



**Shareholder Proposal #9 on the Proxy:**  
**FINANCIAL RISKS of RELIANCE on COAL**  
**FirstEnergy Corporation                      Symbol: FE**

**FirstEnergy does not address the financial risks related to its reliance on coal.**

**Vote "FOR"**

**REPORT ON THE FINANCIAL RISKS OF CONTINUED RELIANCE ON COAL**

**FirstEnergy:**

- Is the 5<sup>th</sup> largest consumer of coal in the US. It ranks 13<sup>th</sup> for total power generation
- FE's generating portfolio consists of 54% coal (7,157 MW).<sup>1</sup>
  - Plans to retire five coal plants on a temporary basis in response to the rising cost of coal.
  - Plans to sell its ownership interest in the troubled Signal Peak mine in Montana.<sup>2</sup>
  - Reduced operations at smaller coal-fired units in response to the continued slow economy and lower demand for electricity, as well as uncertainty related to proposed new federal environmental regulations, resulting in a write off up to \$287 million in value related to the assets and a reduction of up to \$0.59 per share of common stock in the third quarter of 2010.<sup>3</sup>
  - Sources approximately 23.79 million tons of coal per year from Illinois Basin, Powder River Basin, and Central Appalachia.
- Most of FE's coal-plants are considered to be merchant plants, with most of its electricity production sold at auction in Ohio and Pennsylvania.
- Merged with Allegheny Energy, doubling FE's total generation capacity from coal to 14,880MW and more than doubling its number of coal plants from nine to twenty.
- The acquisition of Allegheny's fleet, containing predominantly old and small power plants, may exacerbate FE's financial risk.

FirstEnergy is particularly susceptible to the significant financial risks of continued reliance on coal outlined in the [investor's proxy information sheet](#).

**1. COAL RISK EXPOSURE**

- FE controls nine coal-fired plants, five of which are less than 300 MW.<sup>4</sup>
- Of the 20 coal plants in the combined FE-Allegheny fleet, 13 first went online before 1960. Not one plant or generating unit in the combined fleet was built after 1980.
- Only eight of the 20 plants are equipped with modern pollution control technologies for SO<sub>2</sub> or NO<sub>x</sub> (scrubbers and/or selective catalytic or non-catalytic reducers)
- Capital expenditure for compliance at five of FE's plants is projected at \$399 million for 2010-2012 alone. The plants are being retrofitted with scrubbers and Selective Catalytic or Non-Catalytic Reducers (SNCR).
- Even after all of these upgrades are complete, the majority of the combined fleet will not have control equipment installed.
- FE's coal comes from Central Appalachia (CAPP) and from the Powder River Basin. Between December 2009 and December 2010, prices for CAPP coal rose 31% and for PRB coal prices rose 59.5%.
  - Due to the rising cost of coal in relation to natural gas, FE recently announced the temporary closure of the bulk of generation capacity at Ashtabula, Bay Shore, Burger, Eastlake, and Lake Shore stations.
  - The estimated cost in asset devaluation of such action is \$235 million over the next few years,<sup>5</sup> The costs of putting coal plants on standby are likely to rapidly increase if the market conditions (low natural gas prices driving lower electricity rates) behind the closures persist.



**Risk Profile of FE and Allegheny Coal Plants**

The following tables summarize information for FE's and Allegheny's oldest coal plants. Sammis, Bruce Mansfield, and Hatfield's Ferry are three of five 'supercritical' plants that the companies are reliant on for their base load provision. They are relatively younger, more efficient and less polluting than the rest of the fleet. This is only relative however; all three are subject to at least one litigation case relating to environmental violations. Clifty Creek and Armstrong are indicative of the eleven old plants smaller than 400MW in the fleet, only one of which has any SO<sub>2</sub> or NO<sub>x</sub> pollution controls. It is these that are particularly likely to become uneconomic in the near future.<sup>6</sup>

Name of Plant	WH Sammis, OH	Bruce Mansfield, PA	Clifty Creek, IN	Hatfield's Ferry, PA (Allegheny)	Armstrong, PA (Allegheny)
Year	1959-1972	1976-1980	1955-1956	1969-1971	1958-1959
Plant Capacity (MW)	2,220	2,490	60	1,710	356
Total MWh Electricity Generated 2008 <sup>7</sup>	14,728,590	18,556,736	967,777	11,094,481	1,435,696
% MW Generated from Coal	99.9%	99.8%	99.9%	99.8%	99.7%
SO <sub>2</sub> Emissions (tons) 2008 <sup>8</sup>	102,619	11,117	7,467	160,257	21,814
NO <sub>x</sub> Emissions (tons) 2008 <sup>9</sup>	18,272	26,122	2,363	24,533	2,488
CO <sub>2</sub> Emissions (tons) 2008 <sup>10</sup>	15,686,256	18,160,470	934,247	10,972,985	1,517,695
Hg Emissions (pounds) 2008 <sup>11</sup>	498	145	45	842	264
Emissions Controls SO <sub>2</sub>	Scrubber installation	Scrubber	-	Scrubber	-
Emissions Controls NO <sub>x</sub>	Selective Non-Catalytic Reducer (SNCR) installation	Selective Catalytic Reducer (SCR)	-	SNCR	-
Emissions Controls Hg, Particulates	Electrostatic precipitator (ESP)	ESP	-	-	-

**2. REGULATORY AND OPERATIONAL RISKS RELATED TO CONTINUED RELIANCE ON COAL:** Coal-burning utilities are being increasingly required to comply with the Clean Air Act, Clean Water Act, and other environmental laws governing air, water, and waste emissions.

**Air**

Although many regulations have been “on the books” for decades, we are seeing even greater enforcement of these regulations in recent years due to litigation challenging the EPA as well as utility companies that will require significant capital expenditures in equip coal plants with the necessary controls.

**Air: New Source Review and Environmental Compliance**

- FE is under a consent decree for New Source Review (NSR) violations at the Sammis plants that requires



reductions of SO<sub>2</sub> and NO<sub>x</sub>.

- FE has received Notices of Violation for NSR permitting from EPA at eight of its other coal plants.
- In 2000 the EPA issued a request for information regarding potential NSR violations at all ten plants that Allegheny operates.
- In 2004 nine of Allegheny's plants were served with a separate notice of intent to sue from the PA EDP over Clean Air Act violations. This case is still in the courts; in the meantime another Notice of Violation was served in 2007 against four plants.

**Air: NSR Actions at FE Plants**

PLANT	STATUS	COMPLIANCE ACTION
WH Sammis	2005 Consent Decree	\$1.1 Billion in environmental controls required by 2012
Eastlake	2005 Consent Decree 2009 Finding of Violation	Reduce Nox emissions
Burger	2005 Consent Decree	Reduce Nox and SO <sub>2</sub> . Agreed to repower plant (2009) Biomass repowering project cancelled (2010)
Homer City	2008 Finding of Violation	
Shawville	2009 Notice of Violation	
Portland	2009 Notice of Violation	
Keystone	2009 Notice of Violation	
Bay Shore	2009 Notice of Violation	
Ashtabula	2009 Notice of Violation	

**Water**

New EPA rules for coal plant cooling water systems could cost as much as \$300 million per site.<sup>12</sup>

- Capital costs for new cooling water systems for FirstEnergy’s merchant generators could exceed \$4.3 billion, or 40% of our company’s market capitalization.<sup>13</sup>
- In 2008 the Pennsylvania Department of Environmental Protection imposed new water quality standards for discharge in the Monongahela River, affecting Allegheny's Hatfield Ferry plant.
  - Preliminary studies indicate that in order for the plant to comply, a \$62 million retrofit of the wet scrubbers would be needed to prevent excess sulfurous discharges into the river. The imposition of such standards would likely necessitate costly retrofits on plants just recently retrofit with air quality controls.<sup>14</sup>

**Waste**

The EPA is moving towards re-classifying coal ash as hazardous waste. First Energy’s ponds would represent a significant material liability if this came into force.

- FirstEnergy produces over two million tons of coal ash annually.
  - Neither FE nor Allegheny report what percentage of their ash is wet-handled and stored in ponds.
  - The Bruce Mansfield ash pond, with capacity of 84,300 acre-feet, has a ‘high risk’ classification from the EPA. Allegheny's Pleasants and R Paul Smith stations have high and significant risk rating respectively. All of these ponds date from the 1970s or earlier.<sup>15</sup>
  - Roughly half of FE's ash is recycled into products including concrete, structural fill, soil stabilizing materials, and concrete by-products.
- EPA Administrator Lisa Jackson commented that she has “no data to say that [coal ash re-use] is safe at this point.”<sup>16</sup>



- Dominion Virginia Power is facing two lawsuits (for over \$2BN) for toxins that leached from a structural fill project.<sup>17</sup>

### 3. CONSTRUCTION AND COST RECOVERY: FirstEnergy's new coal plants face cost escalation and resistance from regulators to rate recovery.

- FirstEnergy's capital plan includes nine new coal plant proposals.
  - Two-thirds of the company's growth strategy is tied to coal.<sup>18</sup>
  - The WH Sammis retrofit, originally estimated to cost \$1.1 billion, has cost FE \$1.8 billion as of the end of 2010, making it one of the largest such projects in the US.
- FirstEnergy operates in regions where construction costs are rising exponentially
  - The estimated cost of AMP-Ohio's proposed 960 MW coal-fired power plant project nearly doubled in two years.<sup>19</sup>
- Commercially available technology for post-combustion capture of CO<sub>2</sub> is not expected until 2020 or 2030. Independent sources find that CCS equipment will "raise the cost of generating electricity at new coal-fired power plants by perhaps as much as 60% to 80%."<sup>20</sup>

### 4. A CONSENSUS AMONG INDUSTRY ANALYSTS: Studies since 2009 increasingly conclude that coal plants are uncertain, risky, volatile, costly investments requiring extra diligence.<sup>21</sup>

#### FE has not adequately addressed the material financial risks identified by industry analysts related to its exposure to coal.

In its Statement in Opposition to this Proposal, our company notes the investments it has made since 1990 to reduce pollution from its fleet. FirstEnergy states that nearly 40% of its electricity "is generated without emitting CO<sub>2</sub> and, by the end of 2011, we expect approximately 70% of our generating fleet to be non-emitting or low emitting generation." In its 2010 Corporate Responsibility Report, our company further states: "Over 52% of our coal-fired generating fleet will have full NO<sub>x</sub> and SO<sub>2</sub> equipment controls thus significantly decreasing our exposure to future environmental requirements."<sup>22</sup> FirstEnergy, however, does not discuss the cumulative risks facing the remaining 48% of its coal-fired fleet that does not have full NO<sub>x</sub> and SO<sub>2</sub> controls, nor how it will manage additional environmental control mandates for mercury and other hazardous air pollutants, coal combustion waste, wastewater and, possibly, cooling water.

FirstEnergy does not address the adverse impacts identified by industry analysts, particularly:

- Bernstein Research (February 2011): The gross margin of merchant coal plants "has fallen by over three quarters since 2008, from \$20 billion to \$5 billion" and forward price curves "suggest that in 2011 aggregate unregulated gross margin will erode further, dropping by a fifth from \$5 billion to \$4 billion. This dramatic erosion in gross margin reflects the collapse in the price of natural gas [...] aggravated by continued upward pressure on the price of Appalachian coal."<sup>23</sup>
  - FE's merchant plants are at high risk from competitively priced power from natural gas.
- Bernstein Research (Sept 2010): scrubber installation costs could equal to 5% of FE's market capitalization and 8% of its coal fired output could be lost due to EPA regulation of mercury and acid gases.<sup>24</sup>
- Bernstein Research (Sept 2010): the estimated capital cost to FirstEnergy for cooling towers for their merchant generators could exceed \$4.3 billion, or 40% of FE's market cap.

### 5. CONCLUSION:

Our company has not provided investors with sufficient information to enable them to determine whether the company recognizes and is properly managing the risks associated with its continued reliance on coal. In the absence of meaningful disclosure, investors have no way of fully assessing the risks and rewards from investing in various companies in the utilities sector, and are concerned about unpleasant shocks to shareholder value.

**Vote "FOR" Shareholder Proposal #9**  
**Report on the Financial Risks of Reliance on Coal**



<sup>1</sup> FirstEnergy, 2010 Form 10-K, *Securities and Exchange Commission*, p. 2.

<sup>2</sup> J. Funk, "U.S. warns FirstEnergy Corp. and Boich Cos. mine in Montana has too many safety violations," *Cleveland Plain Dealer*, 26 November 2010, accessed February 2011, available at: [http://www.cleveland.com/business/index.ssf/2010/11/us\\_warns\\_montana\\_mine\\_develope.html](http://www.cleveland.com/business/index.ssf/2010/11/us_warns_montana_mine_develope.html).

<sup>3</sup> First Energy News Release, "FirstEnergy Generation Corp. Announces Plans to Reduce Operations at Smaller Plants," 12 August 2010, available at: <http://investors.firstenergycorp.com/phoenix.zhtml?c=102230&p=irol-newsArticle&ID=1459646&highlight=>.

<sup>4</sup> FirstEnergy, 2010 Form 10-K, p. 40.

<sup>5</sup> FirstEnergy, 2010 Form 10-K, p. 47. See First Energy News Release, "FirstEnergy Generation Corp. Announces Plans to Reduce Operations at Smaller Plants," 12 August 2010, available at: <http://investors.firstenergycorp.com/phoenix.zhtml?c=102230&p=irol-newsArticle&ID=1459646&highlight=>.

<sup>6</sup> Bernstein Research, *Black Days Ahead for Coal: Implications of EPA Air Emissions Regulations for the Energy & Power Markets*, 21 July 2010, p. 3.

<sup>7</sup> Natural Resources Defense Council, "Benchmarking Air Emissions of the 100 Largest Electric Power Producers in the United States, All 2008 Data," accessed 8 April 2011, available at: [http://www.nrdc.org/air/pollution/benchmarking/2008/benchmark2008\\_data.zip](http://www.nrdc.org/air/pollution/benchmarking/2008/benchmark2008_data.zip).

<sup>8</sup> National Resources Defense Council, 2008.

<sup>9</sup> National Resources Defense Council, 2008.

<sup>10</sup> National Resources Defense Council, 2008.

<sup>11</sup> National Resources Defense Council, 2008.

<sup>12</sup> K. Chipman, "Power Plants Face EPA Cooling-Water Rules to Protect Fish," *Bloomberg*, 29 March 2011, available at: <http://www.bloomberg.com/news/2011-03-29/power-generators-must-protect-fish-under-u-s-epa-rules-for-cooling-water.html>.

<sup>13</sup> K. Chipman, 29 March 2011.

<sup>14</sup> Allegheny, 2009 Form 10-K, *Securities and Exchange Commission*, p. 39.

<sup>15</sup> US Environmental Protection Agency, "Information Request Responses from Electric Utilities," Updated 23 November 2010, available at: <http://www.epa.gov/epawaste/nonhaz/industrial/special/fossil/surveys/index.htm>.

<sup>16</sup> "Inspector General to Probe EPA Marketing of Coal Ash," press release from *Public Employees for Environmental Responsibility (PEER)*, 4 November 2009, available at: <http://www.commondreams.org/newswire/2009/11/04>.

<sup>17</sup> L. Hansen, "Lawsuit claims Dominion saw golf course as 'coal ash dump'," *Pilot On-Line*, 27 August 2009, available at: <http://hamptonroads.com/2009/08/lawsuit-claims-dominion-saw-golf-course-coal-ash-dump>.

<sup>18</sup> FirstEnergy, Akron Investor Visit, August 2010.

<sup>19</sup> D. Schlissel, A. Smith, and R. Wilson, "Coal-Fired Power Plant Construction Costs," *Synapse Energy Economics*, July 2008, p. 2, accessed 26 April 2011, available at: <http://www.synapse-energy.com/Downloads/SynapsePaper.2008-07.0.Coal-Plant-Construction-Costs.A0021.pdf>.

<sup>20</sup> <sup>20</sup> D. Schlissel, A. Smith, and R. Wilson, July 2008, p. 7.

<sup>21</sup> M. Celebi, F. Graves, G. Bethla, and L. Brennan, *Potential Coal Plant Retirements Under Emerging Environmental Regulations*, Brattle Group, 8 December 2010; Deutsche Bank Climate Change Advisors, *Natural Gas and Renewables: A Secure Low Carbon Future Energy Plan for the United States*, November 2010; Bernstein Research, *U.S. Utilities Coal-Fired Generation Is Squeezed in the Vice of EPA Regulation: Who Wins and Who Loses?*, October 2010; Bernstein Research, *Black Days Ahead for Coal: EPA Air Emissions Regulation & the Outlook for Coal Fired Generation*, 22 September 2011; MJ Bradley and Analysis Group, *Ensuring A Clean, Modern Electric Generation Fleet while maintaining electric Reliability*, August 2010; J. Fahey, "Why Small Coal-Fired Plants Are Going Away," *Forbes*, 19 July 2010; Bernstein Research, *U.S. Utilities: A Visit to Washington Finds Utility Lobbyists and Environmentalists Agreeing on the Grim Outlook for Coal*, 9 March 2010; M. Kaplan, *Displacing Coal with Generation from Existing Natural Gas-Fired Power plants*, Congressional Research Service, 19 January 2010. See also: North American Electric Reliability Corporation (NERC), *2010 Special Reliability Scenario Assessment: Resource Adequacy and Impact of Potential U.S. Environmental Regulations*, October 2010; Mike Morris, CEO, American Electric, *Power, Power and Gas Leaders Conference*, Bank of America Merrill Lynch, New York, 29 September 2010; *ICF International, Clean Air Regulations: Impacts of EPA Proposed Rules*, 16 September 2010.

<sup>22</sup> FirstEnergy Corp, 2010 Form 10-K, p. 53.

<sup>23</sup> Bernstein Research, *Bernstein Commodities & Power: No Light for Dark Spreads: How Ruinous Economics of Coal-Fired Power Plants Affect the Markets for Coal and Gas*, 18 February 2011, p. 1.

<sup>24</sup> Bernstein Research, *Black Days Ahead for Coal: Implications of EPA Air Emissions Regulations for the Energy & Power Markets*, 21 July 2010, p. 13.