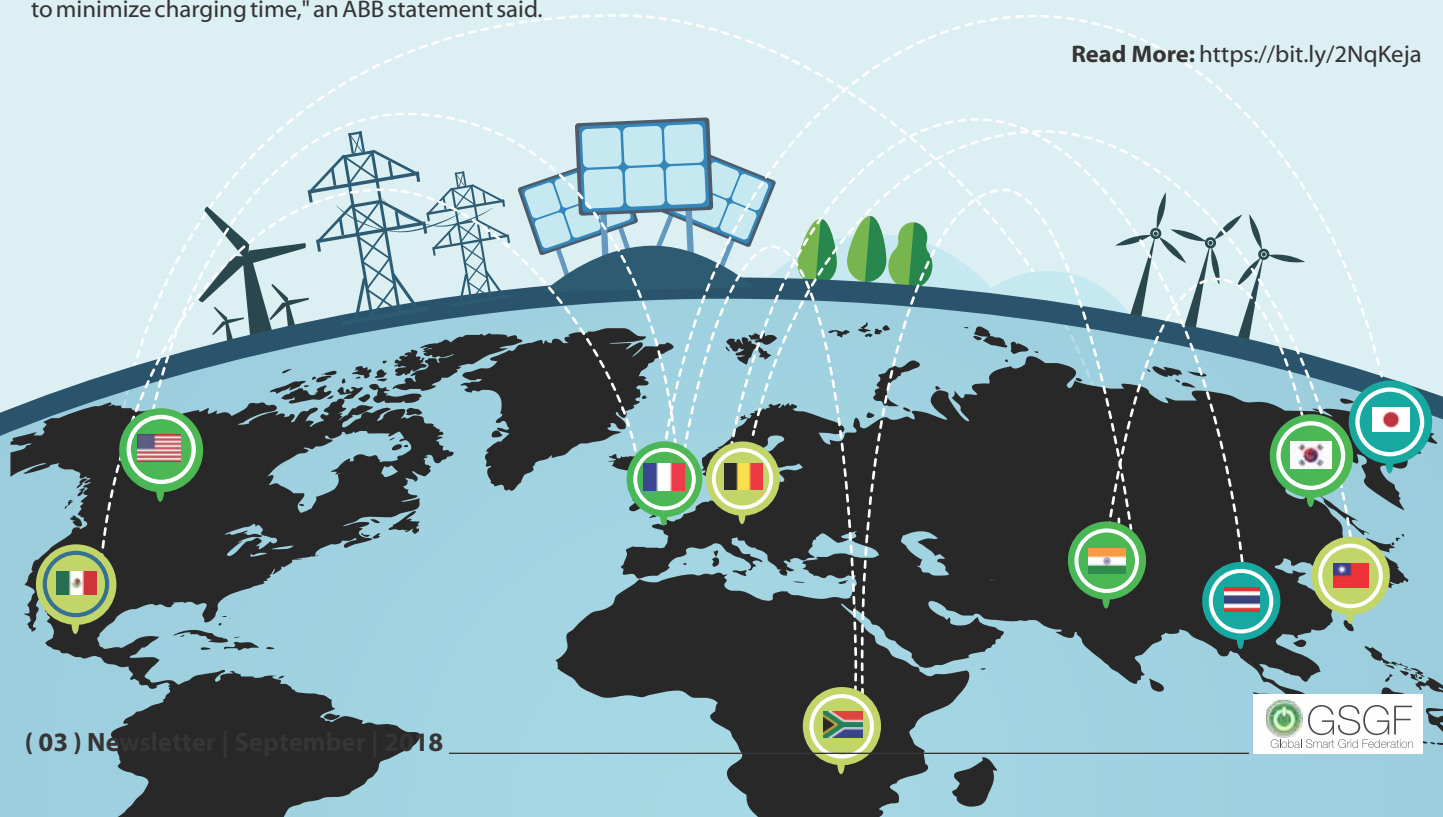
The New York State Public Service Commission (NYSPSC) approved its environmental review of New York's Energy Storage Roadmap and expanded the types of renewable energy systems that are eligible for compensation. The state's Energy Storage Roadmap outlines the policy, regulatory, and programmatic actions necessary to achieve the state's goal of having 1,500 megawatts (MW) of energy storage by 2025 — the equivalent electricity demand of one-fifth of all New York homes. In its environmental review of the roadmap, the commission found several positive environmental impacts related to reductions in peak load demand during critical periods, increases in the overall efficiency of the grid, and/or displacement of fossil fuel-based generation. These will lead to positive public outcomes, including economic, health and environmental benefits. Specifically, it will create approximately 30,000 jobs associated with energy storage research and development and mitigate the effects of climate change with about 2 million metric tons of greenhouse gas (GHG) emissions avoided.

Read More: <https://bit.ly/2xDDJz3>

ABB unveils fast-charging system to power a car in 8 mins for 200 km in India

Power major ABB unveiled its fast-charging system, which can power batteries of a car in flat 8 minutes to run up to 200 km at Move Global Mobility Summit in the capital. "For the first time in India, ABB showcased the Terra HP fast-charging system, which can power up a car for 200 km in just a single charge in just 8 mins. It is ideally suited for highway rest stops and petrol stations, where the highest power is required to minimize charging time," an ABB statement said.

Read More: <https://bit.ly/2NqKeja>



Member Updates



GridWise Alliance's upcoming gridCONNEXt event

GridCONNEXt 2018 will convene world-class experts to explore diverse perspectives and uncover market innovations poised to redraw the electric utility landscape. With the growth of clean energy, energy storage and electrified transportation - along with new business and regulatory models supporting investments in DERs and grid modernization - this event offers an unprecedented opportunity to connect with key stakeholders and explore what's next in the utility sector.

The event is scheduled at Washington, D.C. in December 4-6, 2018 at the Liaison Capitol Hill Hotel to track the convergence of energy, transportation, storage, and the grid. gridCONNEXt will bring together 300 business, utility, finance, and policy leaders to explore the most important topics impacting the energy markets. Secure your spot and register now.

GSGF Updates

Indonesia Smart Grid Initiative (PJCI) joined GSGF as Chartered Member

Established in July 6th, 2015, PJCI is a legal entity that received the principal license of association from the Ministry of Law and Human Rights Decree on August 17th, 2015. Initiated by concerns from numerous parties towards the development of Smart Grid technology in developed countries and neighboring countries, Indonesians intellectuals from various well known University along with utility practitioners established an organization named "Prakarsa Jaringan Cerdas Indonesia (PJCI)" or Indonesia Smart Grid Initiative with the main objective to prepare technology, regulation, education and entrepreneurial institutions as well as forming systematic roadmap for Smart Grid implementation as a solution towards Smart Indonesia.

Mr. Eddie Widiono is the Founder & Chief Advisor of PJCI. Mr. Anton Budiarto is Vice Chairman of the Board of Executives at PJCI.

GSGF welcomes PJCI as a Chartered Member of GSGF!

Partnered Events: Supported by GSGF



EP China 2018
October 15-17/2018, China



IEC 61850 Global 2018
October 16-18/ 2018, Germany



India Smart Utility Week 2019
March 12 - 16/ 2019
Manekshaw Center, New Delhi, india



ICSG Istanbul 2019
April 25-26, 2019, Turkey



6 - 8 November 2018, Vienna, Austria



For participation in the above events
please write to info@globalsmartgridfederation.org

GSGF Face to Face Meeting in Vienna, Austria on October 15, 2018

GSGF is organizing the second GSGF Face to Face Meeting on October 15, 2018 in Vienna, Austria.

GSGF members will also have a Luncheon Meeting with ISGAN members to discuss mutual collaboration.

Malaysian Power Utility ventures into High Speed Broadband (HSBB) – Article by GSGF Ambassador Dr. Ir. Cheong Kam Hoong



Tenaga Nasional Bhd (TNB), the largest power utility in Malaysia, announced on 6 Sep, 2018 that it has initiated a pilot project this month in the state of Malacca to assess the technical, safety and commercial viability of using TNB's electrical infrastructure in providing High Speed Broadband (HSBB).

The pilot project, to be completed by the end of 2018, will cover 1,100 households initially. Households will gain access to high speed broadband (HSBB) network that will be made available through TNB's owned fibre optics which forms part of the company's existing data communication network.

Currently, the fibre optics network is mainly used for its grid operation, as a backhaul for its IT Systems spread across the country, and to support its Smart Grid Initiative. These applications do not consume much bandwidth currently. Part of the remaining bandwidth is also leased out to certain telco as "black fibre".

By using it to provide HSBB, not only the bandwidth of the fibre optics can be further optimised, the cost of the network can also be shared by the various initiatives. This

new HSBB initiative will also create another potential stream of revenue for the utility, which is now operating under a more challenging environment.

This HSBB pilot project has the full support from the Ministry of Communication & Multimedia Malaysia and the Ministry of Energy, Science, Technology, Environment and Climate Change. It is aimed at accelerating the implementation of the government's National Connectivity Plan (NCP) that will allow faster, cheaper and wider Internet accessibility.

The pilot project will also be the platform to test the concept of open access. The platform is expected to stimulate active participation from new and existing providers in backhaul and retail broadband that will create competition that should push broadband prices down for the benefit of Malaysians.

GSGF at a glance

Chartered Members



Think Smart Grids



India Smart Grid Forum



Japan Smart Community Alliance



Korea Smart Grid Association



Smart Grid Mexico



Prakarsa Jaringan Cerdas Indonesia (PJCI)



GridWise Alliance

Utility Members



Electricity Generating Authority of Thailand (EGAT)



Electricity Supply Commission of South Africa (ESKOM)



EDM Mozambique



Green Business Certification Inc.



Florence School of Regulation (FSR)

Associate Members

Current Working Groups

- Smart Grid Roadmaps:
Chair – Smart Grid Mexico
- Smart Grids for EVs:
Chair – Think Smartgrids, France

Working Groups in Pipeline

- Blockchain for Utilities
- AI and Advanced Analytics for Utilities
- Robotic Process Automation for Utilities

Contact us for more information.

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