17 October 2023

Scotland: TotalEnergies Commissions Its Biggest Offshore Wind Farm

TotalEnergies and its partner SSE Renewables are pleased to announce that their Seagreen offshore wind farm is now fully operational and running at its design capacity of 1,075 MW. Seagreen is a joint venture between TotalEnergies (51%) and SSE Renewables (49%). It is located in the North Sea, some 27 km off the coast of Angus. It is TotalEnergies' biggest operational offshore wind farm worldwide and the world's deepest fixed bottom wind farm, with its foundation reaching nearly 60 meters below sea level.

The project, which began construction in June 2020, has been completed in around 3 years for a global investment of around $4 billion, globally in line with the expected capex. The development and construction were led, with the support of TotalEnergies, by SSE which will now operate the offshore wind farm for its expected 25-year lifetime.

The 1,075 MW offshore wind farm has the capacity to generate around 5 terawatt hours (TWh), or enough renewable electricity to power almost 1.6 million homes annually, equivalent to two-thirds of all Scottish homes. Seagreen will also prevent the emission of over 2 million tons of CO2 from fossil fuel electricity generation every year.

Consistently with its business model, TotalEnergies will commercialize, through Seagreen, its share of production through a mix of a long-term contract at guaranteed price, including a 15-year CfD (Contract for Difference) awarded by the UK Government, and a 15-year private CfD with the SSE Group, and short-term sales on the wholesale market.

«The Seagreen offshore windfarm is a fantastic example of the work being done to unleash Scotland's renewable potential, as we seek to lead the world in the transition to net zero» said the First Minister of Scotland, Humza Yousaf. «This significant milestone for Seagreen is also significant for Scotland, taking us a step closer to creating a net zero energy system that delivers affordable, secure and clean energy. Delivering on our climate obligations is an absolute priority for the Scottish Government – so too is our unwavering commitment to a just transition for workers. We are determined to maximize the economic opportunity Scotland's offshore wind potential presents, by developing local supply chains, embedding innovation, boosting skills, creating jobs, and benefiting people and communities».

«This is a big milestone for Seagreen and for Scotland. It shows that this country not only has world-class renewable resources but also world-class teams able to deliver major clean energy projects at scale. Seagreen's ability to power up to 1.6 million homes will make a significant contribution to energy security and extend Scotland and the UK's leadership in clean energy generation», said Alistair Phillips-Davies, Chief Executive of SSE plc.

Total Energies
http://totalenergies.com/

18 October 2023

Grid Resilience and Innovation Partnerships (GRIP) Program Projects

On October 18, 2023, the U.S. Department of Energy announced up to $3.5 billion in Grid Resilience and Innovation Partnerships (GRIP) Program investments for 58 projects across 44 states to strengthen electric grid resilience and reliability across America.

Grid Resilience Utility and Industry Grants

APPLICANT/SELECTEE	PROJECT	FEDERAL COST SHARE	RECIPIENT COST SHARE
Consumers Energy	Sectionalization and Circuit Improvements to Mitigate Outage Impacts for Disadvantaged Communities	$100,000,000	$100,310,996

APPLICANT/SELECTEE	PROJECT	FEDERAL COST SHARE	RECIPIENT COST SHARE
Electric Power Board of Chattanooga	EPB Chattanooga Grid Resiliency Upgrades: Network Conversions & Microgrids	$32,375,691	$32,375,691
Entergy New Orleans, LLC (ENO)	Line Hardening and Battery Microgrid in New Orleans, LA	$54,828,178	$54,828,178
Fort Pierce Utilities Authority	Mitigating Impacts of Extreme Weather and Natural Disasters Through Increased Grid Resiliency	$5,828,993	$2,907,882
Hawaiian Electric Company Inc.	Climate Adaption Resilience Program	$95,313,716	$95,313,718
Holy Cross Energy	Wildfire Assessment and Resilience for Networks (WARN)	$99,328,430	$45,762,816
Jamestown Board of Public Utilities	Jamestown Board of Public Utilities Microgrid	$17,377,945	$5,792,648
Kit Carson Electric Cooperative	Building a Modern, Intelligent Distributed BESS for Resiliency in Northern New Mexico	$15,430,118	$7,715,580
Midwest Energy, Inc.	Transmission Line Rebuild/Replacement for Wildlife Mitigation and Renewable Resource Access	$96,942,707	$47,717,412
Mora-San Miguel Electric Cooperative, Inc.	Three-Part Wildfire Damage Mitigation Project	$11,270,193	$3,756,731
PacifiCorp	PacifiCorp's Equity-aware Enhancement of Grid Resiliency	$99,633,723	$106,105,519
PECO Energy Company (PECO)	Creating a Resilient, Equitable, and Accessible Transformation in Energy for Greater Philadelphia	$100,000,000	$156,761,176
Southern Maryland Electric Cooperative	SMECO Transmission, Distribution, and Communications Resiliency Initiative	$33,567,016	$15,642,000
Sumter Electric Cooperative, Inc. d/b/a SECO Energy	Improving Reliability Through Grid Hardening	$52,857,560	$17,619,190
Tri-County Electric Cooperative, Inc. (TCE)	Tri-County Power Meter Squared & Green Tree	$4,665,803	$2,332,903
Xcel Energy Services, Inc.	Wildfire Mitigation and Extreme Weather Resilience for Xcel Energy	$100,000,000	$142,020,463

ENERGY.GOV
http://www.energy.gov/

18 October 2023

Indian cabinet approves 7.5GW solar park with battery storage in Ladakh

India's cabinet has approved a 13GW renewable energy project, with a 7.5GW solar park, in the most northern state of Ladakh, a remote area that has amongst the most suitable solar conditions in the world. Prime minister Narendra Modi also announced plans for 12GWh of Battery Energy Storage Systems (BESS) in Pang at the southern tip of the state, which has an extreme climate, with very strong irradiation and high altitude offering low temperatures.

The Cabinet Committee on Economic Affairs, chaired by Modi, greenlit the project under phase two of its Green Energy Corridor venture. The Power Grid Corporation of India will lead the project, but completion is a long way away, with a target for setting up by FY2029/30 at a cost of nearly INR208bn (more than USD2.49 billion). Access to Ladakh is very limited and often blocked off from the rest of India by snowfall on connecting roads for more than half the year. Due to its neighbouring of both China and the Kashmir region, it is also geopolitically sensitive with complex terrain and a high military presence.

The transmission line for exporting the power produced to energy demand centres further south in India will pass through the mountainous state of Himachal Pradesh, then Punjab and up to Kaithal in Haryana, where it will be integrated with the national grid. Ladakh itself will also be supplied power via an interconnection from the project to the regional capital city Leh. It will also be connected to the Leh-Alusteng-Srinagar line to provide power to the state of Jammu and Kashmir to the West. The project will entail the installation of up of 713km transmission lines and 5GW capacity high voltage direct current (HVDC) terminals both at Pang and Kaithal. State of the art voltage source converter-based HVDC systems and extra high voltage alternating current systems will also be deployed.

Intra-state transmission systems under the Green Energy Corridors drive are also being set up in the states of Gujarat, Himachal Pradesh, Karnataka, Kerala, Rajasthan, Tamil Nadu and Uttar Pradesh for exporting 20GW of renewable energy-based power across much of India. Ladakh has already waited a long time for these mega-scale projects to get under way. In 2019, the Solar Energy Corporation of India issued a tender for a 7.5GW solar park in Ladakh, following the government's assessment of plans for 23GW of renewable energy in the state.

PV Tech
http://www.pv-tech.org/

18 October 2023

Ocorrência de 15 de agosto: ONS finaliza Relatório de Análise de Perturbação

Processo foi concluído e seguiu todas as etapas regulamentares. Documento traz um anexo com o registro de divergências resultantes da análise da perturbação

O Operador Nacional do Sistema Elétrico (ONS) divulgou hoje, 18 de outubro, a versão final do Relatório de Análise de Perturbação (RAP), relativo à ocorrência no Sistema Interligado Nacional (SIN) no dia 15 agosto de 2023. O documento confirma o resultado apresentado aos agentes no dia 25 de setembro, com a minuta do RAP. A edição contém um anexo com o registro de divergências resultantes da análise da ocorrência.

Esse é o RAP com o maior número de providências cadastradas.

O ONS agradece a todos os profissionais que se dedicaram à elaboração do RAP e reforça que o trabalho realizado traz novas perspectivas para a gestão do setor elétrico e recomendações alinhadas à crescente transformação que o segmento tem vivido.

Clique no link e confira o RAP contendo os anexos de divergência.

ONS
http://www.ons.org.br

19 October 2023

Elering and AST signed the memorandum to develop Estonian-Latvian interconnection

Estonian and Latvian electricity transmission system operators (TSO) Elering and Augstsprieguma tīkls (AST) signed a memorandum of understanding (MoU), with which the parties will jointly start activities for the development of the fourth Estonian-Latvian electricity interconnection. This new interconnection will increase transmission capacity between Estonia and Latvia, contributing to the development of renewable energy sources in the

Baltic Sea region. The fourth Estonian-Latvian interconnection is planned to be built in hybrid mode, ie in addition to connecting the electricity systems of the two countries, it would also be possible to connect RES offshore and onshore production capacities to it. The project will increase system security and stability, but in addition to increasing security of supply, the planned interconnection gives opportunities to receive a larger amount of RES into the Estonian and Latvian electricity networks and thus contributes to the fulfillment of the countries' climate goals. The exact location of the interconnection and other technical details will be agreed on later stages. Based on the previous evaluation and technical analysis, the working version of interconnection capacity is assumed to be 1000 megawatts, and the connection could be completed by 2030+ time horizon with the accompanying investments of transmission infrastructure.

"The new interconnection is an important step of transmission capacity increase between Estonia and Latvia, which is essential for the development of renewable energy sources (RES) in Latvia and Estonia, both onshore and offshore. We see this cooperation as the first step towards creation of interconnected hybrid transmission grid in the Baltic sea, thereby contributing to the goals of decarbonization and RES development for the whole Baltic sea region" says Arnis Daugulis, Member of the AST Board. According to Kalle Kilk, chairman of the board of Elering, Elering is exploring the possibilities of establishing a new connection between Estonia and Latvia from Saaremaa to Kuramaa in Latvia. "Establishing a new connection to Latvia via Saaremaa would enable the most additional capacity between the two countries to be obtained at the lowest cost," he noted.

Elering and AST have agreed to cooperate to make preparatory activities, including several studies, which are a prerequisite to select environmentally friendly and technically-economically preferable scenario for making future investment decision regarding the interconnection development. Elering and AST expect to receive co-financing from the European Union CEF grants for the evaluation and construction of the interconnection and have taken all the necessary steps to include the project in EU development documents. The final decision of project implementation will be made after the European Union's support becomes clear.

The fourth interconnection is next and logical step to increase transmission capacity between Estonia and Latvia. The third Estonian-Latvian electricity interconnection has been constructed and started operating in 2020. Two other Estonian-Latvian interconnections are also under construction as a part of Baltic States synchronization project with continental Europe, where Valmiera-Tartu transmission line construction has been finalized in June this year and Valmiera-Tsirguliina line is under construction until the end of 2024.

Elering
http://elering.ee/

19 October 2023

DOE announces ‘largest-ever investment in America’s grid,’ giving $3.5B across 44 states

The first round of funding under the Grid Resilience and Innovation Partnerships program will boost U.S. renewable capacity by more than 10% within this decade, said DOE officials.

The U.S. Department of Energy on Wednesday announced nearly $3.5 billion in awards under its Grid Resilience and Innovation Partnerships program, known as GRIP, to support 58 projects in 44 states. When matched with private and local investment, officials said the awards will support a total of $8 billion to expand and strengthen the nation’s electric system.

It is “the largest ever investment in America’s grid,” said Energy Secretary Jennifer Granholm. Billions more in future GRIP funding is planned.

The smallest of yesterday's awards include smart grid grants of around $1 million to individual cities, and the largest is $464 million to support the construction of five transmission projects across seven Midwest states.

Utility Dive
http://www.utilitydive.com

19 October 2023

France faces early winter supply risk in event of cold – EDF

France will likely maintain power supply this winter amid lower demand and increasing nuclear availability but a severe cold spell at the beginning of the season could cause supply interruptions, EDF told its workforce this week.

"The power system remains at risk in the event of an intense cold snap, particularly at the beginning of winter," said EDF in a document presented to employee representatives on Wednesday and seen by Montel. "Failures" could begin to affect the grid if temperatures were to drop 7C below normal levels in November and December, the document said, citing possible load shedding, voltage reductions and supply interruptions. "The system does not seem robust enough to cope with a cold snap similar to 2012" when temperatures fell 10C below normal levels in February, it added.

However, "only a combination of a winter as harsh as in 2011-12, extended nuclear unit shutdowns and unplanned outages in the nuclear fleet could lead to power failures," said a report by French power and gas consultancy, Energy and Development Institute (IED) provided to EDF staff. In its document, EDF confirmed nuclear availability targets of 40 GW in November, 45 GW in December and 50 GW in January. Last year, French nuclear availability averaged 31.9 GW in November and 39.2 GW in December, data from Montel's Energy Quantified (EQ) showed.

EDF forecast power demand to remain 7% lower than 2017-19 levels this winter, the document said. Last winter's power demand, adjusted for weather differences, was around 9% lower than the 2014-19 average, according to TSO figures, as prices soared and homes, businesses and industry cut power use. Overall, the grid faced a "considerably lower risk" this winter compared with last, with a "limited risk of failures", EDF said. Europe should see a mild November and December but cooler than normal temperatures in January and February, according to one forecast earlier this week.

Montel News
http://www.montelnews.com/

19 October 2023

Germany Fires Up Extra Coal Unit to Help in Cold Snap

Germany has fired up a refurbished coal unit to help meet energy needs as the region's first cold spell takes hold. A unit of a power plant in the eastern part of the country — LEAG's Jänschwalde block F — started generating on Sunday, according to the operator. The facility, which has a capacity of 500 megawatts, was operational last winter, put in reserve in July, and is now fully available in the market to help boost supplies.

Last year's historic energy crisis forced Germany to temporarily increase its reliance on the dirty fuel after supplies of Russian pipeline gas were shut off. While that poses a setback for the government's plans to curb harmful emissions, it's part of its strategy to contain price increases for consumers during the heating season. The lignite plant's second unit, block E with another 500 megawatts of capacity, is ready for operation and can also be connected to the power grid within a short time, LEAG said. Economy minister Robert Habeck said in an interview with German broadcaster ARD last week that the government will not need to reactivate old reserve plants in the winter of 2024-2025.

A cold snap took hold of northern Europe on Monday, with temperatures plunging below seasonal norms in a first test for the region's energy infrastructure. That tightened Germany's grid capacity as demand rises to keep factories running and homes warm. Spot prices for Monday hit €133.70 per megawatt-hour on Epex Spot SE, the highest price in over a month, also pushed up by low sunshine and wind limiting renewables output.

Bloomberg
http://www.bloomberg.com/

19 October 2023

US facilitates commissioning of new gas-fired power plants

During the past months of 2023, ten new gas-fired combined heat and power plants (CHPPs) of total 6.8 GW capacity were launched in the USA, according to the Energy Information Agency (EIA). Six more gas-fired power plants are to be connected to the grid of 1.8 GW before the end of the year. Eventually, by the end of 2023 the total number of new gas-fired power plants will reach sixteen, and their total capacity – 8.6 GW, which is above the similar metrics of the previous year (eleven power plants of 5.6 GW).

Combined cycle gas turbine (CCGT) units are the most popular type of the gas-fired power plants. They are equipped with steam-power and gas turbine engines, which provides for high efficiency factor (over 60% vs 28–42% of simple gas-turbine units). In total, thirteen steam-power units of total 12.4 GW capacity are to be launched in the USA in 2022–2023; Florida and Michigan will account for 5.8 GW. The total number of new gas-turbine plants in 2022–2023 will reach fourteen, and their cumulative capacity – 1.9 GW, half of which will be provided by Texas.

Despite the fact that gas-turbine plants are significantly behind the steam-power plants in terms of their specific capacitance (140 vs 900 MW), they are capable of quicker response to the surges in energy demand, especially in the regions with high percentage of renewable energy sources (RES). So it is for a good reason that Texas is the key venue for gas-turbine units, because in 2022 the share of wind generation in its power generation reached 25%.

The balancing role of gas-turbine units can be also seen in such metric as power generators' utilisation rate: the total utilisation rate of gas-steam power plants in the USA in 2022 made 56.7%, and for gas-turbine units it was only 13.7%. This indirectly shows that gas-turbine units are used when there is a surge in demand, which cannot be covered by other sources.

Gas remains the key source of power generation in the USA. According to Ember analytical center, the share of gas-fired power plants in the total generation mix of the United States grew from 16% up to 39%, while as the share of coal-fired power plants decrease from 52% down to 19% over the same period. And this trend will continue during the following years. According to EIA, in 2024–2025 twenty new gas-fired power plants of total 7.7 GW capacity will be commissioned in the USA.

Power Energy
http://globalenergyprize.org/

19 October 2023

European Council proposes reforms for EU electricity market design

The European Council approved a proposal this week to improve electricity market design in Europe. If the European Parliament approves the reforms, they will result in more stable energy prices, lower dependence on fossil fuel costs, and better crisis resilience, according to Teresa Ribera Rodríguez, Spain's ecological transition minister.

"We will also accelerate the deployment of renewables, a cheaper and cleaner source of energy for our citizens," she said. The EU Council has announced reforms to stabilize long-term electricity markets, in order to support power purchase agreements (PPAs). The changes involve generalizing two-way contracts for difference (CfDs) and enhancing forward market liquidity. Member states will support PPAs by removing specific barriers and eliminating "disproportionate or discriminatory" procedures if these reforms are approved.

"Measures may include among other things, state-backed guarantee schemes at market prices, private guarantees, or facilities pooling demand for PPAs," said the EU Council. "Measures may include among other things, state-backed guarantee schemes at market prices, private guarantees, or facilities pooling demand for PPAs. Two-way contracts for difference – only applied after a transition period of three years, but five years for hybrid projects connected to two or more bidding zones – would apply to investments in renewable energy, including solar.

"The council added flexibility as to how revenues generated by the state through two-way CfDs would be redistributed," it said. "Revenues would be redistributed to final customers and they may also be used to finance the costs of the direct price support schemes or investments to reduce electricity costs for final customers." The proposal includes a clause regarding consumer protection, with the amendment establishing the free choice of supplier and the option of accessing dynamic electricity prices. This would be across fixed-term and long-term contracts.

"The council agreed to stricter rules than previously for suppliers in their price-hedging strategies to shield customers from variations on wholesale markets," the council stated. "It agreed to protect vulnerable customers from disconnections by putting in place 'supplier of last resort' systems to ensure the continuity of supply at least for household customers if such systems do not already exist. The reforms also empower member states to set regulated prices for small- to medium-sized businesses during crises, according to the announcement.

Pv-magazine
http://www.pv-magazine.com/

20 October 2023

Siemens-Led Group Completes Test of 100% Renewable Hydrogen in Gas Turbine

A consortium that includes power industry giants Siemens Energy and ENGIE said it completed what the group called the world's first operational test of a gas turbine fueled with 100% renewable hydrogen. Siemens Energy on Oct. 13 said the HYFLEXPOWER consortium conducted the test using a gas turbine at Smurfit Kappa, a paper packaging company in Saillat-sur-Vienne, France. The consortium also includes Centrax, a UK-based gas turbine manufacturer; Arttic, a French consultancy; the German Aerospace Center, known as DLR; and four Europe-based universities.

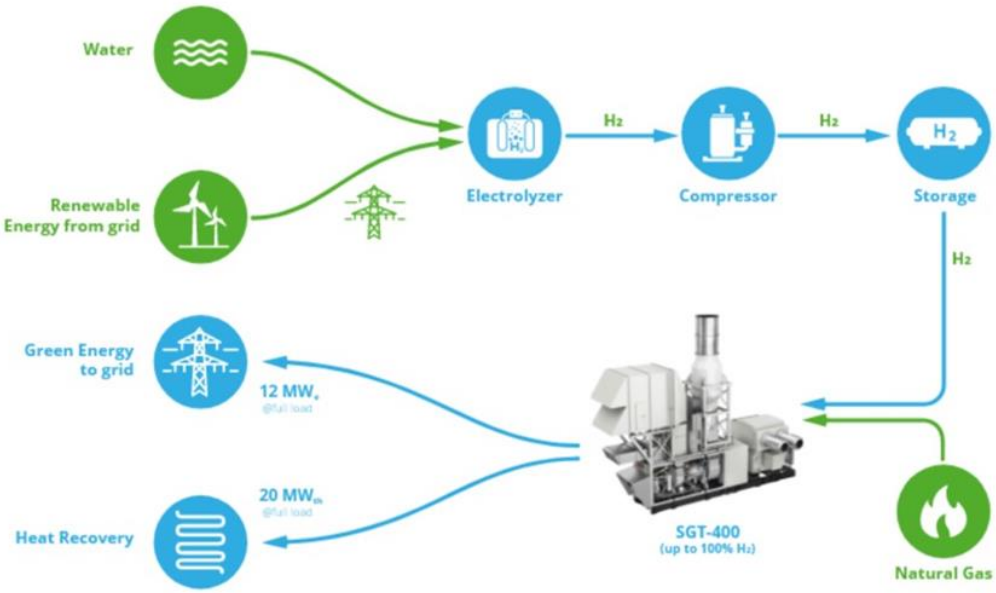
The project in France involves producing and storing renewable hydrogen at the Smurfit Kappa site. Smurfit Kappa is headquartered in Dublin, Ireland. The company produces corrugated packaging, containerboard, and other paper packaging products. "The knowledge and experience gained from the HYFLEXPOWER project where we installed the first gas turbine to run on 100% hydrogen will help us to continue develop our entire gas turbine fleet for a hydrogen-based future," said Karim Amin, member of the executive board of Siemens Energy. "The interaction between electrolysis, storage, and hydrogen conversion at one site has been impressively demonstrated, and now it's a matter of scaling the results."

The hydrogen at the French manufacturing facility is produced by a 1-MW electrolyzer at the site. It is then stored in what Siemens called "an almost one-ton tank and used to

power a Siemens Energy SGT-400 industrial gas turbine." Siemens said the project "demonstrates that hydrogen can be used as a flexible energy storage medium, and that it's also possible to convert an existing gas-fired power turbine to operate using renewable hydrogen." A schematic illustration of the HYFLEXPOWER demonstrator at a Smurfit Kappa paper packaging manufacturing plant in France. Source: Siemens Energy

"We're proud that our Saillat paper mill has been the host for this project because trialing new and emerging technology, such as hydrogen, aligns with our decarbonization strategy and Better Planet 2050 journey. Today's announcement is a great milestone that puts us in good stead," said Garrett Quinn, chief sustainability officer at Smurfit Kappa. Siemens Energy, which is leading the consortium, said the success of the HYFLEXPOWER demonstration in France already has led to a planned expansion of the group to include additional members. Siemens in a news release wrote, "Having tested HYFLEXPOWER for electricity production, the goal is now to extend its operation to industrial heat production and additional operational modes. It is also planned to explore ways of scaling up and commercializing decarbonized electricity generation."

Want to learn more about Siemens Energy and its efforts to support a hydrogen economy? Read this special report, "At the Dawn of the Hydrogen Economy," and also read this commentary from a company executive in the September 2023 issue of POWER. The group has said using renewable hydrogen would support accelerated decarbonization efforts for energy-intensive industries. Siemens Energy supplied the electrolyzer for hydrogen production, and also developed the hydrogen gas turbine. Engie has been in charge of production, storage, and the supply of hydrogen for the project. Centrax has updated the system for safe hydrogen fuel operation.



"At ENGIE, we are very proud of this world first," said Frank Lacroix, the company's executive vice president in charge of Energy Solutions. "The HYFLEXPOWER project is remarkable for many reasons: for the exceptional collaboration it has enabled between several European partners, for the forward-looking technologies it has tested, and for the promising prospects it opens up for the use of renewable hydrogen in the industrial sectors most difficult to decarbonize. We look forward to continuing this decisive work for the future of decarbonized industry with our partners."

The German Aerospace Center (DLR), along with the universities of Lund, Duisburg-Essen, and University College London, have contributed to the project, helping develop the hydrogen turbine technology. Arttic supported the project's operational management. The group said the National Polytechnic University of Athens conducted an economic, environmental, and social analysis of the project's concept.

Siemens Energy also recently announced it would supply 12 electrolyzers with a total capacity of 200 MW to Air Liquide's Normand'Hy project in Normandy, France. Air Liquide, a global gas and technology company, will operate the electrolyzers at the company's plant in the Port-Jérôme industrial zone, beginning in 2026. The companies said the plant will produce 28,000 tones of renewable hydrogen annually for use by industry and the transportation sector. Siemens Energy and Air Liquide in 2021 announced an agreement to work on hydrogen technology projects.

"The sustainable decarbonization of industry is unthinkable without green hydrogen. That is why projects like this are so important," said Anne-Laure de Chammard, member of the executive board of Siemens Energy. "But they can only be a starting point for a sustainable transformation of the industrial landscape. Other large-scale projects must follow quickly. For the development of a European hydrogen economy to succeed, we need reliable support from policymakers and simplified procedures for funding and approving such projects."

Siemens Energy said the electrolyzers at the Normandy site will be based on proton exchange membrane technology, or PEM electrolysis. That technology is compatible with an intermittent renewable energy supply thanks to its short ramp-up time and dynamic controllability, according to Siemens, which said it "well-suited for the rapid ramp-up of the hydrogen industry due to its high energy density and small footprint and material requirements."

The Normand'Hy project will be one of the first to be supplied from Siemens Energy's new electrolyzer production facility in Berlin, Germany. It's part of the framework of the previously mentioned joint venture between Air Liquide and Siemens Energy, which includes industrial series production of stacks—considered the heart of PEM electrolyzers—that will start in November. Siemens Energy has said that production is expected to increase to at least 3 GW by 2025, which could help supply hydrogen projects worldwide.

Power Magazine
http://www.powermag.com/

22 October 2023

Output at Iran's largest hydroelectric power plant up 60%

Seyyed Hamid Salehi, the CEO of the production and operation management company of Karun-3 Dam, announced the boost in energy generation on Sunday. Speaking about the critical need for a stable energy supply during the summer, Salehi emphasized the power plant's optimal performance during the current water year.

"Karun-3 power plant has been able to contribute to the country's energy production to the maximum extent during this water year, generating over 3,400 gigawatts of electricity. It plays a crucial and effective role in stabilizing the national power grid," Salehi noted. "This level of production reflects a 60% increase when compared to the same period during the previous water year and a 50% increase over the average of the past ten years," he added.

He hoped that the combination of increased rainfall and effective reservoir management would enable Karun-3 to maintain its mission of ensuring a reliable and efficient contribution to the stability of the national energy grid.

IRNA
http://irna.ir/

24 October 2023

Shanghai plans offshore wind-powered green hydrogen pilot by 2026

The Chinese city of Shanghai's municipal government has pledged to develop an offshore wind-to-hydrogen pilot project as part of its 2023-2026 workplan published at the end of last week. The government will provide support for offshore wind projects which produce green hydrogen during "high-fluctuation power output conditions", likely to mean electricity that would otherwise be curtailed.

Shanghai unveils target for 10,000 fuel-cell vehicles and 70 hydrogen refuelling stations by 2025. These pilots are also expected to feed into potential standards around so-called "peak shaving", or using hydrogen-fuelled power to produce dispatchable power during spikes in power demand.

Shanghai is the location of the first commercial-scale offshore wind farm in China, Donghai Bridge, which was installed in 2010. And the municipality's latest tender for 800MW of offshore wind reportedly saw bids of 0.207-0.247 yuan/kWh ($0.02-0.03/kWh), suggesting an extremely cheap source of power for green H2 production.

The Shanghai government in July issued a hydrogen mobility workplan up to 2025 which targeted 10,000 fuel cell electric vehicles (FCEVs) and at least 70 hydrogen refuelling stations on its roads, as well as H2 end-use demonstrations in specific districts and regions of the city, including Jiading, Qingpu, Jinshan — which includes the Shanghai Chemical Industry Park — and the planned Lingang development.

China has also seen this year the first volumes of H2 directly produced from seawater at a floating electrolyser platform co-located with the Xinghua Bay offshore wind farm off Fujian province. And in April, French energy company EDF and state-owned China Energy Investment Corporation (CEIC) announced in April this year a giant 1.5GW wind and solar "energy island", which would integrate hydrogen production and storage as part of the project, although no electrolyser capacity has been disclosed.

Hydrogen Insight
http://www.hydrogeninsight.com/

24 October 2023

European Wind Power Action Plan highlights the essential role of grids

ENTSO-E welcomes the publication of the European Wind Power Action Plan presented today by the EU Commission as well as the specific actions related to offshore wind power.

Achieving the objectives of REPowerEU is strongly linked to the development of electricity grids infrastructure to ensure efficient, reliable, and timely connection, as well as the integration of the European renewable energy (RES) potential. The timely expansion of transmission infrastructure is a critical component for the delivery of the EU Green Deal, including the ambitious offshore deployment targets of 111 GW by 2030 and 317 GW by 2050, announced by EU Member States earlier this year.

Last September, ENTSO-E organised the EU High Level Forum on Electricity Grids, where conclusions drew attention to the need to facilitate grid roll-out in Europe and for key cross-border electricity infrastructure.

ENTSO-E is supportive of the emphasis on the efficient and effective permitting for renewables indicated in the Wind Power Action Plan. This same emphasis is equally important for grid infrastructure – most notably, for cross-border transmission lines but also national electricity grids. ENTSO-E therefore sees a strong link between the permitting of new wind power installations and related grid infrastructure. This will ultimately facilitate the growing demand for wind power. For these reasons, we must ensure maximum coherence

between the EU Wind Action Plan and the upcoming EU Grid Action Plan. Actions related to increased predictability through faster permitting, such as the digitalisation of the permit-granting process in all Member States, will yield substantially higher acceptance by local communities as well as bring forward the transposition and implementation of the revised Renewables Energy Directive (RED) provisions on permitting. ENTSO-E sees the link between RES deployment and adequate grid infrastructure as a paramount contribution to the full understanding of the complexity and needs of the energy transition.

On the facilitation of access to EU funding, as highlighted in the EU Grid Forum conclusions, ENTSO-E is glad to see that facilitation measures have been included to support wind energy manufacturing. ENTSO-E highlights that a holistic approach is needed to include access to funding, ensuring stability and predictability for investors through an appropriate legal and regulatory framework, to adequately support the necessary grid expansions.

ENTSO-E recognises the need for skills and manufacturing capacity mentioned in the Wind Power Action Plan. This is a first step towards achieving the necessary network infrastructure and overcoming the significant capacity constraints that exist today. Equally, ensuring a high-level of cyber and physical resilience in the electricity system is a must, in line with relevant EU legislation and the upcoming Network Code on cybersecurity of cross-border electricity flows.

ENTSO-E's Ten-Year Network Development Plan (TYNDP) shows that opportunities for improving Europe's power system exist all over the continent, provided that key grid infrastructure developments are implemented in an effective and timely manner. New installations of offshore wind power throughout European sea basins are a key pillar of the strategy to make the European energy system sustainable, resilient, and self-reliant at the lowest cost to society.

The first European Offshore Network Development Plans (ONDP), to be released by ENTSO-E in January 2024, will further streamline the strategies for the realisation of offshore infrastructure throughout European sea basins.

In the coming weeks, ENTSO-E will further analyse the elements of the European Wind Action Plan, including the offshore-related actions and their implications on the European Electricity Transmission System, as well as the links with the upcoming EU Grid Action Plan. While doing so, ENTSO-E will continue to actively contribute to accelerating the transition to a decarbonised, reliable, and affordable energy system for Europe.

ENTSO-E
http://www.enstoe.eu

26 October 2023

Ecuador to impose power cuts as El Nino hits hydroelectric plants

Ecuador will introduce power cuts for several hours a day until mid-December, the government said on Thursday, because of a strong drought that has hit production at its hydro-electric plants. The country's most extreme drought in the last five decades, which the government attributes to the El Nino phenomenon, has affected the eastern and southern regions where 90% of hydro-electric plants operate.

"We have to be honest with the country, generation is not enough to met demand," Energy Minister Fernando Santos told journalists. "As a precaution against a collapse in power we have to make specific and temporary cuts." Cuts will last four hours per day in the Sierra and Amazon regions and three hours a day along the coast, he said. They will begin on Friday and each city's power company will decide a schedule.

The country needs an additional 460 megawatts to meet demand, Santos said, which will be covered with purchases from electricity generation boats, among other sources.

Imports of natural gas will generate an additional 100 megawatts from mid-December, authorities said. Technical problems at hydro-electric plants have exacerbated the problems, Santos added.

Reuters
http://www.reuters.com/

26 October 2023

Ofgem welcomes Energy Act getting Royal Assent

Ofgem has welcomed getting a statutory net zero duty after the groundbreaking Energy Act became law today. The duty restates Ofgem's principal objective to protect the interests of existing and future energy consumers. But it adds a specific mandate to achieve it by supporting the Government meet its legal obligation to get to net zero by 2050.

It underlines consumers are best protected by building a low-carbon, low-cost energy system, limiting exposure to volatile gas markets and ending dependence on fossil fuels.

The Act overall gives Ofgem new powers to protect consumers and reach net zero – by unlocking investment, accelerating planning decisions, building new infrastructure and paving the way for innovation and technology.

The major new powers and responsibilities for Ofgem include:

- **Net zero duty**: amending the regulator's existing duties by including reference to the net zero targets and five-year carbon budgets in the Climate Change Act 2008. This requires Ofgem to consider how its decisions may assist the Secretary of State in meeting the government's net zero target, while protecting the interests of existing and future consumers. Ofgem welcomed the Government decision in June 2023 to include the duty in the Act
- **New SO:** establish a Future System Operator and Independent System Operator – with responsibilities in both the electricity and gas systems, ensuring efficient energy planning, enhancing energy security, minimising cost to consumers and promoting innovation. The Bill imposes a duty on the Future System Operator to respond to requests for advice, analysis or information from government or Ofgem
- **Heat networks:** appointing Ofgem as the new regulator for heat networks in Great Britain
- **Energy codes:** new governance framework for energy codes – this will move responsibility from industry committees to "code managers" directly accountable to Ofgem. This will give Ofgem strategic powers to protect consumers and create competition
- **Hydrogen transport and storage:** establishing new business models for hydrogen transport and storage to remove market barriers, like high upfront costs, and unlock investment with long-term revenue stability.
- **Multi-purpose interconnectors**: introduce a new legal definition for multi-purpose interconnectors into the Electricity Act 1989.
- **Energy intensive industry**: give government powers to compensate energy intensive industries for a portion of their network charging costs – funded via a charge on all licenced electricity suppliers called the EII Support Levy
- **CO2 transport and storage**: establishing an economic regulation model with statutory objectives and legal powers for Ofgem as the economic regulator of CO2 transport and storage. This will unlock private finance and remove investment barriers for novel technology

Jonathan Brearley, Ofgem CEO, said: "We welcome the Energy Act getting Royal Assent. It is the most significant energy legislation for a decade and a world-first in giving us a legal mandate targeting net zero. It gives Ofgem the powers to drive through the energy

transition - unlocking investment, accelerating planning and building the infrastructure the economy needs. This will give us security from volatile world gas markets and end our dependency on fossil fuels. Consumers have faced a huge number of challenges in recent years, with high energy prices and cost-of-living pressures. The Act will give extra protection for existing and future customers, while powering the journey to net zero at the lowest possible cost to households and businesses. “We’re now working closely with government, consumers and sector to implement the legislation in full."

Ofgem
http://www.ofgem.gov.uk

27 October 2023

NGESO Demand Flexibility Service approved for 2023/24 winter

Demand Flexibility Service first launched last winter and saw 1.6 million households and businesses take part, saving over 3,300MWh of electricity.

Energy regulator Ofgem has today granted approval to our Demand Flexibility Service (DFS) which will be available from 30 October 2023.

DFS incentivises households with smart meters, as well as industrial and commercial users, to voluntarily flex the time they use their electricity to help manage the system this winter during periods where margins are tightest.

End-consumers that are interested in participating in the service can do so through a number of parties. Last winter, we had 31 registered service providers. A list of this years Registered Service Providers will be published on our website in due course, and updated throughout winter.

Last winter, DFS successfully saved over 3,300MWh across 22 events, enough to power nearly 10 million homes. This year, we're committed to developing the service even further and are keen for more consumers and businesses, large and small, to take advantage of this opportunity to reduce their energy bills and carbon footprint.

Alongside potential live uses of the service to balance the network this winter, we will endeavour to run 12 test events that consumers can participate in. Electricity suppliers, aggregators and businesses who directly contract with us will receive a guaranteed acceptance price of £3/kWh for at least six of the test events.

The tests will begin in November as DFS delivers for its second year. Further details on how test events have performed will be made public following delivery.

As set out our Winter Outlook for 2023/24, the broad European energy situation has improved since last year, and margins forecast to be slightly higher than last year, broadly in line with recent winters. If needed, the DFS ‘live events’ will incentivise customers to reduce electricity consumption at periods when margins are tightest.

Claire Dykta, Head of Markets at the ESO, said: “The ESO is delighted that Ofgem has formally approved the return of our Demand Flexibility Service this winter. Households and businesses across Great Britain can now benefit from actively participating in helping balance the network during tight winter periods and be incentivised to do so. Creating more flexibility on our electricity system will be vital for running the clean, green and fair energy system of the future. Last winter’s service was a first of its kind for Great Britain, with millions of consumers and businesses actively participating in demand-side energy system flexibility at scale, and the response from industry and the public has been incredibly positive. The service compliments the robust set of tools the ESO already uses to balance the electricity system every day.”

NGESO
http://www.nationalgrideso.com/