Prime Minister Shri Narendra Modi
Inaugurated the 750 MW Solar Project
at Rewa, Madhya Pradesh, India on
July 10, 2020

Rewa Solar Project comprises of three solar generating units of 250 MW each located on a Solar Park inside a 1500 hectare plot of land. The Solar Park was developed by the Rewa Ultra Mega Solar Limited (RUMSL), a Joint Venture Company of Madhya Pradesh Urja Vikas Nigam Limited (MPUVN), and Solar Energy Corporation of India (SECI), a Central Public Sector Undertaking. Central Financial Assistance of Rs. 138 crore has been provided to RUMSL for development of the Park. After the Park had been developed, Mahindra Renewables Private Ltd., ACME Jaipur Solar Power Private Ltd., and Arinsun Clean Energy Private Ltd were selected by RUMSL through reverse auction for developing three solar generating units of 250 MW each inside the Solar Park. Rewa Solar Project is an example of the excellent results that can be achieved if there is synergy between Central and State Governments.

Rewa Solar Project was the first solar project in the country to break the grid parity barrier. Compared to prevailing solar project tariffs of approx. Rs. 4.50/unit in early 2017, the Rewa project achieved historic results: a first year tariff of Rs. 2.97/unit with a tariff escalation of Rs. 0.05/unit over 15 years and a levelized rate of Rs. 3.30/unit over the term of 25 years. This project will reduce carbon emission equivalent to approx. 1.5 million ton of CO₂ per year.

This Project has been acknowledged in India and abroad for its robust project structuring and innovations. Its payment security mechanism for reducing risks...
to power developers has been recommended as a model to other States by MNRE. It has also received World Bank Group President’s Award for innovation and excellence and was included in the book “A Book of Innovation: New Beginnings” released by Prime Minister. The project is also the first renewable energy project to supply to an institutional customer outside the State, i.e. Delhi Metro, which will get 24% of energy from the project with remaining 76% being supplied to the State distribution companies of Madhya Pradesh.

The Rewa Project also exemplifies India’s commitment to attain the target of 175 GW of installed renewable energy capacity by the year 2022, including 100 GW of Solar installed capacity. Rewa project will reduce carbon emission equivalent to approx. 15 lakh ton of CO₂ per year.


Announcing Online Training Program on Artificial Intelligence and Robotics for Utilities

Online Training Program
ARTIFICIAL INTELLIGENCE AND ROBOTICS FOR UTILITIES
From 14 September 2020

For Queries, please write us at ronkini.shome@indiasmartgrid.org

Appointments and Transfers

Venu Prasad has been appointed as Chairman & Managing Director of the Punjab State Power Corporation Limited

AK Jana has been appointed as Managing Director of Indraprastha Gas Limited (IGL)

M Shenbagam has been appointed as CEO for Central Electricity Supply Company of Orissa Ltd (Bhubaneswar)

MV Ravi Someswarudu has been appointed as Chief Executive Officer (CEO) of GAIL Gas Limited

KEY CONTACTS

Managing Editor
Reena Suri, ISGF

Editor
Sneha Singhania, ISGF

Key Contributors from ISGF
Aashima Chaney
Anand Singh
Bindeshwary Rai
Karnam Bala Subramanyam
Parul Shribatham
Shuvam Sarkar Roy
Suddhasatta Kundu

(For suggestions and feedback on the ISGF SMART GRID Bulletin, please write to contactus@indiasmartgrid.org)

India Smart Grid Forum (ISGF), registered under Indian Societies Registration Act (Act XXI of 1860) is a Public Private Partnership initiative of Ministry of Power, Government of India for accelerated development of Smart Grid technologies in the Indian power sector.


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ISGF Online Training Program on Electric Mobility & Charging Infrastructure

ISGF in association with NITI Aayog and ASTRU organized first Online Training Program on Electric Mobility and Charging Infrastructure from 02 July - 05 August 2020. The Online Training Program received an overwhelming response. It was attended by overall 172 participants from Distribution Utilities, Academic Institutions and Industries are undergoing training in the Online Training in Two different modes of Training i.e Live Online Class Mode and Recorded Offline Mode.

Tutors of the course were experts from India and Overseas including Aditya Ramaji, Mahindra & Mahindra Ltd; Aishwarya Raman, Ola Mobility Institute; Akshima Ghate, RMI India; Amit Tyagi, Phoenix Contact; Anand Singh, ISGF; Anand Swaroop, Olectra Greentech Ltd; Arumugam Manthiram, University of Texas, Austin; Awadesh Jha, Fortum Charge & Drive India; CK Sreenath, BESCOM; D Guha, WBTC, Kolkata; Devanshu Sharma, BSES Yamuna Power Ltd; Eyal Blum, Driivz Ltd; Florien Niere, Phoenix Contact; Girish Ghatikar, EPRI; Huzefa AC, Ashok Leyland; Kartik A Shanbhag, ION Energy Inc; Lonneke D Mutters, OpenCharge Alliance; Makoto Dave YOSHIDA, CHAdeMO Association; Matti Aro, VTT, Finland; N Mohan, EESL; N Murugesan, ISGF; N Nagasatyan, Olectra Greentech Ltd; P M Singh, Exicom; Commander Ramesh Lakra, Quanteon Powertrain; Ravi Seethapathy, ISGF; Reena Suri, ISGF; Reji Kumar Pillai, ISGF; Saad Alam, Illinois Institute of Technology Chicago; Sajid Mubashir, DST, Go; Sandeep Bangia, Tata Power Company Ltd; Shankar Akella, Ashok Leyland; Suddhasatta Kundu, ISGF; Veda Prakash Galigere, Oak Ridge National Lab; Vinod Tiwari, Power Ledger; Wang Xiaofei, Geidco and SGCC; Yuichiro Shimura, Mitsubishi Research Institute.

The key topics covered in this training program were EV Deployment - Global and Indian Scenarios; Technology Development in EV Domain; EV Charging Infrastructure: Part 1 and 2; Grid Enhancement for EV Charging & Vehicle – Grid Integration; Case Studies; Policies and Regulations for EV & EVSE and EV Deployment Experiences in India; Experience, Challenges and Perspectives of EV Manufactures, EV Charging Station Operators and EV Fleet Operators and Evolving Technologies.

The Recorded Training Program is available for the interested Participants to register and undertake at their own convenient time on https://indiasmartgrid.org/onlinetrainingprogram/.
INDIA

CERC Removes Floor Prices for Solar and Non-Solar RECs

The Central Electricity Regulatory Commission (CERC) has issued an order implementing revised forbearance and floor prices for solar and non-solar renewable energy certificates (RECs). In its order, the Commission implemented a forbearance (maximum) price of INR 1,000 (~USD 13.16) for solar and non-solar RECs for 2020, down from 2017’s prices of INR 2,400 (~USD 31.59)/MWh and INR 3,000 (~USD 39.48) respectively. It also issued a floor price of zero for both solar and non-solar RECs from INR 1,000 (~USD 13.16) each previously. Until March 31, 2017, the floor price for solar RECs was INR 3,500 (~USD 46.07)/MWh. Read More: https://bit.ly/3hcOMEz

Ministry of Power Imposes Cyber Security Measures on Imported Power Supply Components

The Ministry of Power (MoP), Government of India has issued a notice mandating all power supply system equipment, components, and parts imported into the country must pass through a check for harmful embedded software. It also mentioned that importing any of these items from “prior reference” countries who fall within the jurisdiction of these directions are also required to obtain prior permission from the Government of India. Following this, the protocol for testing in certified and designated laboratories will be done with the approval of the MoP. Read More: https://bit.ly/2Wll9bS

Himachal Pradesh Issues Order on RPO Targets and Open Access Charges

The Himachal Pradesh Electricity Regulatory Commission (HPERC) has issued an order for distribution companies (DISCOMs) in the state regarding their renewable purchase obligation (RPO) backlogs up to the financial year (FY) 2020. According to the order, the state electricity board had to purchase power from renewable sources to meet its obligation of 9.5% from non-solar and 4.75% from solar power for the FY 2018 and also permitted open access to all the generators irrespective of installed capacity and to all the consumers having contract demand above 1 MVA. Read More: https://bit.ly/2CxRcP1

PowerGrid Corporation to Separate its Transmission Business

The PowerGrid Corporation of India Limited (PGCIL) has announced its plans to separate its power transmission business to form a 100% subsidiary that will carry out transmission-related functions, as per the Ministry of Power’s (MoP) directions. It will be responsible for carrying out the statutory functions that are characteristic of a central transmission utility (CTU) as described in the Electricity Act 2003. This move is to avoid conflict of interest while awarding transmission construction bids to the PGCIL while it also plays the role of a CTU. Read More: https://bit.ly/3euxxha

CESU-Like Revival for 25 Ailing Discoms will Invite Rs 50,000 Crore of Investment

Present situation in many discoms across India is akin to what we have witnessed in Central Electricity Supply Utility of Odisha (CESU). Currently, around 25 state discoms are reeling under huge AT&C losses of more than 25%, and this makes it indispensable for state governments to invite immediate private sector participation. A similar revival model, such as of erstwhile CESU, if scaled to all the above ailing discoms across the country, will invite investment of approx Rs 50,000 crore and lead to three lakh skilled and semi-skilled jobs in the next two-three years. However, post the initial investments the states can reap the benefits. The shining example is Delhi, where as a result of the efficiency, with drastic reduction in AT&C losses, the state government had managed to save of Rs 60,000 crore in the last 18 years, since the unbundling of DVB in 2002. Delhi discom—TPDDL, had also paid dividends to the govt, which till date is the highest total dividend paid by any discom. A viable discom enables the state governments to focus investments on other more critical infra requirements. Views by Mr. Sanjay Banga, President T&D, Tata Power. Read More: https://bit.ly/3093wvn

INTERNATIONAL

Utilities Propose First Regional Grid-Balancing Market in Southeastern US

Southeastern utilities including Duke Energy, Dominion and Southern Company unveiled plans to create the region’s first market for trading of electricity across interstate transmission lines, a move that could lead to lower wholesale energy costs as similar markets have accomplished in other parts of the country. The goal would be to augment the Southeast’s existing system of bilateral energy exchanges across utility-owned transmission networks with a centralized, region-wide, automated intra-hour energy exchange. Read More: https://bit.ly/3fx1dKG
Democrats Introduce US Infrastructure Plan that Includes Support for Microgrids

Hoping to ensure that clean energy investment is a major part of any potential economic recovery package, Democrats in Congress recently introduced the Moving Forward Act — a $1.5 trillion infrastructure plan that would boost renewable energy, grid modernization, resilience measures and microgrids. Microgrids receive particular attention in the proposed legislation for their resilience and ability to integrate innovative technologies into the grid. The bill defines a microgrid as an interconnected system of loads and distributed energy resources, consisting of a ‘generator and energy storage systems’, that is able to operate independently of the electric grid. Throughout, the secretary of energy is directed to prioritize renewable and clean energy integration within funding and deployment programs. Many components that typically make up a microgrid are included in expanded and extended tax credits, and microgrids as a whole are eligible for financial and technical assistance, grant programs, and feasibility studies to be determined by the Department of Energy should the bill move forward in its current form. Read more: https://bit.ly/3essXpd

Smart Grid Updates: Technology & Projects

Grid Modernization

IDA to Fund Gambia and Niger Electricity Programs

The International Development Association (IDA), a subsidiary of the World Bank Group, will be providing both The Gambia and Niger funding for their respective water and electricity programs. Niger will receive USD 150 million in assistance and The Gambia USD 43 million. In Gambia the funds will go toward the implementation of the Gambia Electricity Restoration and Modernization Project (GERMP), aimed at improving access to electricity and water in the country. In Niger, the funding will benefit the Kandadji program to provide water and electricity to 330,000 people living in the Niger River Basin. Read More: https://bit.ly/3J53ZsV

Quanta Services and ATCO-Led Consortium Selected by the Puerto Rico Public-Private Partnership Authority for the Operation and Maintenance of Puerto Rico’s Electric Power Transmission and Distribution System

Quanta Services, Inc. announced that LUMA Energy, LLC (LUMA), a joint venture between Quanta Services (Quanta) and Canadian Utilities Limited, an ATCO Ltd. Company (ATCO), in conjunction with Innovative Emergency Management, Inc. (IEM), has been selected by the Puerto Rico Public-Private Partnership Authority (P3) for a 15-year Operation and Maintenance Agreement (the O&M Agreement) with the Puerto Rico Electric Power Authority (PREPA). This O&M Agreement engages LUMA to operate, maintain and modernize PREPA’s more than 18,000-mile electric transmission and distribution (T&D) system in Puerto Rico following a transition period.

Digital Substation Initiative Launched to Modernize Power Grid Infrastructure

LF Energy, a Linux Foundation nonprofit coalition that seeks to improve power grid infrastructure through open-source project, launched its Digital Substation Automation Systems (DSAS) initiative to enhance the power grid’s modularity, interoperability and scalability to accelerate the global effort toward carbon neutrality by 2050. LF Energy, in partnership with GE Renewable Energy, Schneider Electric, RTE, Alliander, and other organizations in the energy sector, also launched the first project under DSAS: CoMPAS, or Configuration Modules for Power industry Automation Systems. LF Energy's DSAS initiative seeks to alleviate these challenges by optimizing electrical substations through open-source technology. These substations form crossroads of the grids, connecting grid users and grid voltage levels. Read More: https://bit.ly/2CtTOO3

Portland General Electric Jumps into Virtual Power Plant Business

Portland General Electric, the largest utility in Oregon, is jumping into the cutting-edge business of turning home batteries into grid resources. The company announced that it has received approval from regulators to link up 525 homes with solar-storage systems into a controllable fleet, often referred to as a virtual power plant. The five-year pilot will study how to optimize the use of these batteries for the grid, while ensuring the customers get what they want out of participating. The fleet of small batteries will only add up to 4 megawatts. But it could lay the groundwork for expansion under PGE’s ongoing grid modernization plan, which envisions around 200 megawatts of “distributed flexibility” to balance supply and demand. Read More: https://bit.ly/2ZHEx58

Nepal to Modernize Power Grid Using $200 Million ADB Loan

The government of Nepal has secured a $200 million loan from the Asian Development Bank to modernize and reinforce the country’s energy grid network. The loan will cover the strengthening

Digital Substation Automation Systems (DSAS) initiative to enhance the power grid’s modularity, interoperability and scalability to accelerate the global effort toward carbon neutrality by 2050.

Smart Grid Updates (Contd...)

O&M Agreement engages LUMA to operate, maintain and modernize PREPA’s more than 18,000-mile electric transmission and distribution (T&D) system in Puerto Rico following a transition period.
of power transmission and distribution systems to increase network capacity, improve quality and reliability, and remove delays between generation hubs and load centers. A number of projects will be implemented in Kathmandu Valley, Bharatpur metropolitan area of Chitwan district in Bagmati Province and Pokhara of Kaski district in Gandaki province where supply interruptions are frequent and prolonged. Nepal will also benefit from a $35 million grant issued by the government of Norway to install new and upgrade existing substations. Upgrading of substations in Khimti, Barhabise, and Lapsipedi to 400 kilovolts will facilitate cross-border power exchange with India. The project is aligned with the South Asia Subregional Economic Cooperation program on intraregional power trade through cross-border power exchange. Read More: https://bit.ly/3ikGXM

Smart Meter Market Revenue Shrinks by $3.3 Billion

COVID-19 disruptions will reduce the annual smart meter shipments in 2020 by 25%, which means year on year revenue will decline by 31% or $3.3 billion to reach $7.39 billion. The smart electric meter sector is expected to record the sharpest contraction with a 30% year on year decrease in annual shipments. The smart water and gas meter segments will record year on year decreases of 19% and 5%, respectively. Shipments will decline the most in Europe, followed by Asia Pacific and North America. In terms of revenue, the APAC region will be affected the most followed by Europe and North America as revenue shrinks by 34%, 31%, and 30% respectively. Price erosion has also accelerated due to the greater availability of lower-cost smart meters further depressing revenues for original equipment manufacturers. However, market revenue is expected to bounce back in 2021 with a 36% YoY growth in annual shipments and revenues exceeding $9.5 billion. In 2019, Asia Pacific region was the largest market for smart electricity meters, where China alone accounted for nearly 40% of the global shipments. Read more: https://bit.ly/3iYAs49

Tata Power Installs 200,000 Smart Meters in Delhi

Tata Power Delhi Distribution Limited (TPDPLL) announced that it installed 200,000 smart meters across its consumer segments. It supplies electricity to a population of seven million in North Delhi, with 1.7 million registered consumers. Tata Power Delhi Distribution is a joint venture between the Government of the National Capital Territory of Delhi and Tata Power Company Limited. The distribution company (DISCOM) said that it had installed these smart meters in its domestic, industrial, and commercial segments under its advanced metering infrastructure (AMI) projects with radiofrequency canopy network. It noted that it was working with Landis+Gyr, a smart metering and smart grid solutions provider, and Siemens. The DISCOM further added that it has been able to raise around 350,000 bills with actual readings instead of provisional ones during the lockdown and that it has avoided over 150,000 visits per month to consumers’ premises in this period. Read more: https://bit.ly/2ODeckZ

IFC investing USD 10 Million in Prepaid Egyptian Electricity Scheme

International Finance Corporation (IFC), a member of the World Bank Group, is investing up to USD 10 million in a local Egyptian company, namely Globaltronics SAE to help it expand installation of digital prepaid and smart electricity meters in Egyptian homes. The investment will support government energy reforms to improve accuracy in billing, give consumers more payment options and provide consumers with better information about their energy use in order to encourage savings. The investment will help Globaltronics set up a new manufacturing facility in Saudi Arabia and increase its investment in research and development to grow exports and develop new products. Read More: https://bit.ly/2Os5MA

Renewable Energy

UK’s Oil Giant BP to invest $70 Million in India’s Green Growth Equity Fund

United Kingdom-based oil giant BP announced its plans to invest $70 million (~$5.22 billion) in India’s Green Growth Equity Fund (GGEF), which aims at promoting zero carbon and low carbon energy solutions in the country. Once the transaction is completed later this year, BP will become a limited partner in the GGEF and will be a representative in its advisory committee. It will also have the right to co-invest in projects alongside the GGEF. The GGEF has already received investments from India’s National Investment and Infrastructure Fund (NIF) and the Government of the UK’s Department of International Development (DFID). The Mumbai-based Fund invests in companies and platforms across segments, including renewable energy, energy efficiency, energy storage, e-mobility, resource conservation, and associated value chains. The GGEF is currently managed by EverSource Capital, a joint venture between Lightsource BP and Everstone Capital. The Green Growth Equity Fund was launched in April 2018 after Lightsource BP, a global renewable energy development firm, and investment firm Everstone Group teamed up to create a major fund management platform called EverSource Capital for the development of green energy infrastructure in India. At launch, the GGEF had a fundraising target of £500 million (~$710.6 million). Read more: https://bit.ly/2DE6v97

Petronas JV, Tesco Malaysia in Solar Energy PPA

Tesco Stores (Malaysia) Sdn Bhd (Tesco) and NE Suria Satu Sdn Bhd (NESS), a joint-venture company between Petronas Nasional Bhd (Petronas) and NEFIN Group, have entered into the largest long-term power purchase agreement (PPA) (Tesco-NESS PPA) for solar energy in Malaysia. In a joint statement, Tesco and NESS said the first phase of the Tesco-NESS PPA will see the installation of solar photovoltaic (PV) panels on the rooftop spaces of 15 Tesco stores nationwide, which will run for 20 years until 2040. Once the installation is completed in October 2020, the solar PV panels will collectively generate about 18 gigawatt-hours (GWh) of clean energy per year, thus reducing approximately 13,624 tonnes of
With 32 per cent Solar Power, DMRC Among the Greenest Metro Services Globally

The Delhi Metro on July 10 said that it is meeting 32 per cent of its total energy requirement from the 750 MW solar power project set at Rewa in Madhya Pradesh, making it one of the greenest metro services in the world. PM Narendra Modi dedicated the Rewa Solar Energy Plant to the nation. DMRC is meeting nearly 60 per cent of daytime energy requirements from Rewa and overall, 32 per cent of total energy requirements from Rewa. With this, DMRC has become one of the greenest Metros in the world. Notably, this mega solar power project is comprised of three solar generating units of 250 MW each located on a 500-hectare plot of land situated inside a solar park. Central financial assistance of Rs 138 crore has been provided to Rewa Ultra Mega Solar Limited (RUMSL) for the development of the solar park. Read more: https://bit.ly/3gY9mbt

ReNew Power Plans to Double Power Generation Capacity to 20,000 Megawatts in Five Years

Renew Power, India’s largest clean energy firm, plans to double its portfolio of running plants and projects under implementation to 20,000 MW in five years, an ambitious growth plan that has cheered its major investor Goldman Sachs. The expansion would require an investment of Rs 40,000 crore to Rs 50,000 crore, going by the average cost of projects in the industry, although the company did not share financial details. Project economics vary across the country, depending on the cost of land and the intensity of sunlight or wind. Sumant Sinha-led Renew Power’s aggressive expansion is part of the growing corporate interest in the sector in which Gautam Adani is also expanding his presence with the aim of becoming the world’s biggest renewable energy company with a capacity of 25,000 MW.

Goldman Sachs holds 48.6% stake in Renew Power and has backed the company for a long time. Renew Power has also raised debt and equity from other major global investors including Abu Dhabi Investment Authority, Canada Pension Plan Investment Board, JERA and Global Environment Fund. Since its inception 10 years ago, the company has seen foreign direct investment of over $1.4 billion from various investors. Read more: https://bit.ly/3evim6i

Microgrids

Novel Waste-to-Energy Microgrid Aims to Provide Resilience in Camden, New Jersey, USA

Sponsored by the City of Camden, the Camden County Municipal Utilities Authority (CCMU), which operates the water processing facility, and the Camden County Improvement Authority, the Camden Microgrid Project plans to use electricity produced by the Covanta Energy Recovery Center, a waste-to-energy plant. The project will add solar, storage and natural gas to create a microgrid that will serve the utilities authority, the city, county and local businesses. The project would allow the water processing plant to continue operating in an emergency, avoiding the water pollution associated with sewage overflow and other issues that the facility may face during a power outage. In addition, the project is expected to reduce solid waste collection fees for the county — which now pays Covanta about $80 a ton for waste. The hope is that because Covanta will see higher electricity sales revenues, it will reduce collection fees. The county also would lower its electricity costs by buying from the waste-to-energy microgrid. Electricity from the waste-to-energy plant is now sold at about 2 cents/kWh to the local utility. Under the plan, the electricity would be used in the microgrid and sold at higher rates to microgrid users. The microgrid is expected to produce about 10 MW to 15 MW.

Not only will the microgrid provide resilience and renewable energy to the parties involved, it’s expected to help boost the economy in the area. Current plans call for the Camden County Improvement Authority to be named a re-development entity in the area under state economic development laws. Read more: https://bit.ly/3hfFzac

Smart Cities

Accenture to Develop Standardized Application Programming Interface (API) Marketplace for Japan’s Smart Cities

Accenture and the University of Aizu are working on a joint research project to develop the first standardized API marketplace for smart cities in Japan. The partners will also study how smart city data platforms, or operating systems, can make better use of artificial intelligence (AI) in public services. The research will focus on Aizuwakamatsu, a 120,000-person city in Fukushima, where Accenture is part of a broader smart city project to help the region recover economically after the devastating 2011 earthquake, with an emphasis on the use of data. Smart city projects in Aizuwakamatsu include programmes relating to mobility, fintech, education, healthcare, childcare, agriculture, Industry 4.0 and tourism. The API marketplace site, where standardized API code for the creation and linkage of software can be shared, will launch in March 2021 and aims to help local governments and companies benefit from new data connections and integrations between smart city and industry initiatives. Read More: https://bit.ly/3kgqOsF

Qualcomm Smart Cities Effort Accelerates, Edge Devices for Biometrics Showcased

Qualcomm’s smart cities accelerator program has another partner to add to its growing effort, with PFU Limited, a Fujitsu company, announcing that the company has joined and will be focusing on contributing to the development of facial biometric technologies and smart cameras used in identity management solutions. PFU is
a leading developer of facial recognition technology and provides edge solutions such as kiosks, embedded computers and more that generates $1.4 billion in annual revenue. PFU’s work on the smart cities program through its U.S. subsidiary PFU America Inc., it is collaborating with Innominds on the development of facial biometric technologies and smart cameras used in identity management solutions that leverage Qualcomm Technologies’ IoT platforms. Utilizing advanced IoT platforms and 5G connectivity technology from Qualcomm Technologies and working with Innominds on IoT technology and integration services is enabling us to develop a new generation of simple, secure products in the area of facial biometric technology. Read More: https://bit.ly/3hhu9qv

**Berlin Showcases Future Living in Energy-Saving Smart City Quarter**

Berlin is the location for a new CO2-saving smart city project by Panasonic, which aims to help decarbonize society. Future Living Berlin, which is initially focusing on residential apartments, will be a showcase for connected and sustainable green living and is one of the EU lighthouses projects. The development of 90 households combines heat pumps with other efficient, green Panasonic technologies, such as photovoltaic (PV) panels, that have been integrated into an energy-saving solution, controlled and constantly optimised by an intelligent energy management solution. The solution is a world-first, developed as a joint-venture with leading research institutions for decentralized energy management. Panasonic is partnering in the smart city project with GSW Sigmaringen, the building owner of Future Living Berlin. Panasonic claims the pumps run almost carbon-free when powered by the renewable energy provided by the 600 Panasonic HIT panels, which supply a capacity of 195kWp. Read More: https://bit.ly/3hu9qv

**Smart City of Rajkot in Gujarat, India Declared the National Winner of WWF’s Global One Planet City Challenge 2020**

The One Planet City Challenge is WWF’s biennial global challenge that recognizes cities for their ambitions and innovative actions in sectors such as energy, buildings, transport, and waste, to power the global transition to a low-carbon, climate-resilient future. Rajkot, the fourth largest city of Gujarat, India once again bagged the coveted title of the National Winner from India in WWF’s Global One Planet City Challenge (OPCC) 2020. Besides Rajkot, seven other Indian cities, namely Gangtok, Guwahati, Indore, Kochi, Nagpur, Panaji and Pune were among over 255 cities from 53 countries that participated in OPCC 2019-20 edition. After an initial evaluation by WWF and ARUP – a global consultancy, a 27-member international jury comprising urban sustainability experts reviewed the data to select one city from each country as the National Winner, and a Global Winner. Mexico City has been announced as the Global Winner among the 53 National Winners this year. Read More: https://bit.ly/3ip3Kc6

**Electric Vehicles**

**“Deliver Electric Delhi” A Pilot Project on Electrification of Final-Mile Delivery Vehicles in Delhi By Dialogue and Development Commission of Delhi, Rocky Mountain Institute and RMI India**

“Deliver Electric Delhi” is a pilot on the electrification of final mile delivery vehicles in Delhi. The pilot is hosted by Rocky Mountain Institute, RMI India, and Dialogue and Development Commission of Delhi in collaboration with 36 private sector organizations. The pilot will deploy 1,000 electric delivery vehicles and the associated charging infrastructure in Delhi. RMI will also rigorously document the performance and value proposition of electric vehicles to create a replicable and scalable roadmap for full electrification of urban deliveries in Indian cities. The purpose of the roadmap is to improve policymaking for the public sector and decision-making about EVs for the private sector. Read More: https://rmi.org/insight/deliver-electric-delhi/

**Electric Car Subsidies Make Renaults free in Germany**

Germany and France increased their subsidies on electric vehicles to stimulate demand. The state support is allowing Autohaus Koenig, a dealership chain with more than 50 locations across Germany, to advertise a lease for the battery-powered Renault Zoe that is entirely covered by subsidies. In the 20 days since it put the offer online, roughly 3,000 people have inquired and about 300 have signed contracts. Germany subsidies as much as 9,000 euros per electric vehicle to boost the sales as EU is pushing towards decarbonizing transport, and the coronavirus crisis has enabled the acceleration of this program. Berlin based start-up will be starting to lease Daimler AG’s battery powered Smart EQ for 9.90 euros a month. On the other hand, government of France raised the subsidies on EV’s to 7,000 euro per car this year and the customers can also lease the Renault Zoe from 79 euros a month. Read More: https://bit.ly/3h2Q0tF

**Energy Efficiency Services Ltd. (EESL) Signs Agreement with NOIDA Authority to Install EV Charging Units**

EESL has signed an agreement with new Okhla Industrial Development Authority (Noida) to promote electric vehicle and install public EV charging stations and related infrastructure. An upfront investment will be made on services pertaining to operation and maintenance of public charging infrastructure. The aim is to save over 3.7 tonnes of CO2 emission per e-car per year. Noida authority has been sanctioned 162 Public EV Charging Stations under the FAME India Scheme Phase-II of Department of Heavy Industry (DHI). So far, EESL has installed 20 EV chargers, 13 are commissioned and 7 are under commissioning. Read More: https://bit.ly/2OD4ixb

**Panasonic claims the pumps run almost carbon-free when powered by the renewable energy provided by the 600 Panasonic HIT panels, which supply a capacity of 195kWp.**
New York to Invest $750 million to Expand Electric Vehicle Infrastructure

New York Governor Andrew Cuomo on 16 July 2020 (Thursday) announced an investment of $750 million to build charging stations and other electric-vehicle infrastructure as part of the state’s long-term goal to reduce emissions. The aim is to create more than 50,000 charging stations and will largely be funded by the state’s investor-owned utility companies, with the total budget capped at $701 million through 2025. An additional $48.8 million is allocated from a 2017 settlement with German carmaker Volkswagen AG over its diesel emissions cheating scandal to fund electric school and transit buses, as well as charging stations. New York’s announcement comes on the heels of a similar measure by Florida, which on July 10 announced an $8.6 million investment to expand charging stations. Read More: https://bit.ly/2ZJlxD9

MG Motor India, Tata Power Join Hands to Deploy Superfast Chargers for EVs at Select Locations

MG Motor India join hands with Tata Power to set up superfast chargers for electric vehicles at select MG dealerships and offer end – to – end charging solutions. As part of the association, Tata Power will deploy 50kW DC superfast chargers at select MG dealerships besides offering end-to-end electric vehicle charging solutions. These superfast 50kW DC chargers will be accessible by both MG ZS EV customers as well as other EV owners whose automobiles are compatible with the CCS/CHAdeMO charging standards. MG Motor India has already installed 10 superfast 50 kW charging stations across 5 dealerships in different cities – New Delhi, Mumbai, Ahmedabad, Bengaluru and Hyderabad. On the other hand, Tata Power has established an elaborate EV Charging ecosystem with over 180 charging points in 19 different cities under EZ Charge brand along with digital platform to facilitate easy and smooth customer experience. Read More: https://bit.ly/2COqaTt

Energy Storage

Australia’s Energy Storage Capacity to More Than Double in 2020

For the first time, front-of-the-meter (FTM) capacity, at 672 megawatt-hours, will overtake the 581 megawatt-hours of behind-the-meter (BTM) capacity in 2020, a result of funding from state and federal government programs as well as the Australian Renewable Energy Agency. With the Australian Renewable Energy Agency’s advanced renewable funding phasing out, storage developers are pressed to seek private equity to cover 10% to 50% of initial project investments. Revenue uncertainties and risks of grid connection may prevent projects from attracting funding. The FTM market is most acutely affected by this and is likely to contract in 2022.

As Australia gradually phases out its 31-gigawatt coal fleet, it will need to look for alternatives. Project developers, both domestic and international, are clearly unfazed by the challenges. The number of Australian developers active in the market has doubled to 40 this year. By 2025, Australia’s cumulative energy storage investment is expected to hit $6 billion (USD) which translates to 12.9 gigawatt-hours of cumulative storage deployments. Read more: https://bit.ly/3gZ3Xkh

British Battery Storage Sector Takes a ‘Big Step’ as Ministers Remove Size Limit Barriers

Barriers have been removed allowing for battery storage projects five times the size as the current limit in Britain, in a move hailed as a significant, positive and well-timed step. Secondary legislation was passed by ministers on 14 July that will allow for projects above 50MW in England and 350MW in Wales. The move could triple the number of battery storage projects on the grid according to the Department of Business, Energy and Industrial Strategy (BEIS). It is hoped that removing the barrier will help to encourage bolder investment decisions, allowing more batteries to balance the grid as the number of intermittent renewables continues to grow. The need for greater flexibility – such as that provided by battery storage – has been thrown into focus by the COVID-19 lockdown, as demand fell by around 20%, leading the transmission system operator National Grid ESO to develop additional tools for flexibility. The FTM connection may prevent projects from attracting funding. The FTM market is most acutely affected by this and is likely to contract in 2022.

NLC India Commissions 20 MW Solar Project with Battery Energy Storage in Andaman

The Neyveli Lignite Corporation (NLC) India Limited has announced that the electricity department of Andaman and Nicobar administration has confirmed the commissioning of a 20 MW solar power project integrated with 8 MWh battery energy storage system (BESS). This was one of the first tenders in the country that saw solar projects coupled with a battery energy storage system. The project has been developed at Dollygunj and Attampahad in South Andaman, and it was successfully commissioned on June 30, 2020, as per the Bombay Stock Exchange (BSE) filing. NLC India had tendered the solar project with BESS to be developed on the island of Andaman & Nicobar in 2017. The capacity tendered comprised two projects of 10 MW each with 8 MWh BESS. However, the auction for this tender was scrapped, and a fresh tender was issued in March 2018. Battery storage systems are emerging as a potential solution for integrating solar and wind renewables in power systems across the globe. The systems have the unique capability to absorb quickly, hold, and then reinject electricity. According to a recent

The system, which utilises the electrical grid to build out internet infrastructure, will be cheaper than the existing methods of laying internet cables, particularly in developing countries.
Hybrid and RTC projects to boost India’s RE and energy storage market

India has taken the lead in addressing the concern of intermittency in the power supply. The Ministry of New & Renewable Energy (MNRE) has been adopting a variety of measures to boost project investments in renewables over the past few years. The most recent scheme for encouraging round-the-clock (RTC) power is a pioneering one that aims to smoothen the intermittent nature of renewable energy by promoting hybrid energy and battery storage integrated (HES) projects.

The global hybrid energy market, including energy storage, is projected to touch $40 billion by 2025. It is an opportunity that India has capitalized upon, earlier than others. India’s goal of installing 175 GW capacity of renewable energy systems by 2022 will help build a new energy security architecture for the country. During the current pandemic, when the country's renewable energy targets appear daunting, this policy shift towards hybrid energy and storage systems could provide the necessary thrust.

According to the MNRE, based upon the availability of land and solar irradiation, the potential of solar and wind energy in the country is around 750 GW and 300 GW, respectively. However, the current installed capacity in solar and wind energy stands at 35 GW and 38 GW, respectively. This reiterates that we have enough potential to harness these green energy sources. Read more: https://bit.ly/30es5Zo

European Commission invests one billion euro in innovative clean technology projects

The European Commission launched the first call for proposals under the Innovation Fund, one of the world’s largest programmes for the demonstration of innovative low-carbon technologies, financed by revenues from the auction of emission allowances from the EU’s Emissions Trading System. The Innovation Fund will finance breakthrough technologies for renewable energy, energy-intensive industries, energy storage, and carbon capture, use and storage. The first call will provide grant funding of 1 billion euro to large-scale projects for clean technologies to help them overcome the risks linked to commercialisation and large-scale demonstration. Read More: https://bit.ly/2WIWX0d

DISRUPTIVE TECHNOLOGIES

Innovative Facebook robot walks on power lines to install fiber-optic cable

Facebook in San Francisco, USA has developed an aerial fiber deployment solution that uses a robot to safely deploy a specialised fiber-optic cable on medium-voltage (MV) power lines that can dramatically lower the cost of deploying fiber by utilising electrical infrastructure. Each robot will be capable of installing over a kilometre of fiber and passing the dozens of intervening obstacles autonomously in approximately an hour and a half.

To account for the human interaction steps such as setup, loading and unloading the robot, installing transitions, etc., Facebook estimates an overall build speed of 1.5 km to 2 km per robot per day on average. The system, which utilises the electrical grid to build out internet infrastructure, will be cheaper than the existing methods of laying internet cables, particularly in developing countries. Developed by the team at Facebook Connectivity, the system combines innovations in the fields of robotics and fiber-optic cable design. Read more: https://bit.ly/2OSyPc9

UK Start-up Electric Miles uses artificial intelligence and blockchain to optimise charging capabilities

UK based Electric vehicle (EV) charging software-as-a-service (SaaS) provider, Electric Miles, has recently won two new contracts to provide grid balancing flexibility services via the EV charging network for UK Power Networks and Western Power Distribution. The start-up uses artificial intelligence (AI) and blockchain to optimise charging capabilities and claims its solution can deliver savings of up to 40 per cent on each charge, as well as reduce the impact of mass EV charging on the grid.

The two contracts will deliver 8MW of flexibility across South East England, the East of England, London, the Midlands, South Wales and the South West. The cleantech company’s mission is to develop an intelligent internet of energy (IoE) charging solution by connecting EV and home batteries with AI to help users save energy costs, be more efficient, and reduce overall energy needs. Read more: https://bit.ly/2DBrf1g

AI reducing hospital’s energy use by 20%

The winning team of ENGIE x NTU Innovation Challenge, EcoBuilding from Nanyang Technological University, Singapore (NTU Singapore) used a system of multi-variant sensing for predictive controls of air-conditioning. They achieved more than 20% energy savings and improved comfort through machine learning of room occupancy and air quality metrics. Their prototype enables the air-conditioning system to be controlled by artificial intelligence.

They participated in the inaugural ENGIE x NTU Innovation Challenge, were given eight months special access to a local hospital to creatively solve challenges around energy efficiency and smart buildings. It was a technology challenge with a unique twist. Read more: https://bit.ly/2TprzO

Energy Web foundation pilots blockchain REC trading marketplace in Central America

Energy Web Foundation (EWF) recently completed the initial development of an international renewable energy certificate (i-REC) trading marketplace in Central America. Salvadorian...
energy retailer Mercados Eléctricos worked with the EWF to build and pilot the blockchain trading platform. EWF has more than a hundred high profile affiliates and its platform is used by the likes of Duke Energy, Equinor, Siemens and Total.

In May, Mercados Eléctricos (MERELEC) joined as a validator node for the EW Chain, the public blockchain created by EWF. MERELEC has a significant presence in El Salvador, Guatemala, Panama, Mexico, and some other Central American countries. The company has commercialized almost 2,000 GW through its projects. Read more: https://bit.ly/32w8B9V

Cyber Security and Standards

Stronger Clean Energy Standards Will Mean a Stronger Arizona Economy

Arizona Corporation Commission Chairman Bob Burns is pushing to update the state’s inadequate and antiquated clean energy standards to reflect the state’s potential to build a cleaner, less expensive, just and homegrown energy mix. Commission staff has promised to have a proposal ready in July for consideration and a vote. While it may seem incongruous that adoption of clean energy policy could impact such systemic and enormous issues, remember that having affordable and reliable electricity is the underpinning of our entire economy. The move to clean energy is not sudden or unjustified. The commission has been taking input and debating clean standards for three years, with literally thousands of business and customer supporters. Fortunately for us, in that time, the prices of solar, wind and energy storage have continued to plummet. Read More: https://bit.ly/3epr3mF

Testing Mandatory for Power Equipment in India Imports to Check Cyber Threats

As part of the exercise to have strict security and quality checks on all imported power supply system equipment, components and parts, the Ministry of Power has issued a notice making it mandatory to scan all such imports for presence of software that could compromise the security of the country’s critical installations. Sources said that such checks have been incorporated particularly to check Chinese imports. The recent border flare up between India and China has severely dented the trust factor, and the government wants to ensure that any product coming from the neighboring country is clean of malware and harmful embedded software. The ministry has said that all imported power equipment will go through testing for presence of Trojans and harmful embedded software. Such testing will also have to be done by approved Indian laboratories designed for such activities. Read More: https://bit.ly/306d100

DOE, USA Seeks Information on Securing Bulk Power System

DOE is seeking information on the evidence-based cybersecurity maturity metrics employed by utility owners and operators, as well as evaluations made in connection with foreign ownership, control, and influence (FOCI) in their acquisition processes. To help prioritize its review of BPS electric equipment and its assessment of the national security implications should it be acquired, DOE seeks comment on the following types of equipment: transformers (including generation step-up transformers) rated at 20 MVA and low-side voltage of 69 kV and above; reactive power equipment (reactors and capacitors); circuit breakers; and generation (including power generation that is provided to the BPS at the transmission level and back-up generation that supports substations). This includes both the hardware and electronics associated with equipment monitoring, intelligent control, and relay protection. Read More: https://bit.ly/2BZPohP

UNR Inks Cybersecurity Deal with Nevada, USA National Security Site

As the need for cybersecurity is growing exponentially, the University of Nevada, Reno’s UNR Cybersecurity Center and the U.S. Department of Energy’s Nevada National Security Site have recently established partnership opportunities for cybersecurity research and collaboration. Through their initial phase funding of $170,000 for one year from DOE’s National Security Site, the UNR Cybersecurity Center will be researching various vulnerability assessments and how to make the nation’s digital infrastructure more resilient. The proposed research has both direct and indirect impact on hands-on research, education, training and career development of the graduate and undergraduate students at the University of Nevada, Reno, and ultimately the community. Read More: https://bit.ly/3gWvsLJ

Smart Water and Gas

China plans to advance 150 new water conservancy projects

BEIJING - China will advance the construction of 150 new major water conservancy projects, said the National Development and Reform Commission (NDRC). The projects are expected to increase the storage capacity for flood control by 9 billion cubic meters and the annual water supply capacity by 42 billion cubic meters, said Su Wei, an official with the NDRC at a briefing. The projects would involve flood control, allocation of water resources, irrigation and water supply, water ecological protection and smart water conservancy. Their construction is to shore up China’s major water conservancy facilities and ensure national water security, as the country faces shortage of per capita water supply and uneven distribution of water resources. The total investment in the projects is estimated to reach 1.29 trillion yuan ($184.38 billion), which is expected to drive investment of about 6.6 trillion yuan and offer about 800,000 job positions annually on average, Su said. Read More: https://bit.ly/3jhFxIp

SWAN Forum and LoRa Alliance partners to accelerate IoT adoption in the water sector

The Smart Water Networks Forum has formed a new strategic liaison with the LoRa Alliance to advance “smart,” data-driven solutions in water networks, and drive adoption of the LoRaWAN open standard in the water metering sector. This agreement will build off of each organisation’s vibrant membership pool and promote Internet of Things (IoT) deployments for smart network coverage. As LoRaWAN technology further expands its global footprint, utilities broadly—and water metering in particular—remain the leading application for low power wide area networking (LPWAN) technologies and will occupy the largest market segment over the next five years, a market study by IoT Analytics shows. Representing 30% of the installed base by 2025, utilities counts by far the most use cases and will continue to do so. Read More: https://bit.ly/3ev4vwM
ANNOUNCING India Smart Utility Week (ISUW 2021)

INTERNATIONAL CONFERENCE AND EXHIBITION ON SMART ENERGY AND SMART MOBILITY FOR SMART CITIES

02 March - 06 March 2021
New Delhi, India
www.isuw.in

ISUW 2021 Conference and Exhibition Program

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Announcing Distribution Utility Meet (DUM) 2020

DISTRIBUTION UTILITY MEET DUM 2020

4th Annual Conference of Power Distribution Utilities for Collaborative Growth
27 – 28 November 2020

The 4th edition of ISGF’s Annual Conference of Power Distribution Utilities – Distribution Utility Meet (DUM 2020) will be held on 27 - 28 November 2020 on Digital Platform. DUM 2020 will provide a unified voice to influence and enable the Electric Utilities to leverage each other’s experiences for successful nation wide Smart Grid rollouts and to bridge the gap between strategy and execution. As India moved forward in its Smart Grid journey, it is imperative that we do not make the same mistakes but learn from each other’s experiences and also bring international best practices to India. Experts from leading Utilities from USA, Canada and Europe will be invited to participate in DUM 2020 and share their experiences.

For Queries regarding participation, contact India Smart Grid Forum
Email: dum@indiasmartgrid.org | website: www.dumindia.in
@DUM_India | – Distribution Utility Meet (DUM) | – Distribution Utility Meet – DUM

www.isuw.in isuw@isuw.in @isuw2020