



Global Smart Energy Federation
Formerly known as Global Smart Grid Federation

NEWSLETTER

November 2020

E.DSO The New Utility Member of GSEF

We are pleased to announce the joining of European Distribution System Operators (E.DSO) as the Utility Member of GSEF.

E.DSO is the key-interface between the leading Electricity Distribution System Operators (DSOs) and the European institutions and stakeholders. E.DSO promotes the development and large-scale testing of smart grid technologies in real-life situations, new market designs and regulation. E.DSO gathers 41 leading electricity DSOs in 24 countries, including 2 national associations, cooperating to ensure the reliability of Europe's electricity supply for consumers and enabling their active participation in our energy system.

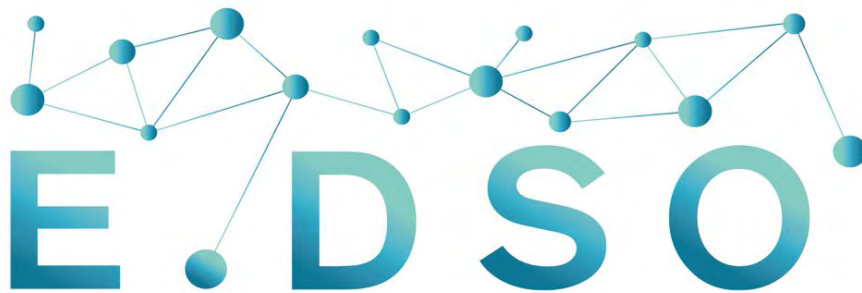
Leveraging E.DSO expertise and experience for electric grid modernization to accelerate energy transition all around the world will be one of the main objectives of E.DSO and GSEF collaboration. Furthermore, we will be identifying several areas of common interest that we can exchange and collaborate on.

We believe that the joining of E.DSO to the GSEF family will be mutually rewarding and create a smarter and cleaner world.

For more information you can visit: <https://www.edsoforsmartgrids.eu/>

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Global Stories on Smart Grid

Polish Energy Company Secures EBRD Funding to Decarbonize Grid

In Poland, energy company Tauron Polska Energia has secured €55.8 million (\$65.1 million) in funding from the European Bank for Reconstruction and Development (EBRD) to implement its grid modernization and decarbonization strategy. The EBRD investment covers 24% of a PLN 1 billion (\$260.3 million) local currency bond issued by Tauron to support its decarbonisation strategy. Tauron will use the investment to support its “just transition” strategy and address the social impact of accelerating the green transition. The strategy includes a gradual decommissioning of coal-fired units, an expansion of renewable energy sources and the reduction of CO2 emissions. The utility will use the bond to expand solar photovoltaic installations to up to 300MW and to develop up to 720MW of new onshore wind energy capacity by 2025.

Read More: <https://bit.ly/3nuAFNS>

Hyundai Plans to Launch 10 new Hybrid, PHEV and Electric Vehicles by 2022

Hyundai Motor plans to expand its electrified, eco-focused vehicle lineup in the next two years. The Korean carmaker has announced that it will offer 10 new models by the end of 2022, which will include seven SUVs. Most of the new vehicles Hyundai plans to launch in the next two years will be electric or hybrid versions of existing models as well as a few all-new models. Among the 10 new vehicles, Hyundai plans to come up with five hybrid, two plug-in hybrid, three electric and one fuel cell vehicles. The new line-up will also feature all-new models such as the Hyundai Ioniq 5 and Hyundai Ioniq 6. The two upcoming Ioniq models will be electric vehicles.

Read More: <https://bit.ly/3pExepw>

McDonald's Installs 200 Electric Vehicle Charging Stations Throughout Italy

McDonald's Italia will install 200 charging points for electric vehicles inside the 100 McDonald's car parks across Italy. The fast-food chain has partnered with Enel X to transition towards electric mobility and to underline the importance of a sustainable footprint. The JuicePole and JuicePump charging stations will be installed inside the car parks of McDonald's restaurants and will offer a new service to customers, allowing two vehicles to be charged simultaneously with available power of up to 22 kW in AC for the JuicePoles and at least 50 kW in DC for the JuicePumps. With the latter, an average of about 30 minutes will be sufficient to “charge up” with electrical energy.

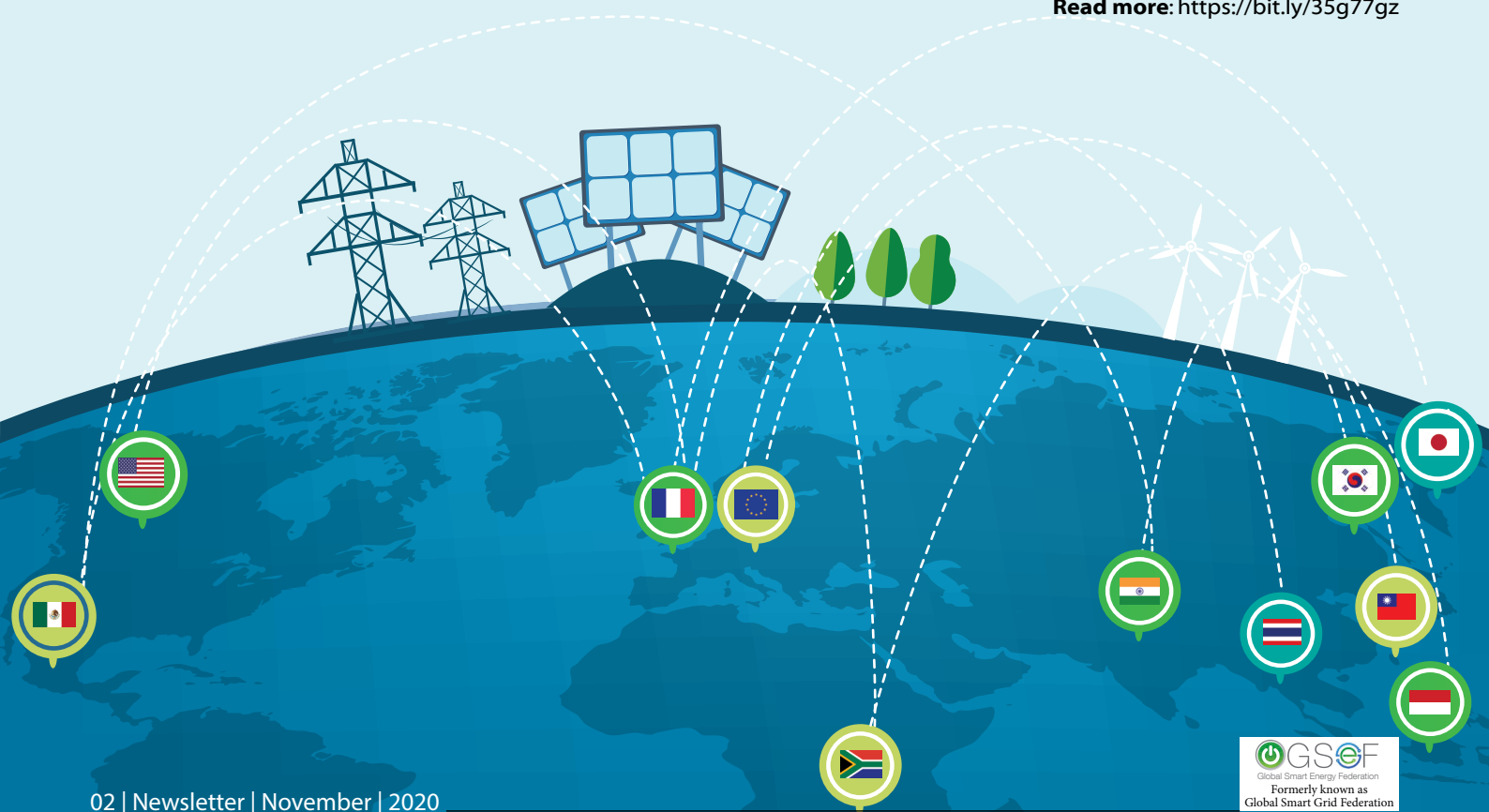
Read More: <https://bit.ly/2UG9Zx3>

Smart Metering to Dominate South Asia's \$25.9 Billion Smart Grid Market

South Asia is set to become a leading destination for smart grid infrastructure investment over the next decade. Dominated by India, the region will invest \$25.9 billion to modernise its power sector over the period 2020-2029, according to a new study released by Northeast Group. Although smart metering will account for the majority of investment, other segments such as grid automation and battery storage will also see significant development. The smart grid market is seeing early growth even as the region continues to cope with the fallout from the global pandemic and ongoing geopolitical tensions between China and India.

India's central government is targeting a nationwide rollout and is utilising every policy lever available to make smart metering an appealing option for Indian states, nearly all of which suffer from high transmission and distribution losses.

Read more: <https://bit.ly/35g77gz>



Global Stories on Smart Grid

World's Largest Renewable Energy Project Proposed for North-West Australia Ditches Electricity in Favour of Ammonia Exports

The proposed 26GW Asian Renewable Energy Hub now plans to export ammonia instead of electricity

In spite of securing environmental approvals, a multinational renewable energy corporation seeking to build Australia's largest wind and solar power generator in the world has abandoned plans to send electricity to Singapore via thousands of kilometres of undersea cables. Instead of using the planned plant, situated in the North West Australian desert, the Asian Renewable Energy Center now hopes to generate ammonia for export instead of electricity. The company's change of direction comes just days after it received the green light last month from the West Australian Environmental Protection Agency for the Singapore project — which would have involved running four, 3,000-kilometre-long, high-voltage transmission cables under the sea. Under the latest proposed change, the size of renewable energy production will be expanded up to 26 gigawatts — more than a third of Australia's current total power-generation capacity. This massive output would be generated from up to 1,743 wind turbines, each 290 metres tall, covering 668,100ha, and a sea of 18 600 MW solar panel arrays, covering 1,418ha of land.

Read more: <https://ab.co/3eJJznl>

Nigerian government begins Automation of Power Network, completes Mapping of 21 States

CDMS aims to offer the most accurate data and latest tools that empower data-driven electrification planning

The federal government launched the Central Data Management System (CDMS), a digital platform of the Nigeria Sustainable Energy for All (SE4ALL) project, which monitors power networks across the country. The project, which is being carried out in collaboration with the European Union (EU) and the German government. The platform has a satellite mapping of 350,000 settlement clusters, over 3,000 settlement clusters remotely mapped with over 2.6 million buildings identified and about 50,000 kilometres of 33 kilovolts (kV) as well as 11kV power distribution lines being tracked nationwide.

Read More: <https://bit.ly/3fNjNiN>

AI and Video Analytics Are Ensuring Security in Energy, Oil & Gas Utilities

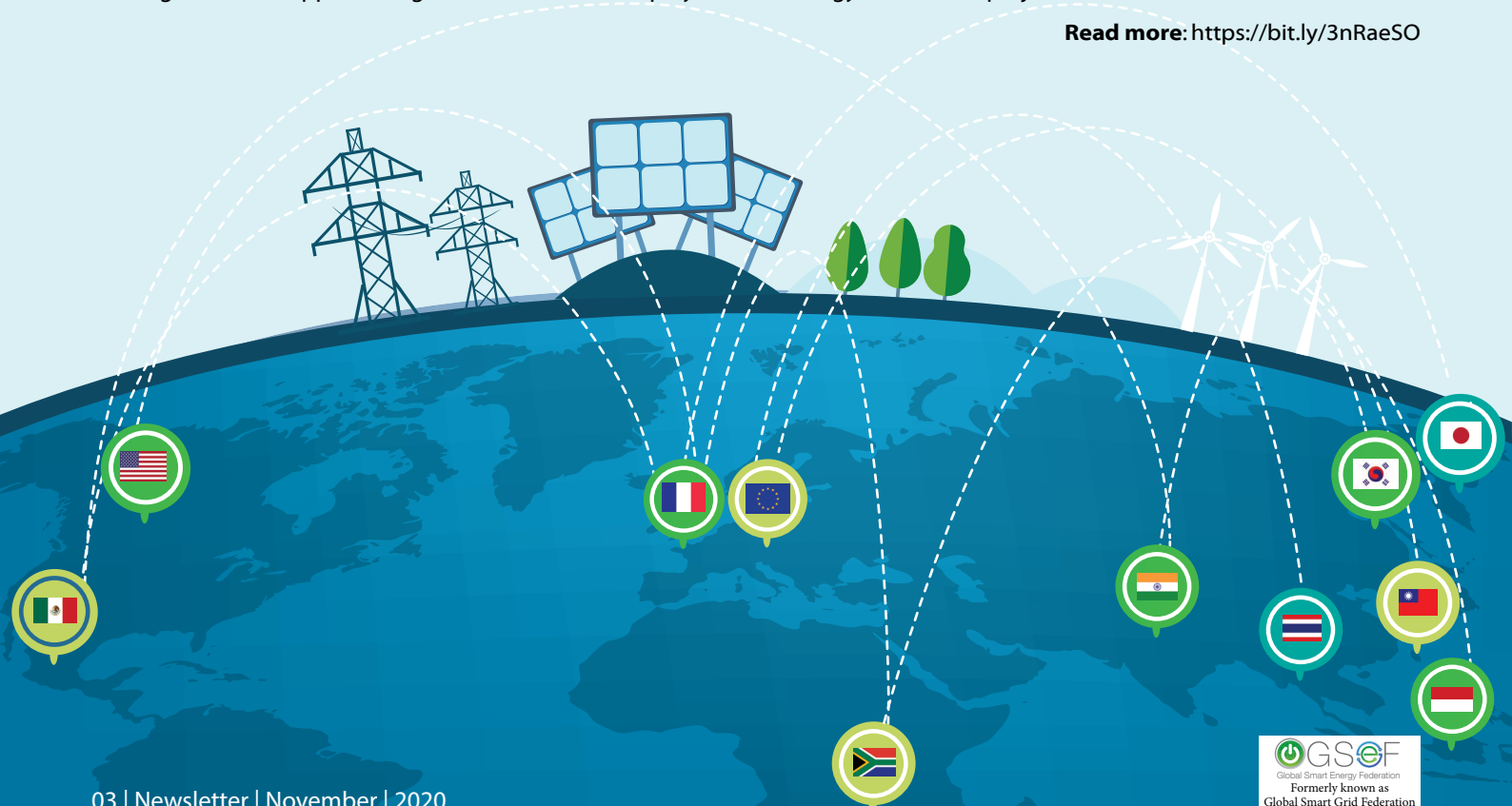
Energy, Oil and gas wealth is considered as one of the most valued commodities across the globe. As the revenue in the sector spikes, the security risks it faces also increases with more cyber and physical attacks taking place in the recent years. Unlike other industries, energy, oil & gas sector get a big bang on its whole working system every time a security breach happens. Ultimately, video analytics combined with artificial intelligence (AI) is shoving hackers the exit door with its extended technological influence.

Read More: <https://indiasmartgrid.org/viewnews.php?id=4789>

Offshore blade maintenance Robot wins major backing from GE

Novel remote blade maintenance technique for offshore wind farms wins accolades in an important competition organised by GE Renewable Energy and renewable energy research groups. A demonstration from Tethys Energy Services (Tethys) and Aeronex won through in a blade robotics innovation competition launched by GE Renewable Energy, the Offshore Renewable Energy (ORE) Catapult and KTN. The organisers were looking for a robotics solution to automatically maintain offshore wind turbine blades and reduce unplanned offshore activity during the operations and maintenance (O&M) phase. Tethys and Aeronex developed a new offshore transportation and delivery system for onshore wind robotics technology to work offshore. GE has now committed to offering technical support and guidance on how to deploy the technology on offshore projects.

Read more: <https://bit.ly/3nRaeSO>



Global Stories on Smart Grid

'Blockchain for Energy' Consortium (Re) launched

The oil and gas operators blockchain consortium has rebranded as the Blockchain for Energy consortium. The former Offshore Operators Committee (OOC) Blockchain Consortium comprised of international oil and gas industry players has, confusingly for our sector, launched with "a new name and brand to be better positioned to meet its members' needs." This updated brand represents the association's core values both in the present day and how its leaders envisioned these values in the future, according to a statement. While the utility and oil and gas sectors are completely different, blockchain use cases such as asset management and resource tracking are similar. Moreover, synergies are growing as companies such as Shell and others make inroads into the power generation sector. Thus awareness of each other's activities and information sharing could benefit both sectors. Currently Blockchain for Energy is developing three main use cases for blockchain on commodity transport invoicing, joint venture management processes and the lifecycle tracking of seismic data.

There are two main consortia in our power sector alongside the smaller project consortia formed by individual companies as they advance their offerings. The oldest and largest is Energy Web, which was formed in 2017 by Austrian blockchain startup Grid Singularity and the Rocky Mountain Institute with an initial membership of 10 utilities. Subsequently the organisation has grown to count more than one hundred affiliates comprised of both developers and users as it develops a range of sector specific solutions built on the open source Energy Web Chain. The three main areas of focus are renewable energy markets, demand flexibility and electric vehicle management. The second is the primarily US oriented Energy Blockchain Consortium, which was founded by Tony Giroi, former CEO of the Accenture acquired consultant Bridge Energy Group, in 2018.

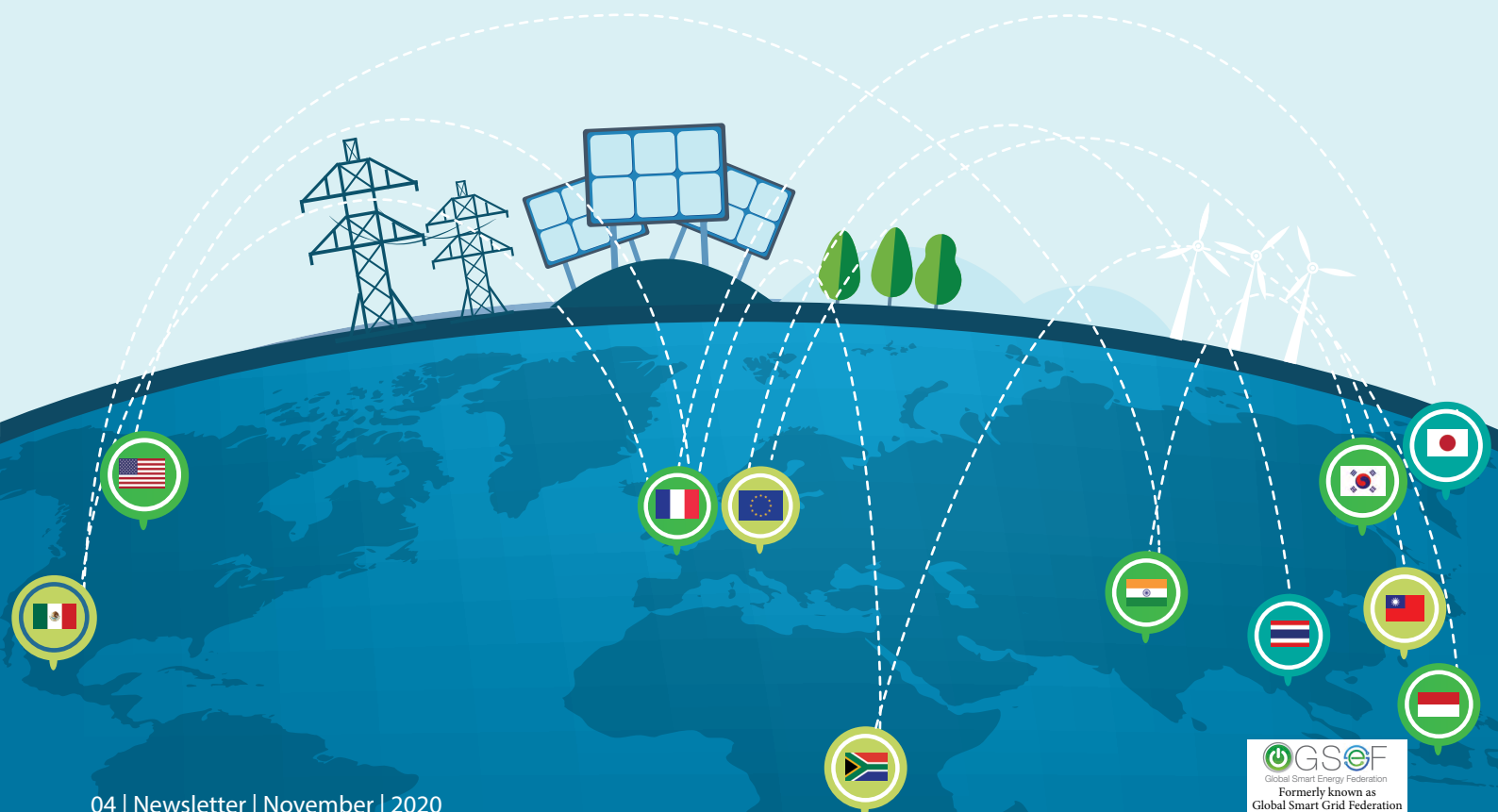
Read more: <https://bit.ly/2J4CDFZ>

Andhra Pradesh to launch IoT project in MSMEs for Energy Efficiency

The government will launch an Internet of Things (IoT) pilot project in micro, small and medium enterprises in all districts to study energy efficiency measures. After the success of the initial project in an MSME unit in East Godavari district, the Union ministry of power-led Bureau of Energy Efficiency has agreed to and sanctioned funds to extend the IoT pilot project to all districts. The AP State Energy Conservation Mission (APSECM) in coordination with the industries department will take up the project in five MSME units in each district under the initiative. The move is expected to help MSMEs improve their energy performance and savings, competitiveness and productivity.

The IoT project may identify the scope for introducing latest energy efficiency technologies to replace existing obsolete or inefficient technologies. According to officials in the state, the Bureau of Energy Efficiency sanctioned the project with funding support within a record period of 24 hours. The government has identified around 19 sectors in MSMEs with opportunities for energy efficiency. Discoms in the state estimate that the sector has an energy saving potential of around 400 MU per annum at the rate of at least 10 per cent energy savings out of a total existing consumption of 5,125 million kilovolt ampere hour.

Read more: <https://bit.ly/33euvK9>



Member Updates

Tokyo “Beyond-Zero” Week Held -All Energy Sources, Technologies and Pathways to Decarbonization

The Ministry of Economy, Trade and Industry (METI) hosted “Tokyo ‘Beyond-Zero’ Week” which composed of Six conferences from October 7 to 14, 2020. Each conference offered a forum for high-level discussions about the key innovations required to build a global roadmap to carbon neutrality and find pathways to go “beyond zero”—namely reducing the levels of CO₂ emissions already in the atmosphere.



These conferences were held to present individual challenges which member countries should take on and to provide approaches and methods to overcome such challenges in society. A total of 12,500 registrations were received. Led by Kajiyama Hiroshi, Japan’s Minister of Economy Trade & Industry (METI), participants included ministerial-level government representatives from the United States, Europe, Saudi Arabia and Qatar, Dr. Fatih Birol, Executive Director of the International Energy Agency (IEA), leaders from national research institutes, as well as leading innovators from academia and industry.

Led by Kajiyama Hiroshi, Japan’s Minister of Economy Trade & Industry (METI) Between Japan hosted a series of wide-ranging discussions between October 7th and 14th 2020, with distinguished participants aiming to make an impactful contribution to addressing the global challenge of climate change. The discussions with these distinguished participants aimed at making an impactful contribution to addressing the global challenge of climate change.

Tokyo “Beyond-Zero” Week: from October 7 to 14, 2020

- Innovation for Cool Earth Forum (ICEF) 2020: October 7 and 8
- Research and Development 20 for Clean Energy Technologies (RD20): October 9
- Task Force on Climate-related Financial Disclosures (TCFD) Summit 2020: October 9
- Ninth LNG Producer-Consumer Conference: October 12
- Second International Conference on Carbon Recycling 2020: October 13
- Hydrogen Energy Ministerial Meeting: October 14

For more details please refer to following URL: https://www.meti.go.jp/english/press/2020/1015_004.html

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Microgrids, a Solution to the Electrification of Isolated Areas?



Les micro-réseaux, une solution à l'électrification des zones isolées



The development of micro-grids is a major challenge in providing universal access to low carbon energy. Think Smartgrids recently organized a webinar on Microgrids and the Challenges of their replicability, in partnership with the French Energy Regulatory Commission 'Commission de Régulation de l'Énergie' (CRE) and the French-speaking energy regulators network (RegulaE.Fr). This was an opportunity to take stock of recently deployed projects that aim to meet a growing demand for energy access for isolated territories or buildings, while offering affordable, low-carbon solutions. The smart grids technologies used to operate these micro-grids also provide greater security, energy resilience and reduced electrical losses.

The Webinar was introduced by Ms. Valérie-Anne Lencznar, CEO, Think Smartgrids and Vice Chair of Global Smart Energy Federation (GSEF) and was moderated by Thomas Bazin, Strategic Account Executive at Schneider Electric. Mr Thomas presented different feedbacks and shared the main keys for a successful microgrid project.

Ms. Catherine Edwige, Commissioner of the French Energy Regulatory Commission (CRE) and President of RegulaE.Fr, introduced the webinar by presenting the actions of the French CRE regarding the micro-grids. The role of the CRE is to define the regulated tariffs for the sale of electricity to consumers of micro-grids, to calculate the public service charges for energy or to evaluate the level of compensation of the electricity production units. Ms. Edwige also presented several models of micro-grids operating with 100% Renewable Energy, on Sein Island, Reunion Island and in French Guyana, stressing the importance on such projects of accompanying the consumer and conducting energy demand management campaigns.

Article By Think Smartgrids

Read more: <https://bit.ly/3mBhLVA>

Preparing Tenaga for Eventual Energy Landscape Shift

The interview with Tenaga Nasional Bhd CEO Amir Hamzah Azizan last Wednesday was delayed for about an hour as his office had requested for it to be done after the special announcement by Prime Minister Tan Sri Muhyiddin Yassin at 2.30pm.

It is understandable that Amir would want to keep abreast of the public policy direction. Operating in a highly regulated business, Tenaga's strategies will be affected by any change in government policy.

Despite the change in government in February, Amir has been steadfastly implementing the transformation plan of the national utility company.

"Every government has its own direction of whatever it has to do. Whatever Tenaga has to do in discharging its amanah (obligations), it will continue to do. What we need to do is be



clear about the direction and how we want to manage the business, and then execute accordingly," says Amir, who assumed the role in April last year.

Some people see him as the new kid on the block in the power industry, even though he is no stranger to the oil and gas sector.

Amir, however, has hit the ground running. Over the past year, he has spearheaded the transformation of one of the oldest government-linked companies (GLCs) in the country to further improve transparency and efficiency. One of the most anticipated transformations is the separation of its power generation and retail businesses.

Starting Oct 1, Tenaga's power generation businesses will be parked under a wholly-owned subsidiary. The generation company (GenCo) will have its own board and balance sheet, with Amir serving as its chairman.

The separation of the businesses is part of the recommendations made by the government through the Malaysian Electricity Supply Industry 2.0 (MESI 2.0) initiative launched in September 2018. MESI

2.0 seeks to liberalise the domestic power industry, meaning the 70-year-old utility group will lose its dominance at home and compete with new entrants.

"I think the current government is looking at how the pace of reform needs to be done in Malaysia, hence they are relooking at MESI 2.0. We are supportive to help the government think through this because at the end of the day, it is not something that we control," says Amir.

"But whatever it is, my obligation to Tenaga is that in whatever form MESI is, we are ready to do it. Hence, whether there was MESI 2.0 or not, we posited on GenCo and RetailCo because it was important for Tenaga to have a better control, a better focus of its generation and retail businesses.

"So, if the pace of MESI 2.0 accelerates, we are ready. If it decelerates, Tenaga will be there and will continue to provide whatever the system needs."

Article contributed by: Dr. Ir. Cheong Kam Hoong

GSEF Ambassador for Asia Pacific

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

Member Updates

Potential of Power-to-Hydrogen at Horizon 2040 in the East Neuk Coastal Region of Scotland

SGN and SPEN, two of the main gas and electricity distributors in Scotland, have commissioned Artelys and E4Tech to **study the potential of power-to-hydrogen at horizon 2040 in the East Neuk coastal region of Scotland**. The study aims at evaluating the quantity and costs of hydrogen that could be available in the area, its potential local uses, the hydrogen storage needs, the interlinked management of hydrogen and electricity systems, and the regulatory, legislative and market barriers to overcome for large-scale deployment of hydrogen.

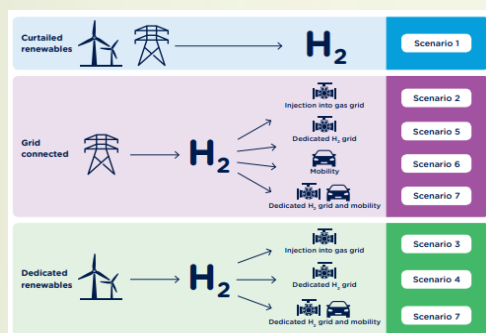
Link to report can be found [here](#), won the British **Network Awards 2020**.

Quantification of available power for hydrogen generation in the East-Neuk

In a first step of the study, leveraging its in-house developed, multi-energy, European-wide modelling platform Artelys Crystal Super Grid, Artelys has undertaken an assessment of the **quantity and structure of locally available surpluses of carbon-free electricity** (from renewable or nuclear generation). The availability of such power on the grid lies in the frequency and deepness of low-price events and is intricately linked with the development of alternative electricity flexibility solution such as interconnections with continental Europe. The model has combined various spatial scales: The East Neuk region, the rest of Great Britain and a country-level European model.



Hydrogen end-uses considered



In a second step, Artelys and E4Tech studied seven possible configurations of the electric and hydrogen system, crossing:

- **Electricity origin:** carbon free electricity surplus from the grid or dedicated renewable generation.
- **Hydrogen applications:** injection into the gas network, direct use for mobility and/or creation of a dedicated hydrogen grid by repurposing part of the local gas network, thus fuelling diverse applications (heating, industry, etc) connected to this H2 grid.

In each considered scenario, Artelys leveraged the computation capacities of its models to **optimise the dimensioning of the electrolyser capacity and the associated hydrogen storage simultaneously to the dynamic operation of the electricity system at an hourly time** step over 2040. Scenarios considered were analysed through environmental and economic KPIs and compared to a baseline solution where hydrogen would be produced from natural gas using steam methane reforming with CCS or imported.

The study highlights that hydrogen generation from a network connected electrolyser could be an economic and efficient solution although the availability of cheap, low-carbon electricity in East Neuk is very dependent on the evolution of UK's generation mix and the development of concurrent flexibilities. On the other hand, the installation of dedicated renewable electricity generation (e.g. a putative 450MW wind farm) coupled with a 400 MW electrolyser, although requiring additional investment costs, would be a robust and reliable solution to provide more than enough hydrogen to fuel a hydrogen grid and hydrogen mobility in East Neuk. **In any case, the flexibility of the electrolyser, as well as the access to hydrogen storage capacities, are key to harness the potential of hydrogen.**

Article Submitted by Marc Boillot

Coal Power Flexibility



Recently I have been partaking in several global stakeholder discussions on the subject of making coal power plants flexible. At the India Smart Utility Week (ISUW) 2020, I was asked to moderate such a panel discussion with speakers from India, EU and North America. I must acknowledge, good progress has been made with many field validations in Germany, USA and India. For India, flexible coal power operation is vital, given its ambitious RE targets (100 GW solar; 60GW wind) by 2023, on a total system peak of about 185 GW (2019). Even though the Wind and Solar power complement each other day/night on a daily cycle, it is nevertheless a very large VRE penetration.

Coal power has undergone many improvements in the last 50 years (ratings, technology, emissions, operations). Improved boiler designs (critical/super-critical/ultra-critical) have led unit sizes to increase from 120 MW (1960s) to 200 MW (1970s) to 500 MW (1990s) to now about 900 MW. However, given their thermal complexities in heat-rate management, steam-water cycle stability and material fatigue due to thermal cycling, they are primarily still designed for baseload operation.

Coal power was a baseload operation until mid-1980s (hydroelectric being the swing resource). With the advent of deregulation and supply-side market reforms in the 1990s and economic dispatch, tables were turned with coal power requiring to become a swing resource (higher marginal price). Lower priced hydroelectric generation began running as baseload units. This change ricocheted through the coal power fleet and saw closures, lay-ups and even weekly on-off operations. Many switched to Gas Turbine fleets to manage this variability. However, the saving grace was that the general rise in global power demand (higher economic activity) enabled the overall increase in coal power in countries that had little gas supply (China, India, Indonesia). Lack of rainfall for years (resulting in lower hydroelectric power) in Latin/Central America, Asia, and Africa, resulted in further increase in coal and oil power.

The T&D reforms of 2005-2015 (and still continuing) saw the advent of Smart Grid, Distributed Generation, Microgrid and behind-the-meter offerings, to better manage customer's demand and energy consumption. This led to many innovations in demand-side management and energy conservation. In fact, the electricity demand/energy profile in the last 15 years in most western nations, has been essentially flat while its economic activity has grown by 2% per annum. The last decade saw the rapid uptake in solar/wind power (policy/falling prices) both in its captive form (behind the meter) and as well as distributed generation form (grid connected). This has resulted in the "duck curve" (solar) during the day and/or the "owl curve" (wind) during the night. Many distribution networks today with high RE penetration, experience reverse power flows during low-load/high-RE periods, heralding many new trends:

- California/USA (2019): Duck Curve - "net morning demand" falling to 40% in just 3 hours due to PV
- Midwest USA (2019): Reduction in average coal power Plant Load Factor (PLF) to 48%
- Germany (2020): Solar/Wind power reducing total coal/lignite power by almost 50% seasonally
- India (2019): Max. RE penetration at 90% (Karnataka), 71% (Andhra), 50% (Tamil Nadu and Rajasthan)
- Ontario/Canada (2020): Embedded RE generation capacity in distribution system reached 79% by fuel mix

The primary design blocks of coal power plants (boiler-turbine-condenser and steam-water cycle) has not changed conceptually. However, given the above cheap VRE proliferation, coal power is now being required to become far more flexible. This flexibility includes (a) lower load operation (down to 30-40% rating); (b) faster power ramp up (% Rating/minute); and (c) quicker shutdowns and restarts (few hours).

In the last five years, many collaborative approaches have been initiated to examine this. The recent USA-Germany-India collaborative work since 2016 (USA: USAID - "Greening-the-Grid"; Germany: Indo-German Energy Forum/GIZ; and India: Power Ministry, NTPC, POSOCO) is a case in point. This effort was ably supported by industry (GE, Siemens, STEAG, Doosan Power, BHEL, ENGIE, Deloitte India) and several utilities (Duke Energy, RWE, Southern, Excel and GSECL). This joint effort as resulted in very good outcomes in exchanging many practical experience, field validation and operating results. Several publications/presentations by USAID, IGEF and Indian agencies have been made to share their findings and to seek further global inputs. Some gleanings from these various meetings, seminars and publications include:

(a) India results:

- i. Lowering output down to 40% from its traditional 55% minimum rating is feasible
- ii. Has successfully piloted two coal plants down to 45% rating

(b) German experience:

- i. Lowering output down to 30% rating is feasible, if process is finely monitored/controlled
- ii. Achieved ramp rates between 2% to 4% per minute and minimum load down between 25% to 40%
- iii. Achieved unit start up time (hot start) between 2-3 hours and (cold start) between 4-7 hours

(c) "Improving Power Plant Flexibility", Conference, India, 2018

- i. USA: Burner upgrades/boiler tuning to specific coal grades can achieve 30% operation
- ii. Japan: New burners developed can accommodate low load (8% of boiler load, 20% of burner load)
- iii. Germany: Upgraded process control and online lifetime monitoring deliver best results overall
- iv. India:
 - i. Need to lower coal power to 28%, if entire 160 GW RE capacity is to be fully absorbed
 - ii. Annual 5,000 start-stop estimated across its entire 229 GW coal fleet
 - iii. 3-5 %/minute ramp rate required with 2 cycles of daily load following

For India, whose mainstay is coal power (will remain so for the foreseeable future), these learnings need to be carefully implemented across its large coal fleet of 229,000 MW with varying locations, unit sizes, vintages, coal calorific values and high ash content. All this, while still meeting economic price dispatch. Such learning would be of interest to China, Indonesia, Malaysia, South Africa and several other South/Central American countries that are primarily coal power based as well.

Notwithstanding the good progress made, I think the following areas still need to be explored and global standards and best practices established:

1. Low load acceptance testing/field validation methodology
2. Safety parameters and monitoring of B-T-G process during such low load operation
3. Certified operator training for such low load operation
4. Combustion optimization and efficiency estimates at part load operation
5. Optimal scheduling dispatch criteria of coal plants by System Operator
6. Estimation methodology of short/long term "damage mechanisms" due to cycling/low load operations
7. Regulatory treatment of increased cost due to such low load operations:
 - a) higher heat rate requirements and increased auxiliary power consumption
 - b) Higher O&M costs due to life reduction
 - c) Increased Oil consumption due to frequent start/stops
 - d) Estimation of revised economic price dispatch during such periods

In summary, coal power plants are capital intensive and their individual plant complexities (combustion process, water-steam cycle management, coal specificity, heat-rates) makes it difficult for a "one-size fits all" solution. For these cycling requirements to be successfully met, new specifications must be accepted for future procurements and the regulatory treatment of costs well established for the current coal power fleet. Only then will plant owners/operators will be willing to invest in flexibility.

Article contributed by Ravi Seethapathy, GSEF Ambassador for Americas

Smart Grid Events

13 Jan 2021: Common Information Model 2021, Virtual Conference, <https://www.smartgrid-forums.com/forums/common-information-model/>

24 February 2021: Advanced Metering Infrastructure 2021, Virtual Conference, <https://www.smartgrid-forums.com/forums/advanced-metering-infrastructure/>

23 - 25 March, 2021: Enlit Asia, ICE, Jakarta <https://www.enlit-asia.com/>

9 -11 June, 2021: EM-Power Europe Munich, Germany, <https://www.em-power.eu/en/home>

27 January 2021: IEC 61850 USA 2021, Virtual Conference, <https://www.smartgrid-forums.com/forums/iec-61850-usa/>

02-05 March 2021: India Smart Utility Week 2021, Digital, <http://www.isgw.in/>

24 - 25 March, 2021: NextGen SCADA Global 2021, Virtual Conference, <https://www.smartgrid-forums.com/forums/nextgen-scada-global/>

Disclaimer: This information is from the public domain. GSEF does not hold any responsibility for the information provided in this section.

Events Supported by GSEF

SMART GRID FORUMS | **Advanced Metering Infrastructure 2021**

24th February 2021 | Virtual Conference

SMART GRID FORUMS | **NextGen SCADA Global 2021**

24th -25th March, 2021

SMART GRID FORUMS | **IEC 61850 USA 2021**

27th January 2021 | Virtual Conference

SMART GRID FORUMS | **Common Information Model 2021**

13th January 2021 | Virtual Conference



23 - 25 March 2021 | ICE, Jakarta, Indonesia
Formerly POWERGEN Asia and Asian Utility Week

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

GSEF at a glance

Charter Members



Think Smart Grids



India Smart Grid Forum



Korea Smart Grid Association (KSGA)



Prakarsa Jaringan Cerdas Indonesia (PJCI)



GridWise Alliance

Regular Members



Smart Grid Mexico



Japan Smart Community Alliance

Utility Members



Electricity Generating Authority of Thailand (EGAT)



Electricity Supply Commission of South Africa (ESKOM)



EDM Mozambique



Tenaga Nasional Berhad (TNB) Malaysia



European Distribution System Operators (E.DSO)

Associate Members



Green Business Certification Inc.



Florence School of Regulation (FSR)



Energy BlockChain Consortium

Current Working Groups

- Blockchain for Utilities
- Regulatory Changes or Regulatory Reforms for the post Covid Digital Utility
- AI and Analytics for Utilities

Working Groups in Pipeline

- Green Recovery Playbook for Utilities

Contact us for more information.

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