

not producing the revenue needed as an incentive to large scale retrofits or new construction of coal plants.

The United States electricity system requires new investment. This investment is taking place against a backdrop of scientific, technological, financial, economic and political change. What worked in the past is not likely to work in the future.

A chorus of CEO's from other major utilities have cited the need for utilities to move forward with creating new models for their operations -- incorporating demand response, energy efficiency, renewable energy, and "distributed" generation as key parts of their businesses.

For example, the CEOs of American Electric Power (AEP), Edison International, and Southern California Edison all told a panel at the *Wall Street Journal's* April 2014 ECO:nomics conference that they see the advent of "distributed solar" -- where customers generate electricity with solar panels on their homes—as an opportunity for their companies to evolve and offer new services.

NRG announced in August 2014⁶⁵ that they are reorganizing their business model in recognition of fundamental changes in the industry, and in October NRG purchased Canadian rooftop solar company Pure Energies. James Rogers, former CEO of Duke Energy Predicted in 2013 that the future for electricity markets would see a fundamental disconnect between GDP growth and electricity growth.⁶⁶

Instead, FE's policy and practice is designed to retain a relative monopoly for coal fired generation.⁶⁷ This is shown through: 1) the use of government regulation to transfer of the Harrison power plant to West Virginia's regulated system; 2) FE's proposed ratepayer bailout for the Sammis, Davis-Besse and OVEC units in Ohio; 3) FE's misuse of Ohio's renewable energy market; 4) FE's opposition to government policies that support

⁶⁵ Amy Poszywak, *UPDATE: NRG lays out strategy to create value from power industry evolution*, SNL Financial, August 7, 2014

⁶⁶ Abby Gruen, *Duke's Rogers calls for utility regulatory, business model 'rethink'*, SNL Financial, January 30, 2013

⁶⁷ While there has been much discussion and support from the coal industry for an all of the above, diverse use of fuel sources for the nation's grid in many parts of the country diversification would actually reduce the use of coal. FirstEnergy and the mid-Atlantic and Midwest region is a case in point.

energy efficiency in Ohio and other states; 5) FirstEnergy's opposition to the participation of energy efficiency and demand response resources in PJM's capacity market; and 6) FE's reliance on federal subsidies to profit from its investment in the Signal Peak mine. FirstEnergy's underlying goals are to boost the financial performance of its struggling merchant subsidiary, FirstEnergy Solutions, while also enhancing its strategy of pursuing regulated growth.

This overall strategy has not succeeded. Mr. Alexander told the *Wall Street Journal* in July 2014 that this has been a "lost decade."⁶⁸

A. Harrison plant transfer

In October 2013, FirstEnergy received approval from the West Virginia Public Service Commission to complete the sale of 1,576 MW of the Harrison power plant from deregulated Allegheny Energy Supply to regulated Mon Power. The Public Service Commission approved the transfer at a price \$257 million higher than the historic book value of the plant.⁶⁹

The Harrison plant sells its output into the energy and capacity markets operated by the regional electricity grid operator, PJM Interconnection LLC. The transaction had been presented to the West Virginia Public Service Commission as a benefit to the West Virginia coal industry and as a way to reduce Mon Power's exposure to the volatility of PJM energy and capacity market purchases. In reality, the transaction locks Mon Power customers into owning far more energy than they need⁷⁰ and exposes them to the risk that the cost of owning and operating the Harrison power plant will not be covered by the sales of this excess electricity into PJM. FE's own numbers showed that the Harrison plant would lose ratepayers money, relative to market purchases, through 2029.⁷¹

⁶⁸ Rebecca Smith, *Electric utilities get no jolt from gadgets, improving economy*, Wall Street Journal, July 28, 2014.

⁶⁹ FE had originally requested a \$589 million mark-up in the value of Harrison, based on the "market value" of the plant, as calculated in an appraisal commissioned by FE. This mark-up was reduced to \$257 million in a settlement.

⁷⁰ Assuming the Company's load forecast is correct, Mon Power customers will have excess energy through 2026. The asset transfer resulted in a transfer of approximately 8400 GWh of additional energy generation to Mon Power. In 2013, Mon Power's existing power plants generated 11,344 GWh. Mon Power forecasted an energy demand of 18,679 GWh in 2026. Hence, with the asset transfer, Mon Power customers will have excess energy well beyond 2026.

⁷¹ Public Service Commission of West Virginia, *Supplemental Testimony of Catherine Kunkel on behalf of the West Virginia Citizen Action Group*, Case No. 12-1571-E-PC, September 10, 2013.

With the approval of the West Virginia Public Service Commission, FirstEnergy was able to transfer the Harrison plant from the risky merchant environment to the protected regulatory environment, where WV ratepayers will pay for the ownership and operation of the plant over the remainder of its useful life. In addition, FE was able to increase the value of the plant by \$257 million; West Virginia ratepayers will also pay for this added cost, plus a rate of return.

Despite Anthony Alexander's statements favoring the free market and opposing government intervention, the Harrison plant transfer shows the company's willingness to seek out and use government regulatory processes to create a guaranteed revenue stream for a financially struggling coal plant.

B. Proposed bailout of Sammis, Davis-Besse and OVEC plants

FE is now seeking a very similar ratepayer bailout in Ohio to protect its Sammis, Davis-Besse and OVEC plants.

In its Ohio rate case, FE is seeking approval for a power purchase agreement, under which its Ohio distribution utilities will purchase the output of the Sammis coal plant (2,200 MW), Davis-Besse nuclear plant (908 MW), and FES's share of the OVEC coal plants (53 MW) at a set price. If approved, this would shift the risk of operating these merchant plants onto Ohio ratepayers, who would be forced to pay for the cost of the plants, regardless of whether it would be less expensive to purchase from the wholesale market. FE estimates that the proposal would cost the average residential customer an additional \$42 in its first year.⁷² In total, FE estimates that the plants would cost Ohio ratepayers \$404 million (net present value) from 2016-2018.⁷³ This rate increase represents about 5% of the Ohio



First Energy's Sammis plant

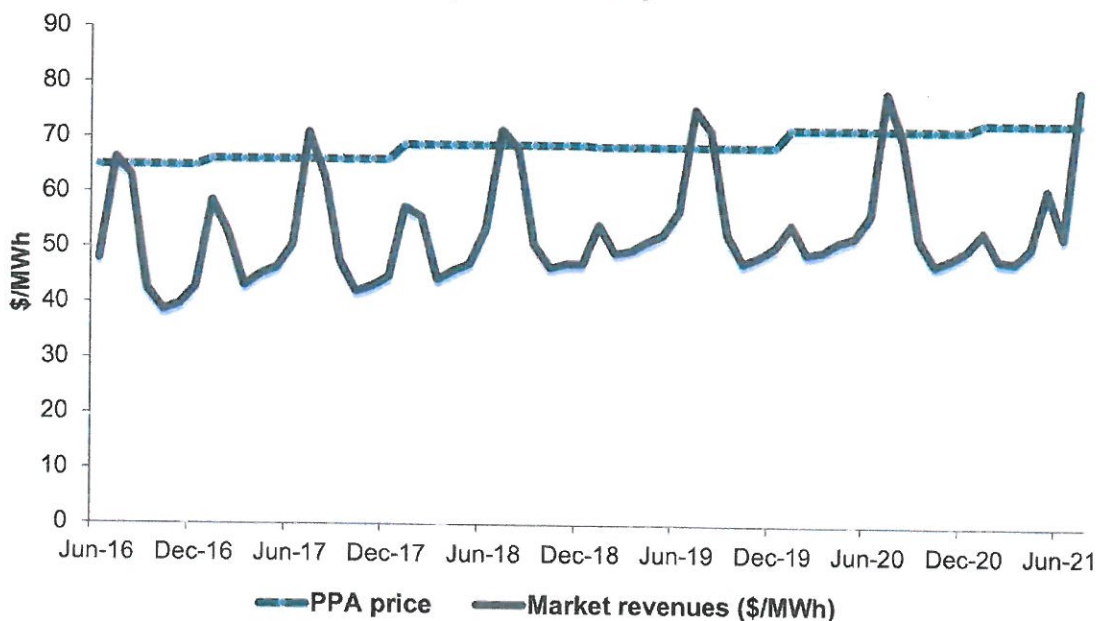
⁷² FE Q2 2014 Earnings call, August 5, 2014.

⁷³ Public Utilities Commission of Ohio, *Direct Testimony of Jay A. Ruberto on behalf of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company, Attachment JAR-1*, Case No. 14-1297-EL-SSO, August 4, 2014.

subsidiaries' projected operating revenues from 2016-2018.⁷⁴ FE estimates that the plants will not start producing a net benefit to ratepayers until 2022.⁷⁵ By our analysis, the plants won't produce a positive benefit to ratepayers for even longer and will cost ratepayers significantly more.

The following graph shows the estimated price that the Sammis coal plant would receive under the proposed power purchase agreement, compared to the estimated price that the plant would otherwise receive from selling its output into the PJM energy and capacity markets, as it does currently. Ohio ratepayers will pay for the difference.

**Cost of Sammis PPA versus Market Revenues
(2016-2021)**



⁷⁴ Public Utilities Commission of Ohio, Application of Ohio Edison Company, The Cleveland Electric Illuminating Company and The Toledo Edison Company for Authority to Provide for a Standard Service Offer Pursuant to R.C. 4928.143 in the Form of an Electric Security Plan: Attachment 6, Case No. 14-1297-EL-SSO, August 4, 2014.

⁷⁵ Public Utilities Commission of Ohio, *Direct Testimony of Jay A. Ruberto on behalf of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company, Attachment JAR-1*, Case No. 14-1297-EL-SSO, August 4, 2014.

FE argues that its plan will protect ratepayers from the volatility of market prices because ratepayers will be locked into a stable (and high) contract for power from the plants. This is the same argument that FE made in 2013 before the WV Public Service Commission in support of the transfer of the Harrison power plant at an inflated price to Mon Power, and the same argument it made to justify additional rate charges for its Ohio nuclear plants.



The hole in the Davis-Besse reactor head, 2002

This is also not the first time that FE has appealed to Ohio state officials for a bailout. In 1999, when Ohio deregulated electricity, FE succeeded in convincing the legislature to add surcharges to the bills of customers in its former service territory to pay for the costs of its nuclear plants. This “transition charge” cost ratepayers \$6.9 billion, and blunted the reduction in bills that should have occurred when competitors entered the market. According to the Ohio Consumers Counsel, the state's ratepayer advocate, 1.9 million consumers paid these surcharges.⁷⁶

C. Misuse of Ohio's renewable energy market

Under Ohio's renewable energy standard, FE's distribution utilities are required to source a certain percentage of their electricity from renewable energy sources.

A financial audit of FE's renewable energy procurement program in 2012 found that FE's distribution companies had purchased renewable energy credits from FirstEnergy Solutions at prices that, at times, exceeded renewable energy credit prices anywhere else in the country.⁷⁷ These prices were passed through to customers.

⁷⁶ John Funk, *FirstEnergy proposes new rate plan to have consumers guarantee sales for two Ohio power plants*, Cleveland Plain Dealer, August 4, 2014.

http://www.cleveland.com/business/index.ssf/2014/08/firstenergy_proposes_new_rate.html

⁷⁷ Exeter Associates, *Management/Performance Audit of the Alternative Energy Resource Rider of the FirstEnergy Ohio utility companies for October 2009 through December 31, 2011*, Case No. 11-5201-EL-RDR, (<http://dis.puc.state.oh.us/TiffToPDF/A1001001A12H15B64215C68703.pdf>)

The Public Utilities Commission of Ohio ultimately fined FE \$43.4 million for this insider dealing and required the company to credit this money back to ratepayers. The PUCO stated that FE's purchase price had been based on negotiations, not a competitive bid, and there was no evidence to support the price.⁷⁸ FE appealed this order to the Ohio Supreme Court. This case has not yet been decided.

D. Political opposition to energy efficiency

FE's corporate policy includes opposition to investments in energy efficiency. FE sees energy efficiency as direct competition to its core business of selling electricity. As a result, FirstEnergy has vigorously opposed energy efficiency in West Virginia, where it successfully argued before the WV Public Service Commission that it should be required to achieve an energy efficiency target of 0.5% of sales in 5 years, one of the weakest energy efficiency targets in the nation.⁷⁹ In Pennsylvania, FE subsidiary West Penn Power was recently fined \$1.3 million for its failure to meet its statutorily mandated energy efficiency target for 2011.⁸⁰



In Ohio, FE was the key player in a successful legislative campaign in 2014 to roll back a 2008 law that established basic standards for the use of energy efficiency and renewable energy by Ohio's utilities.

The Ohio energy efficiency standards were considered to be fairly strong and comparable to those in many other states. The renewable standards were not as aggressive as those of many other states.⁸¹

⁷⁸ Public Utilities Commission of Ohio, *Opinion and Order*, Case No. 11-5201-EL-RDR, August 7, 2013 (<http://dis.puc.state.oh.us/TiffToPdf/A1001001A13H07B41149F98309.pdf>)

⁷⁹ West Virginia Public Service Commission, Case No. 11-0452-E-P-T

⁸⁰ Waqas Azeem, *Pa. PUC penalizes West Penn for not achieving energy savings reduction targets*, SNL Financial, August 21, 2014

⁸¹ In 2011, 19 states achieved energy efficiency savings of 0.7% of sales or greater – the target that Ohio set for that year, (American Council for an Energy Efficient Economy, *The 2013 State Energy Efficiency Scorecard*, November 2013). Also, 29 states have renewable portfolio standards that are more aggressive than Ohio's. (<http://www.ncsl.org/research/energy/renewable-portfolio-standards.aspx>)

FE lagged behind other Ohio utilities in the early implementation of the 2008 law. The State's other two major investor-owned utilities, AEP and Duke, met their energy efficiency benchmarks handily in 2009, the first year of the program, but FE did not. By 2010 and 2011, FE had met the benchmarks.⁸² The company also dragged its feet on purchasing or constructing renewable energy facilities, so that it ended up having to fulfill the requirement by purchasing renewable energy credits.

Rather than deciding to comply with the energy efficiency and renewable portfolio standards of the law, FE decided to try to repeal them. By late 2012, FE had begun a push to stop the law in its tracks, freezing the energy efficiency and renewable energy standards portions of the law at 2012 levels.⁸³ FE's position was supported by the Ohio Chamber of Commerce and several large companies, including Timken and Alcoa, who objected to provisions that large electric users had to either implement a certain amount of electric efficiency or pay a surcharge. FE's proposal was opposed by the Ohio Manufacturers Association, several large companies including Honda and Anheuser-Busch, alternative energy suppliers, environmental organizations, and others. The state's other major investor-owned utilities, AEP and Duke, offered support for FE's position as long as they did not lose the investments they had made so far in energy efficiency. Indeed, both AEP and Duke have now said that they will continue their current energy efficiency and renewable energy plans, even after the passage of SB 310.

FE did not succeed in getting the "permanent freeze" measure passed at the end of the 2012-2013 legislative session. Part of their failure was due to timing – some members of the legislature, the press, and parties interested in the bill protested that the lame duck session did not allow for adequate public hearings or debate. It also became clear that Ohio Governor John Kasich would not endorse a complete freeze of the standards.

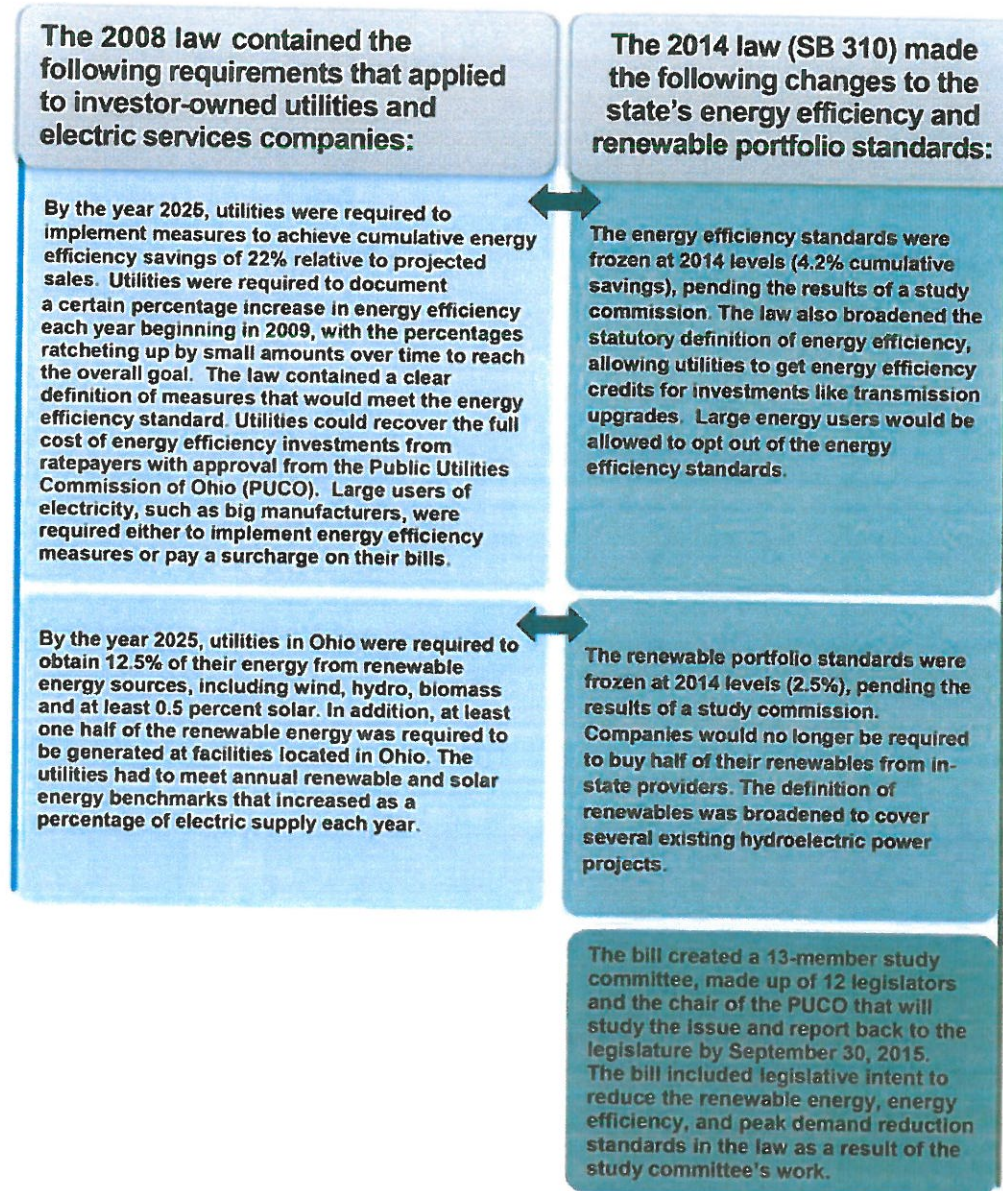
⁸² Max Neubauer, Ben Foster, R. Neal Elliott, David White, and Rick Hornby, *Ohio's Energy Efficiency Resource Standard: Impacts on the Ohio Wholesale Electricity Market and Benefits to the State*, American Council for an Energy Efficiency Economy, April 2013. <http://www.ohiomfg.com/legacy/communities/energy/OMA-ACEEE-Study-Ohio-Energy-Efficiency-Standard.pdf>

⁸³ Dan Gearino, *Utility seeks to cap energy-efficiency rule*, The Columbus Dispatch, November 27, 2012 <http://www.dispatch.com/content/stories/business/2012/11/27/utility-seeks-to-cap-energy-efficiency-rule.html>

FE and its allies regrouped for the next legislative session in 2014. They introduced a somewhat modified version which, rather than permanently freezing the standards outright, provided for a two-year freeze at 2014 levels. A study committee would be created that would report back at the end of 2016 about whether the freeze should be continued.

The FE bill, SB 310⁸⁴, was hotly debated during legislative hearings, and virtually every Ohio newspaper editorialized against it, citing a potential loss of jobs from investment in renewables in the state and the loss of savings from energy efficiency. Nonetheless, the bill passed first the Senate, and then the House in May, and the governor signed the bill into law on June 13, 2014. Below is a comparison of the provisions of the 2008 law with the changes that were made in 2014:

⁸⁴ http://www.legislature.state.oh.us/bills.cfm?ID=130_SB_310



FE welcomed the Governor's signing of the bill.⁸⁵ FE has already begun implementing the roll-back of the energy efficiency standards. In September 2014, FE filed an application with the Public Utilities Commission of Ohio to amend its energy efficiency programs to eliminate its non-low-income residential and commercial energy efficiency programs and to allow large industrial customers to opt-out of paying for and participating in the utility's efficiency programs.⁸⁶

⁸⁵ Toledo Blade Staff, *As expected, Gov. Kasich sign Ohio Senate Bill 310 into law*, Toledo Blade, June 13, 2014.

⁸⁶ Public Utilities Commission of Ohio, *Application for Approval of Amended Energy Efficiency and Peak Demand Reduction Plans for 2015 Through 2016*, September 24, 2014."

E. Opposition to participation of energy efficiency and demand response in PJM capacity market

FE is opposed to the participation of energy efficiency and "demand response" in PJM's capacity market. Demand response is the practice of paying electricity customers to curtail use in order to reduce demand at the most expensive peak periods of the day.

PJM's capacity market is a three-year forward market. PJM reserves the amount of capacity that it expects will be needed to meet demand, plus reserve margin, three years from now. All power plants bid into the auction, and all that clear the auction are awarded the market clearing price for their capacity.

The stated goal of PJM's capacity market is to provide a price signal that will steer investment in new generation to where it is most needed. In practice, the capacity market has not been effective at doing this. The only new "generation" that it has incentivized is demand response, which can be developed on a much shorter time horizon and with much less capital investment than supply-side generation. Instead, the capacity market has primarily subsidized the continued operation of older power plants.⁸⁷

Even though distribution utilities can bid energy efficiency into the capacity market as a resource, FE has been opposed to doing so. Not bidding energy efficiency into the capacity market has two results: it prevents FE's distribution customers from benefitting from the money that they would have otherwise received had that capacity been bid in. And it also artificially inflates capacity prices because a low-cost resource – energy efficiency – is being prevented from bidding into the market. In other words, FE opposes the bidding of energy efficiency and demand response into the capacity market because it wants to maintain high capacity prices to support its coal and nuclear generation.

⁸⁷ M. Wittenstein and E. Hausman, *Incenting the old, preventing the new*, Synapse Energy Economics, June 14, 2011.

This was particularly problematic in the 2015/16 auction, when FE's zone in northern Ohio cleared at the high price of \$357/MW-day, about three times higher than the rest of PJM. An expert witness for the Sierra Club argued in a case before the Public Utilities Commission of Ohio that FE only bid into the auction about a fifth of the energy efficiency savings that it actually could have. Had FE bid its entire energy efficiency savings into that auction, the auction clearing price would have been lowered by up to \$150/MW-day. This would have saved ratepayers in this zone approximately \$600 million in capacity market payments to power plants in 2015/16.⁸⁸

The Public Utilities Commission of Ohio ordered that FE bid more of its energy efficiency into the PJM capacity market in 2013.⁸⁹ The Commission noted that failure to bid energy efficiency into the capacity market could result in the Commission denying FE full recovery from ratepayers of the costs of their energy efficiency programs.⁹⁰

FE has also taken formal steps to oppose demand response in the capacity market. It has recently filed a complaint at the Federal Energy Regulatory Commission seeking to void the latest PJM capacity auction results because of their inclusion of demand response resources.⁹¹ This is despite the fact that PJM credits the availability of demand response with having played a large role in maintaining the stability of the electricity grid during the "polar vortex" events in the winter of 2014.⁹²

F. FirstEnergy's reliance on federal coal subsidies at Signal Peak

In 2008, FE made a \$125 million investment ⁹³ in the Signal Peak mining operation near

⁸⁸ Public Utilities Commission of Ohio, *Direct testimony of Chris Neme on behalf of the Sierra Club*, Case No. 12-1230-EL-SSO, May 21, 2012.

⁸⁹ Public Utilities Commission of Ohio, *Opinion and Order*, Case No. 12-2190-EL-POR, March 20, 2013.

⁹⁰ Public Utilities Commission of Ohio, *Entry on Rehearing*, Case No. 12-2190-EL-POR, July 17, 2013.

⁹¹ E. Whieldon, *Experts foresee broad market impacts from court overturning FERC demand response rule*, May 27, 2014, <http://www.snl.com/interactivex/article.aspx?id=28216310&KPLT=6>.

⁹² "Although operational conditions were tight during the Polar Vortex, some variables exceeded PJM's expectations in real-time: the availability and response of voluntary demand response, the response of the stakeholders to the public appeal for conservation, and the performance of wind-powered generation. Demand response, although not required to respond during the winter this year, did respond and assisted in maintaining the reliability of the system. In fact, the total amount of demand response provided was larger than most generating stations." (PJM Interconnection, *Analysis of Operational Events and Market Impacts During the January 2014 Cold Weather Events*, May 8, 2014, <http://www.pjm.com/-/media/documents/reports/20140509-analysis-of-operational-events-and-market-impacts-during-the-jan-2014-cold-weather-events.ashx>)

⁹³ FirstEnergy, Press Release, *FirstEnergy Secures Long Term Fuel Supply With Investment in Montana Coal Field*, July 17, 2008.

Roundup, Montana. The transaction occurred through a buyout of an existing mine under lease with the federal coal program. FE sold a third of its interest in the mine to Gunvor Group, an international energy trading company, in 2011, and declared a gain of \$569 million on its 2008 investment.

The Signal Peak mine increased in value so dramatically from 2008 to 2011 due to subsidies that the mine receives under the federal Bureau of Land Management's coal leasing program. For thirty years, the federal government has leased coal from the Powder River Basin to privately owned coal companies for below fair market value.⁹⁴ When coal is sold for below market levels the US taxpayer loses money. The Signal Peak mine expanded production under the federal coal leasing program after FE purchased it, increasing production from 755,000 tons of coal in 2009 to 4.4 million tons in 2010. In other words, FE profited from the fact that it was able to secure a below market-rate coal supply to expand its mining operation.

Although the stated intent of the company was to secure a steady supply of high quality coal for its coal plants from Signal Peak at an affordable price,⁹⁵ it never used the mine for that purpose. In 2010, of the 4.4 million tons produced at the mine, less than half went to the U.S. domestic coal market for use in power generation (most to FE plants). Since 2009, Signal Peak has produced an estimated 20 million tons of coal. Of those 20 million tons, only 3 million tons were sold to domestic coal plants,⁹⁶ mostly in 2010 and 2011. A 2012 press release from the Gunvor Group, announcing an international finance syndicate, did not mention sale of the coal for use within the United States at all, but only refers to sale of the coal in Asian markets.⁹⁷ In 2014, the only domestic coal deliveries have been to Wisconsin Electric Power's Valley plant.

FE and Gunvor Group have profited from the ability to export coal produced at the Signal Peak mine overseas without having to pay royalties to the federal government. The U.S. government is supposed to collect 12.5% royalties on the gross income from

⁹⁴ For a discussion of the underlying issues related to fair market value issue, see: <http://www.ieefa.org/study-almost-30-billion-in-revenues-lost-to-taxpayers-by-giveaway-of-federally-owned-coal-in-powder-river-basin/>

⁹⁵ Barry Cassell, *FirstEnergy sees advantages in Montana coal mine investment*, SNL Financial, November 5, 2008.

⁹⁶ SNL database, *Signal Peak Fuel Delivery Summary*, Sourced: July 15, 2014

⁹⁷ Rohan Somanwenshi, *Gunvor closes \$250 million facility to fund Signal Peak mine deal*, SNL Financial, June 11, 2012. See also: Gunvor Press Release, June 11, 2012

each ton of coal sold under its lease agreement. The value of exported coal is exempted from this collection.⁹⁸ FE/Signal Peak appears to have sold upwards of 17 million tons of coal since 2009 on the export market. During this period Arch and Peabody were estimating net income of \$26 per ton.⁹⁹ Using this figure, FE/Signal Peak has made \$55 million from not paying royalties.¹⁰⁰ Put another way, the U.S. taxpayer has lost this revenue.

FirstEnergy has benefited from a dysfunctional federal coal lease program that effectively gives away federal coal below fair market value. It leveraged this undervaluation to significant benefit in its sale to Gunvor. These profits were then used to offset deep structural losses from FE's merchant fleet on the company's balance sheet, underwrite economic development in other countries and boost the bottom line of an international banking syndicate. In short, FE's Signal Peak venture represents a government giveaway that enhanced the value of the company on a non-core project.

The federal coal lease program is designed to support coal fired generation in the United States. The decision to give away the coal for below fair market value was designed to expand the number of plants burning coal in the United States. In this instance there is significant mission drift. Some may see this as a creative and prudent use of corporate assets, others may see this as an abuse of the taxpayer. What this \$600+ million and rising giveaway of U.S. assets could not be described as, however, is a "war on coal."

⁹⁸ Senator Ron Wyden, *Senators Wyden and Murkowski Seek Answers on Coal Royalty Payments*, January 4, 2013, See also: Patrick Rucker, *Asia coal export boom brings no bonus for U.S. taxpayers*, and *U.S. coal exports trade raises alarms for Western States*, Thomson Reuters, December 4, 2012 and December 20, 2012, respectively.

⁹⁹ The net income represents the income to the coal company for its foreign sale minus cost of production in the United States and transportation.

¹⁰⁰ 17 million tons at \$26 per ton gives a net income of \$442 million. At the 12.5% royalty rate, FE would have paid \$55 million on this coal had it been sold domestically.

Section 4: Forward-looking strategy does not work

Historically, FE's strategy has emphasized deregulation, focusing on profiting from merchant generation and from expanding its retail sales in states with retail choice. FE is abandoning this strategy to focus on opportunities for growing profits in its regulated business. This means aggressively pursuing rate increases, seeking bailouts of its merchant power plants from ratepayers, and pursuing policies that stifle competitors to coal. While this forward-looking strategy is clearly negative for the company's customers. We also do not think it will be successful at solving FE's financial problems. In the previous section, we described some specific examples of the impact of FE's strategy on ratepayers and taxpayers. In this section, we put those examples in the larger context of FE's change from a merchant-oriented strategy to a regulated strategy, and argue that this change in strategic direction is unlikely to lead to a significant recovery for the company in the short to medium term.

A. Historic dependence on coal generation has been poor strategy

FE's strategic emphasis on merchant coal generation is shown by its 2011 merger with Allegheny Energy.

Almost 80% of Allegheny Energy's capacity was coal at the time of the merger. FE's 2011 10-k described the company's business model as "market-focused"¹⁰¹ and FE CEO Anthony Alexander told investors that "our competitive business, our diverse generating fleet and the scale of our utility operations, will help us become one of the best-positioned companies for growth in this industry."¹⁰²

Many of the other mergers and acquisitions occurring from 2010-2013¹⁰³ placed increased reliance on regulated generation. FirstEnergy's emphasis on the supposedly positive aspect of greater exposure to the merchant market seems anomalous and out of step with the rest of the electric utility industry.

¹⁰¹ FE 2011 Form 10K, p. 52

¹⁰² FE Q1 2011 earnings call transcript, May 4, 2011.

¹⁰³ See the thematic treatment of Credit Ratings and regulatory asset divestiture and transfers in the 2010, 2011, 2012 and 2013 discussions of Credit Ratings in EEI's Financial Reviews.

FE bought a major coal-dependent utility, Allegheny Energy, at exactly the time when the market for merchant coal generation was going downhill. FirstEnergy's merchant generation segment has performed poorly over the past three years.

At the time of the merger, FE articulated a goal of improving the performance of its supercritical coal fleet, placing the fleet in the top decile of capacity performance in the nation. (Capacity factors measure the percentage of time that a facility is generating electricity). However, according to the most recent data, the company is not on track to meet its goal of top decile performance by 2014. In 2013, two units from FE's supercritical fleet (one from Bruce Mansfield and one from Fort Martin) made the top decile, but the remaining ten units from the five supercritical plants did not achieve this performance goal.¹⁰⁴

Several key financial metrics - revenues, net income, and debt - all point to the weak performance of FE's merchant fleet. The merchant fleet posted a 2013 loss and is poised to lose money again in 2014. The regulated sector produced 182% of net income in 2013. A recent analysis from UBS Investment Research estimates that FirstEnergy Solutions, one of FirstEnergy's merchant companies, has negative value, due to its high levels of debt and poor financial performance. FE's merchant plants have struggled to sell their power competitively in the current environment of low wholesale power prices. Capacity markets, which pay power plants for having their capacity available to meet peak demand, provide an additional source of revenue for merchant power plants. The capacity market is administered by regional electric grid manager PJM Interconnection with the stated goal of ensuring that there is sufficient generation capacity available to ensure reliable operation of the grid. Capacity market payments have been insufficient to make FE's merchant fleet financially viable. PJM's capacity prices have already been set through the 2017/2018 delivery year. Prices in FE's northern Ohio zone will spike to \$357/MW-day in 2015/16 (a record high price), providing a one-time boost in revenue to some of FE's generation in that

¹⁰⁴ SNL Database, Custom Peer Analysis/Capacity Factors by Supercritical Plants/Sourced July 3, 2014

region. In its second quarter 2014 earnings call, FE's CEO confirmed that capacity prices through 2017/18 are "still not where they need to be."^{105,106}

Mr. Alexander stated further that the company's largest merchant coal plant, the 2.4 GW Bruce Mansfield plant, did not clear the 2017/2018 capacity auction and only partially cleared the 2016/17 auction. This means that the plant will not receive any revenues from the capacity market in 2017/18. As a result, FirstEnergy is delaying capital expenditures at the plant.¹⁰⁷ Analysts at UBS are now saying that the retirement of Mansfield is a "ready possibility in the medium term."¹⁰⁸



Bruce Mansfield Plant

Additionally, the financial performance of FE's merchant fleet may be challenged by coal prices, which are expected to rise over the next several years. The coal mining industry in the U.S. is experiencing an unprecedented level of poor financial performance, including 26 bankruptcies of mostly small coal producers in 2012-2013.¹⁰⁹ The industry must find a way to raise prices in order to prosper in the long-term.

¹⁰⁵ FirstEnergy, Q2 2014 Earnings Call Transcript, August 5, 2014

¹⁰⁶ Several recent changes (including PJM's proposed modification to its capacity market to introduce a new capacity product, and a recent US Court of Appeals ruling vacating FERC Order 745 that may impact the participation of demand response in capacity markets) are expected to raise capacity market prices. (See: UBS Investment Research, *US Electric Utilities & IPPs: PJM's Potential Triple Whammy Uplift*, September 16, 2014). It is not clear how much these changes will impact FE, or how FE would make use of any additional revenue if it materializes.

¹⁰⁷ FirstEnergy, Q2 2014 Earnings Call Transcript, August 5, 2014

¹⁰⁸ UBS Investment Research, *FirstEnergy Corp.: Where's the value in power?* August 6, 2014

¹⁰⁹ Darren Epps, *Bankruptcies continue to rock coal companies in '13, but hope for the survivors*, SNL Financial, December 5, 2013

FirstEnergy's merchant subsidiary is not expected to recover financially in the near future. In the short and medium term, even as FE disposes of its merchant coal fleet, the fleet will continue to underperform and perhaps lose money. Energy margins in the merchant sector are expected to remain tight.¹¹⁰

FE's continued choice of coal as a fuel source, particularly for a utility in mid-Atlantic and Midwest markets, is increasingly risky in this new era characterized by low power prices, a glut of natural gas, rising importance of renewable energy and popular opposition to coal. Low natural gas prices are keeping a lid on short-term coal prices. The incursion of natural gas, renewables and energy efficiency as new, permanent investments in the nation's electricity grid points to a broader, more diversified generation mix for the region.

Although individual companies in the utility industry are moving toward greater diversification, particularly away from coal, FE's overall strategy has produced the following operational dynamics: 1) FE's coal-fired capacity is at about the same level as before the merger; 2) FE's actual generation from coal is about 66%; and 3) despite significant levels of retirements the company has not managed to reduce its debt load. It remains to be seen how a company that continues to rely on coal for two-thirds of its generation, with limited debt options can continue.

B. FirstEnergy is reversing its strategy of aggressively expanding retail sales

FE's strategy of aggressively expanding its retail sales has also not worked out as well as the company had hoped. In Ohio, a deregulated state, electricity customers can choose their electricity supplier. FE's merchant generating company, FirstEnergy Solutions (FES), aggressively moved to capture more of this market. In 2010, FE grew

¹¹⁰ FE's projections for natural gas prices through 2015 suggest very little change. Capacity pricing is expected to rise and then drop again. Overall expenses for the competitive fossil fleet are expected to stay the same. See: 1Q 2014Fact Book, Slide 154-155.

FES's base by a factor of three, tripling it from 0.5 million customers in 2009 to 1.5 million.¹¹¹ As of 2013, FES had 2.7 million customers.¹¹²

In order to retain and expand its customer base, FES offered rates that were very close to (and, in some cases, possibly below) wholesale market prices.¹¹³ FES's business model was built on aggressively expanding its customer base by underselling the competition.

This turned out to be a problem for FE during the 2014 "polar vortex." Several polar vortex events in January and February 2014, characterized by extreme cold weather, resulted in very high power demand in the PJM territory. Natural gas deliverability constraints and unexpected outages of some large generators drove power prices in PJM to record highs. However, FE was not able to take advantage of this potential revenue windfall to support its merchant generating companies. Instead, as FE reported in its Q1 2014 earnings call, "we had several nuclear and fossil outages and derates [reductions in available capacity at a generating unit] that occurred during the most volatile pricing periods. [T]hese outages, given the high prices for energy during those periods, had a significant impact on our results."¹¹⁴ Because of its own outages, FES had to become a net buyer from the market in order to supply its customers' demand at peak times when market prices were highest.

As part of a "far more conservative approach in competitive markets," FE has outlined three strategies for mitigating this problem in the future: 1) increasing its retail sales price to better price risk; 2) increasing its hedging for the retail load; and 3) purchasing additional outage insurance.¹¹⁵

In its second quarter 2014 earnings call, FE announced a change in course, reversing its strategy of aggressively expanding its retail customer base. The company noted it had shed 100,000 retail customers in the first half of 2014, reducing its customer base from 2.7

¹¹¹ FirstEnergy, *Q4 2010 Earnings Call Transcript*, February 16, 2011

¹¹² FE 2013 Annual Report

¹¹³ Matt Brakey, *No Solutions: Four problems FirstEnergy Solutions could not answer*, Crain's Cleveland Business, September 19, 2014

¹¹⁴ FE *Q1 2014 Earnings Call Transcript*, May 6, 2014

¹¹⁵ FE *Q1 2014 Earnings Call Transcript*, May 6, 2014

million to 2.6 million.¹¹⁶ FE recently announced that it is pulling out of the retail business in Illinois, where it currently has more than 220,000 residential customers.¹¹⁷

After FE's second quarter 2014 earnings call, analysts at UBS noted that, "[p]ulling out of retail is a big deal for credibility of business model" and that "[t]he decision to scale back from retail marks a key turning point for the company, having relied upon this strategy as a core element to maintain pricing through the last four-year downturn."

While these actions reduce the downside risk of FirstEnergy's retail strategy, they also reduce its upside potential. According to UBS Investment Research, "[e]ssentially the move to de-risk the business will result in higher costs and lower earnings in the future."¹¹⁸

C. FirstEnergy has recently announced a shift to focusing on regulated growth

As a result of the poor performance of its competitive generation strategies, FirstEnergy has recently changed course. At the time of the merger, FE had said, "[w]e do not need to grow our business by expanding our rate base."¹¹⁹ Today, the focus of the business is exactly on securing as much revenue as it can under a regulated system.¹²⁰ Specifically, FE is planning major investments in its transmission system and more frequent rate cases. FE succeeded in 2013 in shifting 1576 MW of the Harrison power plant from merchant subsidiary Allegheny Energy Supply to regulated Mon Power. FirstEnergy expects to achieve at least 80% of its earnings from the regulated business going forward.¹²¹ This is consistent with recent performance (85% of earnings came from the regulated business in 2013).¹²²

¹¹⁶ FE Q1 2014 Earnings Call Transcript, May 6, 2014.

¹¹⁷ Steve Daniels, *FirstEnergy Solutions cuts cord in Illinois*, Crain's Chicago Business, August 18, 2014.

¹¹⁸ UBS Investment Research, *FirstEnergy Corp.: Competitive Dis-synergies*, July 31, 2014.

¹¹⁹ Full quote: "We do not need to grow our business by expanding our rate base. Instead, we are focused on growth through efficiencies, cost controls and making the most of the assets we already have. We will upgrade our facilities to meet increased demand and to reduce the costs and risk in our business, and we will invest in efficiency and productivity improvements to make our assets more competitive." (FE Q1 2011 earnings call, May 4, 2011)

¹²⁰ FE Q4 13 Earnings call, February 25, 2014.

¹²¹ Ibid.

¹²² FE Q4 2013 Fact Book, February 2014.

Harrison Coal Plant transfer

In October 2013, FE received approval from the West Virginia Public Service Commission to sell 1,576 MW of the Harrison power plant from deregulated Allegheny Energy Supply to regulated Mon Power, thus completing a key aspect of FE's new regulated strategy.



Harrison Coal plant, by Scott Mosher

In FE's third quarter 2013 earnings call, shortly after the transaction closed, CEO Anthony Alexander explained that one of the key drivers of the transaction was the need to put the Harrison plant in a regulated environment, in which West Virginia ratepayers will be responsible for its costs for the next 25+ years. He stated:

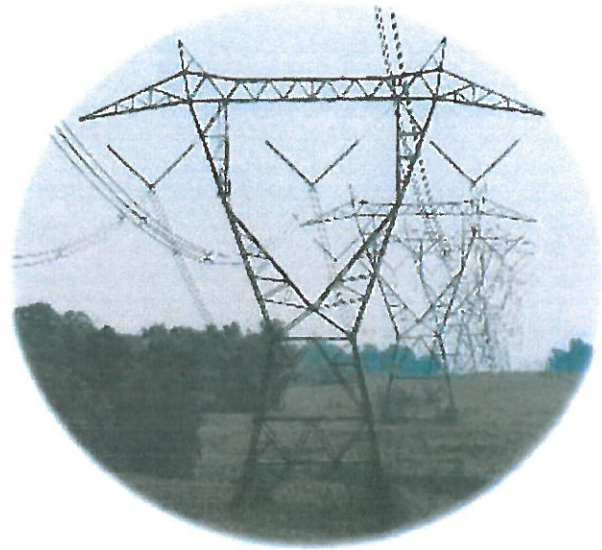
[O]ur competitive operations have been challenged not by operational performance, but by capacity and energy markets that do not support investment in, or in some instances, the operation of generating units. While we can debate for reasons this is occurring, the fact is, power prices have been weak for the last couple of quarters and we may be facing continued soft power prices for at least the next several years. As a result, we began to reposition our competitive business in 2012 and now through a series of even more aggressive actions have better positioned this business for the future.

For example, we have reduced the size and mix of the fleet by closing and selling competitive units. Last month, we closed the Hatfield and Mitchell Power plants and we expect to complete the sale of certain hydro assets later this year. In addition, we completed the Harrison and Pleasants transfer this quarter.¹²³

¹²³ Part of the Harrison transaction also involved the sale of a small fraction (100 MW) of the Pleasants power plant from Mon Power to Allegheny Energy Supply. (FE *Third Quarter 2013 Earnings Call Transcript*, November 5, 2013).

Transmission

FE owns the largest transmission system within PJM.¹²⁴ FE announced in its fourth quarter 2013 earnings call that it is planning to invest \$4.2 billion in this transmission system from 2014-2017. This would roughly double the value of its existing transmission assets; as of the end of 2013, net transmission plant in service was \$4.1 billion.¹²⁵ This investment will mainly be in the northern Ohio zone, where FE earns a Federal Energy Regulatory



FE power lines, by Associated Press

Commission (FERC)-approved 12.38% return on equity on its transmission investments.¹²⁶ The company is targeting annual transmission earnings growth of 20%+ per year.¹²⁷

It is worth noting that FE has the highest return on equity for transmission investments of any peer utility in PJM (a holdover from when FirstEnergy's transmission system used to be part of a different Midwest regional energy market, MISO), and is therefore at risk that FERC may lower this return on equity.^{128,129}

Rate cases

Another piece of FE's regulated strategy is to file more frequent rate cases.¹³⁰ FE currently has rate cases pending in West Virginia, New Jersey, Pennsylvania, and Ohio. The Ohio rate case is described in more detail in the next section. The following table summarizes the rates cases filed in West Virginia, New Jersey, and Pennsylvania:

¹²⁴ Ibid.

¹²⁵ Ibid.

¹²⁶ Ibid.

¹²⁷ Ibid.

¹²⁸ UBS Investment Research, *FirstEnergy Corp.: Competitive Dis-synergies*, July 31, 2014

¹²⁹ Transmission returns on equity are generally only revised if challenged by a complaint at FERC. Such complaints are relatively rare but have been increasing (Glen Boshart, *Moody's: FERC still will support new transmission, but perhaps with lower ROEs*, SNL Financial, May 20, 2013)

¹³⁰ Ibid.

Table 11: Summary of rate cases filed in Pennsylvania, New Jersey and West Virginia¹³¹

Utility	State	Requested rate increase (million \$)	Requested rate increase (%)	Requested return on equity	Date case filed	Case number
Metropolitan Edison	PA	151.9	11.50%	10.90%	8/4/14	R-2014-2428745
Penelec	PA	119.8	8.60%	10.90%	8/4/14	R-2014-2428743
Penn Power	PA	28.5	8.70%	10.90%	8/4/14	R-2014-2428744
West Penn Power	PA	115.5	8.40%	10.90%	8/4/14	R-2014-2428742
Jersey Central Power & Light	NJ	11.0	1.90%	8.66%	2/22/13	ER-12111052
Mon Power & Potomac Edison	WV	151.6	14.68%	11%	4/30/14	14-0702-E-42T

The average return on equity awarded in utility rate cases nationally in 2013 was 10%¹³², suggesting that FE is unlikely to realize the returns on equity requested in the above cases. FE's New Jersey rate case appears especially ambitious, as the Staff of the New Jersey Board of Public Utilities is recommending a \$207.4 million rate decrease.¹³³

FE has no plans to file a rate case in Maryland, where its subsidiary enjoys the second-highest return on equity of any of its ten distribution utilities.¹³⁴

¹³¹ Katerina Dimitratos, *FirstEnergy companies request electric rate increases in Pennsylvania*, SNL RRA Regulatory Focus, August 7, 2014; SNL Financial, *Rate Case Profile D-ER-12111052*, no date; WV Public Service Commission, *Direct Testimony of Kevin G. Wise on behalf of Monongahela Power Company and the Potomac Edison Company*, Case No. 14-0702-E-42T, June 6, 2014; WV Public Service Commission, *Amendment to the general base rate case filing of Monongahela Power Company and the Potomac Edison Company*, June 13, 2014.

¹³² Edison Electric Institute, *Rate Case Summary Q1 2014*, no date.

¹³³ SNL Financial, *Rate Case Profile D-ER-12111052*, no date.

¹³⁴ FE 4Q 2013 *Fact book*, February 2014.

Proposed Ohio merchant plant bailout

In its Ohio rate case, FirstEnergy is seeking approval for a power purchase agreement, under which its Ohio distribution utilities will purchase the output of the Sammis coal plant (2,200 MW), Davis-Besse nuclear plant (908 MW), and FES's share of the OVEC coal plants (53 MW) at a set price. As with the Harrison deal, this proposal would shift the risk of operating these merchant plants onto Ohio ratepayers, who will pay for the plants' costs regardless of whether market purchases would be a less expensive alternative. In testimony to the Public Utilities Commission of Ohio, FE candidly explains the poor financial performance of the plants and the need for a ratepayer bailout:

The economic viability of the Plants is in doubt. Market-based revenues for energy and capacity have been at historic lows and are insufficient to permit FES to continue operating the Plants and to make the necessary investments. Near-term forecasts for energy and capacity prices are unfavorable. While Company witness [Judah] Rose forecasts that market prices for energy and capacity will increase over time, the Plants may not survive to see these better days....

[T]he future of the Plants is in doubt. The Plants are not receiving sufficient revenues to cover the Plants' costs, both from an energy and capacity standpoint. In light of the historically low level of revenues for the last several years, FES may not be financially able to bear the short-term losses associated with the Plants.¹³⁵

While FE's new regulated strategy will undoubtedly produce more revenues than its merchant strategy, we do not believe that this strategy will be able to turn the company around in the near future, a concern which has also been voiced by some financial analysts.¹³⁶ FE, at the enterprise level and as the parent company must

¹³⁵ Public Utilities Commission of Ohio, *Direct Testimony of Donald Moul on behalf of Ohio Edison Company, The Cleveland Electric Illuminating Company and The Toledo Edison Company*, August 4, 2014. pp. 2-3.

¹³⁶ "The cornerstone of management's new strategy discussed earlier this year is pursuing more regular rate cases across all of its various jurisdictions. While its pending case in New Jersey should have clarity shortly after the 2Q call, we look for management to file several new cases in the near-term to 're-baseline' earnings/rate schedules to put itself in a position to lean on its utilities to drive rate base growth. Previously we had expected a series of rate cases in Pennsylvania ~mid-2014 as FE seeks to capitalize on spending opportunities in this jurisdiction but thus far the regulatory calendar has been quiet in the state. For reference, FE has not increased rates at either West Penn Power or Penn Power (last increases came in 1994 and 1988, respectively, before FE owned the entities). A focus will be on the *allocation* of costs across its utility portfolio as we worry the companies have historically over-earned, hence the prior hesitancy to file for rate relief, and also given its historical limited reinvestment. Meanwhile, management's cautious tone towards any meaningful distribution growth prior to 2016 despite the cases reinforces our concerns

manage extraordinary levels of short and long-term debt. It will be difficult to extract cash from regulated operations to pay down this debt.

Additionally, while there has been significant capital expenditure in the regulated business recently, capital expenditures for regulated generation are likely to decline after the company finishes retrofitting power plants for the federal Mercury and Air Toxics (MATS) rule. This will reduce the potential for growth available in the regulated segment.

Finally, rising interest rates will put pressure on the regulated operations, as there will be regulatory lag in recovering increased interest rates from ratepayers.

Section 5: Conclusion

FE's financial performance has deteriorated over the past several years. Revenues and stock price are down, and dividends were recently reduced. This occurred as net margins in 2013 for the industry as a whole rose by 41.1% and the stock market and energy indexes rose as well.

The company's historic reliance on merchant generation, particularly merchant coal generation, has not been successful. The merchant generation segment has been the major driver of the company's poor financial performance.

The company has now reversed course and embraced government regulation as strategy to preserve its business. The company has pursued a political strategy that calls for government and ratepayer subsidy of coal and nuclear generation, while opposing policies to support competing sources of generation, including energy efficiency and demand response. This strategy is shown through:

over its latest rate strategy" (UBS Investment Research, *FirstEnergy Corp.: Competitive Dis-synergies*, July 31, 2014.)

- *Insider dealing on renewable energy credits in Ohio.* The Public Utilities Commission of Ohio fined FE's Ohio distribution utilities \$43.4 million in 2013 for buying renewable energy credits at inflated prices from FirstEnergy Solutions at ratepayer expense.
- *Refusal to bid energy efficiency into capacity market in Ohio.* FE's failure to bid energy efficiency into the regional capacity market drove up the price of capacity in FE's northern Ohio zone, benefitting FE's power plants but costing ratepayers in northern Ohio approximately six hundred million dollars.
- *Passage of Ohio legislation freezing energy efficiency and renewable energy standards.* FE was the leader in the fight to pass Senate Bill 310 in 2014, which froze Ohio's energy efficiency and renewable energy standards for the next two years.
- *Transfer of Harrison plant at an inflated price.* In 2013, FE transferred the Harrison coal plant from Allegheny Energy Supply to Mon Power. By transferring the plant from a merchant to a regulated subsidiary, FE ensured that West Virginia ratepayers would pay an inflated price for the future costs of the plant. FE's own numbers indicate that the deal will lose ratepayers money at least through 2029.
- *Reliance on federal coal subsidies at Signal Peak.* FE has taken advantage of the subsidized cost of leasing federally owned coal in the Powder River Basin to turn a profit on its investment in the Signal Peak mine.
- *Opposition to energy efficiency in Ohio, Pennsylvania, and West Virginia.* FE has aggressively opposed energy efficiency, and in some cases failed to meet mandatory statutory benchmarks for efficiency, in these three states.
- *Proposed bailout of coal and nuclear plants in Ohio.* FE is seeking a ratepayer bailout for its Sammis, Davis-Besse, and OVEC plants; under the proposal, FE customers will pay a fixed amount to cover the cost of running the plants, no matter what their electricity is actually worth on the market. FE's own numbers estimate that this proposal will cost ratepayers over \$400 million in the first three years.
- *Proposed rate increases.* As part of a more aggressive regulatory strategy, FE is currently seeking rate increases totaling nearly \$600 million in Pennsylvania, West Virginia, and New Jersey.

In short, FirstEnergy's regulatory and political strategies are aimed to squeeze as much profit as possible out of the regulated subsidiaries, while using the regulated subsidiaries

and other taxpayer subsidies to prop up its failed merchant generation business. But despite the above initiatives, FE's financial situation has not turned around, and the company is still burdened by excessively high levels of debt. FE's reliance on subsidies and bailouts – while costly to ratepayers – will not solve the underlying downward slide of the company's financial performance.

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Tom Sanzillo is the Director of Finance for the Institute for Energy Economics and Financial Analysis. He has written several studies on coal plants, rate impacts, credit analyses, and the public and private financial structures for coal. In addition, Tom has testified as an expert witness, taught training sessions, and conducted media interviews. Prior to his work with the Institute for Energy Economics and Financial Analysis and his own consulting practice, Tom spent 17 years with both the City and the State of New York in various senior financial and policy management positions. He was formerly the State of New York's first deputy comptroller, a job that put him in charge of the finances of 1,300 units of local government, the management of 44,000 government contracts annually, oversight of over \$200 billion in state and local municipal bond programs and responsibility for a \$156 billion pension fund. From 1990 to 1993 Tom also served in senior management in the New York City Comptroller's Office.

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