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Written Testimony of Nicholas K. Akins

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FERC Technical Conference

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Good afternoon. My name is Nicholas K. Akins, and I serve as President and Chief Executive Officer of American Electric Power (AEP).

AEP applauds the efforts of the Federal Energy Regulatory Commission (FERC) to solicit industry input about the critical reliability question facing the nation today -- implementation of multiple regulations promulgated by the Environmental Protection Agency (EPA) in an effort to reduce emissions from stationary sources: namely electric generation plants.

AEP is one of the largest electric utilities in the United States (U.S.), delivering electricity to more than 5 million customers in 11 states. AEP ranks among the nation's largest generators of electricity, owning nearly 38,000 megawatts (MW) of generating capacity in the U.S. AEP also owns the nation's largest electricity transmission system, a nearly 39,000-mile network that includes more 765-kilovolt extra-high voltage transmission lines than all other U.S. transmission systems combined. AEP's transmission system directly or indirectly serves about 10 percent of the electricity demand in the Eastern Interconnection, the interconnected transmission system that covers 38 eastern and central U.S. states and eastern Canada, and approximately 11 percent of the electricity demand in Electric Reliability Council of Texas (ERCOT), the transmission system that covers much of Texas. AEP's utility units operate as Columbus Southern Power and Ohio Power Companies (collectively AEP Ohio), AEP Texas, Appalachian Power (in Virginia and West Virginia), AEP Appalachian Power (in Tennessee), Indiana

Michigan Power, Kentucky Power, Public Service Company of Oklahoma, and Southwestern Electric Power Company (in Arkansas, Louisiana and east Texas). AEP's headquarters are in Columbus, Ohio.

AEP supports the Clean Air Act. Since the 1990 Clean Air Act Amendments, our investments in emission reduction equipment have resulted in annual reductions in sulfur dioxide emissions from our fleet of coal-fueled generating stations of more than 800,000 tons, or greater than 70 percent, and to reductions in nitrogen oxide emissions of more than 450,000 tons, or about 80 percent. Since 2003, we have retrofitted 7,800 MWs (nine units) and expended more than 35 million work hours at a cost of \$7.2 billion. We spent additional billions on low-sulfur fuel, chemical reagents and other pollution control measures.<sup>1</sup> By comparison we are expected to spend \$6.7 billion in a three year period.

## **Executive Summary**

The Commission's inquiry today is critical to ensuring the reliability of the bulk power system. However, reliability is just one aspect of the numerous potential problems caused by the short compliance deadlines required under these EPA rules. These potential problems include cost increases for retail electric utility customers (up to 35 percent in some regions), the closing of plants unnecessarily, the needless loss of good paying jobs, and a shortage of workers, materials and equipment that would result from retrofitting so many power plants in the short time frame currently provided by the rules. In addition, the Commission also is responsible for sales for resale of electric power. If shortages result from the short time frames of the EPA's rules, the Commission will be responsible for ensuring that the price of energy and capacity remain just and reasonable in the affected regions.

AEP is uniquely positioned not only to provide insight regarding the potential risks to the reliability of the electric grid, but to offer some resolutions that would protect that reliability while helping EPA achieve its emission reduction goals. AEP's proposal would achieve the same reduction targets, but would result in only the equivalent in one year's emissions before the goal is achieved.

Our approach is three-pronged:

1. **Extension of time.** The industry needs achievable time frames in order to analyze and safely and reliably respond to the EPA regulations. This can be accomplished either through a legislative solution or through implementation of the EPA rule on a schedule that widely applies the one-year compliance extension available to the Administrator (for both major retrofits and

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<sup>1</sup> <http://www.aepsustainability.com/ourissues/envperformance/airquality.aspx>

for unit retirements) and utilizes the Presidential authority for a two-year extension for national security reasons. This can be coupled with a reliability “safety valve” to address any remaining reliability concerns.

2. **Coordinated plan.** The regional transmission organizations (RTOs) and non-RTO reliability organizations need to obtain retirement and retrofit plans from generators in order to perform a comprehensive assessment and produce a multi-year compliance plan.
3. **Safety valve backstop.** Allowance of a “safety valve” as a backstop mechanism, and emergency authority to address short-term needs resulting from unexpected generation and transmission outages that have immediate impacts on reliability (i.e., control equipment malfunctions, unforeseen extended outages, transmission failures or other circumstances).

AEP supports environmental regulation or legislation that establishes a more coordinated, realistic and cost-effective compliance program. The regulations must provide appropriate flexibility to achieve the desired emission reductions while ensuring grid reliability and managing customer costs. We believe that a comprehensive, multi-year phased-in approach with appropriate milestones is the most logical way to accomplish the EPA’s objectives. Providing additional time will:

- Allow utilities time to install environmental retrofits with minimal idling or derating of generating units;
- Allow unit retirements to occur over a more reasonable timeframe and to address any potential transmission solutions, which could be needed to minimize grid reliability issues;
- Support a stable, safe and productive workforce over a longer period of time;
- Provide the industry assurance that material procurement, qualified craft labor, permitting and regulatory approvals can be obtained in an appropriate manner; and
- Give local communities time to plan for any potential economic losses.

Granting the additional time would ensure the industry can move forward in achieving the EPA’s environmental goals in a more prudent, reasonable and rational way, which will yield a manageable plan for grid reliability, stable employment and minimization of overall customer rate impacts.

## Scope of the Situation

To summarize the situation the industry is facing, 45 percent of the nation’s electricity is generated by coal.<sup>2</sup> Because of the rapid compliance time frames in the proposed regulation, not the emissions reductions goals themselves, the U.S. is faced with some difficult choices regarding much of its fossil-fired electric generation. While all stakeholders agree that significant quantities of generation will be in jeopardy, too many variables are at play and too many data points are as yet undisclosed to be certain of exactly what those quantities will be. Exacerbating the situation, a few generation owners may profit from the short compliance time frames under the EPA’s rules and, not surprisingly, may not be willing to share proprietary information or support efforts to extend those time frames.

On a nationwide basis, electric utilities have already announced retirement plans over the past couple of years (largely in response to the EPA regulations) that total 48 GW. In addition, the following organizations have made projections of retirements or potential generation at risk of retirement in order to comply with the proposed regulations:

<b>Organization</b>	<b>Projected Generation to be Retired</b>
FBR Investment Research	50 GW <sup>3</sup>
Credit Suisse	35-100 GW <sup>4</sup>
Edison Electric Institute/ ICF	46-101 GW <sup>5</sup>
Fitch Ratings	83 GW <sup>6</sup>
<b>RTOs</b>	<b>Regional Projected Generation to be Retired or at Risk</b>
PJM Interconnection LLC	11-20 GW by 2015 <sup>7</sup>
Southwest Power Pool (SPP)	1-5 GW at risk, with 50% to retire <sup>8</sup>
Midwest ISO (MISO)	60-70 GW will require retrofits, 3-12 GW at risk to retire <sup>9</sup>

<sup>2</sup> <http://www.eia.gov/electricity/>

<sup>3</sup> FBR report entitled “Coal Retirements- The Times They Are Changing’...Already” August 24<sup>th</sup>, 2011

<sup>4</sup> Credit Suisse presentation entitled “Implications of EPA Policy” April 26<sup>th</sup>, 2011

<sup>5</sup> “Potential Impacts of Environmental Regulation on the US Generating Fleet” EEI analysis prepared by ICF International January 2011

<sup>6</sup> <http://www.snl.com/InteractiveX/article.aspx?ID=13708768&CDID=A-13708768-10542&KPLT=2&Printable=1>

<sup>7</sup> PJM’s Comments to EPA Proposed Hazardous Air Pollutant Rule. Submitted to EPA August 4, 2011. EPA-HQ-OAR-2009-0234

<sup>8</sup> SPP’s *Review of the Potential Reliability Impacts of Proposed EPA Regulations Impacting Generation in the SPP Footprint*. Submitted to EPA July 19, 2011

<sup>9</sup> MISO October 2011 EPA Impact Analysis report

*Tie-in of retrofits:* In addition to the risks created by this quantity of generation retiring virtually simultaneously, another risk looms potentially unacknowledged. Many units performing retrofits will most likely be concluding this work by late 2015. It is highly probable that the tie-in schedule (bringing units off line, synchronizing the new retrofit equipment, and then placing the units back in service) for multiple units will create outage scheduling problems as all units that are being retrofitted will not be able to be off-line in a relatively short period of time. Attempting to complete their construction concurrently will place the grid at significant risk. Tie-in outages average 17 to 20 weeks each. This situation would be exacerbated by limited labor and material availability, delays in permitting and state commission approval leading to a crunch to complete projects. Any delays in completing construction will result in potential non-compliance with EPA regulations and/or financial penalties in certain RTOs.

*Ancillary services:* It should be noted that grid integrity goes beyond just capacity. Many retiring units provide ancillary services such as black start capabilities, voltage/reactive load support and frequency response that also will need to be addressed. These services were critical in the 2003 blackout to stop the cascading outages, and bring the grid back to life as the system was re-energized.

*Transmission timing:* In some cases, transmission projects may be the optimal reliability solution when retiring a generating unit. In such cases, the retiring unit will need to be kept operational until the ultimate solution is in service and operational.

These are only a few complex examples that will require coordination across many companies and regional seams, at a level far superseding any cross-jurisdictional coordination that has taken place to date. To accomplish this type of coordination in a period of three years is just not achievable without paying high premiums; and a willingness to accept an extortionate amount of unneeded risk.

AEP at-risk generation is significant. We anticipate retirement of approximately 6,000 megawatts (MW) of coal generation, largely in our eastern footprint. Many of these units provide ancillary services critical to grid stability. Those 6,000 MW were connected to the grid 68 percent of the time in the July 2011 heat wave. They ran at 52 percent capacity factor during peak load periods during this same time period. Additionally, our natural gas combined cycle generating units, which many believe will be available to help absorb the capacity loss and assist in providing lost ancillary service functions from retiring coal units, were already connected to the grid 82 percent of the time and ran at 62 percent capacity factor in the July heat wave. In other words, the plants that can run more often to substitute for retiring capacity

are not our gas plants, which already run frequently; rather they are the coal plants themselves that are targeted by the EPA rules.

Beyond AEP’s 6,000 MW to be retired, we have an additional 1,000 to 5,000 MW to be de-rated or idled until retrofits can be completed. While the EPA regulations as they currently stand allow three years to attain compliance, our extensive experience in retrofits confirms that such projects typically take five years.

Not all stakeholders are in agreement about the reliability risks created by these new regulations. Although PJM has indicated that the last capacity auction for 2014/15 cleared enough resources to provide a 20% reserve margin, this ignores locational reliability issues. The dichotomy of EPA’s projected results and AEP’s own experience highlights a disconcerting disparity between high-level aggregate analyses versus a detailed analysis of local reliability concerns.

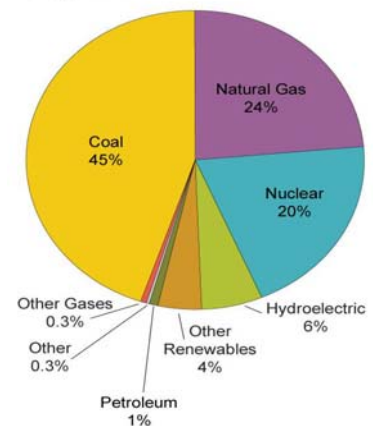
While there may be some disagreement on the degree of reliability impacts, most all the RTOs and ISOs have indicated there is reason for concern. In many instances, reliability issues are not the result of retirements within a single footprint, but the composite impacts of neighboring entities, and the resulting strains placed on the grid in places where they didn’t exist before.

This potential concern supports the need for a comprehensive assessment and additional time for this analysis to be conducted.

### **Fuel Mix**

Currently, the U.S. has a fairly diverse fuel mix for electric generation, with coal comprising a bit under half of the fuel mix composition. Despite the recent encouraging progress made in the realm of shale gas, environmental issues over fracking procedures are slowing its commercialization. Over-reliance on natural gas

**U.S. Net Electricity Generation by Fuel, 2010**



Source: U.S. Energy Information Administration, *Electric Power Monthly*, Table 1.1, preliminary data.

generation for replacing coal will create a new set of North American Electric Reliability Corporation (NERC) security concerns. In certain situations, the demand for natural gas to supply power plants will ultimately drive the need for upgraded pipeline infrastructure.

### **AEP’s Experience**

AEP has invested \$7.2 billion over the past eight years on environmental retrofits, completing nine projects. We are now faced with an additional \$6.7 billion investment over the next three years to comply with all of the proposed EPA regulations. This includes 36 projects just to meet the proposed

Cross-State Air Pollution Rule (CSAPR) and Hazardous Air Pollutants (HAPS) regulations. To further illustrate EPA's aggressive compliance approach, AEP will be required to spend \$700 million to increase particulate filtering from 99.6 percent to 99.8 percent on only nine of its units. While increasing particulate filtering is laudable, the \$700 million divided among our customers represents a significant cost that we cannot ignore, and represents a questionable balance of costs versus benefits to customers.

There are other considerations associated with these retrofit operations. In addition to the financial costs, the effort required to construct new capacity and complete retrofits to meet the expected compliance deadlines brings up safety concerns, particularly worker safety. In 2007, AEP was the nation's largest construction employer, with approximately 8,500 construction contractors working on sites across our 11 states, as we endeavored to complete nine major environmental retrofit projects. Managing those nine projects was challenging. Trying to manage 36 additional projects in a three-year period will be unprecedented. Even if we are able to obtain the needed workforce, financing and materials, managing that many additional workers will be a daunting task with the pressure to complete the projects in far less time than is reasonable or even achievable. AEP always puts the safety of our workers as our number one priority. Under the proposed timeframes, we are concerned that the safety of workers will be compromised, and their productivity will suffer when pressed to try to complete projects in a condensed timeframe.

### **Project Execution Variables**

A number of variables outside of the control of a generation owner can have a profound impact on timely project completion. Although the regulations address generation, often transmission solutions will play a role in compliance plans and should therefore receive substantial consideration. Listed below are some of the issues that AEP has experienced:

- **Permitting delays:** Recent experience with permitting for new and existing coal plants has shown that even simple permits for new pollution control projects can require significant time for agencies to process, and can face potential delays due to local opposition. More extensive permitting for the new replacement capacity or transmission upgrades needed to mitigate reliability impacts also can be significant.
- **State commission approvals:** In many jurisdictions it is unlawful for a utility company to commence construction in advance of receiving a "certificate of need" from the public service commission. In most jurisdictions, it would also be unwise to proceed in advance of state

commission approval, since frequently alternative compliance options must be investigated during such regulatory proceedings and can lead to significant changes in technology choices and design. This could directly impact the time frame for compliance.

- **Abrupt retirements:** RTOs and ISOs require anywhere from 45-182 days notice for retirement of a generating unit.<sup>10</sup>
- **Qualified labor availability:** If all generation and transmission owners need to construct improvements simultaneously, it will create a severe shortage of the skilled labor necessary to meet the proposed deadlines including specialties such as engineering, project management, and field labor availability.
- **Material procurement:** Manufacturing capacity for many of the required resources is limited both domestically and world-wide, and competition for available capacity and inventories is intense. Extreme pressure from simultaneous demands for these resources also will increase the cost of compliance including, but not limited to, equipment rental problems and crane availability.
- **Unanticipated/Forced outages:** On several occasions in recent years, baseload nuclear units have been confronted with unanticipated conditions that caused extensive outages. Severe weather also has resulted in transmission constraints and other equipment damage which required prompt action to assure restoration of electric service within a reasonable period of time. Even when a plant is scheduled for a planned outage, sudden loss of significant capacity elsewhere can require it to remain online, despite adequate planning.

These circumstances and other variables can directly impact the nature and timing of both compliance activities and proposed reliability solutions. As a result, the initial comprehensive reliability assessment should be followed by iterative re-assessments that look beyond single-unit retirements. This assessment should take into consideration a multi-year comprehensive view of how each company's compliance and mitigation plans, which also should include any transmission initiatives, interplay with the actions of other companies throughout the entire footprint of each reliability region. With additional time, a safety-

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<sup>10</sup> U.S. Environmental Protection Agency National Emission Standards for Hazardous Air Pollutants From Coal and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units, 79 Fed. Reg. 24976 (proposed May 3, 2011) (to be codified at 40 C.F.R. Pts. 60& 63) ("Proposed Rule"), EPA, 26 (2011) (JOINT COMMENTS OF THE ELECTRIC RELIABILITY COUNCIL OF TEXAS, THE MIDWEST INDEPENDENT TRANSMISSION SYSTEM OPERATOR, THE NEW YORK INDEPENDENT SYSTEM OPERATOR, PJM INTERCONNECTION, L.L.C., AND THE SOUTHWEST POWER POOL).



valve mechanism, such as the one suggested by the ISO/RTO council, could be used effectively as a backstop approach to deal with these implementation issues.

## **Locational issues**

Locational issues manifest in several ways. It is important to understand that the term “locational” means a broader area than the immediate neighborhood surrounding a power plant. From a reliability perspective, local reliability issues may encompass a geographic area as large as an entire state. In AEP’s footprint, we are evaluating replacing a single blackstart unit that serves to re-start generation in our Virginia/West Virginia service areas in the case of a catastrophic blackout. The retirement of this single unit and the fact that it would no longer be available to provide blackstart capability could impact AEP’s ability to provide service to thousands of customers throughout the southeastern part of our service territory.

Additionally, replacement capacity, as well as its fuel source, namely natural gas, may not be available where it is needed. Certain areas of the country have a more robust gas delivery infrastructure than others. Secondly, the ancillary services associated with replacement capacity will not always have the same impact in one location as they would in another. It is important to note that many of the smaller coal-fired units that are expected to retire are the ones that provide the critical ancillary services the grid needs to remain reliable. These ancillary services include:

- **Voltage and reactive load support:** The complexity and size of localized grids and the fact that electricity cannot be transmitted over long distances without voltage support and reactive power at required levels necessitates having generating resources in particular locations. Many of the generating units most likely to be retired early by the pending EPA regulations provide this localized support. AEP has been working to address these needs and meet planned unit retirement dates. However, our ability to complete these projects in time to meet an inflexible compliance schedule is of great concern.
- **Frequency response:** The entire U.S. bulk electricity system – from the largest generating unit to the smallest home appliance – is designed to operate at a frequency of 60 hertz. Frequencies greater or less than 60 hertz have destructive effects on motors and equipment of all sizes and types. Steam turbines typically are best positioned to respond quickly when frequency corrections are needed. The importance of frequency response will increase with the addition of new intermittent generating resources such as renewables. We acknowledge the recent FERC

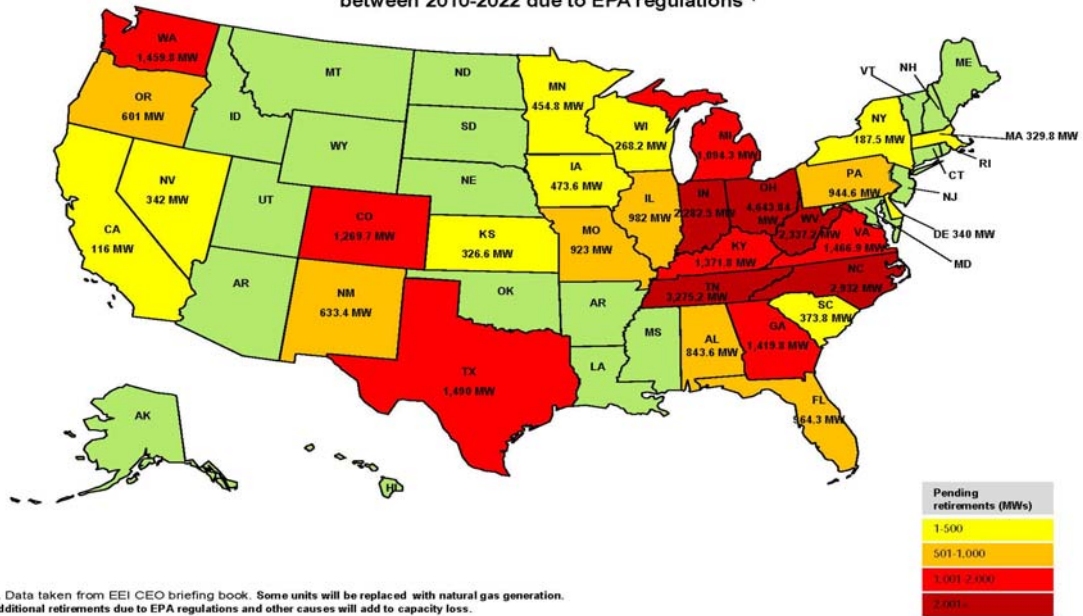
order providing incentives for units able to provide quicker response to frequency changes. But these investments take time to develop.

- **Load following:** Subcritical steam turbine units tend to have a large load range and are able to respond to minute-by-minute changes in load demands. Combustion turbines are significantly less efficient when they operate at less than full capacity, and permit restrictions often prevent sustained low-load operation at these units. Because of these characteristics, their load following range is small, making them less ideal and uneconomical to respond to these changes in demand.
- **System restoration or blackstart capability:** In the event of a system brownout or blackout, load rejection capability allows units to rapidly shed load and allows the unit to remain in an islanding condition (separate from the grid). This capability then allows the generator to reconnect and quickly help restart an electric grid that has gone down. Thirteen of AEP's 17 black start-capable units also have automatic load rejection capabilities. These units are all coal-based.

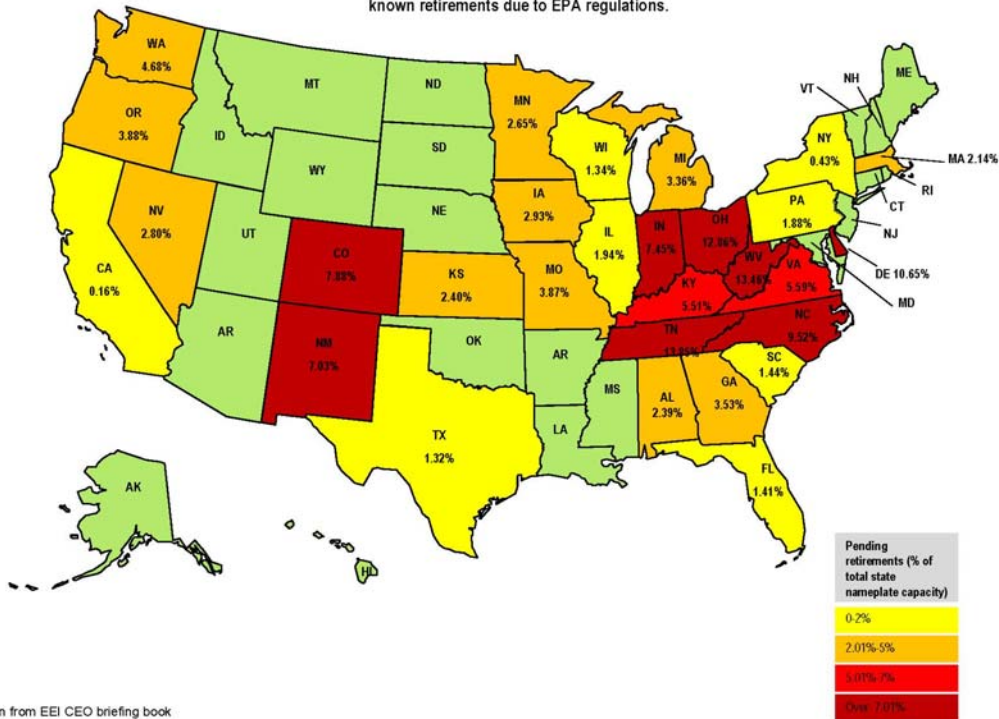
On a broader scope, one cannot assess reliability impacts only on a unit-by-unit basis, but must also review regional disparities. Fuel mixes vary by region, and those regions that are rich in coal resources will be harder hit by these regulations than those where natural gas is plentiful or where nuclear installations are more concentrated. .

The following maps, compiled by AEP using data provided by the Edison Electric Institute, shows regional impact disparity, first measured in megawatts, then in percentages of total capacity. However, due to a lack of transparency in data reporting to date, impacts may be even greater than shown in some regions.

Known total coal unit nameplate capacity to be retired between 2010-2022 due to EPA regulations <sup>1</sup>



Percentage of in-state nameplate generation capacity affected by upcoming known retirements due to EPA regulations.



## Local Economic Impacts

The negative impacts of these regulations will not be confined to reliability of the electric grid. They also will hurt local economies, while simultaneously raising certain AEP utilities' electric rates as much as 35 percent.<sup>11</sup> Natural gas plants typically employ roughly 25 percent of the workers needed to operate a coal-fired plant.<sup>12</sup> AEP is estimating potential job losses for 750 of its own employees through premature unit retirements (not including substantial ancillary business job impacts), while an estimated 170 permanent new jobs could be created by installation of retrofit technologies. As significant as our local job/ economic impacts are, they pale in comparison to the broader impacts on the national economy from much higher electricity and natural gas prices. These price increases will be felt by households, manufacturing and businesses across the U.S. A recent NERA study estimates a loss of 1.65 million job years between 2012 and 2020 due to the EPA rules.<sup>13</sup> Indirect job losses will affect local vendors, contractors and service providers. Although temporary construction jobs will be created, the compacted construction window is so brief that it will create a boom-bust situation. Especially in a weak economy, workers will be attracted to the construction jobs, relocate their families, then quickly lose those jobs and find themselves in a rural community without resources to support a high number of newly unemployed residents.

AEP is projecting a 2015 decline in payroll taxes of more than \$20 million. Our property tax payments, most often the primary funding source for local schools, could decline by approximately \$12 million. This will be a significant hit for the small, rural towns where most of our coal-fueled power plants are located.

### **Comprehensive Assessment and Approach**

Prior to finalization of the Electric Generating Unit Maximum Achievable Control Technology (EGU MACT) rule, a comprehensive reliability assessment is needed to identify and preliminarily address apparent reliability contingencies. This can be accomplished through early determinations of extensions for impacted units to allow continued operation while they complete the installation of controls or reliability improvements, including, but not limited to, construction of replacement generation or transmission alternatives.

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<sup>11</sup> Refer to company's June 9, 2011 press release

<sup>12</sup> <http://www.nei.org/resourcesandstats/documentlibrary/newplants/whitepaper/new-nuclear-plants-an-engine-for-job-creation-economic-growth>

<sup>13</sup> "Potential Impacts of EPA Air , Coal Combustion Residuals and Cooling Water Regulation" September 2011 Prepared by NERA Economic Consulting for American Coalition for Clean Coal Electricity

A primary stumbling block in discussions regarding the EPA regulations has been the lack of complete and transparent data. For a variety of reasons, including market sensitivities, generation owners have been reticent to reveal their retirement data. However, this information is of primary importance in assessing the reliability impact of the regulations on the electric grid. Without the timely submittal of potential generation retirements, it is not possible to accurately assess the impacts from the proposed regulations. Waiting on this detail to be provided, especially with the current timelines for notification of retirement in the RTOs and ISOs, results in a less than desirable outcome. AEP believes this information should be provided confidentially to the RTOs/ISOs and NERC Reliability Entities.

Such information should include:

- Identification of units that will be installing additional pollution control equipment and a realistic schedule for completion of that work (including time for commission approval and permitting, if required).
- Identification of changes in fuel mix that can reasonably be accommodated and a reasonable schedule for any needed modifications or approvals to support those changes.
- Permit requirements that constrain the current operation of any existing unit and any planned changes to eliminate or mitigate those constraints with the schedule for securing those changes.
- Outage periods currently scheduled to support ongoing unit operations and any planned installation of controls or other changes.
- New units scheduled to be completed within the planning period and their in-service dates.
- Transmission upgrades or other mitigation measures intended to address existing or anticipated needs within the planning period.

RTOs and, in non-RTO regions, NERC Regional Entities need access to long-term plans from generators, so their models can be more accurate. At a minimum, the plans should be 5-10 years in scope.

Although the Federal Energy Regulatory Commission (FERC) and the Department of Energy (DOE) have ultimate oversight over reliability, FERC designated NERC as the Electric Reliability Organization per the Energy Policy Act of 2005. It is within the purview of the FERC to further designate NERC and the RTOs to act on its behalf in gathering information needed to compile accurate and comprehensive

assessments. RTOs should not have to speculate on compliance plans because they have incomplete data. It is a reasonable expectation that all utilities should submit their plans to the RTOs, NERC, and/or their state utility commissions to conduct a comprehensive review. Until comprehensive data is available about planned retirements and retrofits, the available, the markets will not respond with new capacity.

Such review should consider transmission outages, transmission construction, coordination across regions (seams issues) and coordination with neighboring interconnections. Inter-relationships between RTO members and between neighboring regions cannot be over-emphasized. One need only look at the East coast blackout of Aug. 14, 2003, to fully appreciate the regional repercussions that can result from one aberration on the grid. And under NERC TPL (Planning) standards, absent the time to install or improve transmission to remedy unit retirement issues, the last resort to transmission emergencies per compliance is directed load shedding. In other words, reliability compliance per this planning standard and compliance with the aggressive EPA regulation time frames will combine to create greater risk of customer outages in response to transmission emergencies absent local generation or the needed transmission improvements. More time is needed to assess, plan, and implement plans.

Regional comprehensive assessments using detailed and comprehensive information of generator and transmission abilities, limitations, and operational plans are needed to create a multi-year compliance plan containing milestones and annual reviews.

Beyond the initial assessments, iterative analyses should be performed on at least an annual basis to ensure that unanticipated delays, synergistic impacts, and new information can be taken into account and provide additional flexibility where needed through a “safety valve” mechanism.

Emergency authorities should quickly consider addressing short-term needs that result from control equipment malfunctions, unforeseen extended outages, transmission failures or other circumstances that have immediate impacts on reliability. Such emergencies could be natural disasters such as hurricanes or seasonal storms.

### **Rational, Phased-in Solution**

AEP supports continued environmental progress achieved over realistic time frames. However, more time is needed for compliance with the current set of EPA regulations impacting coal-fueled power plants. Extending the timeframe provides flexibility in meeting emission reduction objectives without burdening operators and agencies alike on multiple approvals.

If these regulations are implemented within a reasonable schedule as suggested here, the EPA's stated environmental goals would be achieved with much less impact on reliability, customer cost and local economies. Under such an approach, AEP (and the industry) would be able to implement a program that provides a steady reduction in emissions at substantially lower cost, level employment and a safe work environment. Toward that end, AEP supports the Fair Compliance Act of 2011, a bi-partisan legislative initiative introduced by Sen. Joe Manchin (D-WV) and Rep. Dan Coats (R-IN). This legislation would streamline the compliance timelines for the EPA regulations, creating one timeline on which the utility industry would meet the requirements of both the Cross State Air Pollution Rule (CSAPR) and EG MACT regulations, extending the compliance schedule on the EGU MACT rule and CSAPR by two years and three years, respectively.

In addition to supporting this bill, AEP endorses the safety valve mechanism recommended by several RTOs as a backstop concept, in which plants identified as critical for preservation of grid reliability could adopt extended deadlines for compliance. This concept proposed by the RTOs has merit, but cannot be the primary solution to allow flexibility without bogging down the construction plans with incessant approvals from multiple agencies.

Finally, AEP believes the scope of deactivation to be considered in these regulations should include retirement, idling and de-rating of a unit; not just retirement. The full spectrum of potential results must be considered when assessing impacts to the nation's grid, which must remain balanced at all times of every day.

## **Conclusion**

AEP calls upon the FERC, with ultimate reliability authority, to weigh in for reliability as the EPA proceeds with its emissions reduction goals. From requiring all stakeholders to provide the data needed for analysis, to assessing their interrelationships and seams issues that may be created as various entities comply with differing response plans and schedules, FERC has a critical role in this process and must step forward to ensure the ongoing reliability of the nation's electric grid.

AEP supports environmental regulation or legislation that establishes a more coordinated, realistic and cost-effective compliance program. The regulations must provide appropriate flexibility to achieve the desired emission reductions while ensuring grid reliability and managing customer cost. We believe that a multi-year phased-in approach with appropriate milestones is the most logical way to accomplish the EPA's objectives.

Our approach is three-pronged:

1. **Extension of time.** The industry needs achievable time frames in order to analyze and safely and reliably respond to the EPA regulations. This can be accomplished either through a legislative solution or through implementation of the EPA rule on a schedule that widely applies the one year compliance extension available to the Administrator (for both major retrofits and for unit retirements) and utilizes the Presidential authority for a two year extension for national security reasons. This can be coupled with a reliability “safety valve” to address any remaining reliability concerns.
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3. **Safety valve backstop.** Allowance of a “safety valve” as a backstop mechanism, and emergency authority to address short-term needs resulting from unexpected generation and transmission outages that have immediate impacts on reliability (i.e., control equipment malfunctions, unforeseen extended outages, transmission failures or other circumstances).



Providing additional time will:

- Allow utilities time to install environmental retrofits with minimal idling or derating of generating units.
- Allow unit retirements to occur over a more reasonable timeframe and to address any potential transmission solutions, which could be needed to address and minimize grid reliability issues.
- Support a stable, safe and productive workforce over a longer period of time.
- Provide the industry assurance that material procurement, qualified craft labor; permitting and regulatory approvals can be obtained in an appropriate manner.
- Give local communities time to plan for any potential economic losses.

AEP again would like to thank the Commission for its attention to this crucial matter and for the opportunity to participate.