

Coal Fired Power Plant-Operating Utilities Banks Should Avoid

Tennessee Valley Authority (TVA) is the largest electric company owned by the United States government, providing electricity to electric cooperatives, municipal utilities, and a number of wholesale customers serving around 9 million ratepayers across 7 states in the Southeast. TVA is the fourth biggest owner of coal-fired power plants in the United States, with 14,469 MW at 11 plants that spewed more than 73 million tons of carbon pollution in 2009. TVA also uses coal from mountaintop removal mines at some of its plants, and was responsible for the largest coal ash spill in U.S. history when an ash pond dam at its Kingston facility ruptured and dumped an estimated 5.4 million cubic yards of coal ash into tributaries of the Tennessee River.

In August 2011 TVA disclosed plans to invest nearly \$2 billion to extend the life of two of its dirtiest coal plants, the Gallatin and Allen coal plants in Tennessee. TVA is currently proposing to enter into a risky “sale and leaseback” structure in order to finance these costly life extensions, which TVA staff acknowledge will be at least \$10 million more expensive than traditional financing mechanisms. Instead of continuing to rely on its outdated and inefficient coal-fired power plants, TVA’s own Integrated Resource Plan demonstrates that it can meet projected energy needs through increased investment in energy efficiency and clean energy rather than dirty financing gimmicks.

American Electric Power (AEP), headquartered in Columbus, OH, is the largest coal burning utility in the United States. Serving 5.3 million customers in 11 states, AEP’s system includes a staggering 24,302 MW of coal-fired power from 27 plants, representing 66% of the company’s 36,455 MW total generating capacity. AEP’s plants are the largest emitters of nitrous oxide, mercury, and carbon pollution, and the second largest emitters of sulfur dioxide in the country. The company reported emissions of 138 million metric tons of CO₂ in 2010. In 2011, coal comprised 78% of the total fuel used to generate electricity by AEP and its subsidiaries, down from 82% in 2010 and 88% in 2009.

AEP has reported to the SEC that it anticipates needing to invest \$6 - \$7 billion dollars in its fleet between 2012 and 2020 in order to comply with existing and pending environmental standards. In addition to those investments, AEP is considering retirement of 4,603 MW worth of units at 11 plants by 2015. Claiming that efforts to update Federal clean air standards would cause job losses and rate increases, AEP has aggressively and vociferously opposed environmental standards.

AEP has repeatedly been subject to allegations of overcharging consumers in the past five years - the company has been forced to return over \$100 million to consumers. AEP lost 10% of its Ohio customer load in 2011 due to customers switching to alternative suppliers. As part of a 2007 settlement for failing to abide new source review rules for plants in Ohio, Indiana, Virginia, and West Virginia, AEP was forced to pay the largest fine ever levied under the Clean Air Act. In 2005, sulfur trioxide emissions from AEP’s James M. Gavin Plant damaged the town of Ceshire, Ohio so extensively that the company eventually bought the town from residents for \$20 million.

DTE Energy Co., headquartered in Detroit, Michigan, is comprised primarily of Detroit Edison, an electric utility serving 2.1 million customers in southeastern Michigan, and Michigan Consolidated Gas Co. (MichCon), one of the country's largest natural gas utilities serving 1.2 million customers throughout Michigan. Both subsidiaries are fully regulated by the Michigan Public Service Commission. Detroit Edison's generation fleet includes 6,614 MW of coal-fired power capacity from 6 plants, representing 63.4% of the company's 10,425 MW total generating capacity.

A 2010 Clean Air Task Force Report labeled Detroit Edison's Monroe Coal plant the most deadly coal plant in the country, reporting that its emissions are responsible for contributing to more deaths and responsible for more adverse health impacts on a yearly basis than any other coal plant. According to a report by Environmental Integrity Project, Monroe accounts for more than a quarter of Michigan's total CO₂ emissions. Monroe Unit 2 is the largest individual source of sulfur dioxide and nitrogen oxide emissions in the state. In 2009, according to the EPA, Unit 2 emitted 72,320 tons of sulfur dioxide and 8,205 tons of nitrogen oxide. Also, according to the EPA, DTE has predicted that by 2013 Unit 2 will emit 33,816 tons of SO₂ and 14,494 tons of NO_x. The Monroe site was also identified in an EPA risk assessment that found significantly increased cancer risk associated with exposure to contaminated groundwater and coal ash disposal sites lined with only natural soil.

Berkshire Hathaway owns an 89.8% interest in **MidAmerican Energy Holdings Company**, which is largely comprised of two regulated utility companies: PacifiCorp and MidAmerican Energy Company. MidAmerican Energy Holdings Company supplies electricity to 6.2 million customers. Berkshire Hathaway also owns the Burlington Northern Santa Fe (BNSF) Railway, the nation's largest hauler of coal. BNSF shipped 274.7 million tons of coal in 2008 or 23.8% of total domestic coal shipments that year.

Through PacifiCorp and MidAmerican Energy, MidAmerican operates coal-fired power plants in 11 locations across Iowa, Utah, and Wyoming. MidAmerican also owns non-majority shares of several other coal-fired power plants in Arizona, Colorado, and Montana. In 2010, MidAmerican's total coal-fired power plants holdings released 84.7 million tons of carbon pollution or 4.4 % of the nation's carbon pollution from coal-fired plants. MidAmerican's carbon pollution exceeds that of the entire state of Washington. PacifiCorp has by far the largest coal-fired power plant capacity in the Western United States, spewing carbon pollution of 56.3 million tons of carbon pollution. MidAmerican Energy has majority ownership of five of the six jointly owned coal-fired power plants in Iowa, importing coal from Wyoming and spreading 1,300 pounds of mercury pollution and 28.4 million tons of carbon pollution into the environment.

PacifiCorp has been spending what will amount to over \$4 billion by 2023 to lock in its coal plants despite the advantageous cost trends for renewable energy and the rising price of coal. Most of these expenditures are for pollution controls and many were done presumptively before the Environmental Protection Agency (EPA) has approved final rules for the plants. It is likely that many of the newly installed controls will not go far enough to meet federal air pollution requirements. In December 2011, the Oregon Public Utility Commission declined to approve PacifiCorp's latest Integrated Resource Plan, in large measure due to the lack of information from the utility regarding the risks of its presumptive expenditures, how expenses will be allocated among stakeholders, and how energy efficiency would be developed to reduce increased generation needs. PacifiCorp's

Jim Bridger plant, ranked by the Environmental Integrity Project as the 27th dirtiest power plant in the nation for its quarter-ton of mercury pollution in 2010, cost the company a \$1 million cash penalty to the U.S. Treasury for air pollution violations.

Ameren Corporation is based in St. Louis, Missouri and holds assets worth \$23 billion. It is the parent company of Ameren Illinois and Ameren Missouri as well as Ameren Energy Resources (non-rate-regulated energy commodities - including energy generation and marketing). Ameren was initially created by the merger of CIPSCO Incorporated and Union Electric Company. Ameren's net capacity is 16,600 MW and it serves 2.4 million electric customers and nearly one million natural gas customers across 64,000 square miles in Illinois and Missouri.

Ameren owns all or part of 11 coal units in MO and IL, accounting for over 10,000 MW of coal-fired capacity and related emissions; including the Labadie plant in Missouri, which ranked as the second worst mercury polluter in the nation, emitting over 1,500 pounds of airborne mercury annually. Ameren's mercury emissions helped push the state of Missouri to fourth nationwide in total airborne mercury emissions in 2010, and put Ameren Corp in the top four most polluting companies for airborne mercury nationally. In general, the Ameren fleet contains some of the dirtiest and heaviest polluting units in Missouri, and Ameren is broadly viewed as a recalcitrant player in EPA compliance with the federal Clean Air and Clean Water Acts.

Southern Company is the largest electric generator in the United States with 42,963 MW of capacity serving 4.4 million customers in the Southeast. In 2009, Southern Company's more than 26,000 MW of coal capacity was responsible for 134,512,618 million tons of carbon pollution. Three of its coal plants in Georgia and Alabama topped the list of the largest carbon polluters in 2010, and were the only sources in the United States emitting more than 20,000,000 million tons apiece. Data from the Clean Air Task Force showed that Southern Company's coal-fired power plants cause 224 deaths, 1,710 heart attacks, 20,770 asthma attacks, and 752 cases of chronic bronchitis per year. The total annual cost of all of this damage is over \$9 billion. Southern Company currently has at least 22 plants that utilize "wet" storage facilities for coal combustion waste -- including at least one site that the US Environmental Protection Agency (EPA) found has polluted ground and surface waters.

In addition, Southern Company subsidiary Mississippi Power is the only company to start construction on a new coal plant in the last three years, the Kemper plant in Mississippi linked to a massive new lignite strip mine.

Energy Futures Holdings (EFH) was created from the largest leveraged buyout in U.S. history, when a conglomeration of private equity firms purchased the largest electricity provider in Texas, then-TXU. Because Texas is deregulated, EFH owns separately the retail provider, the transmission entity, as well as Luminant, the largest owner of generation in Texas.

Luminant is more than simply the largest generator of electricity; it is also the largest polluter in a state with over 2,000 industrial sources. Luminant's "Big 3" (Martin Lake, Monticello, and Big Brown) coal plants account for nearly 25 percent of all criteria emissions (major pollution) in the state and nearly 50 percent of all coal plant pollution. Those three coal plants account for only 5400 MW on the ERCOT system (Texas's wholly contained grid that does not connect to the rest of the nation) out of almost 72,000 MW.

Luminant is highly over leveraged and has already been declared in default by minor owners of certain bonds. Because of the debt load, it is unlikely that it makes sense to invest further in these facilities.

Duke Energy agreed to buy **Progress Energy** for \$13.7 billion in stock on January 9, 2011, which will create the largest U.S. power company if it wins approval from regulators in North and South Carolina. The transaction would create an industry giant with approximately 7.1 million electricity customers in North Carolina, South Carolina, Florida, Indiana, Kentucky and Ohio, and 57,000 megawatts of generating capacity. Duke is already one of the largest electric power holding companies in the United States and the third largest coal energy producer. Its regulated utility operations serve approximately 4 million customers located in five states in the Southeast and Midwest, representing a population of approximately 12 million people. Duke Controls 68 coal-fired generating stations with 18,579 MW of total capacity.

Duke has continued to pour billions of dollars into new coal-fired power plants; Duke's plants include the controversial 825 MW new coal unit at the Cliffside power plant in North Carolina, which will come on line this year, and the Edwardsport coal plant in Indiana. Both plants are regarded as some of the last coal-fired power plants to be built in the country. Further, Duke owns 10 of the 44 coal waste dumps that the EPA has named as having high hazard potential across the country. In September 2010, a portion of one of Progress Energy's coal ash ponds failed at its Sutton Steam Plant in eastern North Carolina. The breach, which sent clay and dry ash cascading down to the toe of the raised embankment, was an estimated eight feet deep and about 22 feet wide. Several other coal ash ponds at Progress' plants are classified as having high hazard potential by the EPA, including its two ponds in Asheville.

Entergy is one of the largest utilities in the south, with approximately 30,000 MW of generating capacity electricity for 2.8 million customers in Arkansas, Louisiana, Mississippi and Texas. Its holdings include Entergy Arkansas, Inc., Entergy Gulf States Louisiana, L.L.C., Entergy Louisiana, L.L.C., Entergy Mississippi, Inc., Entergy New Orleans, Inc., Entergy Texas, Inc., Entergy Nuclear, Entergy Solutions District Cooling, LP, and Entergy Thermal, L.L.C. The Entergy portfolio contains not only coal and gas, but also the second-largest nuclear generator in the United States.

In Arkansas, Entergy serves approximately 937,000 customers in a 63-county service territory. It owns and operates significant portions of the White Bluff coal-fired generating facility in Redfield, AR (1700 MW), and the Independence coal-fired generating facility (1700 MW) in Newark as well as the 1839-MW Nuclear One facility in Russellville and multiple natural gas facilities. Currently, Entergy is planning to install more than \$1 billion to extend the life of the uncontrolled White Bluff facility and is expected to take similar action on its Independence facility instead of investing in cleaner and cheaper options to meet energy needs.

Edison International is a public utility holding company that generates and distributes electricity through its two subsidiaries: Southern California Edison, a regulated electric utility, and Edison Mission Energy, an unregulated power generation business. EMG's

subsidiary Edison Mission Energy is an independent power producer engaged in the business of owning, leasing, operating and selling energy and capacity from electric power generation facilities through its own subsidiary Midwest Generation. Midwest Generation owns or operates coal plants in Illinois and Pennsylvania, including the retiring Fisk and Crawford plants as well as Waukegan, Will County, Joliet, and Powerton, which account for 5,172 MWs. These plants together have been responsible for 28 million tons of CO₂ annually. In the past, Midwest Generation has been responsible for the largest SO₂ polluting coal plant in the United States, the massive Homer City facility in Pennsylvania.

NRG Energy owns 7,415 MW of coal-fired power plant capacity with nearly a third of its 24,675 MW generation capacity in North America, and serves 1.8 million customers. NRG is one of the last major electric companies in the United States with a proposal to build a new coal plant, the Limestone 3 unit in Texas. Due to Texas's low power prices, lack of full-time need, and existing drought conditions, the proposed plant makes no sense to build.

NRG also owns a number of coal-fired power plants in the Northeast, including its Huntley and Dunkirk facilities in Western New York. NRG recently idled Dunkirk due to low power prices, lack of demand, and inability to compete against cleaner energy options, which sparked a proposal to force New York ratepayers to pay higher electricity prices in order to force the coal plant to operate and pollute more.