

Columbus Seeing Steady Growth in Solar Installations

February 6, 2019 5:50 pm Brent Warren
A solar installation on the roof of Evolved Body Art in the University District. Photo courtesy of Modern Energy.

Columbus may not be what anyone thinks of as a solar energy hotbed – especially in the midst of another gray and cold central Ohio winter – but local experts say that interest in solar panels is growing across both the residential and commercial sectors. “Absolutely, the demand is growing,” said Johnathan Gioffre, owner of Modern Energy, a company that has been installing solar panels in the region since 2012. “I typically judge (demand) by the amount of leads we get weekly...and compared to five years ago, when we were lucky to do a lead per week, now we get five to 10 leads per week.”

That sentiment is born out by city-wide numbers from the Department of Building and Zoning Services. In 2016, the City of Columbus granted just 26 electrical permits for new solar photovoltaic (PV) systems, while that number grew to 66 in 2017, and to 75 in 2018. Keith Dimoff of EcoHouse Solar, another local installer, agreed that solar power generation is “greatly increasing” in the region.

Solar panels on an older home in Dennison Place. Photo courtesy of Ecohouse Solar.

Some of that increase is coming from new rooftop panels in older urban neighborhoods, despite the challenges that often accompany such installations. Dimoff mentioned recent projects in Weinland Park, Linden and Olde Towne East, while Gioffre said that Modern Energy is currently working on a proposal for a home in German Village. Because solar panels can significantly alter the look of a house, some historic commissions have raised objections to them. Another challenge in older neighborhoods is the abundance of tall trees that can block the sun.

Solar appears to be slowly catching on in the commercial development world too, thanks in part to the the Property Assessed Clean Energy (PACE) program, which provides financing for energy efficiency improvements. Local developer Michael Tomko, whose Tomko Company renovated a historic downtown office building in 2015, recently utilized PACE funding to replace the roof on the building and install solar panels.

“We looked at the payback schedule for solar, and it’s really remarkable,” said Tomko. Combined with the new roof, which is much better insulated than the old one, he said that the new panels “will pay a substantial fraction of the electric bill for the property.” Although most of Modern Energy’s business has been residential so far, Gioffre see a lot of potential for expansion on the commercial side. The company installed panels on the roof of Evolved Body Art in the University District, and hopes to grow that part of its business.

“We’ve worked with a few large companies, helping them explore their solar options,” he said, adding that “there’s a learning curve in the Midwest, but it’s becoming much more popular...the interest level keeps growing year to year.”

Institute for Energy Economics & Financial Analysis

IEEFA November 29, 2018

S&P: No end in sight for coal plant closings

S&P Global Market Intelligence (\$):

Despite presidential efforts to repeal regulations or otherwise boost coal consumption, power generators in the U.S. are set to retire a total of 14.3 GW of coal-fired power plant capacity in 2018, up from 7.0 GW of capacity retired in 2017, according to an S&P Global Market Intelligence analysis. This year will mark the highest level of coal retirements since 2015, when the U.S. power companies included in the analysis retired 14.7 GW of coal-fired capacity.

Another 23.1 GW of coal plant retirements have already been announced or received regulatory approval for 2019 to 2024, marking 71.9 GW of coal retired or scheduled to be retired between 2014 and 2024. The analysis shows about 245.6 GW of current operating coal plant capacity in the U.S. and does not include more recent retirement announcements from Entergy Corp. and a city-owned coal plant in Michigan.

Utilities have cited a range of reasons for closing coal plants including higher costs, aging plants, future regulatory uncertainty and public sentiment around the fuel and its contributions to climate change. The trend is expected to continue as aging power plants become increasingly uneconomic, Seth Feaster, an Institute for Energy Economics and Financial Analysis energy analyst, wrote in an October report on coal retirements.

NextEra Energy Inc. Chairman, President and CEO James Robo said on an October call that with government incentives, the new build cost of wind and solar is below the operating cost of existing coal and nuclear power plants in the U.S. and projected it will be lower even without incentives within a decade. "I think this industry has not really internalized yet how disruptive that will be when you see the ability to put to work those kinds of widespread renewables, particularly combined with storage," Robo said.

More (\$): Coal plant closings double in Trump's 2nd year despite 'end of war on coal'

Cathy Kunkel May 5, 2017

IEEFA Ohio/Pennsylvania: Bracing for Economic Fallout From Failing Power Plants

Now Is the Time to Plan for Transition

Time has borne out what we said in a report we published in 2014 arguing that FirstEnergy was in financial trouble and that its strategy of seeking bailouts from customers might not be enough to turn around the company's flagging fortunes.

This excerpt from that report—“FirstEnergy: A Major Utility Seeks a Subsidized Turnaround”—summarizes our assessment:

“FirstEnergy is burdened by heavy reliance on an underperforming merchant coal fleet in a weak competitive market and a regulated coal plant portfolio that is profitable but unable to carry legacy debt and likely additional environmental retrofit costs.”

Three years on, FirstEnergy continues to founder and today is flirting with bankruptcy. Its stock price has not recovered, and in 2016 the company posted a loss of \$6.2 billion. FirstEnergy’s net income has been less than the dividends paid to shareholders every year from 2011 through 2016, meaning that FirstEnergy has not been generating enough profit to support its annual payment to shareholders. This is obviously no more sustainable a business model than it was three years ago.

FirstEnergy’s weakness is driven by its competitive generation business, FirstEnergy Solutions (FES). FES has been in dire straits for several years now because low wholesale energy market prices (driven by cheap natural gas, the rise of renewables, and relatively flat electricity demand) have made it difficult for FES’s coal and nuclear plants to compete. FES’s revenues declined every year from 2013 through 2016, and just within the past six months all three major credit rating agencies have downgraded its corporate bonds. In the fourth quarter of 2016, FES took an \$8 billion loss to write down the value of its remaining coal and nuclear units— an acknowledgement that FES’s coal and nuclear plants have lost 88 percent and 90 percent of their value, respectively.

On an earnings call this year, FirstEnergy CEO Chuck Jones stated that the company will be getting entirely out of the competitive electricity-generation business by mid-2018, and Jones floated the possibility that the FES subsidiary could go bankrupt.

WHAT DOES THIS MEAN FOR FES’S REMAINING POWER PLANTS AND FOR COMMUNITIES affected by whatever happens to these plants?

After having already sold off or retired several plants over the past few years, FES has seven remaining large power plants. Five are in Ohio: the Bay Shore coal plant (135 megawatts, scheduled to retire in 2020), the Davis-Besse nuclear plant (908 MW), the Perry nuclear plant (1108 MW), the Sammis coal plant (2210 MW with four of seven units scheduled to retire by 2020), and the West Lorain gas plant (545 MW). Two are in Pennsylvania: the Bruce Mansfield coal plant (2510 MW) and the Beaver Valley nuclear plant (1808 MW).

The Ohio nuclear plants—Davis-Besse and Perry—are the subject of a proposed bill in the Ohio legislature (introduced by a legislator whose law firm includes lobbyists for FirstEnergy). The bill would provide a ratepayer subsidy to Davis-Besse and Perry for up to 16 years to prop up the continued operation of the plants. If this legislation passes, it would help FirstEnergy find a buyer for these plants if FES goes bankrupt.

No legislation is pending to bail out the coal plants, although the Public Utilities Commission of Ohio last year approved a bailout of \$200 million per year for up to five years for FirstEnergy. This was

substantially less than the original \$4 billion subsidy FirstEnergy had sought to preserve Sammis and Davis-Besse, and apparently not enough to deter FirstEnergy from its plans to exit the competitive power-generation business. If FirstEnergy Solutions goes bankrupt, FirstEnergy would be looking to sell or retire FES coal and nuclear assets. Given the poor performance of the portfolio (as evidenced by the recent write-down of nearly 90 percent of its value), we think it highly unlikely that FirstEnergy would be able to find a buyer who would continue to operate these units for the long term— if it can find a buyer at all. Examples of coal plants recently emerging from bankruptcy, including Pennsylvania’s Homer City coal plant and many of the coal plants in Texas owned by Vistra Energy (a new company created out of the bankruptcy of Luminant and TXU), continue to struggle financially and are still seen as likely candidates for retirement.

Just restructuring or shedding debt through bankruptcy is not enough to make coal plants profitable in today’s market. An electricity-generation transition is sweeping the U.S. as natural gas and renewables continue to make coal-fired and nuclear generation less and less competitive. Energy companies that have failed to recognize and responsibly manage this trend include FirstEnergy, and FirstEnergy Solutions is the poster child of the corporate result.

MANY COMMUNITIES IN OHIO AND PENNSYLVANIA WILL BE AFFECTED AS THE FES SPIRAL PLAYS OUT, and it is in the best interest of those communities to plan now for the potential closure of these plants. It’s unlikely that FES or any owner will be able to operate these plants profitably over the long term, and the implications are serious for the many towns and cities affected. An industry in decline is not compatible with job stability, balanced municipal and county budgets, and economic growth.

Where to begin?

Ohio and Pennsylvania lawmakers could look to nearby New York State, which created the Electric Generation Facility Cessation Mitigation Fund in 2016 to help communities protect their tax bases when power plants close. The fund, originally set up with \$30 million in annual funding for five years, recently was expanded to provide \$42 million annually for seven years.

State support of this type will prove crucial in Ohio and Pennsylvania, allowing the continuation of public services and school funding during a transition time in which they can develop alternatives to power-plant economies.

Cathy Kunkel is an IEEFA energy analyst

David Schlissel January 13, 2017

IEEFA Update: As U.S. Electricity-Generation Transition Continues, Signs of Tough Year Ahead for Coal-Power Sector

Low Natural Gas Prices and Increasingly Inexpensive Renewable Generation Technologies

The New Year has barely broken but headlines around the electricity-generation transition that is occurring across the U.S. already suggest a year for the record books.

Indications are that coal-fired generation, specifically, will suffer significant additional setbacks as competition from natural gas and renewables continues to take away market share. Publications specializing in energy-development and energy-finance markets are already onto several signals that point to less demand for coal-fired generation. The Bond Buyer, for instance, reported this week on how PJM Interconnection, which manages the electricity grid in 14 states, is acknowledging a trend toward less demand. The article quotes some telling analysis by Fitch Ratings that includes this passage: “The long-term decline in electricity demand will likely be driven by conservation efforts, more efficient lighting technologies, increasing efficiency standards and growth in distributed generation, particularly rooftop solar,” Fitch Ratings analyst Dennis Pidherny wrote in a Dec. 27 outlook. “Improvements in battery storage technology, expanded federal investment incentives and favorable net metering arrangements in some states, could push electric sales down even further.””

Less demand for generation creates lower energy market prices, all of which make it tougher for coal to compete as more readily available renewables and cheaper gas-fired capacity are added to the grid. An analysis put out this week by SNL, the energy-industry trade publication, noted that market forces are driving less and less use of coal. A line of note from the analysis: “That achievement is due, at least in part, to low natural gas prices and increasingly inexpensive renewable generation technologies.”

Meanwhile, the U.S. Energy Information Administration (EIA) reports that more than half of the generation capacity added to the grid in 2016 was from solar and wind. Here’s a ClimateWire/Scientific American article that summarizes the EIA data and that includes this passage of note: “In contrast to the growth in renewable energy, EIA this week also reported that U.S. coal is expected to fall to its lowest level in nearly 40 years, at 743 million short tons. The vast majority of U.S. coal is burned to generate electricity.”

David Schlissel December 21, 2016

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IEEFA Update: Wind Is Blowing Away Fossil-Generated Power in Middle America

From Deep in the Heart of Texas to North Dakota, a Historic Shift in U.S. Electricity Production

Wind generation has grown by more than 11 million megawatt-hours (MWh) in just a year in the huge ERCOT market of Texas. The increase, which has driven wind’s share of generation to 48 million MWh in the first 11 months of 2016 from 36 million MWh in the first 11 months of 2015, has displaced over 11.6 million MWh of electricity that would otherwise have been produced at fossil-fired plants.

This shift is not surprising given that the amount of wind capacity in ERCOT, which includes most of Texas and more than 20 million electricity customers, had reached 17,000 megawatts by the end of October, driven by 1,200 megawatt of new wind-generation installations this year. An additional 2,000 megawatts of wind capacity is expected to come online this month. It's part of a trend we described in a report we published in September detailing a historic shift across ERCOT, which is shorthand for the market operated by the Electricity Reliability Council of Texas. Less than a month ago, on Nov. 28, wind generation produced a record 15,000 megawatts of the electricity used in ERCOT. The record for percentage of the total ERCOT load served by wind was set earlier in the year, on March 23.

This year's increase in ERCOT follows similar increases in previous years; wind generation in ERCOT has soared by more than 84 percent since 2011. The trend has contributed to a steep decline in coal-fired generation, which provided 27 percent of total electricity generation in ERCOT in the first 11 months of 2016, down from 39 percent in 2011.

And wind's share of ERCOT electricity generation can be expected to continue to grow significantly in coming years. A SIMILAR SHIFT IS OCCURRING ACROSS THE VAST REGION OF MIDDLE AMERICA SERVED BY THE SOUTHWEST POWER POOL (SPP), an area known also as the Saudi Arabia of wind. It includes all or most of Kansas, Nebraska, North Dakota, Oklahoma, South Dakota, and significant chunks of other states. SPP reported having more than 12,000 megawatts of wind capacity in service this year, with as much as an additional 4,000 expected to come online soon.

More than 33,000 megawatts of wind projects are in various stages of development across the region, which—as SPP itself has said—has “more potential wind energy in [its] footprint than SPP could absorb.” It's an export industry in the making.

As with ERCOT, SPP wind-powered electricity production has surged. Last winter, wind produced 17.7 percent of electricity generated in SPP, a 70 percent increase from two years earlier. This past February, wind provided about 21 percent of SPP electricity, and on a number of occasions this year, wind has provided almost half of the region's total generation. Overall, wind accounted for more than 17 percent SPP generation in the first 11 months of 2016. Meanwhile, the amount of power generated by coal-fired generators has fallen. It dropped to 48 percent of the total generation in SPP in the first 11 months of 2016 from more than 62 percent in 2013.

David Schlissel is IEEFA's director of resource planning analysis.

David Schlissel September 28, 2018

IEEFA update: Big risk to taxpayers in FirstEnergy settlement on coal plants

Who will pay for cleanup and reclamation at sites in Ohio, Pennsylvania and West Virginia?

The overriding risk that remains from a federal court settlement this week around the FirstEnergy Solutions bankruptcy in Ohio is that taxpayers in three states will be left holding the bag on cleaning up after the company.

This is no small-ticket item. It's impossible to say what it will cost to decommission and do the proper reclamation work on FirstEnergy Solutions' three coal-fired plants—one each in Ohio, Pennsylvania and West Virginia, and all of which are failing financially because they can no longer compete with cheaper forms of power generation. But it would most likely run into the hundreds of millions of dollars. Under the terms of the settlement, which gives creditors \$225 million in cash and \$628 million in FirstEnergy Solutions promissory notes, nothing is set aside for cleanup—and it seems unlikely that those creditors, who were owed \$2.1 billion, will spend the money for that. As I detailed in testimony filed this week in the case, what's more likely, as it stands, is that 1) either the tab will be passed on to taxpayers or 2) the four sites in question will remain environmentally blighted.

Unanswered questions as to whether a big utility company will be held responsible for its environmental obligations. A just outcome would have FirstEnergy Corp., the parent company of FirstEnergy Solutions, step up and pay for the mess it is leaving behind at the Bruce Mansfield plant outside Pittsburgh, the W.H. Sammis plant in eastern Ohio and the Pleasants Power plant in northern West Virginia. All are facing imminent closure. FirstEnergy has announced already that Mansfield will be retired by June 1, 2021, Sammis in phases by 2022, and Pleasants at the end of this year.

The terms of the settlement don't place any restrictions requiring debtors to set aside and maintain any of the funds they receive through the settlement for decommissioning, cleanup or remediation of the plants. And FES debtors in any case are probably in no position to foot the bill, considering how much money they have lost with the company already.

Electricity-generation markets are undergoing radical change with the abundance since 2010 of cheap natural gas and the rise of zero-fuel-cost renewables wind, primarily wind and solar. All of the plants in question as a result have been uneconomic, producing large losses for FirstEnergy its creditors, a situation that is unlikely to change in the foreseeable future. In any event, the actual costs of decommissioning and environmental cleanup and remediation are very plant-specific and highly uncertain, especially before detailed engineering and environmental studies of the Mansfield, Sammis and Pleasants coal plants have been conducted. They depend on such factors as the volumes of the hazardous chemicals and wastes produced and left behind at each site, the volume of coal combustion residuals remaining site, whether there is a wet impoundment and whether there has been groundwater contamination.

AS I STATED IN MY TESTIMONY, DETAILED ENGINEERING AND ENVIRONMENTAL ANALYSIS OF EACH SITE IS REQUIRED before a reasonable estimate can be made of what it will cost to decommission and do the requisite cleanup and remediation. Often, as with power plant construction, the actual cost of the work may not be known until the project is started, or even completed.

But it should not be fobbed off onto taxpayers. FirstEnergy Corp. came around very late to the realization that its core coal-fired and nuclear electricity-generation assets were fast-becoming uncompetitive, but that does not mean that the company is not responsible for its mistakes. The company in its most recent annual report to investors acknowledged that it has missed the boat. An excerpt from its December 2017 10-K filing with the Securities and Exchange Commission is revealing:

“Based upon continued significantly low prices in the wholesale energy and capacity markets, peak demand for electricity and anemic demand forecasts along with the inability to obtain legislative or regulatory relief, FES’ cash flow from operations may be insufficient to repay its indebtedness or trade payables in the near- and long-term. FES’ near-term obligations and their impact to liquidity raise substantial doubt about FES’ ability to meet its obligations as they come due over the next twelve months and, as such, its ability to continue as a going concern.”

The company added this: “FES will have many fewer customers to whom it will be selling electricity generated by its financially distressed coal plants and nuclear plants.” We said as much in a report we published four years ago that questioned the company’s stubborn commitment to coal at a time when electricity markets were changing and when the shift to natural gas and renewables was gaining momentum.

FirstEnergy paid market trends no heed, however, which is why it is in the precarious position it is today but is no excuse for it to run away from its cleanup responsibilities at Mansfield, Pleasants, and Sammis — regardless of what those obligations cost.

Testimony in FirstEnergy Solutions bankruptcy

David Schlissel is IEEFA’s director of resource planning analysis.

Utility to close coal power plants in Ohio, Pennsylvania

By JULIE CARR SMYTH

August 30, 2018

COLUMBUS, Ohio (AP) — An Ohio-based energy company said Wednesday it is closing its last coal-fired power plants in Ohio and Pennsylvania, a move decried by the coal industry and called inevitable by environmentalists.

FirstEnergy Solutions said it plans to shut down its remaining four coal plants by 2022. The three Ohio plants are on the Ohio River in Stratton. Its last Pennsylvania coal plant is in Shippingport. The plants employ a combined 550 people. The company said it can’t compete in the regional wholesale markets that are managed by grid manager PJM Interconnection.

“Our decision to retire the fossil-fueled plants was every bit as difficult as the one we made five months ago to deactivate our nuclear assets,” said Donald Moul, FES Generation Companies president and chief nuclear officer, in a statement.

He said coal and nuclear power plants are losing out to cheaper energy sources such as natural gas and renewables. Closure of the plants would leave about two dozen coal-fired plants operational in Ohio and Pennsylvania, according to data from the U.S. Energy Information Agency.

AEP to shutter 1,590 MW Ohio coal plant two years ahead of schedule

Robert Walton

Oct. 10, 2018

American Electric Power (AEP) confirmed Tuesday in an email that the company has decided to close down its 1,590 MW Conesville coal generation facility in Ohio by May 31, 2020, two years ahead of schedule. The utility considered recent power auction results as well as the costs to continue operating the plant, determining it was not economically viable. Units 5 and 6 were originally slated to close down in 2022, but the company now says market conditions could lead to their mothballing as early as May 2019. Unit 4 will run through May 2020, at which point the plant will be shuttered.

There had been some discussion of repowering Units 5 and 6 with natural gas but AEP never pursued that plan, working instead for several years to exit the competitive generation business in Ohio.

With the units struggling to clear in the PJM capacity auction and efforts to win subsidies for its plant denied, the AEP announcement is the latest sign of the coal industry's slow decline. The company informed employees of the decision on Oct. 5.

The company said it "unsuccessfully sought a buyer for Conesville Plant for a number of years," but made the decision to shut it down after considering "the costs of keeping the plant operational and the outcomes of recent competitive generation auctions." The plant's closure may already be having ripple effects. Westmoreland Coal announced Oct. 9 that it had declared bankruptcy and the Conesville plant is a major customer of the coal supplier, according to S&P Global.

Conesville failed to clear in PJM Interconnection's capacity auction for the 2021-22 delivery year, and had struggled to clear portions of its capacity in the previous auction. Last year Ohio's Department of Taxation had lowered its assessment of the plant's value from more than \$72 million to less than \$35 million, resulting in significant revenue for local entities, according to the Coshocton Tribune.

AEP had pressed for customers to support its struggling plants, then looked to a possible restructuring of Ohio's energy markets before ultimately calling it quits on the plant and on merchant generation in the state. AEP now says its "long-term strategy is focused on its regulated businesses and investment in infrastructure and the energy innovations."

As it has done following other plant closures in recent years, AEP says it will work state and federal agencies along with "parties who specialize in decommissioning brownfield sites," to ensure the Conesville closure meets all requirements.

Last year, AEP struck a deal with Dynegy to consolidate ownership interest in two co-owned plant. AEP sold the 330 MW Zimmer Plant in exchange for Dynegy's 312 MW share at Conesville, giving AEP about 92% ownership. Dayton Power & Light owns a share of Conesville Unit 4, and AEP officials said they had discussed the decision and were in agreement on retiring the unit in 2020.

Some of FirstEnergy's Power-Generation Businesses File for Bankruptcy

Ohio-based power company has appealed to Trump administration for emergency lifeline

By Andrew Scurria and Becky Yerak

April 1, 2018 6:24 p.m. ET

4 COMMENTS

A fleet of FirstEnergy Corp. power-generation businesses filed for chapter 11 bankruptcy, underscoring the financial pressures on the nation's coal and nuclear power-plant operators. The Saturday chapter 11 filing in U.S. Bankruptcy Court in Akron, Ohio, covers FirstEnergy Solutions Corp., which sells power to retail and wholesale customers primarily in the Midwest and mid-Atlantic regions of U.S.

The bankrupt FirstEnergy affiliates operate seven power facilities in Midwestern power markets where aggressive competition from cheaper gas-fired and renewable energy sources has undercut the economics of traditional nuclear and coal plants. The Ohio-based company said it would operate those plants normally while state and federal regulators consider its recent requests for a bailout.

Warning of a "market failure," FirstEnergy Solutions on Thursday petitioned the U.S. Energy Department to prop up coal and nuclear plants across the Midwest by forcing the region's grid operator to cut favorable deals that shift more of their costs onto consumers. A spokeswoman for Energy Secretary Rick Perry said the request would "go through our standard review process."

The FirstEnergy Corp. parent company isn't part of the chapter 11 case, nor are other company subsidiaries that operate in regulated electricity markets. But creditors are considering asserting claims that the parent failed to honor its financial obligations to the bankrupt units, a person familiar with the matter said.

The companies filing for bankruptcy have more than 3,000 employees and total debt of about \$3.8 billion, according to court documents. FirstEnergy Solutions Corp. alone has \$1.5 billion in debt, including a \$150 million revolving credit note with Allegheny Energy Supply Co. under which \$102 million is currently outstanding and due Monday.

First Energy said the bankrupt units have access to \$550 million in cash that will allow them to meet their obligations to employees, suppliers and customers while under court protection. FirstEnergy Solutions President Donald Schneider said the chapter 11 filing "represents our best path forward as we continue to pursue opportunities for restructuring, asset sales and legislative and regulatory relief."

The company's collection of coal and nuclear plants had been flirting with bankruptcy since last year when FirstEnergy announced it would exit competitive power markets and refocus on its regulated businesses. It also has pleaded for financial lifelines from regulators that the company said would allow its plants to stay open under new ownership. Ohio lawmakers have so far ignored its pleas for a bailout

amid opposition from an alliance of consumer advocates, environmentalists and manufacturing interests.

A spokesman for coal company Murray Energy Corp., a big supplier to FirstEnergy Solutions, said the bankruptcy could have been avoided had federal energy regulators enacted a Trump administration proposal to make coal and nuclear power plants eligible for billions of dollars from higher prices that would have ultimately been passed on to consumers. The Federal Energy Regulatory Commission in January rejected the administration proposal, which had been backed by Murray Energy Chief Executive Robert Murray, a friend and supporter of President Donald Trump, saying the administration hadn't convinced them the plan was needed to ensure the system's reliability. "As a result of FERC's failure, critical power plants will close, thousands of American jobs will be lost and security of our electric power grids will be forever compromised," the Murray spokesman said Sunday. A FERC spokesman declined to comment.

FirstEnergy Solutions, meanwhile, has argued that consumers should be made to compensate coal and nuclear plant operators for making the power grid more reliable, during winter months especially, and for providing diversity to the country's power supply.

Rebuffed by state lawmakers, FirstEnergy Solutions last week turned to the Energy Department with an application that, if granted, would obligate grid operator PJM Interconnection LLC to negotiate new contracts treating nuclear and coal plants as regulated assets and guarantee that their costs could be recovered from ratepayers.

As part of the bankruptcy, FirstEnergy Solutions is seeking to scrap its unprofitable contracts to buy power from wind- and solar-power plants. The company is asking a bankruptcy judge to step in and rule that FERC can't force FirstEnergy Solutions to continue to honor the deals.

The company filed for bankruptcy after reaching a "process-support" pact with an ad hoc group of bondholders that includes investment funds and affiliates of Avenue Capital, Fidelity Investments and Northwestern Mutual Life Insurance Co. among others.

FirstEnergy Solutions, which had 2017 revenue of \$3.1 billion, plans to pursue a "dual-path exit from chapter 11"—either via a creditor-supported chapter 11 plan or the sale of some or all of the assets—according to court papers.

FirstEnergy Solutions has hired law firm Akin Gump Strauss Hauer & Feld LLP, turnaround firm Alvarez & Marsal North America LLC and financial adviser Lazard Ltd. to guide it through bankruptcy. Judge Alan M. Koschik is handling the bankruptcy case, docket number 18-50757. An initial hearing is set for Tuesday morning at 9 a.m. in Akron.

—Timothy Puko contributed to this article.

Write to Andrew Scurria at Andrew.Scurria@wsj.com and Becky Yerak at becky.yerak@wsj.com

Appeared in the April 2, 2018, print edition as 'FirstEnergy Units File for Bankruptcy.'

The bill, known as the "Colorado Energy Impact Assistance Act",

HOUSE SPONSORSHIP

Hansen,

SENATE SPONSORSHIP

(None),

Shading denotes HOUSE amendment. Double underlining denotes SENATE amendment.

Capital letters or bold & italic numbers indicate new material to be added to existing statute.

Dashes through the words indicate deletions from existing statute.

authorizes any electric utility (utility) to apply to the public utilities commission (PUC) for a financing order that will authorize the utility to issue low-cost Colorado energy impact assistance bonds (bonds) to lower the cost to electric utility customers (ratepayers) when the retirement of a power plant occurs. A portion of bond proceeds will provide transition assistance for Colorado workers and communities directly affected by the retirement of the facilities (transition assistance). To repay the bonds at the lowest cost to ratepayers, the PUC is authorized to review and approve a financing order and authorize a special energy impact assistance charge that is separate and apart from the utility's base rates on all ratepayer bills. The establishment and ongoing adjustment of the separate charge will allow bonds to achieve the highest possible credit rating, at least AA/Aa2, from the national independent credit rating agencies and will therefore allow bonds to be issued at the lowest possible interest rate and lowest subsequent cost to ratepayers. Before issuing a financing order, the PUC must hold a public hearing, receive testimony from affected groups, and make specified

determinations concerning the necessity, prudence, justness, reasonableness, and quantifiable benefits to utility ratepayers of issuing the financing order. After the public hearing process, if a financing order is approved by the PUC, it must include specific information and instructions for the utility to which it applies relating to the amount of bonds to be issued and the imposition of the energy impact assistance charge and must require the utility to pay a specified percentage of the net present value of the savings to a newly created Colorado energy impact assistance authority (authority) for the payment of transition assistance by the authority and the authority's reasonable and necessary administrative and operating costs. As an alternative to the financing order and bond issuance process, upon the closure of an electric generating facility, a Colorado electric utility may transfer to the authority an amount of up to 15% of the net present value of operational savings created by the closure of the electric generating facility, and such a transfer shall be deemed by the PUC to be a prudent action by the utility.

The bill specifies that the authority is governed by a 7-member board of directors appointed by the governor and specifies mandatory and suggested occupational experience for the directors. The authority is authorized to receive bond proceeds from a utility to which a financing order applies and use the bond proceeds to provide transition assistance and pay its reasonable and necessary administrative and operating costs. Transition assistance is defined to include payment of retraining costs, including costs of apprenticeship programs and skilled worker retraining programs, for and financial assistance to directly displaced

Colorado facility workers, compensation to Colorado local governments for lost property tax revenue directly resulting from the retirement of a facility, and similar payments, job retraining, assistance, and

-2- HB19-1037

compensation for directly displaced Colorado workers and local governments in areas that produce fuel used in the retired facility directly resulting from the elimination of the need for fuel at the facility. The authority must disburse at least 50% of the transition assistance that it provides directly to Colorado workers. In addition, when determining how best to provide transition assistance to a local community, the authority must, in conjunction with each board of county commissioners, municipal governing body, and school district that includes all or a portion of the impacted community, establish and take into consideration the advice of a local advisory committee. The authority is subject to open meeting and open records requirements and is required to submit a report to specified committees of the general assembly that sets forth a complete and detailed financial and operating statement of the authority for any fiscal year for which the authority has provided transition assistance.

Wind, Solar Are Now The Cheapest Sources Of Power Generation

By Tsvetana Paraskova - Nov 19, 2018, 10:00 PM CST

Thanks to falling costs, unsubsidized onshore wind and solar have become the cheapest sources of electricity generation in nearly all major economies in the world, including India and China, according to a new report by Bloomberg NEF.

The comparative costs for power generation—the levelized costs of electricity (LCOE)—showed that onshore wind and solar are the cheapest power generation sources for all major economies except for Japan.

Even in India and China, where “not long ago coal was king”, solar and wind beat coal with cheaper generation, according to BNEF’s latest half-year LCOE analysis. “In India, best-in-class solar and wind plants are now half the cost of new coal plants,” says the study, as carried by Renewable Energy Magazine. In China, the utility-scale PV market has shrunk by a third so far in 2018, according to BNEF, because of the Chinese decision not to issue approvals for any new solar power installations this year and to cut the feed-in tariff subsidy. The market contraction in China, however, resulted in cheap equipment in the world, driving the LCOE for new PV down to \$60/MWh in the second half this year, down by 13 percent compared to the first half of 2018.

In onshore wind, the comparable cost is now \$52/MWh, down by 6 percent from H1 2018, thanks to cheaper turbines and a stronger U.S. dollar, according to BNEF’s analysis, which shows that unsubsidized onshore wind is now as cheap as \$27/MWh in India and Texas, for example.

In August, Bloomberg NEF data showed that the world had reached the landmark 1 TW of wind and solar generation capacity installed. According to Bloomberg NEF estimates, the second terawatt of wind and solar capacity combined will be reached by the middle of 2023 and will cost 46 percent less than the first.

Cheap renewable energy and cheaper and cheaper batteries are expected to lead to wind and solar accounting for 50 percent of the world’s electricity generation by 2050, Bloomberg NEF’s New Energy Outlook 2018 says.

By Tsvetana Paraskova for Oilprice.com

MidAmerican Energy News

Wind XII project positions MidAmerican Energy to hit 100 percent renewable goal

DES MOINES, Iowa – (May 30, 2018) – MidAmerican Energy Company will be the first investor-owned electric utility in the country to generate renewable energy equal to 100 percent of its customers’ usage on an annual basis, upon completing its newest proposed wind energy project.

MidAmerican Energy proposed an additional investment of \$922 million with the announcement of its Wind XII project that will be formally filed with the Iowa Utilities Board later today. The project, if approved, is expected to be completed in late 2020. Over the past three years, MidAmerican Energy has moved forward with its previously announced Wind XI and repowering projects, that when combined with Wind XII, will provide customers with 100 percent renewable energy on an annual basis. And, like MidAmerican’s previous wind projects, Wind XII will be accomplished without the need to ask for an increase in customers’ rates.

“Wind XII will transform our 100 percent renewable energy vision from a bold dream into a reality,” Adam Wright, MidAmerican Energy’s President and CEO, said. “We are listening and working with our customers to put them first. Wind XII is a clear demonstration of our commitment to and investment in

the cleaner, more sustainable energy future our customers want and our environment deserves. We have been able to invest in renewables while at the same time keeping electric rates affordable for the long term, creating a one-of-a-kind win-win solution.”

MidAmerican Energy’s investment in renewables has helped make Iowa a national wind energy leader. Iowa leads the country in the percentage of electric generation coming from wind.

“Iowans are used to leading the way. We believe to our core that it is our responsibility to use the resources we are given in the best way possible. It’s that sustainable approach that has led Iowa to achieve the highest percentage of power generation coming from wind energy, more than any other state,” Iowa Governor Kim Reynolds stated. “And, it doesn’t hurt that we have a company like MidAmerican Energy that has taken the long view and is forward-looking in its goal to provide sustainable and affordable energy to its customers.”

Economic benefits for Iowa

When combined with MidAmerican Energy’s other projects, the 591-megawatt Wind XII project will allow the company to provide renewable energy each year that is equal to 100 percent of the energy consumed by the homes and businesses in MidAmerican Energy’s Iowa service area.

The company estimates Wind XII will create more than 300 full-time jobs related to construction and another 28 full-time positions for ongoing operations and maintenance.

In addition, Wind XII will provide an average \$6.9 million per year in additional Iowa property tax payments on wind turbines and nearly \$5.6 million more in annual landowner easement payments. In 2017, MidAmerican Energy paid \$19.6 million in Iowa property taxes on wind turbines.

“This is an important step forward for our company, our customers and the state of Iowa,” Wright said. “In addition to delivering on our promise to customers, we are also helping to make Iowa a more competitive place to do business – ensuring that our economy continues to grow and thrive. This historic moment is something we are proud to share.”

The company is currently exploring potential wind farm sites in Iowa and will announce wind farm locations prior to constructing each site. MidAmerican Energy will continue to use its natural gas, nuclear and coal-fueled plants to ensure reliable electric service even in times of low wind.

Plunging Prices Mean Building New Renewable Energy Is Cheaper Than Running Existing Coal

Energy Innovation: Policy and Technology

Energy Innovation: Policy and Technology

Contributor

Energy

POST WRITTEN BY

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The price to build new wind and solar has fallen below the cost of running existing coal-fired power plants customers save money when utilities replace existing coal with wind or solar

A new report reveals 42% of global coal capacity is currently unprofitable, and the United States could save \$78 billion by closing coal-fired power plants in line with the Paris Climate Accord's climate goals. This industry-disrupting trend comes down to dollars and cents, as the cost of renewable energy dips below fossil fuel generation. Across the U.S., renewable energy is beating coal on cost: The price to build new wind and solar has fallen below the cost of running existing coal-fired power plants in Red and Blue states. For example, Colorado's Xcel will retire 660 megawatts (MW) of coal capacity ahead of schedule in favor of renewable sources and battery storage, and reduce costs in the process. Midwestern utility MidAmerican will be the first utility to reach 100% renewable energy by 2020 without increasing customer rates, and Indiana's NIPSCO will replace 1.8 gigawatts (GW) of coal with wind and solar.

Lazard's annual Levelized Cost of Energy (LCOE) analysis reports solar photovoltaic (PV) and wind costs have dropped an extraordinary 88% and 69% since 2009, respectively. Meanwhile, coal and nuclear costs have increased by 9% and 23%, respectively. Even without accounting for current subsidies, renewable energy costs can be considerably lower than the marginal cost of conventional energy technologies. In other words, customers save money when utilities replace existing coal with wind or solar.

Historical LCOE comparison reveals dramatic declines for wind and solar

Historical LCOE comparison reveals dramatic declines for wind and solar LAZARD

And clean energy generation costs will only continue to fall. The National Renewable Energy Laboratory projects utility solar PV costs will decline 60% by 2050 under mid-level forecasts assuming continued industry growth, and technological breakthroughs could cut costs up to 80% by 2050. Similarly, its onshore wind analysis forecasts a 30% cost decline by 2050, which could be up to 58%-64% with breakthroughs.

US wind power grew 8 percent in 2018 amid record demand

4/09/19

There are wind farms or factories supplying the industry in all 50 states, but no state exemplifies these trends better than Texas. The Lone Star State is home to roughly a quarter of all U.S. wind power capacity. If Texas were a country, it would rank fifth in the world for wind power capacity with nearly 25,000 megawatts (MW) installed. And with nearly 7,000 MW of additional wind projects under

construction or in advanced development at the end of 2018, Texas is adding more wind than all but two other states currently have installed.

Texas's leadership in wind capacity means it also leads in wind industry jobs and investment. Texas is the top state for direct and indirect wind industry jobs, with more than 25,000 Texans working in the industry. Wind farms in Texas have drawn over \$46 billion in total capital investment to date and pay approximately \$307 million each year in landowner payments plus state and local taxes.

Wind power supports economic development in rural America

Wind farms pay \$1.05 billion a year through state and local taxes plus lease payments to landowners, the most complete picture yet of the value wind farms pay into rural communities. To arrive at \$1 billion, AWEA quantified the never-before reported \$761 million a year paid by wind farms in state and local taxes that help communities improve their school systems, fix roads and fund emergency services. An additional \$289 million a year in wind farm land lease payments serve as a valuable drought-proof cash crop for American farmers and ranchers that can help keep a farm in the family. Most of these revenues go to rural areas, where 99 percent of America's wind generating capacity can be found.

"Communities across Texas and the nation feel the benefits wind power delivers," Kiernan said. "Wind farm revenue enabled Blackwell Consolidated Independent School District, located near Abilene, Texas, to build a new school building, buy new technology, and provide scholarships worth \$36,000 to students attending 1st through 12th grades. And that's just one of the more than 100 districts in Texas that have seen the benefits of wind power in their community."

Wind power is contributing to a boom in American renewable energy jobs: wind turbine service technician is the second fastest growing job in the U.S. after solar installer, according to the Bureau of Labor Statistics. The U.S. added 8,500 wind power jobs last year, including well-paying jobs in wind turbine service, construction, engineering and manufacturing. Veterans are hired for many of these jobs, at a rate that is 67 percent higher than the national average, because America's servicemembers have the skills needed to operate rugged machinery in the field under tough conditions to keep energy reliably flowing to homes and businesses. There are also 24,000 manufacturing jobs found at over 500 U.S. factories supplying the wind industry.

State bailout of Lordstown trumps nuclear plants aid

Opinion: May 5, 2019 at 12:00a.m. Youngstown Vindicator

State bailout of Lordstown trumps nuclear plants aid

General Motors has eliminated 4,500 jobs in Lordstown in the past three years. The population of Lordstown is currently 3,200. The loss of the GM Lordstown Complex has created a dramatic negative financial impact on the village.

The Ohio Legislature has offered no bailout to us. Why should we spend \$300 million a year to bail out two bankrupt nuclear plants? This bailout destabilizes the current open and free power-generation

market in Ohio at the taxpayers' expense. Additionally, it jeopardizes a new natural-gas-to-electric power plant in Lordstown that will produce electricity at half the cost of nuclear or coal, saving consumers money.

A new plant will bring 2 million man hours of work to the Mahoning Valley and would have an economic impact of \$26 billion to Lordstown, Warren, and the Mahoning Valley over its lifetime. Because of this, I question: Why is a bailout needed? Who is responsible? Do we point to bad management? Poor business decisions?

In a changing world the Mahoning Valley must be on top and ahead of the curve. I appreciate state Rep. Michael O'Brien's willingness to recognize that this piece of legislation will negatively impact Lordstown and the entire Mahoning Valley. I ask that you call your state legislators and ask them to also vote no on Ohio House Bill 6.

Arno Hill, Lordstown

Arno Hill is mayor of Lordstown