

**STATEMENT OF CARL A. MONROE  
EXECUTIVE VICE PRESIDENT AND CHIEF OPERATING OFFICER  
SOUTHWEST POWER POOL, INC.**

**BEFORE THE**

**FEDERAL ENERGY REGULATORY COMMISSION**

*Docket No. AD12-1 Technical Conference*

November 30, 2011

Southwest Power Pool, Inc.  
415 North McKinley, #140 Plaza  
West  
Little Rock, AR 72205  
<http://www.spp.org>

**Summary of the Testimony of Carl A. Monroe,  
Executive Vice President and Chief Operation Officer  
Southwest Power Pool, Inc.  
November 30, 2011**

Southwest Power Pool, Inc. (SPP) is a FERC-approved Regional Transmission Organization whose mission statement is: **“Helping our members work together to keep the lights on . . . today and in the future.”** SPP is mandated by FERC to ensure reliable supplies of power, adequate transmission infrastructure, and competitive wholesale prices of electricity. SPP is responsible for administering open access transmission service and regional transmission planning across the SPP Region, which includes the states of Arkansas, Kansas, Louisiana, Mississippi, Missouri, Nebraska, New Mexico, Oklahoma, and Texas.

SPP is a member-driven organization with a core ideology to do the right thing for the right reason in the right way. SPP’s evolutionary approach to market development and transmission expansion planning have proven to be effective to date, but those efforts face risks given the challenges with the uncertainty and time pressures associated with approved and pending EPA Rules. Current timelines to incorporate those EPA Rules, adversely affect SPP’s development and implementation of comprehensive short and long range plans as a result of the expected disruptive impact on existing and planned resources within the SPP footprint. Additionally, aside from resource adequacy concerns, the current implementation timeline present threats to the reliable operation of the grid. A core principle at SPP is that reliability and economics are inseparable. SPP’s approved existing long range plans reflect in excess of \$5 billion of approved transmission projects to improve grid efficiencies while maintaining reliability standards. Because of the uncertainty in the recently approved and pending EPA Rules, the expected goals and participants, and the compressed implementation timeframe, existing approved and proposed transmission expansion plans for SPP have not be able to give due consideration to the significant impact to resource availabilities due to inadequate allowances, outages to retrofit existing power plants, changes to unit dispatch and commitment, etc. All of these impacts are a direct result of EPA’s accelerated timelines for implementation of current and pending rules. As noted below, SPP is primarily concerned with time constraints prohibiting the development of comprehensive and efficient long range plans to address EPA Rules and supports a

“reliability safety valve” in limited circumstances to manage grid security with due consideration of economic impacts.

Haste makes waste. Time is needed to compile comprehensive plans based on final EPA rules, perform assessments to ensure reliability and effect on SPP’s Integrated Transmission Planning (ITP) process approved by the FERC in the near term (ITPNT), as well as associated impacts to longer term ten-year (ITP10) and twenty-year (ITP20) plans, evaluate and make adjustments as necessary to maintain reliability and effective markets in the interim, assess market conditions, etc. Although recent EPA regulations such as the final CSAPR rules were refined in October 2011, SPP members have yet to finalize compliance plans for 2012 given uncertainty about the pending EPA Mercury and Air Toxics Standards (MATS) rules which are expected in mid-December 2011. MATS and other EPA regulations are expected to have a profound impact to existing generation resources within SPP in the 2014 – 2016 timeframe. As a result, time is needed for reviewing and understanding the final rules, for the development of compliance and mitigation plans by generator owner/operators, for the planning authorities in their aggregation and refinement of those plans into regional assessments, coordinating those plans with their neighbors since allowances are managed at the state, not RTO, level, and then having time to implement those plans. Once plans are developed and finalized with due consideration of reliability needs, it is expected that “reliability safety valves” may be needed to provide some time to implement prudent compliance plans.

These EPA Rules will have a significant impact on our nation’s utility industry and have been a major concern for SPP’s Board of Directors and Strategic Planning Committee as well as the SPP Regional Entity Board of Trustees. SPP has been diligent in pursuing plans based on the limited information both it and its members have had to date. SPP’s ITP20 completed early this year included future considerations that these rules might impact. SPP’s current ITP10, whose scope was developed this year, included a Future 2 to reflect the expected impact of pending EPA regulations of smaller and older fossil, primarily coal, resources within the footprint which amounted to approximately 2.6 GW of nameplate capacity.

In addition to longer range economic planning studies such as the ITP10 and ITP20, SPP staff has been actively engaged in collecting input and performing reliability assessments to determine the impacts of EPA rules prior to the adoption of CSAPR in July 2011. The challenges with addressing EPA Rules in

SPP and the expected impacts on SPP operations were not anticipated since Kansas, Nebraska and Texas were not in CAIR, which preceded CSAPR.

SPP's first reliability assessment regarding EPA Rules in mid-2011 focused on supply adequacy in 2013 and 2015 based on a survey of select SPP members with results extrapolated over the footprint. Capacity margins were determined to be unacceptable in 2013 under worst case conditions driven to a large extent by projected units becoming unavailable in the interim due to mothball/idling of capacity, equipment retrofits and outages, etc. These findings were reflected in Nick Brown's letter to the EPA of July 19, 2011 (Attachment 1) which noted two recommendations: 1) "EPA provide a gradual compliance schedule that allows the industry time to meet the proposed requirements in a reliable, safe and economic manner. Working with the industry to institute these changes will help preserve reliable system operations and also allow for a more gradual integration of the costs of compliance that could significantly mitigate reliability issues and sudden increases in consumer electricity prices; and 2) EPA include in its rules a temporary waiver mechanism under which the affected generator owner could seek an extension for continued operation of a generator while solutions, such as transmission expansion or demand response programs, can be assessed and approved by SPP and other transmission service providers."

As a result of these findings, the SPP Board of Directors and Strategic Planning Committee directed additional studies to be performed which focused on a 2012 assessment of the CSAPR in September 2011 (SPP CSAPR Study). The study began with a review of the EPA CSAPR Model results which showed that 10.7 GWs of generating capacity in the SPP RTO footprint would not be deployed in 2012. Further analysis to account for capacity that is not expected to be needed for peak yielded a net impact of CSAPR of 5.4 GWs from 48 units that would not be utilized across the 2012 Summer Peak. Additionally, the SPP CSAPR Study showed a shift in the generation from larger plants to smaller plants. Preliminary results of the SPP CSAPR study show that many overloads greater than 120% of a facility's emergency ratings were found under N-1 conditions. Furthermore, due to the non-deployment of major units in some areas there were voltage issues below 85%, with two-thirds of the voltage issues occurring on 115kV lines, and the remaining one-third on 69 kV lines. Non-convergence of many scenarios were of particular concern in this initial reliability assessment that was based on EPA IPM model outputs regarding units consuming no fuel in SPP. These results were shared with SPP stakeholders in September 2011 in

advance of the September 20, 2011 letter from Nick Brown which was also signed by the SPP RE Board of Trustees (Attachment 2). This letter concluded with: “The EPA must provide time to allow the industry to plan an approach to comply with its rules in a reliable and reasonable fashion. As it stands now, SPP and its members may be placed in the untenable position of deciding which agency’s rules to violate, FERC or EPA. Putting an industry with critical infrastructure in the position of choosing which agency’s rules to violate is bad public policy. SPP suggests that the EPA delay CSAPR’s effective date at least a year to allow for investigating, planning, and developing solutions to assist our members in maintaining grid reliability and compliance with both its current regulatory bodies and all of the EPA regulations that impact the electric industry.”

Concerns about the reliability and economic impacts of the approved and pending EPA Rules were elevated at the SPP October 13, 2011 Strategic Planning Committee meeting which requested a survey be developed and distributed to generator owner/operators in the footprint to understand their compliance plans with the pending EPA Rules and the expected impacts to generating resources within its footprint, with a focus on resource adequacy as well as reliability impacts using NERC reliability rules, which include a traditional powerflow modeling effort and n-1 contingencies with a focus on 2012 initially. Preliminary survey results have been compiled and it appears that there may be some localized resource adequacy concerns during the summer peak for 2012. Planning without defined goals and performance objectives is difficult, if not impossible. The refined CSAPR in October 2011 and uncertainty regarding MATS have effectively paralyzed definitive regional assessments and provided tremendous uncertainty regarding future expansion plans.

SPP staff is working with stakeholders to perform a comprehensive assessment of pending EPA Rules beginning in January 2012 to reflect generator owner/operator compliance plans for CSAPR and MATS and other issues that are expected in the 2014-2016 time period. Time and resources will be needed to obtain compliance plans from generator owner/operators involving an additional survey and workshops. Even after obtaining these plans, SPP will need time to perform the comprehensive assessment including development of transmission expansion plans. SPP staff looks forward to working diligently with its members and affected stakeholders including neighboring regions to develop effective long range plans, which include mitigation plans, as appropriate.

SPP staff is also working with its members to provide responses to the questions posed by Commissioner Moeller and will provide responses as soon as practical. It is clear that SPP needs to facilitate discussions, coordinate activities, and perform reliability assessments to maintain grid security with due consideration of economics among our members, stakeholders and neighbors for these EPA Rules that appear to be game changers to our industry. SPP is confident in our ability to address regulations with an appropriate balance between costs and benefits, but need certainty on requirements first then some time to identify and implement appropriate solutions.

SPP is not asking for changes in the EPA Rules, any FERC regulations, or the NERC reliability rules. SPP and its members need time to develop and implement a comprehensive plan in its region and coordinated with its neighbors. SPP also needs a “safety valve” to allow for rational planning activities. These are needed in order to “Help our member keep the lights on... today and in the future.”

Thank you for providing me the opportunity to speak on these important issues confronting the electric industry. I look forward to any questions that you may have.

## **Attachment 1**



HELPING OUR MEMBERS WORK TOGETHER  
TO KEEP THE LIGHTS ON... TODAY AND IN THE FUTURE

---

Nicholas A. Brown, President & CEO

**VIA ELECTRONIC SUBMISSION AND FIRST CLASS MAIL**

July 19, 2011

Water Docket  
U.S. Environmental Protection Agency  
Mail Code: 4203M  
1200 Pennsylvania Ave., NW  
Washington, DC 20460

EPA Docket Center  
U.S. Environmental Protection Agency  
Mail Code: 2822T  
1200 Pennsylvania Ave., NW  
Washington, DC 20460

Re: National Pollutant Discharge Elimination System – Cooling Water Intake Structures at Existing Facilities and Phase I Facilities; Docket ID No. EPA-HQ-OW-2008-0667

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; Docket ID Nos. EPA-HQ-OAR-2009-0234 and EPA-HQ-OAR-2011-0044

Dear Sir or Madam:

Southwest Power Pool, Inc. (SPP) appreciates the opportunity to comment and respectfully submits the attached report entitled, "Review of the Potential Reliability Impacts of Proposed EPA Regulations Impacting Generation in the SPP Footprint", dated July 19, 2011, in response to the U.S. Environmental Protection Agency's (EPA) proposed rules issued in the above-captioned dockets. SPP's preliminary assessment is based on a similar study performed by ERCOT which found comparable results. SPP's cursory analyses identify substantial reliability and cost impacts under credible scenarios with extremely conservative inputs and assumptions, particularly in light of the recently released EPA Cross-State Air Pollution Rule (CSAPR) which was not considered in this assessment.

SPP is an Arkansas non-profit corporation with its principal place of business at 415 N. McKinley, Suite 140, Little Rock, Arkansas 72205. Currently, SPP has 64 members serving approximately 15 million customers in a 370,000 square mile service territory covering all or part of the following states: Arkansas, Missouri, Kansas, Oklahoma, Louisiana, Mississippi, Nebraska, New Mexico and Texas. SPP's members include investor-owned utilities, municipals, cooperatives, state authorities, independent power producers, power marketers, independent transmission companies, as well as a contract participant. SPP is a Federal Energy Regulatory Commission (FERC) approved Regional Transmission Organization (RTO) and administers open-access transmission services across the SPP region under the terms of SPP's Open Access Transmission Tariff. As an RTO, SPP plans for and



functionally controls the transmission infrastructure committed to it and administers a competitive real-time wholesale electricity marketplace.

As outlined in the paragraphs that follow, SPP is concerned that the timeframe for implementation of the proposed rules may not provide generator operators sufficient time to bring their facilities into compliance, and they would be prohibited from operating until compliance activities can be completed. Should this occur, threats to the reliable operation of the grid will occur.

While SPP's initial assessment has focused on coal and gas units and select EPA rules similar to the ERCOT assessment, other pending requirements – carbon dioxide regulations for example – could have major impacts on future resource plans, system reliability, and economics. It is important to note this initial assessment did not consider impacts the reciprocating internal combustion engines (RICE) regulations may have on the potential loss of small units which many municipalities have relied upon. Elimination of those units could create local congestion challenges and require both transmission expansion and local programs to keep the lights on. Similarly, SPP did not consider the impact of Regional Haze requirements and the most recently published Cross-State Air Pollution Rule, which will exacerbate impacts on the system and SPP's ability to maintain adequate generating capability and reserves in the SPP footprint.

Based on this cursory assessment, which seems conservative given recent developments, it appears that EPA regulations could prevent reliable operation of the SPP RTO. Further impacts may occur, including failure to meet the requirements set forth by the North American Electric Reliability Corporation which were approved by FERC. SPP's findings and conclusions are not intended to exaggerate the system impacts, but rather to point out the possible types of adverse outcomes that may result in worst case scenarios as defined in this assessment.

SPP is concerned that the timeframe for compliance with the proposed rules, should they be approved, may be more aggressive than what can be achieved by the industry. Should this be the case it may adversely impact grid reliability due to the sudden required retirements and outages of units. At this point, SPP is aggressively monitoring several areas of its system where temporary mothballing of facilities appears possible and may lead to unstable, and hence unreliable, operating conditions. SPP encourages the EPA to work with generation owners to develop flexible compliance schedules to ensure equipment installation is completed in a timely, safe, reliable and cost-effective manner without an arbitrary deadline. Compliance plans developed in a collaborative manner may lessen the negative impact and/or prevent the unavailability of labor, parts, and other resources that may result from an arbitrary deadline. Such an approach would also ease concerns over grid instability caused by mass outages on generators to install the required equipment.

Furthermore, SPP is concerned that sufficient time will not be available to complete transmission construction activities necessary to mitigate the prohibited operation of certain generators and to complete the construction of replacement resources. As SPP becomes aware of units removed from service due to compliance with these new regulations, it will work diligently to plan and direct the transmission construction necessary to mitigate any resulting reliability issues on the SPP transmission system. However, as Transmission Customers within the region remove units from service and secure new replacement capacity, SPP is concerned as to the uncertainty of being able to identify the needed upgrades and place those new lines in service. SPP is responsible for overseeing the reliable operation of the SPP transmission system and is concerned that, in the event SPP is unable to construct the necessary lines in time and units are unable to operate due to these additional EPA restrictions, the SPP

transmission system may be placed in an unreliable operating state or one that necessitates firm load curtailments/customer outages.

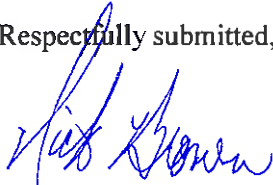
As a result of these concerns, SPP has two specific recommendations:

- First, SPP recommends that the EPA provide a gradual compliance schedule that allows the industry time to meet the proposed requirements in a reliable, safe and economic manner. Working with the industry to institute these changes will help preserve reliable system operations and also allow for a more gradual integration of the costs of compliance that could significantly mitigate reliability issues and sudden increases in consumer electricity prices.
- Second, SPP recommends that the EPA include in its rules a temporary waiver mechanism under which the affected generator owner, could seek an extension to allow for the continued operation of a generator while solutions, such as transmission expansion or demand response programs, can be assessed and approved by SPP and other transmission service providers.

Although these recommendations are based solely upon SPP's initial assessment, they appear to be prudent under any foreseeable conditions that may occur.

Please do not hesitate to contact me should you have questions or would like to request additional information.

Respectfully submitted,



Nicholas A. Brown  
President & CEO  
(501) 614-3213 • Fax: (501) 664-9553 • nbrown@spp.org

cc: SPP Board of Director, Members Committee, Strategic Planning Committee  
State Regulators and Federal Legislators in AR, KS, LA, MO, MS, NE, NM, OK, and TX

## **Attachment 2**

**VIA ELECTRONIC MAIL AND FIRST CLASS MAIL**

September 20, 2011

Administrator Lisa P. Jackson  
USEPA Headquarters  
Ariel Rios Building  
1200 Pennsylvania Avenue, N. W.  
Mail Code: 1101A  
Washington, DC 20460

Re: SPP's Review of the EPA's IPM Analysis of the Cross-State Air Pollution Rule, Docket ID No. EPA-HQ-OAR-2009-0491

Dear Ms. Jackson:

Southwest Power Pool, Inc. (SPP), in its capacity as a Federal Energy Regulatory Commission (FERC) approved Regional Transmission Organization (RTO) and a Regional Entity, is concerned that the Environmental Protection Agency (EPA) finalized the Cross-State Air Pollution Rule (CSAPR) without adequately assessing the reliability impacts of the CSAPR on the SPP region. SPP originally expressed concern with the reliability impacts of proposed regulations<sup>1</sup> in its July 19, 2011 comment letter to the EPA.

As required by the Energy Policy Act of 2005, FERC has approved mandatory and enforceable reliability standards promulgated by NERC with which the industry must comply. These standards were developed through a well vetted industry process identifying key requirements to ensure the bulk electric system meets an adequate level of reliability. Failure to comply with these standards can affect the ability of the power grid to operate reliably as well subject SPP and its members to financial penalties. These standards require that SPP's Transmission Planners ensure that transmission lines are not overloaded and that voltage is maintained within certain prescribed limits in the event of the failure of a single element in the system. Additionally, the standards require that Transmission Operators operate in real-time within certain limits. In order to meet the demands of the system there needs to be an adequate balance of generation and transmission availability both in the short and long term. The timing of the CSAPR regulations does not provide the SPP region with enough time to ensure that adequate balance.

Our reliability modeling<sup>2</sup> indicates that the CSAPR Integrated Planning Model 4.1 (IPM) results, as depicted by the EPA, are likely to cause SPP to be out of compliance with the applicable NERC standards as early as 2012. SPP's planning models identified 5.4 GW from the 48 generation units identified by the EPA with zero fuel burn in 2012 that would have been dispatched during the 2012

---

<sup>1</sup> On July 19, 2011, Nicholas A. Brown, SPP President and CEO, submitted comments to the EPA in Docket ID Nos. EPA-HQ-OW-2008-0667, EPA-HQ-OAR-2009-0234, and EPA-HQ-OAR-2011-0044, additionally providing SPP's preliminary assessment of the potential reliability impacts of proposed EPA regulations impacting generation in the SPP footprint.

<sup>2</sup> SPP removed all generation units in its models that consumed zero fuel in the EPA models. No other SPP model adjustments were made.

Summer Peak conditions. Our analysis revealed 220 overloads in excess of the required, 100% of emergency ratings under contingencies, and 1047 circumstances at various locations on the transmission system where voltage was below the prescribed lower limit of 90% of nominal rating. The statistics in this analysis must be viewed as being indicative, not definitive, results and are probably very conservative compared to what would be experienced in the real world should the modeled system conditions exist. An even clearer representation of reliability violations can be found by applying higher operability limits of 120% to the overloads. There were 16 such overloads on the system. Using a similar out of normal range there were 93 circumstances where voltage dropped below 85% of nominal. These “clear-cut” examples of standards violations represent the well founded concerns regarding the timeline with which the CSAPR would be instituted.

Additionally, 30 contingency scenarios did not solve, which is indicative of extreme system constraints, including the potential of cascading blackouts similar to what occurred in 2003 or which could require the shedding of firm load (that is, localized rolling black-outs initiated by utilities within the SPP region) to avoid more widespread and uncontrolled blackouts and to remain in compliance with reliability standards. Some of the contingencies could be resolved with other short-term transmission and/or resource solutions, but several could not. In those cases, SPP would be in clear violation of mandatory reliability standards and subject to penalty from FERC. However, SPP cannot be compliant with NERC’s planning standards without placing its generation owners in violation of EPA standards when the unutilized units in the IPM are unavailable to SPP. Further exacerbating this situation, SPP’s analysis also revealed that generation production from “small units”<sup>3</sup> increased from 13 to 57 units deployed. Some of these units are likely subject to the reciprocating internal combustion engines (RICE) regulations, which were not evaluated as part of this reliability study. If we look beyond the summer peak hour studied, the unavailability of approximately 11 GWs<sup>4</sup> of total capacity from the EPA model in SPP’s footprint would likely result in additional localized reliability issues.

The result of SPP’s reliability assessment of the EPA’s CSAPR IPM generation dispatch indicates serious, negative implications to the reliable operation of the electric grid in the SPP region raising the possibility of rolling blackouts or cascading outages that would likely have significant impacts on human health, public safety and commercial activity within SPP. These regulations further compound the reliability impacts addressed by SPP in its July 19, 2011 comment letter, which focused on the MACT regulations to be enacted in 2014/15. The time period between finalization of the CSAPR and its effective date is too short to allow SPP and its members/registered entities to appreciate the effects of the rule and to take actions to ensure reliability.

SPP supports a more flexible approach to meeting the emission requirements under the CSAPR, as stated in a joint letter from the New York Independent System Operator, Midwest Independent System Operator, PJM Regional Transmission Organization, the Electric Reliability Council of Texas, and SPP to the EPA in August. The EPA must provide time to allow the industry to plan an approach to comply with its rules in a reliable and reasonable fashion. As it stands now, SPP and its members may be placed in the untenable position of deciding which agency’s rules to violate, FERC or EPA. Putting an

---


<sup>3</sup> “Small units” denotes those units generating 25 megawatts or less per unit.

<sup>4</sup> Although the EPA model had additional units and capacity with zero fuel burn in 2012 (10.7 - 10.9 GW in total depending on the source of the Pmax), many of these units which were not dispatched in our 2012summer model will be needed during off-peak load periods to accommodate outages and to maintain system reliability.

industry with critical infrastructure in the position of choosing which agency's rules to violate is bad public policy. SPP suggests that the EPA delay CSAPR's effective date at least a year to allow for investigating, planning, and developing solutions to assist our members in maintaining grid reliability and compliance with both its current regulatory bodies and all of the EPA regulations that impact the electric industry.

Your prompt attention to this matter is greatly appreciated. Please do not hesitate to contact me if you have any questions or would like to discuss this matter further.

Respectfully submitted,



Nicholas A. Brown  
President & CEO  
Southwest Power Pool, Inc.  
(501) 614-3213 • Fax: (501) 664-9553 • nbrown@spp.org



John Meyer  
Chairman and Trustee  
Southwest Power Pool Regional Entity



David Christiano  
Trustee  
Southwest Power Pool Regional Entity



Gerry Burrows  
Trustee  
Southwest Power Pool Regional Entity

cc: SPP Board of Directors  
SPP Regional State Committee  
SPP Strategic Planning Committee  
State Regulators in Arkansas, Kansas, Louisiana, Missouri, Mississippi, Nebraska, New Mexico,  
Oklahoma, and Texas



HELPING OUR MEMBERS WORK TOGETHER  
TO KEEP THE LIGHTS ON... TODAY AND IN THE FUTURE

---

Congressional Delegations of Arkansas, Kansas, Louisiana, Missouri, Mississippi, Nebraska, New Mexico, Oklahoma, and Texas  
Governors of Arkansas, Kansas, Louisiana, Missouri, Mississippi, Nebraska, New Mexico, Oklahoma, and Texas  
North American Electric Reliability Corporation  
President Barack Obama  
Secretary of Energy Dr. Steven Chu  
Federal Energy Regulatory Commission