15 November 2018

Capacity market suspended after EU court overturns state aid clearance

The capacity market has been suspended until further notice after an EU court overturned a 2014 decision by the European Commission to authorise the scheme under state aid rules.

The General Court of the Court of Justice of the European Union said in making its decision the commission failed to properly establish the technological neutrality of the mechanism.

As a result, future auctions and payments under existing contracts have both been halted until the scheme receives fresh approval. The Department for Business, Energy and Industrial Strategy (BEIS) said it is working closely with the European Commission to resolve the matter.

Tempus Energy lodged an appeal against the commission's decision in 2015, arguing the capacity market discriminated against demand-side response (DSR), for example, due to the shorter contract lengths available to DSR aggregators when compared to generators.

The company later claimed it was paradoxical for the commission to clear the UK scheme without conducting a formal investigation and then launch a general inquiry into capacity markets in 2016.

In its ruling on the matter, the court said the commission had approved the mechanism following a preliminary examination lasting just one month. It said this, by itself, did not demonstrate that the commission held doubts over the compatibility of the capacity market with state aid rules.

However, the judgement also noted it had declined to launch a formal investigation into the capacity market, despite several industry players raising objections to its authorisation and the Electricity Market Reform Panel of Technical Experts highlighting a lack of understanding over the potential of DSR to meet capacity requirements in a 2014 report.

The court said the commission should not have "simply relied" on information provided by the UK to reach its conclusion without undertaking its own analysis and has therefore annulled the decision.

Responding to the ruling, BEIS said in statement: "We are already working closely with the commission to aid their investigation and seek timely state aid approval for the capacity market.

"The ruling does not change the UK government's commitment to delivering secure electricity supplies at least cost, or our belief that capacity market auctions are the most appropriate way to do this. The ruling will not impact security of supply this winter.

"This ruling imposes a standstill period on the capacity market. We are working with National Grid to contact affected parties."

Tempus Energy chief executive Sarah Bell commented: "A customer revolution is on the cards. This ruling opens the door for cheaper energy – greater use of demand-side innovation would change the way we use electricity in practice, and place customers at the heart of the energy system for the first time." She continued: "Customers are not only footing the bill for this ill-designed scheme, they are also being prevented from accessing

its potential benefits themselves. “If the government is serious about decarbonising energy at the lowest cost to the customer, it must design a market that encourages, not stifles, environmentally friendly technology. “The energy transition is about supporting smart technology and equipping the consumer to manage their own energy – not funding fossil fuels.”

Utility Week
http://www.utilityweek.co.uk

15 November 2018

Commission welcomes European Parliament adoption of key files of the Clean Energy for All Europeans package

New rules on renewables, energy efficiency and the governance of the Energy Union have been signed off by the European Parliament today – an important step in enabling the European Union and its Member States to embrace the clean energy transition, follow up on the already adopted 2030 climate legislation and meet the Paris Agreement commitments.

European Parliament completed the parliamentary approval of half of the eight legislative proposals in the 2016 Clean Energy for All Europeans package, following the Energy Performance in Buildings Directive, which came into force on 9 July. The package is a key element of the Juncker Commission's political priority of “a resilient Energy Union with a forward-looking climate change policy", aimed at giving Europeans access to secure, affordable and climate-friendly energy and making the European Union world leader in renewable energy.

Vice-President responsible for the Energy Union Maroš Šefčovič said: "With today's vote, we unlock the true potential of Europe's clean energy transition, helping us meet our Paris Agreement goals and translating into more jobs, lower energy bills for consumers and less energy imports. The Energy Union is coming of age, going from strength to strength".

Commissioner for Climate Action and Energy Miguel Arias Cañete added: "Four out of eight proposals of the Clean Energy for All Europeans Package have now been fully agreed, a signal that we are on the right track and that we will deliver on our pledge made at the beginning of the mandate. Our ambitious commitment to clean energy in Europe and the Paris Agreement will be made a reality by laws like the ones voted today. I now call on Member States to show similar ambition and leadership when submitting their draft National Energy and Climate Plans that are due by the end of this year."

The new regulatory framework, in particular via the introduction of the first national energy and climate plans, brings regulatory certainty and enabling conditions for essential investments to take place in this important sector. It empowers European consumers to become fully active players in the energy transition and fixes two new targets for the EU in 2030: a binding renewable energy target of at least 32% and an energy efficiency target of at least 32.5%, which will stimulate Europe's industrial competitiveness, boost growth and jobs, reduce energy bills, help tackle energy poverty and improve air quality. When these policies will be fully implemented, they will lead to steeper emission reductions for the whole EU than anticipated– some 45% by 2030 compared to 1990, instead of 40%. To strive towards a long-term greenhouse gas reduction objective, the framework sets up a robust governance system of the Energy Union.

Main achievements:

Renewable Energy

- Sets a new, binding, renewable energy target for the EU for 2030 of at least 32%, including a review clause by 2023 for an upward revision of the EU level target.
- Improves the design and stability of support schemes for renewables.
- Delivers real streamlining and reduction of administrative procedures.
- Establishes a clear and stable regulatory framework on self-consumption.
- Increases the level of ambition for the transport and heating/cooling sectors.
- Improves the sustainability of the use of bioenergy.

Energy Efficiency

- Sets a new energy efficiency target for the EU for 2030 of at least 32.5%, with an upwards revision clause by 2023;
- Will extend the annual energy saving obligation beyond 2020, which will attract private investments and support the emergence of new market actors;
- Will strengthen rules on individual metering and billing of thermal energy by giving consumers - especially those in multi-apartment building with collective heating systems – clearer rights to receive more frequent and more useful information on their energy consumption, enabling them to better understand and control their heating bills.
- Will require Member States to have in place transparent, publicly available national rules on the allocation of the cost of heating, cooling and hot water consumption in multi-apartment and multi-purpose buildings with collective systems for such services.

Governance of the Energy Union and Climate Action

- Puts in place a simplified, robust and transparent governance for the Energy Union which promotes long-term certainty and predictability for investors and ensures that EU and Member States can work together towards achieving the 2030 targets and the EU's international commitments under the Paris Agreement.
- Calls for each Member State to prepare a national energy and climate plan for the period 2021 to 2030, covering all the five dimension of the Energy Union and taking into account the longer-term perspective.
- Aligns the frequency and timing of reporting obligations across the five dimensions of the Energy Union and with the Paris Climate Agreement, significantly enhancing transparency and reducing the administrative burden for the Member States, the Commission and other EU Institutions.

Next steps

Following this approval by the European Parliament, the Council of Ministers will now finalise its formal approval of the three laws in the coming weeks. This endorsement will be followed by the publication of the texts in the Official Journal of the Union, and the new legislation will enter into force 3 days after publication.

European Commission
http://ec.europa.eu

15 November 2018

Spain's climate draft proposes 100% renewable power generation by 2050

The Spanish government has unveiled a draft energy and climate plan (Plan Nacional Integrado de Energía y Clima) which aims to cover 70% of domestic power

generation with renewables by 2030 (up from 23% in 2017) and 100% by 2050. By 2030, Spain targets 35% of renewables in final energy consumption and a 35% improvement in energy efficiency compared to the EU baseline. Efforts will focus on rehabilitating the housing stocks (at least 100,000 renovations per year between 2021 and 2030) and a long-term strategy for building energy rehabilitation will be approved to include aid and funding for vulnerable households.

The draft climate plan also proposes to stop issuing oil and gas exploration licenses, ban fracking and scrap new fossil fuel subsidies. It also proposes to prohibit the sale of diesel, gasoline and hybrid cars as of 2040. The government will promote biomethane and other biofuels (including for air transport). In addition, at least 20% of the national budget would be earmarked for climate action and a Committee on Climate Change and Energy Transition should be created.

These objectives will help the country reduce its greenhouse gas emissions by at least 20% by 2030 and as much as 90% by 2050 compared to 1990 levels. Since GHG emissions are currently 17% above their 1990 level, this would translate into a 37% cut in emissions by 2020.

If the draft becomes a law, this would mean that Spain's national objectives would outstrip the targets adopted under the EU's clean energy package as it wants to meet a 35% binding target for both renewable power generation and energy efficiency: earlier in 2018, the European Parliament and the Commission agreed that member states would have to contribute to an EU-wide objective of 32% for renewable based power generation and 32.5% for energy efficiency uptake by 2030.

Enerdata
http://www.enerdata.net

17 November 2018

France to shut down all coal-fired power plants by 2023

Two years before the UK has pledged to stop burning the fossil fuel

France will shut down all its coal-fired power plants by 2023, president Francois Hollande has announced.

Speaking at an annual UN climate change conference on Wednesday, Mr Hollande vowed to beat by two years the UK's commitment to stop using the fossil fuel to generate power by 2025.

Mr Hollande, a keynote speaker at the event in Marrakech, Morocco, also praised his US counterpart Barack Obama for his work on climate change, and then appeared to snub president-elect Donald Trump.

Mr Trump is reportedly seeking ways to withdraw from the Paris agreement, a global treaty to limit climate change.

"The role played by Barack Obama was crucial in achieving the Paris agreement," Mr Hollande said, before adding, in what has been perceived as a dig at Mr Trump, that becoming a signatory to the treaty is "irreversible". "We need carbon neutrality by 2050," the French President continued, promising that coal will no longer form part of France's energy mix in six to seven years' time.

France is already a world leader in low-carbon energy. The country has invested heavily in nuclear power over the past few decades and now derives more than 75 per

cent of its electricity from nuclear fission. It produces so much nuclear energy, in fact, that it exports much of it to nearby nations, making around £2.5 billion each year.

Independent
http://www.independent.co.uk

17 November 2018

Tajikistan launches first turbine of giant Rogun hydropower plant

On November 16, Tajikistan President Emomali Rahmon set the first turbine of the Rogun hydroelectric dam in motion at a ceremony attended by thousands to mark the latest milestone in this ambitious $3.9-billion project involving Italian company Salini Impregilo to double the country's energy production. Rahmon pressed a red button to switch on the plant's first of six planned turbines.

President Rahmon watched as the rotor of Unit 6 came to life in the dam's power house in the presence of government officials and foreign dignitaries, including World Bank Vice President, Europe and Central Asia Cyril Muller, Italian Undersecretary of Foreign Affairs Manlio Di Stefano and Salini Impregilo Chief Executive Pietro Salini.

Unit 6 is the first of six turbines being installed at the dam. With each having a capacity of 600 megawatts (MW), the total installed capacity will eventually be 3,600 MW, equal to three nuclear power plants. This huge capacity will make Rogun the most powerful hydroelectric dam in Central Asia.

A second turbine is expected to start producing electricity in 2019 in what is called early generation: putting into operation part of the dam before it is completed, Salini Impregilo said in a press release. The early start of the turbines will allow Tajikistan to cope with internal demand for electricity, especially during the winter months when thousands of families are in need light and heat. It will also be able to raise money from the sale of part of the electricity produced to neighbouring countries.

Commissioned by OJSC Rogun Hydropower Project, the state-run company that is coordinating the project, the rockfill dam with a loam core is being built by Salini Impregilo to become the tallest dam in the world at 335 metres. Salini Impregilo is doing the main civil works and related services. With the dam crest at an elevation of 1,300 meters above the sea level, Rogun will also become the world's highest dam, breaking the record held by the Nurek Dam, also in Tajikistan.

Located in the upper reaches of the Vakhsh River in the Pamir Mountains, Rogun is about 90 kilometres from Dushanbe, the capital of Tajikistan.

Dushanbe hopes the $3.9 billion project built on the Vakhsh river will not only make the country energy self-sufficient, but plans to export some of its output to Afghanistan, Pakistan, and Uzbekistan, RFE/RL's Tajik Service reported.

The project was launched in the late 1970s but halted after the Soviet Union's collapse in 1991. Construction restarted in late October 2016, less than two months after the announced death of Islam Karimov, the long-term president of neighboring Uzbekistan. Karimov opposed the project, saying the dam would reduce water flows to Uzbekistan's cotton fields.

Last year, Tajikistan raised $500 million from an inaugural international bond offering to help finance the construction, which is being carried out by an Italian company, Salini Impregilo.

Dushanbe hopes to generate money to finance further construction at the plant after its starts producing energy.

The Times of Central Asia
http://www.timesca.com

19 November 2018

Germany's Varta steps up plans to mass produce electric car battery cells

German battery maker Varta (VAR1.DE) has sealed a research agreement to lay the groundwork for mass production of lithium-ion battery cells for electric cars as it seeks to take on Asian leaders in the sector.

Varta, which currently specializes in batteries for hearing aids and large storage systems for solar energy, has agreed a cooperation deal with Germany's Fraunhofer Institute, a scientific research body, the two parties said on Monday.

The German government has earmarked 1 billion euros ($1.1 billion) to support domestic companies looking to produce battery cells for electric vehicles as a way to reduce German carmakers' dependence on Asian suppliers and protect jobs at risk from the shift away from combustion engines.

With the research project, Varta wants to gain technical advantages in battery cell production over Asian manufacturers and is in intensive discussions with relevant market players to broaden its product line, Varta CEO Herbert Schein told reporters in Stuttgart. He declined to give further details.

Varta, chemical giant BASF (BASFn.DE) and Ford's (F.N) German subsidiary Ford-Werke GmbH are among companies involved in talks with Germany's Economy Minister Peter Altmaier about building local battery cell alliances, sources have told Reuters.

Berlin's push to shape industrial policy marks a break with its generally "hands off" approach to business decisions and is part of European efforts to forge battery alliances to counter the dominance of Chinese, Japanese and Korean firms.

However, Asian market leaders are already ramping up their output, increasing the risk of a glut that could hinder the establishment of battery cell production by European newcomers.

Volkswagen (VOWG_p.DE) is also open to joining a Berlin-led consortium exploring production of electric car battery cells in Germany, a person familiar with the matter said last week.

Thomas Bauernhansl, director at the Fraunhofer Institute for Manufacturing Engineering and Automation IPA, said the focus of the research project was to set up a more digitized production line that will reduce the current scrap rate of 10 percent.

Varta is currently the only company in Germany with experience in mass production of battery cells and this reduces the risk of market entry in new areas such as large lithium-ion battery cells for electric cars, Bauernhansl said.

Economy Minister Altmaier has said there were interested parties for several consortia on battery cell production and that he expected the first concrete investment decisions at the end of the first quarter of 2019.

Reuters
http://www.reuters.com

26 November 2018

Military not Waiting for Trump's Resilience 'Solution'

On Bases, as off, Distribution is Often Weak Link

A draft Department of Energy memo leaked in May that sought to justify coal and nuclear plant subsidies cited a 2008 Defense Science Board report that noting off-site generation supplies virtually all the electricity for the nation's more than 500 military installations.

"Backup power at military installations is based on assumptions of a more resilient grid than exists and much shorter outages than may occur and is not sized to accommodate new homeland defense missions," the report said.

But DOE's 40-page memo failed to note the considerable efforts the military has made to improve the resilience of the installations' power supplies in the 10 years since then — or that most Defense Department outages are the result of distribution lines or other facilities on its bases. And it makes no mention of climate change, which the military has identified as a concern since at least 1977. (See related stories, Military Sees Climate Change as Growing Threat and US Climate Report Spells out Coming Challenges to Industry.)

In fact, the military has been among the leaders in the federal government in seeking to make its facilities more resilient and in adding renewable power, energy storage and microgrids to its facilities. DOD is the largest single energy consumer in the U.S., spending $3.48 billion on installation energy in fiscal year 2017.

At the time of the 2008 Science Board report, the bases' backup power was almost entirely diesel generators. Since then, the department has begun investing in microgrids and solar generation to allow their critical operations to continue operating during grid outages.

The military also has been increasingly turning to renewable generation. Nellis Air Force Base, Nev., for example, is the site of a 14-MW solar PV plant covering 140 acres that meets 25% of the base's electricity needs.

In the National Defense Authorization Act of 2010, Congress ordered DOD to produce 25% of facility energy from renewables by FY 2025. As of FY 2017, DOD was producing or procuring 8.74% of its total facility energy from renewables, below its intermediate goal of 10%.

The military has made more progress in its energy efficiency efforts, reducing its energy intensity (British thermal units per gross square foot of facility space) by almost 50% since FY 1975.

RTO Insider
http://www.rtoinsider.com

26 November 2018

European Utilities Muscle Into Energy Storage

But they must deal with dropping frequency regulation prices, a sluggish C&I market and Brexit concerns. German frequency response service revenues have dropped by almost two-thirds in two years as utilities have rushed to deploy energy storage, research shows. Wood Mackenzie Power & Renewables this month said prices in a June 2016

German frequency market auction cleared €23 ($26) per megawatt-hour, but were down to €8 ($9) per megawatt-hour in July 2018, a 65 percent reduction. The reduction followed big investments in utility-scale front-of-meter energy storage systems for frequency markets.

"As these markets become increasingly crowded, we have seen prices plummet to levels which will make for lower-than-anticipated project returns," said Wood Mackenzie in a press release.

Germany and the U.K. have led utility investments in energy storage over the last two years, according to Wood Mackenzie's Europe Energy Storage Landscape 2018 report. "By investing in energy storage, these companies are able to diversify their portfolio and improve their customer offering by including a clever piece of technology alongside a necessary service," said report author Rory McCarthy, a senior research analyst. Although there are gaps across Europe as policymakers struggle to keep pace with new technology, energy storage deployments continue to ramp up, he said. "Europe is now a very real contender for that global top spot in terms of total deployments," he commented. The continent is witnessing a glut of developers entering the market across the utility, commercial and industrial (C&I) and residential segments, he said.

Europe's energy storage markets have received added impetus in the last couple of years from solar developers, which see batteries as a complementary revenue stream to traditional PV system sales that have been hit by a reduction in state subsidies across the continent. Yet despite hearty installation rates in the U.K. and Germany particularly, there are still areas where Europe's energy storage markets could do better. C&I, for example, "is not exactly a booming marketplace," McCarthy said. "The value proposition is not there yet." Unless a C&I customer has a high onsite value for power resilience or quality, projects in this segment would likely have to rely on the declining value of frequency markets in order to achieve financial close, he said.

And even though Germany boasts the world's largest residential market for energy storage, thanks to a subsidy scheme from the German government-owned development bank KfW, the value proposition for this market is also a challenging one. The KfW subsidy program is coming to an end. And according to McCarthy, battery costs are still too high to make a convincing business case for residential energy storage. This is in spite of an impressive 54 percent reduction in the levelized cost of residential solar-plus-storage systems in Germany since 2013.

One thing that could keep Germany's residential energy storage market going is that economics may not be the deciding factor for early adopters. Many German homeowners may be willing to accept a high cost premium for a piece of technology that can simultaneously de-risk future bill increases and help drive Europe's energy transition, McCarthy conceded. Nevertheless, with the outlook still uncertain for residential and C&I-based energy storage, for now it is mainly up to utilities to keep European battery installation rates chugging along.

Utilities see a strategic value in energy storage assets and have the balance sheets to enter into ultra-low-bid auctions, even if the returns may not be attractive, said McCarthy. And utilities are also going after the C&I segment, albeit with limited success to date. However, Europe's biggest utility-scale energy storage market, the U.K., faces considerable uncertainty because of its disengagement from the European Union next year. "Brexit has...[created uncertainty] around the pipeline of interconnectors to mainland Europe," McCarthy said. This could be good news for the U.K. storage market, as

interconnectors are direct competitors in the flexibility marketplace. However, Wood Mackenzie has seen the price of energy storage systems increase in the U.K. as Brexit concerns cause the pound to wobble against the euro and the dollar. “Ultimately, there will be winners and losers in the energy storage space as details of Brexit negotiations are revealed," said McCarthy.

For a deeper dive into the British and German energy storage markets, read Julian Spector's analysis at GTM Squared.

GreenTechMedia
http://www.greentechmedia.com

27 November 2018

Arsenal football club install energy storage system

The first energy storage system to be installed at a UK football stadium has been unveiled. The 3 MW battery system at the ground of Premier League club Arsenal in north London will be able to run the 60,000-seat stadium for the entire 90 minutes of a match. A further 1MW of storage to be added next summer. Arsenal managing director Vinai Venkatesham said: “This is a big step forwards for us in being efficient with energy usage and it builds on our work in reducing our carbon footprint as an organization.”

The system is also intended to operate as support for the wider UK grid. It be automatically traded and optimized by Open Energi in response to market signals and has already secured a frequency response contract from National Grid.

Open Energi’s Dynamic Demand 2.0 platform will operate the system to allow Arsenal to avoid peak power prices, buying electricity when it is cheap and storing it for use when prices are high, and also respond to market signals from National Grid. Open Energi commercial director David Hill explained: “Operating a battery across multiple timeframes and markets requires careful management and constant evaluation of the cost-benefit of each action. Dynamic Demand 2.0 uses machine learning to automate and optimize battery performance second-by-second, delivering savings for businesses and clean, reliable flexibility to the grid.” He said the Arsenal project “is a great example of how energy storage can enable a more sustainable energy future and put end users in control of how, when and from where they consume electricity”.

The storage system has been installed by Pivot Power, which will manage it for 15 years. Chief executive Matt Allen said: “Battery storage is an incredibly flexible asset and we’re delighted to be working with Open Energi to ensure Arsenal receive the maximum benefits from this system.” In 2016, Arsenal became the first Premier League club to switch to 100 per cent green electricity when it signed a deal with Octopus Energy – its energy comes from a network of solar farms and anaerobic digestion plants. Allen added: “Arsenal is showing how football clubs and other big power users can save money and support the UK’s climate change and clean air targets. Batteries are central to creating a cost-effective, low-carbon economy and we are keen to help government, local authorities and businesses seize the opportunities they offer.”

Arsenal has installed LED floodlights which use 30 per cent less electricity than conventional lights. The stadium recycles 80 per cent of match day waste, with all food waste sent to an anaerobic digestion plant where it is turned into energy to supply the club.

PEi
http://www.powerengineeringint.com

27 November 2018

Macron delays reduction of nuclear share by a decade

Macron delays reduction of nuclear share by a decade, but announces 45 GW solar target by 2030.

Although the French President promised that solar capacity will increase fivefold by 2030, France's new energy strategy will keep nuclear power at the core of its electricity system. The decommissioning of approximately 20% of France's nuclear power generation assets, originally set by the country's energy transition law for 2025, has been delayed to 2035. Macron said this plan may be reconsidered, however, if storage technologies help mitigate intermittence issues and if there can be stronger European integration.

"I was not elected on a nuclear exit program, but on a reduction of the nuclear share to 50% of our energy mix." With this statement, made during the presentation of France's new energy strategy, the "Programmation pluriannuelle de l'énergie" (PPE), French president Emmanuel Macron explained that the target will be reached with the closing of 14 nuclear reactors by 2035 and not by 2025, as was originally set out in the country's 2015 energy transition policy.

He added that up to six nuclear power plants may be closed by 2030 (including the closure of the Fessenheim plant in 2020), while the remaining reactors will be shut down by 2035. This timeframe may be reconsidered, Macron said, if storage technologies reach maturity, thus enabling the better integration of intermittent renewables and if European integration becomes stronger.

The latest nuclear power scenario shared by Macron is similar to the mid-scenario unveiled by French news agency AFP a week earlier. This means that the worst case scenario, which includes the construction of four new nuclear plants, has been avoided. However, the favorite option of the French renewable energy industry, which envisages the closure of six nuclear power plants by 2028 and the decomissioning of another six by 2035, has also not been approved.

As for building new nuclear reactors, Macron said he asked state-owned power utility EDF, which owns and operates all of France's 58 nuclear power plants, to define a "new nuclear" program, including price commitments to make nuclear power more competitive. "Everything must be ready in 2021 so that the choice proposed to the French can be transparent," he said.

Arnaud Gosseement, a well-known lawyer specializing in environmental legislation, said on Twitter that the importance of today's announcements is relative, as they only provide broad guidelines of a draft energy strategy. "The road is still long before a decree: a new law will have to be passed by Parliament," he stated.

PV Magazine
http://www.pv-magazine.com