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Energy and Climate Report

Afternoon Briefing - Your Preview of Today's News

The following news provides a snapshot of what Bloomberg BNA is working on today. Read the full version of all the stories in the final issue, published each night.

Nuclear Subsidies Slow to Catch on as Opposition Steps Up

Posted June 08, 2017, 02:14 P.M. ET

By Jim Polson

Almost a year after New York became the first state to approve subsidies for nuclear reactors threatened with closure, efforts to replicate the model elsewhere are proving a tough sell.

Lawmakers in Connecticut failed to pass a bill June 7 that was designed to shore up a nuclear plant. Dominion Energy Inc., which mounted a high-profile campaign to win higher revenue for its Millstone station, said it would "continue assessing our investments" in the state as a result.

With the exception of Illinois, supporters of state aid are similarly struggling to make headway in Ohio and Pennsylvania. Those with the most to lose—such as renewable energy providers and big electric customers—are pushing back in state legislatures, said Peter Bradford, a consultant who used to serve on the Nuclear Regulatory Commission. That's making it harder for states to come to the rescue of reactors grappling with plunging power prices.

"It is pretty difficult to get these things across a finish line," Kit Konolige, a Bloomberg Intelligence analyst based in New York, said by phone. "It's been resisted strongly, certainly in Ohio and Connecticut."

Reactor Shutdowns

At least five nuclear power plants have retired in the past five years, including Fort Calhoun in Nebraska, which closed in October. Those in favor of state subsidies say the carbon-free electricity provided by nuclear is needed to help states meet ambitious clean energy targets and preserve local jobs, while opponents counter that they distort the idea of a level playing field.

Dominion had backed a bill proposing that the state takes competitive bids for both nuclear and renewable power. "Continued inaction harms customers, the state's ability to meet its climate goals, and the state's economy," Ken Holt, a spokesman for Dominion's Millstone plant, said in a June 8 statement.

Opponents, including the state's largest electric utilities, had argued there was no evidence Millstone needed state aid, arguing that customers would end up saddled with higher bills as a

result.

Exelon Corp. said last month its Three Mile Island reactor near Harrisburg, Pa —site of the worst commercial nuclear accident in U.S. history in 1979—will close in 2019 after losing money for five years. No formal legislation has been introduced in the state.

Legislation introduced in Ohio in April to subsidize FirstEnergy Corp.'s reactors has yet to emerge from House or Senate committees. House hearings have been suspended and no vote is planned, Jennifer Young, a company spokeswoman, said by phone June 7.

U.K. Seen Headed for Subsidy Free Power from Offshore Wind Farms

Posted June 08, 2017, 02:28 P.M. ET

By Jessica Shankleman

Britain may soon join Germany in harvesting subsidy-free electricity from offshore wind farms, giving government ministers new options in securing power supplies that don't pollute.

Until recently, turbines based at sea were among the most costly forms of power generation, requiring more than $100 a megawatt-hour, which is more than the cost of the latest nuclear power station in the U.K. Across Europe, costs have fallen rapidly in the last year and industry experts say the U.K. could see equally aggressive bidding this year.

In April, Germany accepted bids from developers to build offshore wind farms for an average of 4.40 euros ($4.93) a megawatt-hour, below the current market price for power meaning the facilities essentially will work without subsidy.

The British government soon will collect bids for a 290 million pound ($375 million) funding round for offshore-wind projects to be completed in the early 2020s, and industry officials are speculating how low developers might bid. While the headline cost reported in the U.K. won't be directly comparable with Germany's, it's likely to show progress toward the goal having the technology work without government support.

"If they don't do that, then they will not be competitive," Torben Hvid Larsen, chief technology officer at MHI Vestas Offshore Wind A/S, said in an interview in London June 8.

A spokesman for MHI Vestas said the company's official outlook is for the technology to still require some support from government, though the results will indicate a "trajectory toward subsidy-free pricing in future offshore wind auctions."

Winners are expected to be announced later this year, and as many as seven offshore wind farms may qualify to bid, according to Bloomberg New Energy Finance.

British projects have higher prices than those in Denmark or the Netherlands, where either utilities companies or the government absorb the costs of hooking the wind farms into the grid. In the U.K., developers must pay for site surveys and grid connections, making projects in Britain appear more expensive than those elsewhere, according to the trade association RenewableUK.

The amount of subsidy paid is the difference between the wholesale price of energy and the investment required to make a return on a renewable energy plant. To match Denmark, the Netherlands and excluding grid costs, the U.K. would need to see bids from 60 pounds to 69 pounds a megawatt-hour, said RenewableUK.

"For it to be shockingly cheap in the way that Denmark and the German auction have been, a price in the 60s would be amazing," said Emma Pinchbeck, executive director of RenewableUK. "My personal view is that a price in the 70s is not unlikley."

Prices for offshore wind in Europe have fallen dramatically in the last half decade and plunged 22 percent in 2016 alone, according to BNEF.

While the U.K. auction system operates differently to that in the U.K., calculations can be made that allow companies to compare costs, said MHI Vestas' Larsen.

MHI Vestas, a joint venture between Denmark's Vestas Wind Systems and Mitsubishi Heavy Industries, this week unveiled a 9.5-megawatt machine, the world's most powerful wind turbine, as part of its efforts to increase the size of turbines and reduce their costs.

Wind turbines account for about 40 percent of the cost of offshore projects, said Larsen. Bigger blades are at the heart of Germany's subsidy free bids. Dong has said it expects machines able to produce 13 to 15 megawatts each for its projects when they're due to be completed in 2025.

German Renewables Peak as Country Bolsters Paris Commitment

Posted June 08, 2017, 7:54 A.M. ET

By Weixin Zha, Brian Parkin and Jesper Starn

Germany's latest wind and solar power record is unlikely to be the last as the nation deepens its commitment to a low-carbon economy in the face of U.S. President Donald Trump's decision to quit the Paris climate accord.

Clean power supplied two-thirds of Germany's power at one point June 7, with wind and solar generation exceeding the output of more than 50 nuclear reactors as warm, blustery weather crossed the country. In Britain, the same conditions meant wind, solar and nuclear generation exceeded the combined output of natural gas and coal for the first time.

Germany's power from renewables may jump to a record 35 percent or more of the nation's power consumption and will continue to add wind and solar installations through an auction system that has already resulted in subsidy-free green energy. German Chancellor Angela Merkel said last week she'll rally Europe and the world behind the Paris deal, calling it "irreversible" even after Trump's pullout.

"Germany is not taking its foot of the gas pedal in terms of renewable auctions," Elchin Mammadov, analyst at Bloomberg Intelligence, said by phone from London. "So we will see more records going forward."

Wind and solar output climbed to total 52 gigawatts at 1:30 p.m. Berlin time on June 7 when

sunshine was at its peak, according to grid company data provided by the European Energy Exchange. Consumption was 78 gigawatts at the same time. One gigawatt is enough to power 2 million European homes.

Power prices turned negative June 7, dropping to as low as minus 50 euros (-$57) a megawatt-hour between 3pm and 4pm, according to data from the Epex Spot SE power exchange in Paris. Day-ahead rates for June 7 dropped to the lowest for a working day in at least 17 years.

Hydro Overpowers Energy Needs in China

Posted June 08, 2017, 11:29 A.M. ET

By Michael Standaert

Unused energy from hydropower facilities in the southwest China provinces of Yunnan and Sichuan in 2016 was more than the amount needed to power Hebei, the main province surrounding Beijing, for a month, raising questions about the need for future projects.

Rapid development of hydropower projects, a drop in energy demand, and lack of transmission infrastructure and policies to share energy sources with other provinces meant that Sichuan and Yunnan did not use 142 and 314 terawatt-hours, respectively, last year—a dramatic jump from the 26 and 50 terawatt-hours that went unused in 2013, China Communist Party newspaper People's Daily reported.

Idle capacity for facilities that supply electricity for industrial and residential use were built with massive investments and those resources could actually be more than what has been stated in some areas, Julian Kirchherr, a hydropower expert at the Copernicus Institute of Sustainable Development, Utrecht University, Netherlands, told Bloomberg BNA.

"Some sources I've talked to say that more than half of the hydropower capacity in Yunnan province is idle right now," Kirchherr said. "China has commissioned way too many hydropower [projects]. It commissioned, once again, more hydropower capacity than any other country in the world in 2016—around 11 gigawatts—and much of this will not be needed."

The provincial and central governments have not announced plans to deal with the unused power situation.

One solution for the extra energy, however, would be for Yunnan and Sichuan to sell idle capacity to other provinces, but "competing interests impede this," Kirchherr said.

"The national government wants a 'point-to-grid' solution, which means that electricity from a particular dam in Yunnan province is directly sold to a region in need," he said. "Prices for this solution were set by the National Development and Reform Commission and Yunnan provincial officials find these are way too low."

The provinces and the national development agency are now at a "deadlock," Kirchherr said, "which explains a lot of the idle capacity and what you need now is a compromise between Yunnan province and the national government."

Environmental Impacts

The hydropower issue is particularly problematic in Yunnan, where both old and new facilities built along the Lancang River, also known as the Mekong when it flows into Southeast Asia, waste energy and threaten biodiversity.

"Six megadams have been built on the Lancang River and there are at least another six which are being planned," Stephanie Jensen-Cormier, a program director with nonprofit International Rivers in Beijing, told Bloomberg BNA. "It is very important for China to consider the impacts on downstream neighbors as it finds ways to increase its generation of renewable energy."

One of the threatened rivers in China is the Nu River, known as the Salween in Southeast Asia, which is the last free-flowing major river in the country and a center of biodiversity, holding around 50 percent of China's animal species and more than 6,000 plant species.

Five large hydropower projects were slated to be built along the Nu just a few years ago, but the projects were put on hold this March when Yunnan provincial authorities suspended the project as China reevaluates balancing future energy needs against the possibility of establishing a national park along the river.

Overbuilding hydropower facilities and China's push to develop hydropower resources in Southeast Asia as part of its Belt and Road Initiative on trade and economic development also have had negative consequences for neighboring countries, where the major rivers provide primary drinking water, food, irrigation, and other resources for millions of people downstream.

Seven dam projects were constructed on the Irrawaddy River in northern Myanmar, where 90 percent of the electricity was supposed to go to Yunnan, but the province no longer has any need for the energy, Kirchherr said. In the meantime, food security downstream has been threatened as fish are caught up in the dam, and thousands of Burmese/residents have had to be resettled.

"China needs to cancel projects abroad whose electricity was supposed to be exported to China," he said.

China's Clean Energy Ambition Floats on Abandoned Coal Mine

Posted June 08, 2017, 8:13 A.M. ET

By Feifei Shen

China's ambitions to dominate new energy technologies are unfolding at the site of an abandoned coal mine about 300 miles northwest of Shanghai.

There, in Anhui province, Sungrow Power Supply Co. has built the world's largest floating solar farm with 166,000 panels on a lake created when a nearby mine collapsed. While not an entirely unique idea—similar facilities are working in Japan, the U.K. and Israel—the project's scale represents a step forward for China in shaping the future of energy.

President Xi Jinping's government this week is drawing attention to those efforts at a meeting of energy ministers from around the world that concludes June 8 in Beijing. With plans to spend $360 billion on renewable energy by 2020, China is seeking to appear as a global leader on the environment, marking a contrast with U.S. President Donald Trump's rebuke of the Paris Agreement on climate change.

"The Chinese are really investing in the research and development side of innovation," said Helen Clarkson, chief executive officer of The Climate Group, a non-governmental organization that works to promote clean energy technologies and policy.

While Trump has said repeatedly he wants to stimulate fossil fuels and especially coal, China is funding a series of ground-breaking projects that generate power without pollution. Whether with massive floating solar farms like the one in Anhui, sprawling wind farms or ambitious plans to develop geothermal reserves, the world's most-populous nation is asserting itself as a powerhouse of clean-energy technology.

Renewables Spending

In the northwestern province of Qinghai, Huanghe Hydropower Development Co. is planning a demonstration project to integrate power from hydro-electric dams with wind turbines and solar cells. Similarly, the Guoshen Group, a power plant operator, intends to build a project that will combine wind, solar and thermal power with energy storage in the northern region of Inner Mongolia.

Meanwhile, construction has begun on China's first large-scale effort to trap and store carbon dioxide emissions. The Yanchang Integrated Carbon Capture and Storage Project, Asia's first commercial carbon capture plant, is set to begin operating in 2018.

"Everybody has to become more sophisticated about their investment strategy," said Sophie Lu, head of China research at Bloomberg New Energy Finance. "Now it's all about innovation either in new technology or in a new application or a new business model."

China's efforts pit it against the U.S., which insists it can remain a hotbed of innovation in energy even though the president is slashing funds for start-ups in the industry and pulling out of the 2015 Paris accord. On his trip to Asia to represent Trump, U.S. Energy Secretary Rick Perry spoke forcefully of America's efforts to spur energy technology while also challenging China to take leadership on the issue.

"There is a lot of innovation out there, and it is gonna come, not all of the ways, but a lot of it will come from the United States," Perry told reporters in Tokyo. "Somehow or another, because we don't belong to this little club, you can't be innovative and drive technology and affect the climate. I just don't buy it."

Jobs Growth

The stakes are high for both nations. The clean-energy business employed 9.8 million people last year, up 1.1 percent from 2015, led by an expansion in solar photovoltaics, according to the International Renewable Energy Agency's annual report. Green jobs may reach 24 million worldwide in 2030 as more countries work to combat climate change, Irena said.

"China is a real driver in the money they invest in the diligence of their innovation," California Governor Jerry Brown said in a Bloomberg Television interview June 6. "I want California to partner with China in that endeavor. Otherwise we won't achieve our climate goals."

In Anhui, Sungrow's 40-megawatt solar farm in a district of Huainan city called Panji features panels fixed to floats on the surface of a lake that formed after the ground surrounding an old coal mine collapsed.

Floating Solar

Floating solar is spreading and getting bigger, led by projects in Asia and Europe.

Hong Kong-listed Xinyi Solar Holdings Ltd. completed a 20-megawatt floating solar farm last year in Huainan. On a reservoir outside Tokyo, Kyocera TCL Solar LLC has finished a 13.4-megawatt project, the biggest of its kind in Japan. Thames Water Utilities Ltd., the U.K.'s largest privately owned water supplier, operates Europe's largest floating solar farm on its Queen Elizabeth Reservoir reservoir near Heathrow airport.

By the end of September, Sungrow will complete more than 150 megawatts of new floating capacity in Huainan, said Hu Bing, an executive at Sungrow, the world's second-biggest photovoltaic inverter maker.

The Anhui project could yield 5 percent to 10 percent more power compared with a conventional solar plant because the panels are expected to be cooled as surface water evaporates, said Hu.

To be fair, China's energy innovations still have some way to go to catch up to the country's aspirations.

While China has 37 working nuclear reactors, none have been built without expertise from abroad. The country also hasn't produced an innovator with a profile similar to that of Tesla Inc., General Electric Co. or Vestas Wind Systems A/S.

The U.S. plans to keep its competitive edge "the same way we have historically," Perry said in Tokyo. "It's called innovation and technology."

—With assistance from Stephen Stapczynski and Chisaki Watanabe.

Trump Said to Mull Combining Agencies Separated After Gulf Spill

Posted June 08, 2017, 7:55 A.M. ET

By Jennifer A. Dlouhy

After the 2010 Gulf oil spill, the Obama administration broke the scandal-plagued federal agency that policed offshore drilling into separate bureaus.

Now the Trump administration is considering putting it back together again.

The change, described by Interior Department officials and lobbyists familiar with the deliberations, would combine two agencies: one that enforces regulations on offshore drilling safety and another in charge of leasing offshore tracts. Keeping those roles separate was a key recommendation of a presidential commission that investigated the Deepwater Horizon blast that killed 11 men and sent oil gushing into the Gulf of Mexico for months.

Merging the bureaus could send a signal that Interior is easing off on enforcement, right as President Donald Trump expands areas available for offshore oil drilling, according to Bob Graham,

a former Florida senator who led the commission.

"I have heard no indication of why we're doing this," Graham said in an interview. "It's just seven years after this enormous disaster—and this was one of the key steps in at least mitigating the chances of a repetition."

Officials are still weighing the reorganization, according to the people, who declined to be identified discussing internal deliberations. Interior Department spokesmen didn't respond to requests to comment on the possible change.

For decades before the BP Plc oil spill, federal regulation of offshore energy development was handled by a single agency within the Department of Interior: the Minerals Management Service. Its biggest claim to fame was a wide-ranging ethics scandal during the administration of President George W. Bush that involved cocaine use, sexual misconduct and financial self-dealing by a handful of employees, which was documented in multiple probes.

The episode highlighted an uncomfortably cozy relationship between the oil and gas industry drilling offshore and the federal regulators who were supposed to keep a watch over them. Two years later, when BP's failed Macondo well blew out in the Gulf of Mexico, those concerns erupted anew.

Within weeks, with oil still gushing into the Gulf, the administration of President Barack Obama announced it was shuttering the MMS and carving it up into three agencies. Besides the leasing and enforcement bureaus, a third office would act as a piggy bank, collecting billions of dollars annually in royalties, rental payments and bonus bids tied to offshore energy development.

That last agency, the Office of Natural Resources Revenue, would be untouched by the organizational plans now under consideration by Interior Secretary Ryan Zinke. The two agencies that would be combined are the Bureau of Safety and Environmental Enforcement and the leasing-focused Bureau of Ocean Energy Management.

Zinke has said he's looking at reorganizing the entire Interior Department with an eye on empowering regional officials and improving collaboration across its agencies. That could involve creating regional hubs to coordinate Interior agencies with overlapping roles and missions that are at cross purposes.

The effort could allow energy companies to get quicker project approvals or, at least, a clear pathway to them.

"We are looking at reorganizing in maybe more of a joint model so industry and citizens when they want to do a project can have—I don't want to say certainty, but at least a path of how to get there," Zinke said at the Offshore Technology Conference last month. "You can know sooner in the process whether yes or no is appropriate and what is that investment you have to make."

Scott Angelle, the newly appointed head of the safety bureau, told reporters last week that he has not been told the two agencies will merge, but "everything is on the table" as part of the department-wide reorganization.

The inherent conflict within the Minerals Management Service was written on the walls of the former agency—literally. Donald Boesch, a marine scientist who served on the presidential spill commission, remembers a fact-finding mission to meet with environmental analysts and safety inspectors at a former MMS office in Louisiana. On the conference room wall, a huge chart illustrated the growth in revenue the agency had gleaned from offshore oil development. Other

graphs showed increasing oil and gas produced offshore.

"The metrics they had to deal with on a daily basis were all oriented toward expanding that activity and increasing production as fast as they could," said Boesch, now president of the University of Maryland Center for Environmental Science. "That symbolically indicated that there was a strong conflict of interest in how this organization is run."

Recombining the agencies would revive their "inherently conflicting missions," said Senator Ed Markey, a Democrat from Massachusetts.

"Our coastal communities—and even the oil industry—can't afford a return to the bad old days of the safety cop and the leasing agent being the same person," Markey said in an e-mailed statement.

The since-divided bureaus have developed their own identities and missions. Environmental analysis has increased at the ocean energy bureau, while the safety agency expanded its oversight beyond oil and gas companies by penalizing offshore contractors for infractions.

Industry Reaction

Oil industry officials aren't exactly clamoring for the change.

After the creation of the two bureaus, there was confusion about which agency was in charge of which task. Oil companies didn't know where to file permit applications and where to file proposed exploration plans.

"We've found on the industry side that there's still some confusion of who does what," said Randall Luthi, a former MMS director who now leads the National Ocean Industries Association. And the longer the bureaus stay apart, the more stove-piped they become, he said. "If you're going to do it, now is probably a good time."

Still, the reorganization is such a major effort that it could take time away from other priorities, including rewriting Obama-era regulations governing offshore drilling, Luthi said.

"If you asked industry what is your top, No. 1 priority, I doubt it's the re-meshing" of these bureaus, he said.

—With assistance from Laura Blewitt.