

The Digital Transformation of Utilities: Meeting the challenge of integrating data to serve networks and customers – a white paper by Think SmartGrids, France

The digital transformation of electrical systems, a response to the major challenge of global warming. The latest IPCC report illustrates the urgent need to act on global warming. Energy is at the core of this action, and the transformation of electrical systems has already been engaged in France and across Europe. The rapid expansion of renewable energy, the transformation of consumption patterns and uses, and the introduction of new players are all factors transforming the electrical system and changing the role of transmission and distribution system operators.

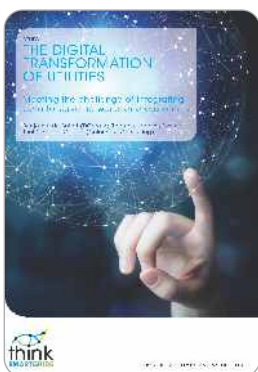
In a rapidly changing system, network planning and security are becoming increasingly complex. Nonetheless, the fact remains that the growth of decentralized production requires reconciling several territorial scales, from regions in the European Union, as well as the United States.

In this context, it is the responsibility of grid operators to ensure the permanence of public service missions such as the continuity of power supply, the electrical solidarity between territories, and the integration of renewable energies, while controlling the costs for the community. Faced with these multiple challenges, the aim is to render the grids more flexible, more scalable, and to optimize the management of existing lines. The energy grids of tomorrow therefore must be digital. Their ability to adapt easily to changes in their environment, due to scalable and easily reconfigurable technologies, will be a key asset to enabling a low-cost energy transition and maximizing value creation for citizens.

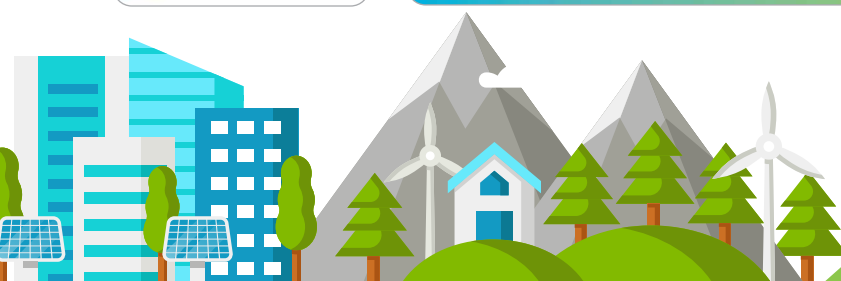
For more details visit : https://extranet.thinksmartgrids.fr/?get_group_doc=9/1543222684-ThinkSmartgrids_report_data_nov2018.pdf

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This study was conducted by the Data & Digital Transformation working group of the association Think Smartgrids.



Global Stories on Smart Grid

Afghanistan invites expression of interest for Solar Projects

Ministry of Energy and Water (MEW) of Afghanistan has invited expressions of interest from developers to set up 2 GW of grid-connected solar photovoltaic (PV) projects in the country. According to MEW, 400 MW each of grid-connected solar PV each will be developed in Kabul, Nangarhar, Kandahar, Herat, and Balkh provinces of Afghanistan. A single bidder must bid for a minimum 50 MW of grid-connected solar PV in each province and the land for each project will be allocated from the government.

Read More: <https://bit.ly/2UTGw1M>

AfDB Backs Nigerian Off-grid

The African Development Bank mobilized 200 million USD to support the Nigerian power sector. This funding will support the efforts made in the electrification of rural areas, facilitating the deployment of off-grid solutions by private investors, as well as the implementation of electrical systems for federal universities. All of these accompanying measures are implemented as part of the Nigeria Electrification Project (NEP) conducted by the Rural Electrification Agency (REA). They are part of the government's ambition to achieve universal access to energy by 2030.

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

World Bank and AFD Working on Solar Risk Mitigation

The World Bank and Agence Francaise de Developpement (AFD) are jointly working on a Solar Risk Mitigation Initiative (SRMI) to improve solar energy deployment in some of the world's poorest countries. The initiative's integrated approach includes support for the development of an enabling policy structure in the selected countries and a new digital procurement (e-tendering) platform to streamline solar auctions is targeting relatively small solar projects, those under 20 MW.

Read More: <https://bit.ly/2AI3SEC>

Arizona adopts new EV policy

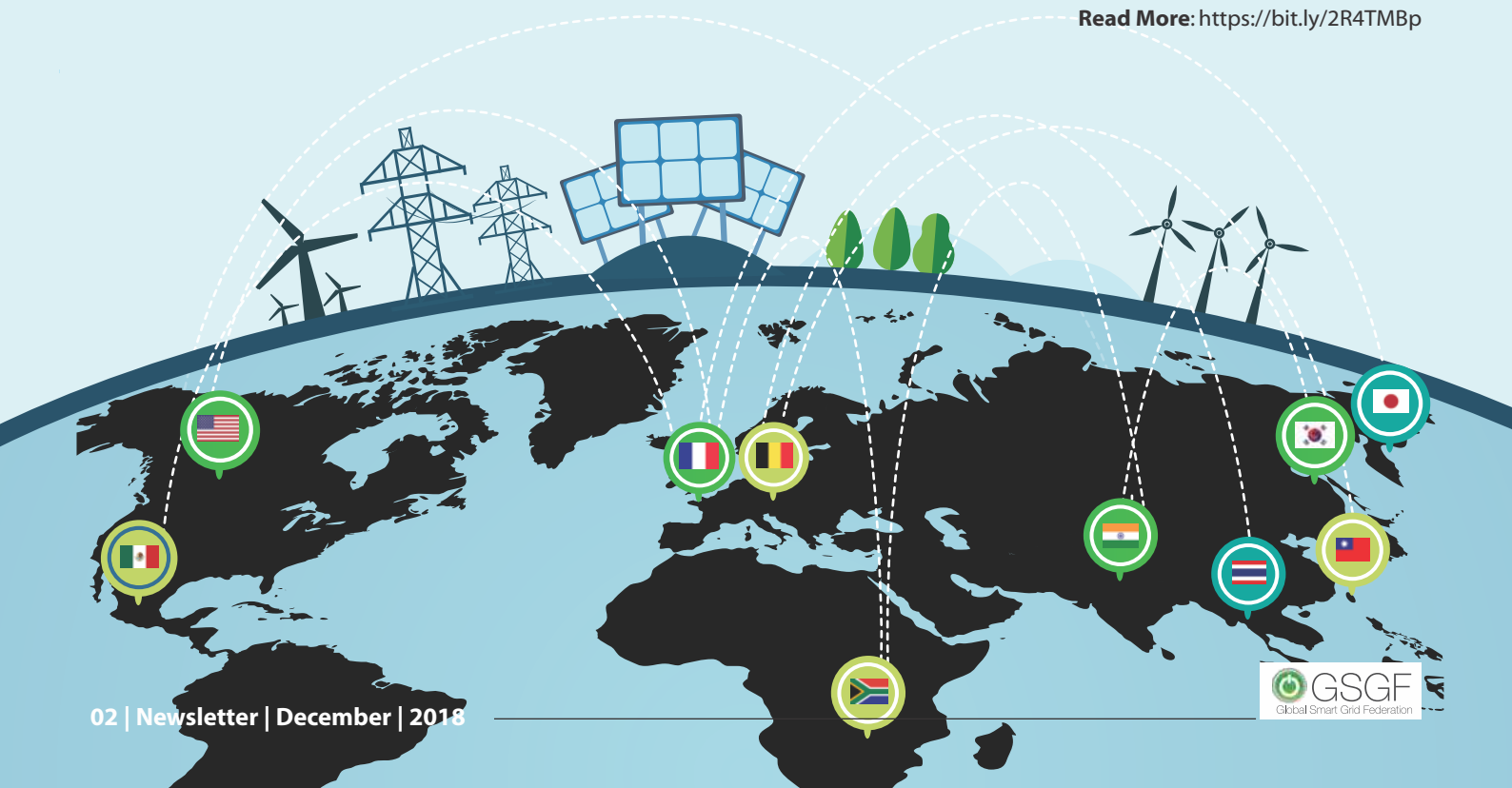
The Arizona Corporation Commission adopts an electric vehicle (EV) policy that encourages investor-owned utilities to develop new rates and pilot programs supporting EV growth, and which ensures recovery of "prudent costs" spent to develop charging stations. The EV policy calls on utilities to propose optional rate design tariffs to encourage off-peak charging, and to develop outreach and education programs focused on EVs, infrastructure and electrification of the transportation sector.

Read More: <https://bit.ly/2rRwUY5>

European Commission approves reductions in surcharges for energy-intensive companies in Greece

The European Commission has approved, under EU State aid rules, reductions granted to energy-intensive companies on a surcharge to finance support for renewable electricity production and high-efficient cogeneration in Greece and these reductions will only be applied to energy-intensive companies exposed to international trade. Furthermore, Greece submitted an adjustment plan to align the level of reductions for all eligible companies and to phase out the reductions after a transitory period for non-eligible companies that were benefitting from a surcharge reduction until now.

Read More: <https://bit.ly/2R4TMBp>



Global Stories on Smart Grid

First-ever EV charging security requirements released

The first-ever cyber-security requirements for electric vehicle (EV) charging infrastructure were launched by ENCS, the European Network of Cyber Security, and EDSO, the European Distribution System Operators' Association for Smart Grids. The requirements, that are applicable throughout Europe, provide municipalities and distribution network operators with a practical set of considerations when procuring EV chargers and harmonise security standards across the continent.

Read More: <https://bit.ly/2T8BI79>

BMW AG and Porsche develop ultra-fast prototype charger

MW AG and Porsche launched a charging station that can charge electric vehicles with enough power to drive 100 kilometers (62 miles) in less than three minutes, pushing ahead of Tesla Inc. in the race to make battery-powered cars more convenient. The ultra-fast prototype charger has a capacity of 450 kilowatts, more than triple that of Tesla's Superchargers.

Read More: <https://bloom.bg/2QNAmRA>

California makes solar power compulsory for new homes

California became the first state in the United States to require homes built in 2020 and later be solar powered, following a vote by the Building Standards Commission. The decision is estimated to add \$10,000 to the cost of building a single-family home - about \$8,400 from adding solar and about \$1,500 for making homes more energy-efficient. But lower utility bills over the 30-year lifespan of the solar panels are expected to offset these costs.

Read More: <https://bit.ly/2Lzb1FR>

New York realigns the state energy storage target to 3 GW by 2030

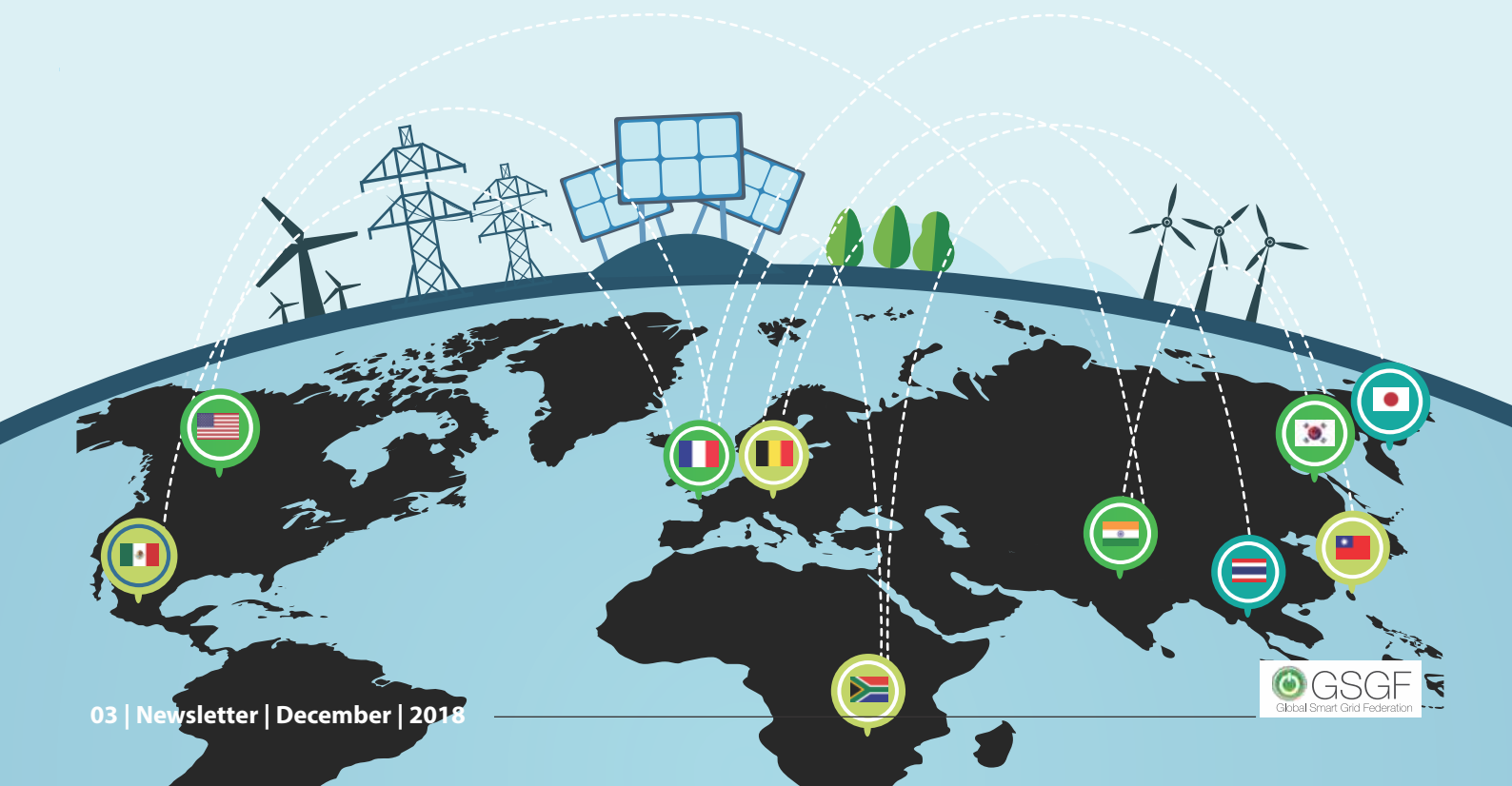
The New York State Public Service Commission approved two initiatives to dramatically increase New York's energy efficiency and energy storage targets to combat climate change. The new energy efficiency target for investor-owned utilities is expected to more than double utility energy efficiency progress by 2025, reducing the state's energy consumption by the equivalent of fuelling and powering 1.8 million homes. The energy storage initiative sets New York on a trajectory to achieve 1,500 MW of storage by 2025, enough electricity to power 1.2 million homes, and up to 3,000 MW by 2030.

Read More: <https://bit.ly/2UE2GVw>

UK plans largest retail EV charging network

Volkswagen and Tesco have collaborated to roll out the largest retail network of electric vehicle (EV) chargers across the UK. The charging network will comprise of 2,400 EV charging bays to be deployed at 600 Tesco stores within the next three years. The charging bays will be based in Tesco Extra and Superstore car parks throughout the UK and will be installed by UK-based independent public charging network operator, Pod Point. Customers will be able to charge their electric cars using a standard 7kW fast charger for free or benefit from the use of a rapid 50 kW charger for a small cost in line with the market rate.

Read more: <https://bit.ly/2QA8Gzx>





gridCONNEXt 2018

Diverse Utility Perspective showcased at the 2nd Annual Event of GridWise Alliance in Washington, DC, 4th -6th December, 2018

GridWise Alliance in association with Clean Edge, Inc organized its second edition of gridCONNEXt conference which was held in Washington D.C, from 4th to 6th December, 2018. The event brought together business, utility, regulators, finance and policy leaders to explore the most important topics impacting the grid and uncover market innovations poised to redraw the electric utility landscape. The conference theme explored the “convergence of energy, transportation, storage and the grid”

GridWise Alliance CEO Steve Hauser stated that “Dramatic shifts in business and policy models – along with technology innovation – are reshaping the electric utility landscape at an unprecedented rate”. He further stated that “gridCONNEXt 2018 will once again convene companies, regulators, investors, and utilities to explore the convergence of energy, transportation, and storage – and uncover what it means for a smart, connected, and resilient grid.”

“Our mission is to provide electric utility stakeholders with an unprecedented venue to collaborate, share best practices, and create the future of the electric utility industry,” explains Clean Edge Managing Director and conference co-producer Ron Pernick. “Attendees will hear from industry and policy experts via inspirational keynotes, insightful fireside chats, and expert-rich panel discussions.”

Confirmed premier partners included CentrePoint Energy and IteL. Supporting and contributing partners included Exelon, Ladis+Gyr, ABB and Itron.

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

GSGF Updates

Innovation for Cool Earth Forum (ICEF) Held in Tokyo

On October 10-11, the fifth annual meeting of the Innovation for Cool Earth Forum (ICEF) was held in Tokyo, hosted by Japan's Ministry of Economy, Trade and Industry (METI) and the New Energy and Industrial Technology Development Organization (NEDO).

ICEF is attended by the world's leading experts from industry, academia, and government, and aims to encourage discussion and cooperation on addressing climate change issues through the promotion and acceleration of innovation in the energy and environment areas. The forum was established on the initiative of Japan's Prime Minister Shinzo Abe, and its annual meeting has been held in Japan since 2014.

This year's annual meeting was attended by more than 1000 people from about 70 countries or regions, with about 90 experts providing presentations. During the plenary sessions, the ultimate goal of achieving net-zero CO2 emissions was reaffirmed and in-depth discussions took place on business-led technological innovation toward de-carbonization as well as social innovation involving industry and consumers.

To raise awareness of worldwide best innovative practices in the energy and environment areas, ICEF Top 10 Innovations, selected from about 200 cases, were announced at the conclusion of ICEF.

Read More: https://www.icef-forum.org/pdf2018/pastevent/ICEF2018_REPORT_E.pdf

Events Supported by GSGF



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



ICSG Istanbul 2019
April 25-26, 2019, Turkey



EU negotiators reach final deal on Clean Energy Package



Update by

Mr. Marc Boillot: GSGF Ambassador – Europe & Africa

After 2 years of negotiation, EU negotiators reached a final political agreement on the 2 files : Electricity Directive and Regulation.

The agreed Directive and Regulation are going to shape the European electricity market for the next ten years to better integrate RES into the system, to tackle barriers to cross border trade as well as to set new rules for trading, balancing and capacity markets.

The newly agreed electricity market design files aim to adapt the current market rules to new market realities and to allow electricity to move freely to where it is most needed, by setting up a 70% minimum availability target for interconnectors.

Furthermore, the new market design aims to “contribute to the EU’s goal of being the world leader in energy production from RES by allowing more flexibility to accommodate an increasing share of renewable energy in the grid”.

The revised Directive aims to strengthen the role of consumers in the energy transition by “giving them more choice and greater protection... through access to smart meters, price comparison tools, dynamic price contracts and citizens’ energy communities”.

Moreover, the Directive gives more powers to European consumers by obliging electricity providers to offer the option to switch provider without extra fees within a maximum period of three weeks (and 24 hours by 2026), as well as a possibility for customers to opt for a dynamic electricity price contract from energy companies with more than 200,000 clients.

One of the crucial points agreed under the new Directive, is that electricity providers will be free to set their own prices, however, Member States would still be allowed to temporarily set regulated tariffs to assist and protect energy-poor or vulnerable households. By 2025, the EC will have to prepare an EU-wide report to assess the progress towards phasing out price regulation.

The revised Regulation aims to bring “stricter and harmonised rules for capacity mechanisms, reconciling thus the EU objectives of security of supply and emission reduction”.

Additionally, the Regulation provides for enhanced regional coordination through the so-called Regional Coordination Centres (RCCs), which is expected to “improve market functioning and thereby competitiveness while making the system more stable”.

Although that negotiators reached an agreement on the highly debated issue of the future of capacity mechanisms, the details of the new text were heavily criticised by green politicians and activists.

The new Regulation introduces for the first time a CO2 performance limit for power plants eligible to receive subsidies under the capacity mechanism schemes. Practically, the 550g rule leaves coal plants out of capacity mechanism schemes.

However, both of the measures will not be applied to plants that received a contract before 2020, also known as the “grandfathering clause”, which negotiators managed to secure with the major support of Poland.

According to the ITRE Committee Secretariat, the European Parliament Plenary vote on the last four files is scheduled for 25 March 2019.

According to the EP’s Rapporteur on the two files, Krišjānis Kariņš, “the agreement is good for the climate and good for the wallet. It will help the transformation to cleaner electricity production and it will make the electricity market more competitive across EU borders. Parliament has succeeded in getting rid of heavy state subsidies, so that the market can do its job of supplying EU industries and households with affordable and secure energy.”

GSGF at a glance

Charter 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



Tenaga Nasional Berhad Malaysia

Associate Members



Green Business Certification Inc.



Florence School of Regulation (FSR)



Energy Block Chain Consortium

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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