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July 5, 2007

VIA ELECTRONIC FILING

Mr. Vernon A. Williams, Secretary
Surface Transportation Board
395 E Street, S.W.
Washington, DC 20423-0001

Re: *STB Ex Parte No. 672 – Rail Transportation of Resources Critical to
The Nation's Energy Supply*

Dear Mr. Williams:

In accordance with the Board's Decision issued June 6, 2007, in the above-referenced proceeding, enclosed for filing is the Written Testimony of Charles W. Linderman, Director, Energy Supply Policy, on behalf of Edison Electric Institute.

Respectfully submitted,


Michael F. McBride

Attorney for Edison Electric Institute

Enclosure

**BEFORE THE
SURFACE TRANSPORTATION BOARD**

Ex Parte No. 672

**RAIL TRANSPORTATION OF RESOURCES CRITICAL
TO THE NATION'S ENERGY SUPPLY**

**WRITTEN TESTIMONY
OF**

**Charles W. Linderman
Director, Energy Supply Policy
Edison Electric Institute**

I. INTRODUCTION

On behalf of the Edison Electric Institute (“EEI”), I would like to thank the Board for taking the time to provide rail customers with the opportunity to address concerns relating to rail transportation of resources critical to the nation’s energy supply. As you are aware, EEI is the association of U.S. shareholder-owned electric companies whose members serve 95 percent of the ultimate customers in the shareholder-owned segment of the industry, and represent approximately 70 percent of the U.S. electric power industry. Our comments will focus slightly more broadly than just on coal, ethanol and biofuels today, but will also address the transportation by rail of two items related to energy production: nuclear waste and chemicals used for environmental compliance, especially ammonia that is used for NO_x control in selective catalytic reduction (“SCR”) systems to control power plant emissions of nitrogen oxides (NO_x).

EEI recognizes that the railroads’ investments and growth in the PRB and other selected portions of their systems have been impressive. However, if those improvements were fully reflected in adequate deliveries to their utility customers, we would not be here today expressing our concerns to the Board and could better focus our efforts elsewhere. The electric utility industry continues to have serious concerns that what the railroads are proclaiming as a dramatic recovery from, and cure of, their energy-related service woes of 2005 leaves untold certain infrastructure weaknesses and vulnerabilities, which continue to leave America’s energy sector—and the U.S. economy—at substantial risk of further coal delivery disruptions just at the time that utilities and generators are evaluating the construction of nearly 80GW¹ of new coal-fired generation capacity over the next decade. As I will explain more fully to the Board in the following comments, these concerns fall roughly in three general areas: (1) overall averages and

¹ A gigawatt (GW) is a thousand megawatts (MW). A typical coal-fired unit has a capacity of 200-800 MW.

investment numbers being proclaimed by the railroad industry do not necessarily reflect—or ensure—service improvements to all regions; (2) increased coal tonnages being publicized by the railroads—generally as compared to the disastrous year of 2005—do not necessarily mean that all requirements are being met; and (3) much of the increased tonnages reported by the carriers in 2006 and 2007 are being achieved by adding more trainsets instead of improving train performance, i.e., velocity, through critical bottlenecks and hubs, thereby leaving the rail system terribly fragile and vulnerable to further disruptions related to increased congestion, new traffic, track maintenance schedules and such ordinary occurrences as weather events, derailments, etc.

II. RELIABLE RAIL SERVICE IS CRITICAL TO AMERICA’S ENERGY SECTOR

Today coal provides approximately 50 percent of the fuel for the nation’s electricity generation. The Energy Information Administration (EIA) of the U.S. Department of Energy (DOE) in its Annual Energy Outlook for 2007 projects coal production, primarily for use in the production of electricity, to increase between 1.1% and 1.8 % until the year 2030 – that is, assuming sufficient transportation exists to deliver the increased demand. Rail carriers have sometimes commented that they do not understand the generation plans of the power sector. Through these comments, EEI hereby provides insight into generators' construction plans, so that the railroads may better plan for needed investments.

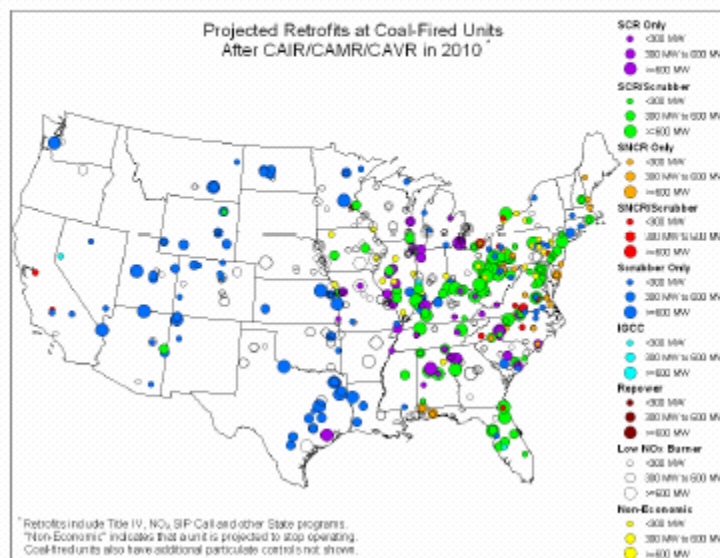
While a key challenge to coal continues to be environmental opposition – with certain groups seeking to limit the role of coal in electric production, coal consumption is expected to continue to rise as the generation sector of our business finds ways to produce as much electricity as possible from the Nation’s fleet of coal-fired generating plants. Included as Attachment 3 is a current list of Planned Coal Units in the U.S. from Global Energy Decisions, Inc. It lists plants already under construction as well as planned new facilities of about 80 GW, representing an

approximate capital investment of about \$80 billion, depending on the generation technology under construction. Attachment 1 is a summary document in tabular format of the data in Attachment 3. Attachment 2 is a list of definitions of terms related to construction timing. Attachment 4 is a list of existing and future coal-fired plants and applicable environmental control technologies listed by plant to control emissions of sulfur dioxide (SO₂). The emissions control equipment on this list excludes a wide variety of additional technologies that are utilized to reduce emissions of other pollutants, e.g., NO_x. Reduction of SO₂ emissions is heavily reliant upon “scrubber” technologies that employ the use of lime or limestone as a reagent. For example, a typical 500 MW power plant might use up to 150,000 tons of limestone each year. Lime or limestone is often transported by rail to power plants. Finally, we have included two maps of locations where emission control systems (e.g., scrubbers and SCR) are being, or have been, installed. In 2005, the U.S. Environmental Protection Agency adopted three new environmental regulations that will require power plants to invest approximately \$50 billion in 1999 dollars (EPA estimate). These rules – Clean Air Interstate Rule, Clean Air Mercury Rule, and the Clean Air Visibility Rule – will require many power plants (mostly coal-fired plants) around the country to install new emission control technologies, such as scrubbers and SCR.

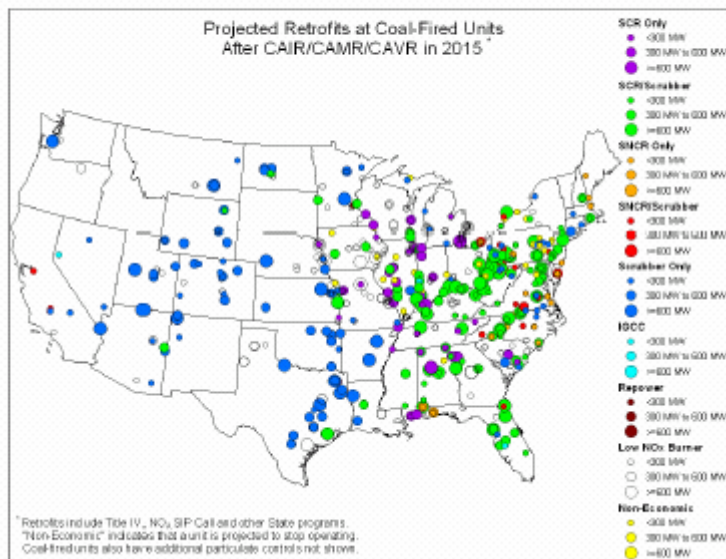
Electric utility compliance with environmental rules raises another rail service issue. We have been informed that some in the rail industry are skittish about the transport of anhydrous ammonia because of hazardous material liability concerns. These carriers must recognize that the power sector has no choice in the use of ammonia in SCR systems and limestone in scrubber systems. Failure to comply with environmental regulations under the Clean Air Act can result in plant shutdowns or, potentially, civil or criminal penalties. Given the role of electricity as the lifeblood of the modern economy, we urge rail carriers to provide as much prior notice as

possible if they are not willing to ship chemicals that are crucial to environmental compliance by some of their largest customers, so that affected utilities can seek assistance from the STB, if need be, in effectuating the necessary transportation. The predecessor of the STB, the ICC, determined that rail carriers are common carriers of potentially hazardous radioactive materials. Based on that precedent, we believe rail carriers have no basis in law for refusing to carry any type of freight based on the alleged hazards of transportation. So long as shipments are tendered in accordance with all applicable governmental regulations, hazardous materials must be transported by railroads.

Emission Reductions Occur through Projected Installation of Advanced Air Pollution Control Technology in 2010...



Emission Reductions Occur through Projected Installation of Advanced Air Pollution Control Technology in 2015...



In the above enclosed maps, the dots indicate where SCR and scrubber technology will be used, which will require rail transport of increasingly large volumes of ammonia and limestone in many parts of the country. Both of the maps are from a U.S. Environmental Protection Agency (EPA) presentation entitled “Contributions of CAIR/CAMR/CAVR to NAAQS Attainment: Focus on Control Technologies and Emission Reductions in the Electric Power Sector,” April 18, 2006. (See, <http://www.epa.gov/airmarkets/progsregs/cair/docs/naaqsattainment.pdf>.) EPA estimates that nearly 150 GW of SCR capacity will be added to U.S. power plants between 2006 and 2020. A typical 500 MW plant consumes 2,500 pound of ammonia per hour, 210 tons per week, and nearly 11,000 tons per year. The projected increase of 150 GW of SCR capacity (in addition to roughly 75 GW installed before 2006), would require 3.3 million tons in new annual ammonia shipments to power plants. It should also be noted that these tonnages could range up to five times higher, if the ammonia is delivered in aqueous form.

On the subject of investments and capital expenditures, the electric industry not only spends the huge sums noted above on generation and environmental protection, but also on the high-voltage electric transmission system where actual 2006 expenditures were \$6.909 billion. Since 2000, the industry invested \$37.8 billion in transmission. We are also committed to investing in the local distribution system and invested \$17.3 billion in 2006. Since 2000, we have invested almost \$109 billion in local distribution.² All of these investments are dedicated to maintaining the reliable and affordable provision of electric service, are subject to prudence reviews at either the state or federal level, and are subject to rate of return regulation.

As important as coal and anhydrous ammonia are to our industry, the rail industry also needs to be prepared to help transport spent nuclear fuel and other radioactive waste to the Yucca Mountain Repository in Nevada when the Repository opens.³ The federal government continues to collect fees for the development of the Repository on the generation of nuclear power at every nuclear power plant in the country. Given the concerns about continuing dry cask storage at the Nation's nuclear power plants, we look forward to the resolution of the issue and the transportation of such materials to the Repository. We were pleased to note that DOE and the Union Pacific Railroad Company (UP) settled their long-standing rate proceeding before the STB with respect to transportation of radioactive materials, including to Yucca Mountain, because UP will be essential to that transportation.

² This data is taken from the latest *EEI Annual Property & Plant Capital Investment Survey*.

³ The Board's predecessor and the courts determined that, when radioactive materials are transported by railroad, the Price-Anderson Act, which provides a combination of insurance and indemnity to protect against liability caused by such materials, applies. Interestingly, the railroads have analogized to Price-Anderson in urging Congress to provide limits on their liability for transporting hazardous materials generally. EEI would be willing to work with the railroad industry on such an approach if the concerns of the shipping community on rail matters generally were also addressed in an overall resolution of our differences.

III. RAILROAD INFRASTRUCTURE ADEQUACY REMAINS A CONCERN DESPITE IMPROVEMENTS IN THE PRB.

Approximately 40 percent of the coal used for electricity production comes from the Powder River Basin (PRB) coalfields. EIA forecasts that western coal demand/production, most of it PRB coal, is expected to grow at an annual rate of 2.5% (2005-2030). That means that about 20 percent of the electricity consumed in the United States is generated using PRB coal, more than the amount using natural gas.

There is only one mode of transportation practically available for PRB or other Western-originated coal – rail. In addition to the PRB coal, much of the Appalachian coal as well as some amounts of lignite rely on rail shipment and/or delivery. Not surprisingly, this means that a large portion of the US generation capacity is directly dependent on the railroads' performance for their capability to generate electricity.

While much of the focus in recent years has been on the operations of the PRB Joint Line,⁴ the energy industry is dependent on much more than just a well-functioning Joint Line. Like a spider web with Wyoming at its center, the transport of PRB coal frequently takes the coal more than 1,000 miles from the mines before it reaches its final destination east, west, and south of the PRB. During the trip, the train is dependent on fluidity of the system, including smooth passage through major railroad gateways such as Kansas City, St Louis, Chicago, or Memphis. These gateways have seen an increase in all types of rail traffic, including intermodal, automotive, grain and coal, in recent years, and are becoming increasingly congested. Even worse, gateway congestion and reduction in fluidity may be the result if this year's corn planting

⁴ Currently, BNSF and UP are the only two railroads providing coal transportation out of the PRB. Most of this coal is transported over a line of railroad that the two carriers jointly own that is commonly referred to as the "Joint Line." The Joint Line is a north-south rail line that spans approximately 120 miles. The Joint Line begins in the south at a junction between the BNSF and the UP networks named Shawnee Junction, Wyoming and extends north to the northernmost mine served by the Joint Line, Caballo Mine a short distance south of Gillette, Wyoming.

is reflected in the upcoming harvest. Reuters reported on March 30⁵ that the 2007 planting of corn is the largest in 63 years, up about 6% over the record season of 2004. This could yield an unusually large harvest for the rails to move corn to consumer markets and ethanol plants, simultaneously with the influx of imported goods in preparation for the year-end shopping season. This congestion can also be attributed to industry consolidation as the result of prior railroad mergers and acquisitions, resulting in the closure and abandonment of many rail yards and trackage.

Fluidity of the rail system is dependent on sufficiently sized rail yards, interchange facilities, locomotive and crew availability. If any one of these factors is not properly planned for and provided, it could seriously threaten the ability of the electric sector to reliably produce electricity for the U.S. economy, at affordable prices. A less-than-well-functioning rail road system thus could lead to higher electricity prices for the U.S. economy, and therefore a less-competitive U.S. industrial sector.

From the mid-1980s until early 2004, BNSF and UP competed vigorously for the right to transport PRB coal tonnages. Coal shipments originating on the major line coming out of the PRB have grown from approximately 75 million tons in 1984 to over 350 million tons in 2006. While both BNSF and UP have invested capital into the Joint Line to facilitate this growth, the electric industry has also played an important role in the development of the PRB transportation system. In addition to paying more than the railroads' costs of providing service through the profitable rates charged for rail transportation, utilities have directly paid the costs associated with transporting coal through a variety of initiatives, including but by no means limited to: investment in track and highly-specialized train handling facilities at the generating stations (or, in some cases, at rail-to-barge transfer facilities); investment in large fleets of tens of thousands

⁵ March 30, 2007: "U.S. Farmers Aim for Record Corn Crop, Ethanol Riches", Reuters.

of railcars; plant improvements that facilitated the use of longer trains (e.g., expanded loop tracks) so as to enable more tonnage to be delivered per train; and the construction of car repair shops (or contracting with private car repair shops) in which to maintain and repair these fleets of cars. The electric industry also entered into long-term contracts to provide the western railroads with contract certainty so that they could make the necessary investments in roadbed, locomotives and manpower. All of these actions helped reduce the capital and operating costs of the railroads, with the overarching purpose of ensuring that utilities and their electric customers could count on reliable deliveries of coal to their power plants.

Even with these investments, the railroads' service levels on the Joint Line have been deteriorating since late 2004. While much has been made of the weather events in 2005, it seems clear that the railroads were starting to fall behind on their deliveries to the electric utility industry by the fourth quarter of 2004. Although this point of view has not been as publicly debated, looking back, it indicates that the railroads were already entering a period where they were unable to deliver coal at the levels called for by their customers.

The rail service deterioration in the PRB in 2005 is well-documented and need not be recounted here. Suffice it to say, however, that some of our members received only about 85 percent of their nominated requirements for the year 2005, equating to a shortfall well in excess of several million tons. The cost of replacing this shortfall with alternate fuel sources has been estimated to be in the tens of millions of dollars even though coal supplies were abundant in the PRB itself.

Governmental and private forecasts continue to project PRB coal traffic growth well into the future. For example, according to the consulting firm Energy Ventures Analysis, Inc., approximately 3,000-4,000 MW of PRB-coal fired generation will be constructed annually

through 2013, which will lead to an increased demand for PRB coal of about 12-16 million tons per year. This growth is expected to come in markets both near and far from the PRB, such as Texas and the Southeast. These plants will add a considerable amount of ton-miles to the railroads' service obligation, to locations that already today have significant delivery problems. For these reasons, the electric utility industry has strongly supported the Dakota, Minnesota and Eastern Railroad's efforts to obtain government approval for its new line into the PRB, and we compliment the Board for its actions with respect to that Project.

A recent industry publication quoted a representative from BNSF saying that BNSF "believes 'there is sufficient capacity on the Joint Line to accommodate the needs of existing customers as well as new customers who recognize the value of PRB coal delivered to their facilities.'" In addition, the article goes on to state that "BNSF reviews demand and adjusts capacity expansion plans as appropriate to make sure that there is sufficient capacity on the Joint Line to meet the demand." However, the Joint Line capacity is only one of many factors that influence the railroads' ability to deliver on their contract commitments. It is well-known, for example, that intermodal traffic growth is highly prized and prioritized by the railroads. However, even in the coal sector alone, public data indicates that railroad decisions relating to performance and service during and after 2005 were not always as evenly allocated as they would like the public to believe. For example, in mid-2006 when the railroads were publicly proclaiming their recovery from the 2005 service disruptions, actual service to different regions varied greatly. Although some regions were experiencing year-to-date PRB-shipments at levels of 10-20% over 2005 volumes, other regions were seeing much smaller improvements and in some cases even LESS than the 2005 volumes—not to mention 2004 service-levels which for some utilities were still not matched even for 2006 end-of-year numbers.

The railroads have made attempts to try to identify other solutions such as re-routing trains, and optimizing slotting procedures at the mines and the power plants, but these efforts have not been sufficient to offset the overall slow-down in deliveries. On the contrary, there are multiple power plants in some regions where overall traffic (including intermodal, grain, automotive, coal, etc.) in the surrounding areas have increased and the railroads' service levels have deteriorated to a point where they are not reliably and consistently delivering the contracted amounts of coal that are critical to keeping today's efficient and economic coal-fired generating units running at full capacity. Despite BNSF's recent claims that there is adequate capacity to meet its customers' needs as detailed above, some companies are still experiencing difficulties due to bottlenecks across the system in 2007.

Although in 2007 utilities are finally seeing some signs of recovery by the railroads in most regions, concerns remain that the system is extremely fragile and unable to absorb and recover from shortfalls resulting from normal operating disruptions, track maintenance schedules, etc. While the train sets (added mostly by utilities) deliver much-needed tonnage, the appearance of recovery is somewhat illusory because the need for these additional sets indicates that the rail system has not fully recovered. If the past is any indicator, when the next disruption occurs, these additional sets will be the first ones parked. Further, with both UP and BNSF again in the market for additional coal business out of the PRB, we are concerned that the loading slots used for these additional train sets will be used for newer, more profitable shipping arrangements that are subject to railroad circular pricing with the associated surcharges for fuel, etc., rather than be allocated to those who have existing contracts with BNSF and UP (and who ought to have at least as much of a right to those slots as any shipper).

Accordingly, like any prudent utility with an obligation to serve its electricity customers, some of our members find themselves compelled to continue to purchase a certain amount of coal from alternate sources in order to ensure a reliable supply of coal to maximize the output of their base-load coal-fired generating facilities. However, the acquisition of supplemental coal supplies obviously comes at a cost. It is also important to note that it is not feasible or prudent for any utility to shut down its supply of supplemental coal whenever short-term delivery recoveries occur that may be short-lived. This is because the development of reliable alternate supplies requires several months or even years to locate suitable coals and sources, test and ensure compliance with ever-tightening environmental regulations affecting not only combustion emissions but every step of the delivery and handling process, develop contracts and gear-up the entire production, transportation, delivery and handling process from mine to boiler. None of this supplemental coal, however, would be necessary but for the railroads' choices to limit the amount of coal they are delivering to their coal shippers. Regrettably, rail service has deteriorated to levels where shippers cannot count on the railroads to deliver in accordance with contract commitments. Faced with the Hobson's choice of spending more for coal from alternate sources, or taking the risk that the railroads will limit deliveries notwithstanding the contract requirements, utilities have looked to alternate sources. Further complicating such efforts, however, is that the railroads also face delivery challenges in many of the regions from which alternate coal sources originate. The volume of supplemental coal needed, and the costs thereof which the utility customers will ultimately bear, will depend largely on the degree to which this Board and the railroad industry regain market confidence in their ability to meet future requirements for coal-fired electricity generation.

Developing infrastructure and competitive options are not only limited to generators relying on PRB coal, but are also issues for generators relying on Appalachian coal sources. For example, in recent weeks there have been published press reports about the Mirant Corporation adding a barge-unloading terminal at the Morgantown Station on the lower Potomac River, which supplies power to the Washington, D.C. metropolitan region, with the capability of bringing additional amounts of imported coal into the U.S. market.

IV. LACK OF EFFECTIVE COMPETITION HAS CREATED CONTINUED SERVICE PROBLEMS AS WELL AS MONOPOLY/DUOPOLY SITUATIONS AND PROVIDES RAILROADS GREAT MARKET POWER.

The rail transportation market for coal has changed substantially over the last few years due to inadequate investment by the railroads in a timely manner, maintenance problems, service failures, and a lack of competition. The result has been increased market power for the railroads.

While the railroads have frequently touted their increased investments and capital expenditures to their customers and investors over the last few years, the fact is that the combined capital expenditure spending for UP and BNSF declined approximately 8% annually from 1998 through 2002. Thus, despite a recent short-term increase in UP's and BNSF's combined capital expenditures, they actually are just now returning to 1998 levels, without accounting for inflation.

Further, the lack of effective competition in the marketplace reduces the incentive and internal discipline needed by the carriers to perform at utmost efficiency. Our assessment is that there has been a steady decline in on-time performance for coal deliveries since the third quarter of 2003 and that while deliveries have improved, cycle times from the mines to the powerplants are not significantly improved.

Further cause for pessimism regarding sustained service improvements is the fact that the railroads are now unwilling to accept responsibility for guaranteed performance at any

meaningful level. In general, the service performance standards in rail contracts have deteriorated substantially over time as the railroads have gained more market power and as competition has deteriorated.⁶ The railroads are now in a very strong market position, which allows them to dictate contractual terms unilaterally on a “take it or leave it” basis. As a direct result, utilities must not only consider alternative fuel supplies but they may also be forced to make additional investment in extra train sets in order to try to meet their delivery requirements.

The Staggers Rail Act of 1980, which was intended to replace government regulation wherever possible with the powers of competition, granted railroads greatly increased commercial freedom, and granted the ICC (now STB) authority to monitor performance and set maximum rates while minimizing federal regulatory control. It is important to note that in 1980, there were over 70 Class I railroads, whereas over the last 25 years, the nation’s major railroads have consolidated to the point that only four major railroads now provide 95% of all freight rail transportation in America. Only two of those railroads serve the coal mines in the east and the other two serve the west. Much of the competition that formerly existed is now gone, due to consolidation.

While the Staggers Act may have originally promoted competition and been considered a success at some point in time, it is clear from a rail customer standpoint that the consolidation of the Class I carriers has gone too far and resulted in anything but a competitive marketplace. Merriam-Webster defines competition in business as "the effort of two or more parties acting independently to secure the business of a third party by offering the most favorable terms." The current situation in the PRB regarding rail service is anything but competitive as evidenced by

⁶ Of course, as recent years have demonstrated, having a contract service standard has been of little benefit given the railroads view that they will treat all trains “the same,” regardless of what the contract service standard says. Thus, even with a contract service standard, reliability of service is a serious concern.

the increased pricing and severe deterioration of service levels experienced by customers in recent years.

In addition to the above-stated general concerns regarding service reliability, the following are some specific examples of practices imposed by the railroads that are clearly inconsistent with a competitive marketplace:

- *The Bottleneck Problem*

Under current deregulation policy, when a railroad controls a bottleneck line segment (a line owned by a single carrier that serves a particular origin or destination), it is not required to provide the rail customer with a rate for transportation over that segment to a point where the rail customer can reach a competing railroad. Instead the railroad has the ability to hold that shipper captive and subject it to “take it or leave it” rates and service guarantees.

- *Paper Barriers*

The Staggers Rail Act led to the formation of hundreds of short-line railroads that operate track formerly run by a major railroad. Paper barriers are provisions in lease agreements for this track that effectively prevent the short-line railroad from providing rail customers access to competing major railroads, once again creating a non-competitive situation.

V. RAILROADS AND UTILITIES – SIMILAR YET VERY DIFFERENT IN TERMS OF ACCOUNTABILITY AND OBLIGATION TO SERVE.

Railroads and electric utilities are very similar in that both are absolutely critical to meeting the nation’s energy supply requirements, in addition to the following:

- Both require large capital investment for necessary infrastructure;
- Both typically have large service territories with limited competition, or even monopolies, in certain regions;

- Both are closely linked to U.S. economic performance and have experienced substantial demand growth over the last ten years; and
- Barriers to entry for both electric utilities and railroads are substantial from a financial investment perspective.

However, there are also some very distinct differences between railroads and electric utilities:

- Electric utilities have a binding obligation to serve their customers whereas the railroads are unwilling to provide any reasonable service commitments. (Can you imagine what would happen if an electric utility decided to serve its customers only 85% of the time?)
- Electric utilities are required to maintain adequate reserves or excess capacity to allow for maintenance, forced outages, etc., whereas railroads have no obligation to maintain reserve capacity and in fact have professed a “just in time” investment strategy to ensure that excess capacity does not exist;
- Electric utilities are required to provide for, or allow, interconnection or access to their bulk transmission system to accommodate new generating facilities or wholesale power transactions, whereas railroads can and do refuse to allow interconnections or access to their rail systems;
- Electric utilities are effectively regulated by both state and federal regulatory agencies in terms of both rates and service requirements, whereas the railroads are not held accountable by any state or federal regulatory agency with respect to rates or service requirements;

- Electric utilities are subject to U.S. anti-trust laws, whereas railroads are largely exempt from those laws, leaving customers no alternate forum in which to effectively resolve their claims of anti-competitive behavior;
- Electric utilities typically have an “authorized rate of return” which limits their return on investment, whereas railroads have no limits on the rate of return they are allowed; and
- Electric utilities must comply with a myriad of stringent environmental laws and regulations, and are dependent on railroads for reliable rail delivery of chemical reagents to operate plants in compliance with these requirements.

The simple takeaway from this comparison is that the overall business model of the railroads is flawed and inconsistent with any other similar business model. The Board needs to revisit this model, especially in light of the critical nature of the service railroads provide to utilities and the U.S. economy.

VII. CONCLUSIONS.

It has become painfully obvious to many utility shippers that the current situation with the railroads is out-of-hand, and there is little chance for improvement without the intervention of the Board or other legislative changes to proactively address the issues addressed herein. Despite railroad claims regarding increased infrastructure investment and service restoration, the fact remains that significant service problems and market-dominant pricing issues continue for many rail customers in the electric utility industry. Further exacerbating this problem is the lack of rail competition that exists due to certain destinations being captive due to single source rail providers, or various practices imposed by the railroads (bottleneck issue, paper barriers, terminal trackage rights restrictions, etc.). While railroads are similar to utilities in many aspects, they effectively enjoy unrestrained monopoly power in certain regions and are not

accountable to their customers. Rail customers have nowhere to turn to have their issues appropriately addressed. In consideration of the critical nature of coal deliveries to meet more than one-half of the Nation's electricity needs, it is imperative that railroads build and maintain appropriate infrastructure to competitively and reliably serve the needs of utilities both now and in the future at reasonable rates, with reasonable service guarantees, and with appropriate oversight.

We believe the Board has the authority to ensure that railroads are meeting their common carrier obligations to serve their customers and have adequate infrastructure in place to meet these requirements, whether they be for coal transportation or the transportation of other resources critical to the nation's energy supply, such as ethanol, biofuels, lime or limestone, spent nuclear fuel, urea, or anhydrous ammonia.

Thank you again for your careful consideration of these important issues.

Attachment 1: Summary of Projected Coal Capacity Additions by 12/31/2017

- 79,778 MW of additional coal capacity is expected to come online between now and 12/31/2017--40,063 MW of which are expected to be online by 12/31/2011.
- 25,803 MW of the additional coal capacity have already been permitted, are under construction or are being prepared for construction.
- At least 37 plants/units making up 20,375 MW are expected to utilize integrated coal gasification combined cycle (IGCC) technology.
- On a regional level, the WECC NERC region is expected to have the most coal capacity (22,021 MW) come online between now and the end of 2017, while SERC (15,841 MW), and RFC (13,558 MW) are the other NERC regions anticipated to add over 10,000 MW of coal capacity by the end of 2017.
- According to Global Energy Decisions, Inc., 214 existing coal plant units with a combined nameplate of 92,024 MW will be retrofitted with "scrubber" technology by 2015.

Additional Coal Capacity Expected to Come Online in the U.S. by 12/31/2017

Commercial Online Year	Total MW
2007	885
2008	1,091
2009	6,016
2010	12,597
2011	19,474
2012	19,042
2013	13,305
2014	2,339
2015	3,029
2016	500
2017	1,500
Grand Total	79,778

Status of Future Coal Plants/Units

Unit Status	Total MW
Pending Application	23,266
Study Feasibility	3,052
Permitted	11,074
Proposed	27,657
Site Prep	3,965
Under Construction	10,764
Grand Total	79,778

Projected Coal Capacity Additions by NERC Region Years 2007 through 2017

NERC Region	Total MW
ASCC	300
ERCOT	8,900
FRCC	4,420
MRO US	8,170
NPCC	720
RFC	13,558
SERC	15,841
SPP	5,848
WECC	22,021
Grand Total	79,778

Data Source: Global Energy Decisions, Inc.

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Attachment 2: Unit Status Description

Planned Categories:

FE	Feasibility	Planned new generator undergoing feasibility study
PL	Proposed	New generator planned for installation
AP	App Pending	Application(s) filed for permit(s), regulatory approval pending
PM	Permitted	Two or more permits approved or contracts for fuel or power have been received
SP	Site Prep	The power plant site is being prepared for construction
UC	Under Const	Planned generator under construction
TS	Testing	Generator operating under test conditions, not in commercial service

Attachment 3: Planned Coal Plant Units in the U.S.

Plant Name	NERC Region	Unit	Capacity (MW)	Primary Fuel	Unit Status	Commercial Online Date
Council Bluffs	MRO US	ST4	790	Subbituminous Coal	Under Const	7/1/2007
Central Illinois Energy Cogeneration	SERC	ST1	5	Waste Coal	Under Const	10/1/2007
Wygen II	WECC	ST1	90	Coal - generic	Under Const	12/31/2007
Goodland Energy Resources	SPP	ST	22	Subbituminous Coal	Under Const	1/1/2008
Lamar Plant	WECC	AB	22	Coal - generic	Under Const	5/30/2008
Lamar Plant	WECC	AB2	22	Coal - generic	Under Const	5/30/2008
Weston	MRO US	4	500	Subbituminous Coal	Under Const	6/1/2008
TS Power Plant	WECC	ST	200	Coal - generic	Under Const	12/31/2008
Cross	SERC	4	600	Bituminous Coal	Under Const	1/1/2009
Hugh L Spurlock	SERC	4	278	Bituminous Coal	Under Const	4/1/2009
Nebraska City Unit 2	MRO US	ST1	663	Subbituminous Coal	Under Const	5/1/2009
Rodemacher	SPP	3	660	Petroleum Coke	Under Const	9/1/2009
Oak Creek Power Plant	RFC	1	615.001	Subbituminous Coal	Under Const	9/29/2009
Comanche (CO)	WECC	3	750	Subbituminous Coal	Under Const	10/1/2009
Springerville Generating Station	WECC	ST4	400	Subbituminous Coal	Under Const	12/31/2009
Dallman	SERC	4	250	Coal - generic	Under Const	1/1/2010
Trimble Station (LGE)	SERC	ST2	750	Coal - generic	Under Const	1/1/2010
Iatan 2	SPP	ST	850	Coal - generic	Under Const	6/1/2010
J K Spruce	ERCOT	2	750	Coal - generic	Under Const	6/1/2010
Plum Point Energy	SERC	ST1	665	Coal - generic	Under Const	6/1/2010
Oak Creek Power Plant	RFC	2	615.001	Subbituminous Coal	Under Const	9/29/2010
Southwest	SPP	ST2	300	Coal - generic	Under Const	10/1/2010
Beech Hollow Power Project	RFC	ST	272	Waste Coal	Under Const	1/1/2011
Longview Power	RFC	AB1	695	Coal - generic	Under Const	3/1/2011
Renew Energy Facility (WI)	MRO US	ST1	55	Coal - generic	Site Prep	12/31/2008
River Hill Project	RFC	1	290	Waste Coal	Site Prep	11/1/2010
Kentucky Mountain Power LLC	SERC	CFB1	250	Waste Coal	Site Prep	12/1/2010
Kentucky Mountain Power LLC	SERC	CFB2	250	Waste Coal	Site Prep	12/1/2010
Prairie State Energy Campus	SERC	ST1	810	Coal - generic	Site Prep	1/1/2011
Whelan Energy Center	MRO US	ST	220	Coal - generic	Site Prep	1/1/2011
Two Elk Energy Park	WECC	ST1	320	Waste Coal	Site Prep	3/30/2011
Prairie State Energy Campus	SERC	ST2	810	Coal - generic	Site Prep	6/1/2011
American Municipal Power Gen. Station	RFC	ST 1	480	Coal - generic	Site Prep	1/1/2013
American Municipal Power Gen. Station	RFC	ST 2	480	Coal - generic	Site Prep	1/1/2013
Sevier Power Project	WECC	AB1	270	Coal - generic	Permitted	1/1/2008
Greene Energy Resource Recovery	RFC	AB1	580	Waste Coal	Permitted	6/1/2009
Sandow 5	ERCOT	CFB	630	Lignite Coal	Permitted	7/1/2009
Port Lavaca	ERCOT	CFB1	150	Petroleum Coke	Permitted	1/1/2010
Port Lavaca	ERCOT	CFB2	150	Petroleum Coke	Permitted	1/1/2010
Rentech East Dubuque	RFC	IG	76	Coal - generic	Permitted	3/14/2010
Big Cajun 2	SERC	ST4	775	Coal - generic	Permitted	6/1/2010
Stanton Energy Center	FRCC	IGCC	315	Subbituminous Coal	Permitted	6/1/2010
Western Greenbrier Co-Generation LLC	RFC	AB1	98	Waste Coal	Permitted	6/1/2010
Wygen III	WECC	ST3	90	Coal - generic	Permitted	6/1/2010
Oak Grove Steam Electric Station	ERCOT	ST1	860	Lignite Coal	Permitted	1/1/2011

Plant Name	NERC Region	Unit	Capacity (MW)	Primary Fuel	Unit Status	Commercial Online Date
Oak Grove Steam Electric Station	ERCOT	ST2	860	Lignite Coal	Permitted	1/1/2011
Taylorville Energy Center	RFC	IGCC	770	Coal - generic	Permitted	1/1/2011
Thoroughbred Energy Campus	SERC	1	750	Bituminous Coal	Permitted	1/1/2011
Thoroughbred Energy Campus	SERC	2	750	Bituminous Coal	Permitted	1/1/2011
Sandy Creek Energy Station	ERCOT	ST	800	Coal - generic	Permitted	12/1/2011
Highwood Generation Station	WECC	AB1	250	Coal - generic	Permitted	1/1/2012
Hugo (OK)	SPP	ST 2	750	Coal - generic	Permitted	1/1/2012
Longleaf Energy Station	SERC	ST1	600	Coal - generic	Permitted	5/30/2012
Longleaf Energy Station	SERC	ST2	600	Coal - generic	Permitted	5/30/2012
Intermountain	WECC	ST3	950	Bituminous Coal	Permitted	6/1/2012
Big Cajun 1	SERC	CFB	230	Petroleum Coke	App Pending	1/1/2009
Estill County	SERC	CFB	110	Waste Coal	App Pending	12/1/2009
Bonanza	WECC	2	190	Waste Coal	App Pending	1/1/2010
JK Smith	SERC	ST2	278	Coal - generic	App Pending	1/1/2010
Lower Columbia Clean Energy Center	WECC	IGCC	520	Coal - generic	App Pending	1/1/2010
White Pine Energy Station	WECC	ST1	800	Coal - generic	App Pending	1/1/2010
White Pine Energy Station	WECC	ST2	800	Coal - generic	App Pending	1/1/2010
JK Smith	SERC	ST1	278	Coal - generic	App Pending	3/1/2010
Cash Creek Generation	SERC	IG	677	Coal - generic	App Pending	6/1/2010
Indeck Elwood Energy Center	RFC	1	330	Bituminous Coal	App Pending	10/1/2010
Indeck Elwood Energy Center	RFC	2	330	Bituminous Coal	App Pending	10/1/2010
Cliffside	SERC	6	800	Coal - generic	App Pending	1/1/2011
Dry Fork Station	WECC	ST	422	Coal - generic	App Pending	1/1/2011
Jamestown Clean Coal Project	NPCC	CFB	40	Coal - generic	App Pending	1/1/2011
Red Rock Power Plant (PSC Ok)	SPP	ST	950	Subbituminous Coal	App Pending	1/1/2011
Mesaba Energy Project	MRO US	IGCC1	741	Coal - generic	App Pending	2/1/2011
Duke Energy IGCC (IN)	RFC	IGCC	630	Coal - generic	App Pending	3/1/2011
Big Stone	MRO US	ST2	630	Subbituminous Coal	App Pending	6/1/2011
John W Turk Jr Power Plant	SPP	ST1	720.999	Bituminous Coal	App Pending	6/1/2011
Twin Oaks Power	ERCOT	3	600	Lignite Coal	App Pending	6/1/2011
Ely Energy Center	WECC	ST1	750	Coal - generic	App Pending	12/31/2011
Holcomb East	SPP	2	700	Coal - generic	App Pending	1/1/2012
Limestone	ERCOT	3	800	Coal - generic	App Pending	1/1/2012
Nelson Dewey	MRO US	3	300	Coal - generic	App Pending	1/1/2012
Toquop Energy Project	WECC	ST	750	Coal - generic	App Pending	3/31/2012
Seminole (FL)	FRCC	3	750	Bituminous Coal	App Pending	5/1/2012
Taylor Energy Center	FRCC	ST	765	Coal - generic	App Pending	5/1/2012
Bowie Power Station	WECC	IGCC	600	Coal - generic	App Pending	6/1/2012
Plum Point Energy	SERC	ST2	800	Coal - generic	App Pending	6/1/2012
Two Elk II	WECC	ST1	750	Coal - generic	App Pending	6/1/2012
Associated Electric Coop Coal Project	SERC	ST	660	Coal - generic	App Pending	1/1/2013
Mesaba Energy Project	MRO US	IGCC2	741	Coal - generic	App Pending	1/1/2013
Mountaineer	RFC	IGCC	784	Coal - generic	App Pending	1/1/2013
Glades Power Park	FRCC	ST1	980	Coal - generic	App Pending	6/1/2013
Holcomb Expansion Project	WECC	ST1	700	Coal - generic	App Pending	6/1/2013
Ely Energy Center	WECC	ST2	750	Coal - generic	App Pending	12/31/2013
Glades Power Park	FRCC	ST2	980	Coal - generic	App Pending	6/1/2014
Great Bend IGCC	RFC	IGCC 1	629	Coal - generic	App Pending	12/31/2015

Plant Name	NERC Region	Unit	Capacity (MW)	Primary Fuel	Unit Status	Commercial Online Date
Eastalco	RFC	IGCC	900	Coal - generic	Feasibility	1/1/2011
Indian River Generating Station (DE)	RFC	IGCC	752	Coal - generic	Feasibility	1/1/2012
Southern Illinois Univ	SERC	IGCC	200	Coal - generic	Feasibility	1/1/2012
Colorado IGCC	WECC	IGCC	600	Coal - generic	Feasibility	1/1/2015
Consumers Energy IGCC	RFC	IGCC	600	Coal - generic	Feasibility	1/1/2015
Benton (EnviroPower)	SERC	CFB1	250	Coal - generic	Proposed	6/1/2009
Benton (EnviroPower)	SERC	CFB2	250	Coal - generic	Proposed	6/1/2009
Lima Energy	RFC	IGCC	600	Petroleum Coke	Proposed	1/1/2010
Medicine Bow Fuel & Power	WECC	IGCC	350	Coal - generic	Proposed	1/1/2010
Otter Creek	WECC	1	750	Coal - generic	Proposed	1/1/2010
Worland Cogeneration	WECC	ST	30	Coal - generic	Proposed	1/1/2010
Spiritwood Energy	MRO US	ST	40	Lignite Coal	Proposed	3/1/2010
Great Falls Energy Center	WECC	IGCC	275	Coal Based Synfuel	Proposed	1/1/2011
Lockwood IGCC Power Plant	ERCOT	1	600	Petroleum Coke	Proposed	1/1/2011
Southeast Idaho Energy	WECC	IGCC	520	Coal - generic	Proposed	1/1/2011
Lake Charles Cogeneration	SERC	IGCC	528	Petroleum Coke	Proposed	4/1/2011
Carson Hydrogen Power Project	WECC	IGCC	500	Petroleum Coke	Proposed	6/1/2011
Desert Rock Power Plant	WECC	ST1	750	Coal - generic	Proposed	6/1/2011
Desert Rock Power Plant	WECC	ST2	750	Coal - generic	Proposed	6/1/2011
Kenai Blue Sky	ASCC	IGCC	200	Coal - generic	Proposed	6/1/2011
Nelson Creek (MT)	WECC	AB1	250	Coal - generic	Proposed	10/1/2011
Bull Mountain	WECC	IGCC	300	Coal - generic	Proposed	1/1/2012
Carmi Minemouth	RFC	1	270	Coal - generic	Proposed	1/1/2012
Elk Run Energy Station	MRO US	ST	750	Coal - generic	Proposed	1/1/2012
Hunter	WECC	ST4	600	Bituminous Coal	Proposed	1/1/2012
James de Young	RFC	6	70	Coal - generic	Proposed	1/1/2012
M&M Energy Great Lakes Energy Plant	RFC	IGCC	728	Coal - generic	Proposed	1/1/2012
Nearman 2	SPP	ST	235	Coal - generic	Proposed	1/1/2012
NRG IGCC	ERCOT	IGCC	600	Coal - generic	Proposed	1/1/2012
Sherburne County	MRO US	4	140	Subbituminous Coal	Proposed	1/1/2012
Tenaska Energy Grand River	SPP	ST	660	Coal - generic	Proposed	1/1/2012
Little Gypsy	SERC	4	582.2	Petroleum Coke	Proposed	4/1/2012
Appalachian Power IGCC	RFC	IGCC	629	Coal - generic	Proposed	6/1/2012
Otter Creek	WECC	2	750	Coal - generic	Proposed	6/1/2012
Otter Creek	WECC	3	750	Coal - generic	Proposed	6/1/2012
Otter Creek	WECC	4	750	Coal - generic	Proposed	6/1/2012
UNC Chapel Hill Cogeneration	SERC	ST2	26	Bituminous Coal	Proposed	6/1/2012
Virginia City Coal	RFC	ST1	585	Coal - generic	Proposed	6/1/2012
Headwaters Coal Creek	MRO US	IGCC	300	Coal - generic	Proposed	8/1/2012
Basin Electric Coal	MRO US	ST	600	Coal - generic	Proposed	1/1/2013
Huntley Generating	NPCC	IGCC	680	Coal - generic	Proposed	1/1/2013
Jim Bridger	WECC	5	750	Subbituminous Coal	Proposed	1/1/2013
Lockwood IGCC Power Plant	ERCOT	2	600	Petroleum Coke	Proposed	1/1/2013
Marshalltown Generating Station (IA)	MRO US	1	600	Coal - generic	Proposed	1/1/2013
Nelson Creek (MT)	WECC	AB2	250	Coal - generic	Proposed	1/1/2013
Polk Station	FRCC	IGCC	630	Bituminous Coal	Proposed	1/1/2013
Soda Springs Power Plant	WECC	PFBC	250	Coal - generic	Proposed	1/1/2013
Soda Springs Power Plant	WECC	PFBC 2	250	Coal - generic	Proposed	1/1/2013

Plant Name	NERC Region	Unit	Capacity (MW)	Primary Fuel	Unit Status	Commercial Online Date
Kemper County IGCC	SERC	IGCC	600	Lignite Coal	Proposed	6/1/2013
South Heart Coal	MRO US	ST1	500	Coal - generic	Proposed	6/1/2013
Pee Dee Coal	SERC	ST1	660	Coal - generic	Proposed	9/1/2013
Pee Dee Coal	SERC	ST2	660	Coal - generic	Proposed	9/1/2013
Wallula Energy Resource Center	WECC	IGCC	700	Coal - generic	Proposed	12/31/2013
Columbia (MO CLMBIA)	SERC	9	108.5	Coal - generic	Proposed	1/1/2014
Mid Michigan Energy	RFC	ST	750	Coal - generic	Proposed	1/1/2014
Rocky Mountain Power IGCC	WECC	IG	500	Subbituminous Coal	Proposed	1/1/2014
Ely Energy Center	WECC	IGCC1	500	Coal - generic	Proposed	1/1/2015
Matanuska Coal	ASCC	AB	100	Coal - generic	Proposed	1/1/2015
Milton R Young	MRO US	ST3	600	Lignite Coal	Proposed	1/1/2015
Ely Energy Center	WECC	IGCC2	500	Coal - generic	Proposed	1/1/2016
Cps/Austin Energy Power Complex	ERCOT	2	1500	Coal - generic	Proposed	12/31/2017

Data Source: Global Energy Decisions, Inc.

Attachment 4: Existing and Future Coal Plants in the U.S. and Applicable Environmental Control Technologies

Plant Name	Existing Plant/Unit	NER C Region	Unit	Capacity (MW)	Fuel	Emissions Control Equipment	Scrubber	Install Date
Elrama Power Plant	Retrofit	RFC	UNT1	100	Coal Based Synfuel	Wet Lime FGD	Yes	6/6/2007
Elrama Power Plant	Retrofit	RFC	UNT2	100	Coal Based Synfuel	Wet Lime FGD	Yes	6/6/2007
Elrama Power Plant	Retrofit	RFC	UNT3	125	Coal Based Synfuel	Wet Lime FGD	Yes	6/6/2007
Elrama Power Plant	Retrofit	RFC	UNT4	185	Coal Based Synfuel	Wet Lime FGD	Yes	6/6/2007
Port Hudson	Retrofit	SERC	AB1	58	Petroleum Coke	Fluidized Bed Limestone Injection	Yes	6/14/2007
Port Hudson	Retrofit	SERC	AB1	58	Petroleum Coke	Novel Integrated Desulfurization		6/14/2007
Council Bluffs	Future	MRO	ST4	790	Subbituminous Coal	Dry Lime FGD	Yes	7/1/2007
Central Illinois Energy Cogeneration	Future	SERC	ST1	5	Waste Coal	Dry Lime FGD	Yes	10/1/2007
Central Illinois Energy Cogeneration	Retrofit	SERC	ST1	5	Waste Coal	Fluidized Bed Limestone Injection	Yes	10/1/2007
Miami Fort	Retrofit	RFC WEC	7	557.1	Bituminous Coal	Wet Limestone Flue Gas	Yes	10/1/2007
Wygen II	Future	C	ST1	90	Coal - generic	Desulfurization	Yes	12/31/2007
Louisa	Retrofit	MRO	1	738	Subbituminous Coal	Dry Lime FGD	Yes	12/31/2007
Pleasant Prairie	Retrofit	RFC	2	616.5	Subbituminous Coal	Wet Lime FGD	Yes	12/31/2007
Roxboro	Retrofit	SERC	1	410.8	Bituminous Coal	Wet Limestone	Yes	12/31/2007
Roxboro	Retrofit	SERC	2	657	Bituminous Coal	Wet Limestone	Yes	12/31/2007
Goodland Energy Resources	Future	SPP	ST	22	Subbituminous Coal	Dry Lime FGD	Yes	1/1/2008
Milton R Young	Future	MRO	ST1	257	Coal	Flue Gas Desulfurization	Yes	1/1/2008
Trimble Station (LGE)	Future	SERC NPC	1	566.1	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2008
Brayton PT	Retrofit	C WEC	GEN1	241	Bituminous Coal	Dry Lime FGD	Yes	1/1/2008
Comanche (CO)	Retrofit	C	2	396	Subbituminous Coal	Dry Lime FGD	Yes	1/1/2008
Belews Creek	Retrofit	SERC	1	1080.1	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2008
Belews Creek	Retrofit	SERC	2	1080.1	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2008
Cardinal	Retrofit	RFC	1	615.2	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2008
Cardinal	Retrofit	RFC	2	615.2	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2008
E W Brown	Retrofit	SERC	1	113.6	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2008
E W Brown	Retrofit	SERC	3	446.3	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2008

Plant Name	Existing Plant/Unit	NER C Region	Unit	Capacity (MW)	Fuel	Emissions Control Equipment	Scrubber	Install Date
Gorgas 2 & 3	Retrofit	SERC	10	788.8	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2008
Gorgas 2 & 3	Retrofit	SERC	8	187.5	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2008
Gorgas 2 & 3	Retrofit	SERC	9	190.4	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2008
John E Amos Morgantown Generating Station	Retrofit	RFC	3	1300	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2008
Morgantown Generating Station	Retrofit	RFC	ST1	626	Coal Based Synfuel	Flue Gas Desulfurization	Yes	1/1/2008
Morgantown Generating Station	Retrofit	RFC	ST2	626	Coal Based Synfuel	Flue Gas Desulfurization	Yes	1/1/2008
Muskingum River	Retrofit	RFC	5	615.2	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2008
Pirkey	Retrofit	SPP	1	721	Lignite Coal	Flue Gas Desulfurization	Yes	1/1/2008
South Oak Creek	Retrofit	RFC	7	317.6	Subbituminous Coal	Flue Gas Desulfurization	Yes	1/1/2008
W H Sammis Taconite Harbor Energy Center	Retrofit	RFC	5	334	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2008
Taconite Harbor Energy Center	Retrofit	MRO	GEN1	84	Subbituminous Coal	Furnace Sorbent Injection		1/1/2008
Taconite Harbor Energy Center	Retrofit	MRO	GEN3	84	Subbituminous Coal	Furnace Sorbent Injection		1/1/2008
Taconite Harbor Energy Center	Retrofit	MRO	GEN1	84	Subbituminous Coal	Wet Limestone	Yes	1/1/2008
Taconite Harbor Energy Center	Retrofit	MRO	GEN3	84	Subbituminous Coal	Wet Limestone	Yes	1/1/2008
Chesterfield Coal Creek	Retrofit	SERC	6	693.9	Coal Based Synfuel	Flue Gas Desulfurization	Yes	3/1/2008
Montour	Retrofit	MRO	2	605	Lignite Coal	Other		3/1/2008
Montour	Retrofit	RFC	MT2	819	Bituminous Coal	Flue Gas Desulfurization	Yes	4/1/2008
Cayuga	Retrofit	RFC	2	531	Bituminous Coal	Wet Limestone	Yes	4/1/2008
Montour	Retrofit	RFC	MT1	805.5	Bituminous Coal	Flue Gas Desulfurization	Yes	4/4/2008
Lamar Plant	Future	WEC C	AB	22	Coal - generic	Fluidized Bed Limestone Injection	Yes	5/30/2008
Lamar Plant	Future	WEC C	AB2	22	Coal - generic	Fluidized Bed Limestone Injection	Yes	5/30/2008
Weston	Future	MRO	4	500	Subbituminous Coal	Flue Gas Desulfurization	Yes	6/1/2008
Cholla	Retrofit	WEC C	4	414	Subbituminous Coal	Wet Lime FGD	Yes	6/1/2008
J M Stuart	Retrofit	RFC	1	610.2	Bituminous Coal	Flue Gas Desulfurization	Yes	7/1/2008
J M Stuart	Retrofit	RFC	2	610.2	Bituminous Coal	Flue Gas Desulfurization	Yes	7/1/2008
J M Stuart	Retrofit	RFC	3	610.2	Bituminous Coal	Flue Gas Desulfurization	Yes	7/1/2008
J M Stuart	Retrofit	RFC	4	610.2	Bituminous Coal	Flue Gas Desulfurization	Yes	7/1/2008
Killen Station	Retrofit	RFC	2	666.4	Bituminous Coal	Flue Gas Desulfurization	Yes	7/1/2008
Bowen	Retrofit	SERC	3	952	Bituminous Coal	Flue Gas Desulfurization	Yes	9/1/2008
Bowen	Retrofit	SERC	4	952	Bituminous Coal	Flue Gas Desulfurization	Yes	9/1/2008

Plant Name	Existing Plant/Unit	NER C Region	Unit	Capacity (MW)	Fuel	Emissions Control Equipment	Scrubber	Install Date
Hugh L Spurlock	Retrofit	SERC	2	508.2	Coal Bituminous	Desulfurization Flue Gas	Yes	10/1/2008
PPL Brunner Island	Retrofit	RFC	BI3	790.4	Coal Bituminous	Desulfurization Flue Gas	Yes	10/1/2008
Cayuga	Retrofit	RFC	1	531	Coal Coal Based	Wet Limestone Flue Gas	Yes	10/1/2008
Winyah	Retrofit	SERC	1	315	Synfuel Coal Based	Desulfurization Flue Gas	Yes	12/1/2008
Winyah	Retrofit	SERC	1	315	Synfuel Coal Based	Desulfurization Flue Gas	Yes	12/1/2008
Winyah	Retrofit	SERC	2	315	Synfuel Coal Based	Desulfurization Flue Gas	Yes	12/1/2008
Winyah	Retrofit	SERC	2	315	Synfuel	Desulfurization	Yes	12/1/2008
Winyah Renew Energy Facility (WI)	Future	MRO NPC	ST1	55	Coal - generic Bituminous	Wet Limestone	Yes	12/31/2008
AES Westover	Retrofit	C WEC	8	75	Coal Subbituminous	Dry Lime FGD	Yes	12/31/2008
Comanche (CO)	Retrofit	C	1	382.5	Coal Bituminous	Dry Lime FGD Flue Gas	Yes	12/31/2008
W H Sammis	Retrofit	RFC	3	190.4	Coal Subbituminous	Desulfurization	Yes	12/31/2008
Monroe (MI)	Retrofit	RFC	4	817.2	Coal Bituminous	Wet Lime FGD	Yes	12/31/2008
Homer City Station	Retrofit	RFC	1	660	Coal Bituminous	Wet Limestone	Yes	12/31/2008
Homer City Station	Retrofit	RFC	2	660	Coal Bituminous	Wet Limestone	Yes	12/31/2008
Roxboro	Retrofit	SERC	3	745.2	Coal Bituminous	Wet Limestone	Yes	12/31/2008
Roxboro	Retrofit	SERC ERC	4	745.2	Coal	Wet Limestone Fluidized Bed	Yes	12/31/2008
Sandow 5	Future	OT NPC	CFB	630	Lignite Coal Bituminous	Limestone Injection Flue Gas	Yes	1/1/2009
Brayton PT	Retrofit	C	GEN3	642.6	Coal Bituminous	Desulfurization Flue Gas	Yes	1/1/2009
Charles R Lowman	Retrofit	SERC	1	66	Coal Bituminous	Desulfurization Flue Gas	Yes	1/1/2009
Charles R Lowman	Retrofit	SERC	2	236	Coal Bituminous	Desulfurization Flue Gas	Yes	1/1/2009
Charles R Lowman	Retrofit	SERC	3	236	Coal Bituminous	Desulfurization Flue Gas	Yes	1/1/2009
E W Brown	Retrofit	SERC	2	179.5	Coal Bituminous	Desulfurization Flue Gas	Yes	1/1/2009
Ghent	Retrofit	SERC	3	556.5	Coal Bituminous	Desulfurization Flue Gas	Yes	1/1/2009
John E Amos	Retrofit	RFC	1	816.3	Coal Bituminous	Desulfurization Flue Gas	Yes	1/1/2009
John E Amos	Retrofit	RFC	2	816.3	Coal Subbituminous	Desulfurization Flue Gas	Yes	1/1/2009
La Cygne	Retrofit	SPP	1	893	Coal Bituminous	Desulfurization Flue Gas	Yes	1/1/2009
PPL Brunner Island	Retrofit	RFC	BI1	363.3	Coal Bituminous	Desulfurization Flue Gas	Yes	1/1/2009
PPL Brunner Island	Retrofit	RFC	BI2	405	Coal	Desulfurization	Yes	1/1/2009
Cane Run	Retrofit	SERC	4	163.2	Bituminous	Wet Lime FGD	Yes	1/1/2009

Plant Name	Existing Plant/Unit	NER C Region	Unit	Capacity (MW)	Fuel	Emissions Control Equipment	Scrubber	Install Date
Cane Run	Retrofit	SERC	5	209.4	Coal Bituminous	Wet Lime FGD	Yes	1/1/2009
Cane Run	Retrofit	SERC	6	272	Coal Bituminous	Wet Lime FGD	Yes	1/1/2009
Hatfields Ferry Power Station	Retrofit	RFC	1	576	Coal Bituminous	Wet Lime FGD	Yes	1/1/2009
Hatfields Ferry Power Station	Retrofit	RFC	2	576	Coal Bituminous	Wet Lime FGD	Yes	1/1/2009
Hatfields Ferry Power Station	Retrofit	RFC	3	576	Coal Bituminous	Wet Lime FGD	Yes	1/1/2009
Keystone (PA)	Retrofit	RFC	1	936	Coal Based Synfuel	Wet Lime FGD	Yes	1/1/2009
Keystone (PA)	Retrofit	RFC	2	936	Coal Bituminous	Wet Lime FGD	Yes	1/1/2009
Bull Run (TN)	Retrofit	SERC	1	950	Coal	Wet Limestone	Yes	1/1/2009
Leland Olds 1 & 2	Retrofit	MRO	2	440	Lignite Coal Bituminous	Wet Limestone	Yes	1/1/2009
Mayo	Retrofit	SERC	1	735.8	Coal	Wet Limestone	Yes	1/1/2009
Silver Lake (MN)	Retrofit	MRO	3	25	Coal Bituminous	Dry Lime FGD	Yes	3/1/2009
Silver Lake (MN)	Retrofit	MRO	4	54	Coal Bituminous	Dry Lime FGD	Yes	3/1/2009
Hugh L Spurlock	Future	SERC	4	278	Coal	Dry Lime FGD	Yes	4/1/2009
Crystal River	Retrofit	ERC OT	5	739.2	Bituminous Coal	Flue Gas Desulfurization	Yes	4/1/2009
Crystal River	Retrofit	ERC OT	5	739.2	Bituminous Coal	Wet Limestone Flue Gas	Yes	4/1/2009
Deerhaven Generating Station	Retrofit	ERC OT	2	250.7	Bituminous Coal	Flue Gas Desulfurization	Yes	5/1/2009
Benton (EnviroPower)	Future	SERC	CFB1	250	Coal - generic	Fluidized Bed Limestone Injection	Yes	6/1/2009
Benton (EnviroPower)	Future	SERC	CFB2	250	Coal - generic	Fluidized Bed Limestone Injection	Yes	6/1/2009
Greene Energy Resource Recovery	Future	RFC	AB1	580	Waste Coal	Fluidized Bed Limestone Injection	Yes	6/1/2009
Benton (EnviroPower)	Retrofit	SERC	CFB1	250	Coal - generic	Flue Gas Desulfurization	Yes	6/1/2009
Benton (EnviroPower)	Retrofit	SERC	CFB2	250	Coal - generic	Flue Gas Desulfurization	Yes	6/1/2009
Hugh L Spurlock	Retrofit	SERC WEC	1	305.2	Bituminous Coal	Flue Gas Desulfurization	Yes	6/1/2009
Cholla	Retrofit	C WEC	3	312.3	Subbituminous Coal	Wet Lime FGD	Yes	6/1/2009
Hunter Oak Creek Power Plant	Retrofit	C	ST1	488.3	Bituminous Coal	Wet Lime FGD	Yes	6/1/2009
	Future	RFC WEC	1	615	Subbituminous Coal	Wet Limestone	Yes	9/29/2009
Comanche (CO) Cheswick Power Plant	Future	C	3	750	Subbituminous Coal	Dry Lime FGD	Yes	10/1/2009
	Retrofit	RFC	1	637	Bituminous Coal	Wet Lime FGD	Yes	10/1/2009
Crist	Retrofit	SERC	6	369.7	Bituminous Coal	Wet Limestone	Yes	10/1/2009
Crist	Retrofit	SERC	7	578	Bituminous Coal	Wet Limestone	Yes	10/1/2009

Plant Name	Existing Plant/Unit	NER C Region	Unit	Capacity (MW)	Fuel	Emissions Control Equipment	Scrubber	Install Date
Fort Martin	Retrofit	RFC	1	576	Bituminous Coal	Flue Gas Desulfurization	Yes	10/31/2009
Fort Martin	Retrofit	RFC	2	576	Bituminous Coal	Flue Gas Desulfurization	Yes	10/31/2009
Chalk Point	Retrofit	RFC	1	364	Coal Based Synfuel	Flue Gas Desulfurization	Yes	11/1/2009
Chalk Point	Retrofit	RFC	2	364	Coal Based Synfuel	Flue Gas Desulfurization	Yes	11/1/2009
Crystal River	Retrofit	ERC OT	ST4	739.2	Bituminous Coal	Wet Limestone	Yes	11/1/2009
Dickerson	Retrofit	RFC	2	196	Bituminous Coal	Wet Limestone	Yes	11/5/2009
Dickerson	Retrofit	RFC	3	196	Bituminous Coal	Wet Limestone	Yes	11/5/2009
Dickerson	Retrofit	RFC	ST1	196	Bituminous Coal	Wet Limestone	Yes	11/5/2009
Springerville Generating Station	Future	WEC C	ST4	400	Subbituminous Coal	Dry Lime FGD	Yes	12/31/2009
Kyger Creek	Retrofit	RFC	1	217.2	Bituminous Coal	Flue Gas Desulfurization	Yes	12/31/2009
Kyger Creek	Retrofit	RFC	2	217.2	Bituminous Coal	Flue Gas Desulfurization	Yes	12/31/2009
Kyger Creek	Retrofit	RFC	3	217.2	Bituminous Coal	Flue Gas Desulfurization	Yes	12/31/2009
Kyger Creek	Retrofit	RFC	4	217.2	Bituminous Coal	Flue Gas Desulfurization	Yes	12/31/2009
Kyger Creek	Retrofit	RFC	5	217.2	Bituminous Coal	Flue Gas Desulfurization	Yes	12/31/2009
Clay Boswell	Retrofit	MRO	3	364.5	Subbituminous Coal	Wet Lime FGD	Yes	12/31/2009
Dallman	Future	SERC NPC	4	250	Coal - generic Subbituminous	Wet Lime FGD	Yes	1/1/2010
Huntley Generating	Future	C	67	218	Coal	Wet Limestone	Yes	1/1/2010
Trimble Station (LGE)	Future	SERC NPC	ST2	750	Coal - generic Bituminous	Wet Limestone	Yes	1/1/2010
Brayton PT	Retrofit	C	GEN2	241	Coal Subbituminous	Dry Lime FGD	Yes	1/1/2010
Council Bluffs	Retrofit	MRO	ST1	49	Coal	Dry Lime FGD	Yes	1/1/2010
Mercer Generating Station	Retrofit	RFC	1	326.4	Bituminous Coal	Dry Lime FGD	Yes	1/1/2010
Mercer Generating Station	Retrofit	RFC	2	326.4	Bituminous Coal	Dry Lime FGD	Yes	1/1/2010
Baldwin Energy Complex	Retrofit	SERC	1	623.1	Subbituminous Coal	Flue Gas Desulfurization	Yes	1/1/2010
Baldwin Energy Complex	Retrofit	SERC	2	634.5	Subbituminous Coal	Flue Gas Desulfurization	Yes	1/1/2010
Baldwin Energy Complex	Retrofit	SERC	3	634.5	Subbituminous Coal	Flue Gas Desulfurization	Yes	1/1/2010
Big Sandy	Retrofit	RFC	2	816.3	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2010
Bowen	Retrofit	SERC	1	805.8	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2010
Bowen	Retrofit	SERC	2	788.8	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2010
Chesterfield	Retrofit	SERC	3	112.5	Coal Based Synfuel	Flue Gas Desulfurization	Yes	1/1/2010
Chesterfield	Retrofit	SERC	4	187.5	Coal Based Synfuel	Flue Gas Desulfurization	Yes	1/1/2010

Plant Name	Existing Plant/Unit	NER C Region	Unit	Capacity (MW)	Fuel	Emissions Control Equipment	Scrubber	Install Date
Conesville	Retrofit	RFC	4	841.5	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2010
Hammond	Retrofit	SERC	1	125	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2010
Hammond	Retrofit	SERC	2	125	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2010
Hammond	Retrofit	SERC	3	125	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2010
Hammond	Retrofit	SERC	4	578	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2010
Lee	Retrofit	SERC	3	252.4	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2010
Stanton (ND)	Retrofit	MRO	1	190.2	Subbituminous Coal	Flue Gas Desulfurization	Yes	1/1/2010
Vermillion Power Station	Retrofit	SERC	2	108.8	Subbituminous Coal	Flue Gas Desulfurization	Yes	1/1/2010
W H Sammis	Retrofit	RFC	1	190.4	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2010
W H Sammis	Retrofit	RFC	2	190.4	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2010
Wansley (GPC)	Retrofit	SERC	1	952	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2010
Wansley (GPC)	Retrofit	SERC	2	952	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2010
Warrick	Retrofit	RFC	4	323	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2010
Yorktown	Retrofit	SERC	1	187.5	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2010
Brandon Shores	Retrofit	RFC	1	685	Bituminous Coal	Wet Lime FGD	Yes	1/1/2010
Brandon Shores	Retrofit	RFC	2	685	Bituminous Coal	Wet Lime FGD	Yes	1/1/2010
Monroe (MI)	Retrofit	RFC	3	822.6	Subbituminous Coal	Wet Lime FGD	Yes	1/1/2010
W A Parish	Retrofit	ERC OT	7	614.6	Subbituminous Coal	Wet Lime FGD	Yes	1/1/2010
Warrick	Retrofit	RFC	1	144	Bituminous Coal	Wet Lime FGD	Yes	1/1/2010
Warrick	Retrofit	RFC	2	144	Bituminous Coal	Wet Lime FGD	Yes	1/1/2010
Warrick	Retrofit	RFC	3	144	Bituminous Coal	Wet Lime FGD	Yes	1/1/2010
Warrick	Retrofit	RFC	4	323	Bituminous Coal	Wet Lime FGD	Yes	1/1/2010
Fayette Power Project	Retrofit	ERC OT	1	615	Subbituminous Coal	Wet Limestone	Yes	1/1/2010
Fayette Power Project	Retrofit	ERC OT	2	615	Subbituminous Coal	Wet Limestone	Yes	1/1/2010
Kingston	Retrofit	SERC	1	175	Bituminous Coal	Wet Limestone	Yes	1/1/2010
Kingston	Retrofit	SERC	2	175	Bituminous Coal	Wet Limestone	Yes	1/1/2010
Kingston	Retrofit	SERC	3	175	Bituminous Coal	Wet Limestone	Yes	1/1/2010
Kingston	Retrofit	SERC	4	175	Bituminous Coal	Wet Limestone	Yes	1/1/2010
Kingston	Retrofit	SERC	5	200	Bituminous Coal	Wet Limestone	Yes	1/1/2010

Plant Name	Existing Plant/Unit	NER C Region	Unit	Capacity (MW)	Fuel	Emissions Control Equipment	Scrubber	Install Date
Kingston	Retrofit	SERC	6	200	Bituminous Coal	Wet Limestone	Yes	1/1/2010
Kingston	Retrofit	SERC	7	200	Bituminous Coal	Wet Limestone	Yes	1/1/2010
Kingston	Retrofit	SERC	8	200	Bituminous Coal	Wet Limestone	Yes	1/1/2010
Kingston	Retrofit	SERC	9	200	Bituminous Coal	Wet Limestone	Yes	1/1/2010
Leland Olds 1 & 2	Retrofit	MRO WEC	1	216	Lignite Coal	Wet Limestone	Yes	1/1/2010
San Juan	Retrofit	C WEC	1	369	Subbituminous Coal	Wet Limestone	Yes	1/1/2010
San Juan	Retrofit	C WEC	2	369	Subbituminous Coal	Wet Limestone	Yes	1/1/2010
San Juan	Retrofit	C WEC	3	555	Subbituminous Coal	Wet Limestone	Yes	1/1/2010
San Juan	Retrofit	C	4	555	Subbituminous Coal	Wet Limestone	Yes	1/1/2010
Chesterfield Gascoyne Generating Station	Retrofit	SERC	5	359	Bituminous Coal	Flue Gas Desulfurization	Yes	3/1/2010
	Retrofit	MRO	ST	175	Coal - generic Subbituminous	Dry Lime FGD Flue Gas	Yes	5/1/2010
Weston	Retrofit	MRO WEC	3	350.5	Coal	Desulfurization	Yes	5/1/2010
Hunter	Retrofit	C	ST2	488.3	Bituminous Coal	Wet Lime FGD	Yes	5/1/2010
Big Cajun 2	Future	SERC	ST4	775	Coal - generic	Dry Lime FGD	Yes	6/1/2010
Western Greenbrier Co-Generation LLC	Future	RFC	AB1	98	Waste Coal	Dry Lime FGD Flue Gas	Yes	6/1/2010
Iatan 2	Future	SPP ERC	ST	850	Coal - generic	Desulfurization Flue Gas	Yes	6/1/2010
J K Spruce	Future	OT	2	750	Coal - generic Subbituminous	Desulfurization	Yes	6/1/2010
John P Madgett	Retrofit	MRO	1	387	Coal	Dry Lime FGD Flue Gas	Yes	6/1/2010
G G Allen	Retrofit	SERC	1	165	Bituminous Coal	Desulfurization Flue Gas	Yes	6/1/2010
G G Allen	Retrofit	SERC	2	165	Bituminous Coal	Desulfurization Flue Gas	Yes	6/1/2010
G G Allen	Retrofit	SERC	3	275	Bituminous Coal	Desulfurization Flue Gas	Yes	6/1/2010
G G Allen	Retrofit	SERC	4	275	Bituminous Coal	Desulfurization Flue Gas	Yes	6/1/2010
G G Allen	Retrofit	SERC	5	275	Coal	Desulfurization	Yes	6/1/2010
Oak Creek Power Plant	Future	RFC	2	615	Subbituminous Coal	Wet Limestone	Yes	9/29/2010
Indeck Elwood Energy Center	Future	RFC	1	330	Bituminous Coal	Dry Lime FGD	Yes	10/1/2010
Indeck Elwood Energy Center	Future	RFC	2	330	Bituminous Coal	Dry Lime FGD	Yes	10/1/2010
Southwest	Future	SPP	ST2	300	Coal - generic	Dry Lime FGD	Yes	10/1/2010
Indeck Elwood Energy Center	Retrofit	RFC	1	330	Bituminous Coal	Fluidized Bed Limestone Injection	Yes	10/1/2010
Indeck Elwood Energy Center	Retrofit	RFC	2	330	Bituminous Coal	Fluidized Bed Limestone Injection	Yes	10/1/2010
River Hill Project	Future	RFC	1	290	Waste Coal	Dry Lime FGD	Yes	11/1/2010
River Hill Project	Retrofit	RFC	1	290	Waste Coal	Fluidized Bed	Yes	11/1/2010

Plant Name	Existing Plant/Unit	NER C Region	Unit	Capacity (MW)	Fuel	Emissions Control Equipment	Scrubber	Install Date
Kentucky Mountain Power LLC	Future	SERC	CFB1	250	Waste Coal	Limestone Injection Flue Gas Desulfurization	Yes	12/1/2010
Kentucky Mountain Power LLC	Future	SERC WEC	CFB2	250	Waste Coal	Flue Gas Desulfurization	Yes	12/1/2010
Bonanza Hudson Generating Station	Future	C	2	110	Waste Coal Bituminous	Dry Lime FGD	Yes	12/31/2010
	Retrofit	RFC	2	659.7	Coal Subbituminous	Dry Lime FGD Flue Gas	Yes	12/31/2010
Clifty Creek	Retrofit	RFC	1	217.2	Coal Subbituminous	Desulfurization Flue Gas	Yes	12/31/2010
Clifty Creek	Retrofit	RFC	2	217.2	Coal Subbituminous	Desulfurization Flue Gas	Yes	12/31/2010
Clifty Creek	Retrofit	RFC	3	217.2	Coal Subbituminous	Desulfurization Flue Gas	Yes	12/31/2010
Clifty Creek	Retrofit	RFC	4	217.2	Coal Subbituminous	Desulfurization Flue Gas	Yes	12/31/2010
Clifty Creek	Retrofit	RFC	5	217.2	Coal Subbituminous	Desulfurization Flue Gas	Yes	12/31/2010
Clifty Creek	Retrofit	RFC	6	217.2	Coal Bituminous	Desulfurization Flue Gas	Yes	12/31/2010
W H Sammis	Retrofit	RFC	6	680	Coal Bituminous	Desulfurization Flue Gas	Yes	12/31/2010
W H Sammis Indian River Generating Station (DE)	Retrofit	RFC	7	680	Coal	Desulfurization	Yes	12/31/2010
Whelan Energy Center	Future	RFC	4	442.4	Bituminous Coal	Dry Lime FGD	Yes	1/1/2011
	Future	MRO WEC	ST	220	Coal - generic	Dry Lime FGD Flue Gas	Yes	1/1/2011
Dry Fork Station	Future	C	ST	422	Coal - generic Subbituminous	Desulfurization Flue Gas	Yes	1/1/2011
Red Rock Power Plant (PSC Ok)	Future	SPP	ST	950	Coal	Desulfurization	Yes	1/1/2011
Beech Hollow Power Project	Future	RFC	ST	272	Waste Coal	Fluidized Bed Limestone Injection	Yes	1/1/2011
Jamestown Clean Coal Project	Future	NPC	CFB	40	Coal - generic	Fluidized Bed Limestone Injection	Yes	1/1/2011
Taylorville Energy Center	Future	RFC	IGCC	770	Coal - generic	Other		1/1/2011
Prairie State Energy Campus	Future	SERC	ST1	810	Coal - generic	Wet Lime FGD	Yes	1/1/2011
Oak Grove Steam Electric Station	Future	ERC	ST1	860	Lignite Coal	Wet Limestone	Yes	1/1/2011
Oak Grove Steam Electric Station	Future	OT	ST2	860	Lignite Coal	Wet Limestone	Yes	1/1/2011
Thoroughbred Energy Campus	Future	OT	ST2	860	Bituminous Coal	Wet Limestone	Yes	1/1/2011
Thoroughbred Energy Campus	Future	SERC	1	750	Coal Bituminous	Wet Limestone	Yes	1/1/2011
	Future	SERC	2	750	Coal Bituminous	Wet Limestone	Yes	1/1/2011
Barry	Retrofit	SERC	5	788.8	Coal Subbituminous	Flue Gas Desulfurization	Yes	1/1/2011
Big Stone	Retrofit	MRO	ST1	456	Coal Bituminous	Flue Gas Desulfurization	Yes	1/1/2011
Cape Fear Mesaba Energy Project	Retrofit	SERC	6	187.9	Coal	Desulfurization	Yes	1/1/2011
	Future	MRO	IGCC1	741	Coal - generic	Other		2/1/2011

Plant Name	Existing Plant/Unit	NER C Region	Unit	Capacity (MW)	Fuel	Emissions Control Equipment	Scrubber	Install Date
Longview Power	Future	RFC WEC	AB1	695	Coal - generic	Wet Lime FGD Flue Gas Desulfurization	Yes	3/1/2011
Two Elk Energy Park	Retrofit	C	ST1	320	Waste Coal Bituminous	Desulfurization	Yes	3/30/2011
John W Turk Jr Power Plant	Future	SPP WEC	ST1	721	Coal	Dry Lime FGD Flue Gas Desulfurization	Yes	6/1/2011
Desert Rock Power Plant	Future	C	ST1	750	Coal - generic	Desulfurization	Yes	6/1/2011
Desert Rock Power Plant	Future	WEC	ST2	750	Coal - generic Subbituminous	Desulfurization	Yes	6/1/2011
Big Stone	Future	MRO	ST2	630	Coal	Wet Lime FGD	Yes	6/1/2011
Prairie State Energy Campus	Future	SERC WEC	ST2	810	Coal - generic	Wet Lime FGD	Yes	6/1/2011
Sevier Power Project	Future	C	AB1	270	Coal - generic Subbituminous	Dry Lime FGD Flue Gas Desulfurization	Yes	12/31/2011
James H Miller Jr	Retrofit	SERC	3	705.5	Coal Subbituminous	Desulfurization	Yes	12/31/2011
James H Miller Jr	Retrofit	SERC WEC	4	705.5	Coal	Desulfurization	Yes	12/31/2011
Sevier Power Project	Retrofit	C	AB1	270	Coal - generic	Fluidized Bed Limestone Injection	Yes	12/31/2011
Elk Run Energy Station	Future	MRO	ST	750	Coal - generic	Dry Lime FGD	Yes	1/1/2012
Holcomb East	Future	SPP	2	700	Coal - generic	Dry Lime FGD	Yes	1/1/2012
Indian River Generating Station (DE)	Future	RFC	1	81.6	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2012
Indian River Generating Station (DE)	Future	RFC	3	176.8	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2012
Tenaska Energy	Future	SPP	ST	660	Coal - generic	Flue Gas Desulfurization	Yes	1/1/2012
Grand River	Future	SPP	ST	660	Coal - generic	Fluidized Bed Desulfurization	Yes	1/1/2012
Carmi Minemouth	Future	RFC WEC	1	270	Coal - generic	Limestone Injection	Yes	1/1/2012
Highwood Generation Station	Future	C	AB1	250	Coal - generic Subbituminous	Fluidized Bed Limestone Injection	Yes	1/1/2012
Sherburne County	Retrofit	MRO	1	706	Coal Subbituminous	Dry Lime FGD	Yes	1/1/2012
Sherburne County	Retrofit	MRO	2	689	Coal Subbituminous	Dry Lime FGD	Yes	1/1/2012
Cape Fear	Retrofit	SERC	5	140.6	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2012
Havana	Retrofit	SERC	6	488	Coal Subbituminous	Flue Gas Desulfurization	Yes	1/1/2012
J T Deely	Retrofit	ERC	1	446	Coal Subbituminous	Flue Gas Desulfurization	Yes	1/1/2012
J T Deely	Retrofit	OT	2	446	Coal Subbituminous	Flue Gas Desulfurization	Yes	1/1/2012
Pacific Mountain Energy Center	Retrofit	WEC	IG1	300	Coal - generic	Other		1/1/2012
Pacific Mountain Energy Center	Retrofit	WEC	IG2	300	Coal - generic	Other		1/1/2012
Toquop Energy Project	Future	WEC	ST	750	Coal - generic	Wet Lime FGD	Yes	3/31/2012
Seminole (FL)	Future	ERC	3	750	Bituminous Coal	Flue Gas Desulfurization	Yes	5/1/2012
Taylor Energy Center	Future	OT	ST	765	Coal - generic	Flue Gas Desulfurization	Yes	5/1/2012

Plant Name	Existing Plant/Unit	NER C Region	Unit	Capacity (MW)	Fuel	Emissions Control Equipment	Scrubber	Install Date
Longleaf Energy Station	Future	SERC	ST1	600	Coal - generic	Dry Lime FGD	Yes	5/30/2012
Longleaf Energy Station	Future	SERC	ST2	600	Coal - generic	Dry Lime FGD	Yes	5/30/2012
Intermountain	Future	WEC C	ST3	950	Bituminous Coal	Wet Lime FGD	Yes	6/1/2012
John Sevier	Retrofit	SERC	1	200	Bituminous Coal	Flue Gas Desulfurization	Yes	6/1/2012
John Sevier	Retrofit	SERC	2	200	Bituminous Coal	Flue Gas Desulfurization	Yes	6/1/2012
John Sevier	Retrofit	SERC	3	200	Bituminous Coal	Flue Gas Desulfurization	Yes	6/1/2012
John Sevier	Retrofit	SERC	4	200	Bituminous Coal	Flue Gas Desulfurization	Yes	6/1/2012
Cross	Future	SERC	2	556.2	Bituminous Coal	Flue Gas Desulfurization	Yes	12/1/2012
Winyah	Retrofit	SERC	3	315	Coal Based Synfuel	Flue Gas Desulfurization	Yes	12/1/2012
Winyah	Retrofit	SERC	4	315	Coal Based Synfuel	Flue Gas Desulfurization	Yes	12/1/2012
Mountaineer	Future	RFC WEC	IGCC	784	Subbituminous Coal	Acid Gas Removal System		1/1/2013
Jim Bridger Indian River Generating Station (DE)	Future	RFC	5	750	Coal	Dry Lime FGD	Yes	1/1/2013
Mesaba Energy Project	Future	RFC	2	81.6	Bituminous Coal	Flue Gas Desulfurization	Yes	1/1/2013
American Municipal Power Gen. Station	Future	MRO	IGCC2	741	Coal - generic	Other		1/1/2013
American Municipal Power Gen. Station	Future	RFC	ST 1	480	Coal - generic	Wet Limestone	Yes	1/1/2013
Crystal River	Future	RFC	ST 2	480	Coal - generic	Wet Limestone	Yes	1/1/2013
Crystal River	Retrofit	ERC OT	2	523.8	Bituminous Coal	Wet Limestone	Yes	1/1/2013
L V Sutton Holcomb Expansion Project	Retrofit	SERC WEC	3	446.6	Coal	Wet Limestone	Yes	1/1/2013
Glades Power Park	Future	C	ST1	700	Coal - generic	Dry Lime FGD	Yes	6/1/2013
Merrimack	Future	ERC OT	ST1	980	Coal - generic	Wet Lime FGD	Yes	6/1/2013
Merrimack	Retrofit	NPC C	1	113.6	Bituminous Coal	Wet Limestone	Yes	6/1/2013
Merrimack	Retrofit	NPC C	2	345.6	Bituminous Coal	Wet Limestone	Yes	6/1/2013
Ely Energy Center	Future	WEC C	ST1	750	Coal - generic	Wet Lime FGD	Yes	12/31/2013
Ely Energy Center	Future	WEC C	ST2	750	Coal - generic	Wet Lime FGD	Yes	12/31/2013
Carmi Minemouth	Future	Fluidized Bed Limestone Injection						
Carmi Minemouth	Retrofit	RFC	2	270	Subbituminous Coal	Wet Lime FGD	Yes	1/1/2014
W A Parish	Retrofit	ERC OT	6	734.1	Bituminous Coal	Wet Lime FGD	Yes	1/1/2014
Colbert	Retrofit	SERC	5	550	Bituminous Coal	Wet Limestone	Yes	1/1/2014
Yorktown	Retrofit	SERC	2	187.5	Coal	Flue Gas Desulfurization	Yes	1/1/2015
Coffeen	Retrofit	SERC	1	388.9	Bituminous	Wet Lime FGD	Yes	1/1/2015

Plant Name	Existing Plant/Unit	NER C Region	Unit	Capacity (MW)	Fuel	Emissions Control Equipment	Scrubber	Install Date
Coffeen	Retrofit	SERC	2	616.5	Coal Bituminous	Wet Lime FGD	Yes	1/1/2015
Duck Creek	Retrofit	SERC	1	441	Coal Bituminous	Wet Lime FGD	Yes	1/1/2015
Sioux	Retrofit	SERC	1	549.7	Coal Subbituminous	Wet Lime FGD	Yes	1/1/2015
Sioux	Retrofit	SERC	2	549.7	Coal Subbituminous	Wet Lime FGD	Yes	1/1/2015
Hunter	Future	WEC	ST4	600	Coal Bituminous	Wet Lime FGD	Yes	1/1/2017
Crawford (IL)	Retrofit	C	7	239.3	Coal Subbituminous	Other		1/1/2018
Crawford (IL)	Retrofit	RFC	8	358.1	Coal Subbituminous	Other		1/1/2018
Fisk Street	Retrofit	RFC	19	374	Coal Subbituminous	Other		1/1/2018
Joliet 29	Retrofit	RFC	7	660	Coal Subbituminous	Other		1/1/2018
Joliet 29	Retrofit	RFC	8	660	Coal Subbituminous	Other		1/1/2018
Joliet 9	Retrofit	RFC	6	360.4	Coal Subbituminous	Other		1/1/2018
Powerton	Retrofit	RFC	5	892.8	Coal Subbituminous	Other		1/1/2018
Powerton	Retrofit	RFC	6	892.8	Coal Subbituminous	Other		1/1/2018
Waukegan	Retrofit	RFC	7	326.4	Coal Subbituminous	Other		1/1/2018
Waukegan	Retrofit	RFC	8	355.3	Coal Subbituminous	Other		1/1/2018

Data Source: Global Energy Decisions, Inc.