BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of an Investigation of the Cost to Missouri's Electric Utilities Resulting from Compliance with Federal Environmental Regulations	)))	File No. EW-2012-0065

RESPONSES OF SOUTHWEST POWER POOL, INC. TO WORKSHOP QUESTIONS AND SCENARIOS.

COMES NOW, Southwest Power Pool, Inc. ("SPP"), by and through its counsel, and hereby submits its Responses to the Workshop Questions and Scenarios ("Responses") in response to the Workshop Questions and Scenarios filed by the Public Service Commission of the State of Missouri staff on January 4, 2016. SPP's Responses were prepared by Lanny Nickell, Vice President, Engineering, and are attached hereto as Attachment 1.

Respectfully submitted,

/s/ Mark W. Comley
Mark W. Comley #28847
NEWMAN, COMLEY & RUTH P.C.
601 Monroe Street, Suite 301
P.O. Box 537
Jefferson City, MO 65102-0537
(573) 634-2266
(573) 636-3306 FAX
Email: comleym@ncrpc.com

and

Erin Cullum Marcussen, AR BIN 2004070
Southwest Power Pool, Inc.
201 Worthen Drive
Little Rock, AR 72223
Telephone: (501) 688-2503
Email: ecullum@spp.org

Attorneys for Southwest Power Pool, Inc.

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of this document was sent via e-mail on this 1st day of February, 2016, to General Counsel's Office at staffcounselservice@psc.mo.gov; and Office of Public Counsel at opcservice.ded.mo.gov.

/s/ Mark W. Comley

Attachment 1

Utility name:
Southwest Power Pool, Inc. ("SPP")

Contact information of person completing questions:
Lanny Nickell, Vice President Engineering
Southwest Power Pool, Inc.
201 Worthen Drive
Little Rock, AR 72223
(501) 614-3232
lnickell@spp.org

SPP appreciates the opportunity to participate in the discussions related to this important matter. Although the majority of questions posed by the Missouri PSC do not apply to SPP, SPP has provided responses to certain questions. In addition, SPP offers the following comments for the Missouri Commission's consideration.

SPP takes no position with respect to the Clean Power Plan (CPP) compliance approaches employed by the states within its region. However, as the Regional Transmission Operator for the SPP region (which covers all or part of 14 states), SPP has an interest in mitigating impacts to its core functions of planning and operating the electric grid. In addition, SPP utilizes a market platform for obtaining the services required for electric grid management (*i.e.* energy and ancillary services). Because the CPP will impact the capacity portfolio in the SPP region, it will necessarily impact the economics of the relevant SPP markets. States can consider both the reliability and cost impacts to the SPP regional grid as they develop their plans, and, as relevant, structure their plans to mitigate potential impacts.

With respect to mitigating reliability and economic impacts, SPP studies have indicated that regional approaches may be beneficial. Although, SPP has not performed a quantitative analysis of the final Section 111(d) rule, it has performed quantitative analyses of the draft rule that focused on reliability and economic impacts on the SPP regional electric grid.[1] SPP has also reviewed the final rule and has produced qualitative assessments of mass-based and rate-based compliance approaches and of the proposed Federal Plan. These assessments can be found at: http://www.spp.org/documents/33058/mass-based%20and%20rate-based%20comparison_(redline)(2).pdf and at http://www.spp.org/documents/33057/spp%20comments%20on%20proposed%20federal%20plan_(redline)(2).pdf. SPP has also prepared a set of talking points that it uses in dialogue

[1] Until the details of all state plans and/or federal plans are known, a non-speculative quantitative analysis of the final rule cannot be performed. The analyses performed by SPP were based on the clean power plan draft rule. Because the specific impacts related to state plans/federal plans were not known, the analyses were based on assumptions about the impact the draft rule would have on the capacity portfolio in the SPP region, which, in turn, impacts system operations and economics of the SPP regional electric grid.

with state agencies and stakeholders. These can be found at: http://www.spp.org/documents/33061/spp%20cpp%20talking%20points.pdf.

The SPP studies indicate that a regional approach to CPP compliance may mitigate potential economic and reliability impacts to the SPP region.[2] Therefore, states may want to consider this as they look at CPP compliance options. .

To the extent a state is interested in understanding the potential reliability and / or economic impacts of particular compliance approaches, the plan should be assessed relative to the structural and operational realities of the grid. The most effective way to accomplish this is to work with the system operator (SPP for the SPP region) to facilitate a coordinated review of all compliance plans that affect the SPP region.[3] SPP stands ready to work with states in the SPP region to assist in any way that it can facilitate a reliable, cost effective approach to compliance.

The majority of the following questions do not warrant responses from SPP. SPP offers the following comments on relevant questions.

1. Please identify planned unit retirements
    a. Unit, capacity, date of planned retirement
    b. Plan for load replacement and rationale/estimated cost associated with that plan
    c. Are these planned retirements a result of the Clean Power Plan?
    d. Has your utility modified its retirement plans based on the final Section 111(d) rule?
    e. Is there a possibility that these plans will change based on the state compliance plan?
    f. What implications/costs would be involved if your utility needed to move a planned retirement date to assist with state compliance (e.g., a planned retirement is scheduled for 2035, but the retirement is moved to 2029)?

Response: Not applicable to SPP.

2. Please provide the estimated cost of compliance with the final Section 111(d) rule based on each of the following scenarios or assumptions:

[2] A regional compliance approach does not have to depend upon a single compliance plan for a geographic region, but could be accomplished with compatible state compliance plans that rely on market-based trading solutions.

[3] The CPP requires states to assess the reliability impacts of draft compliance plans and to submit the results of those analyses with the proposed state plans to EPA. Although it does not prescribe any particular methodology or third party reviewer, it recommends that states coordinate with their relevant system operators, which is the ISOs/RTOs in organized market regions of the country.

a. Missouri uses a mass-based approach and allocates allowances pro-rata based on an historical baseline (sometimes referred to as grandfathering) using one of the following parameters:
    i. CO_2 emissions
    ii. Heat input
    iii. Net Generation
b. Missouri uses a mass-based approach as described in scenario "a" and allowances are either:
    i. Irrevocable even if a unit retires or
    ii. Redistributed to existing affected units if a unit retires
c. Missouri uses a mass-based approach and allocates allowances as described in Scenario "a" and includes set-asides for one or more of the following:
    i. Renewable energy projects
    ii. Energy efficiency projects
    iii. Existing NGCC output-based
d. Missouri uses a mass-based approach and allocates allowances based on updating output-based allocations where affected sources and potentially one or more of the following are eligible to receive allocations based on their pro-rata share of updated generation levels each compliance period:
    i. Renewable generating resources that began operation post 2012
    ii. New/uprated nuclear
    iii. Energy from qualified biomass
    iv. Energy savings from post 2012 demand-side energy efficiency measures
e. Missouri uses a mass-based approach and, similar to the RGGI regional auction model, auctions allowances with proceeds deposited into an energy efficiency investment fund. Assume a market clearing price per allowance of:
    i. $5.50;
    ii. $7.50.
f. Missouri uses a mass-based approach and allocates allowances as described in Scenarios "a" or "d" and includes a new source complement.
g. Missouri uses a mass-based approach and allocates allowances as described in Scenarios "a" and "d" and sets aside five percent (5%) of allowances for renewable energy or energy efficiency.
h. Missouri takes advantage of the Clean Energy Incentive Program.

Response: SPP has not performed an assessment of the cost of compliance with the final rule, and has not evaluated these mass-based scenarios. SPP has undertaken a qualitative analysis of the mass and rate based approaches, which is available on the SPP website at: http://www.spp.org/documents/33058/mass-based%20and%20rate-based%20comparison_(redline)(2).pdf.

3. Please describe any anticipated reliability issues or capacity constraints if Missouri implements a compliance plan that includes the following scenarios or assumptions:
    a. Missouri uses a mass-based approach and allocates allowances pro-rata based on an historical baseline using one of the following parameters:
        i. CO_2 emissions
        ii. Heat input
        iii. Net Generation
    b. Missouri uses a mass-based approach as described in scenario "a" and allowances are either:
        i. Irrevocable even if a unit retires or
        ii. Redistributed to existing affected units if a unit retires
    c. Missouri uses a mass-based approach and allocates allowances as described in Scenario "a" and includes a set-aside for one or more of the following:
        i. Renewable energy projects
        ii. Energy efficiency projects
        iii. Existing NGCC output-based
    d. Missouri uses a mass-based approach and allocates allowances based on updating output-based allocations where affected sources and potentially one or more of the following are eligible to receive allocations based on their pro-rata share of updated generation levels each compliance period:
        i. Renewable generating resources that began operation post 2012
        ii. New/uprated nuclear
        iii. Energy from qualified biomass
        iv. Energy savings from post 2012 demand-side energy efficiency measures
    e. Missouri uses a mass-based approach and, similar to the RGGI regional auction model, auctions allowances with proceeds deposited into an energy efficiency investment fund. Assume a market clearing price per allowance of:
        i. $5.50;
        ii. $7.50.
    f. Missouri uses a mass-based approach and allocates allowances as described in Scenarios "a" or "d" and includes a new source complement.
    g. Missouri uses a mass-based approach and allocates allowances as described in Scenarios "a" and "d" and sets aside five percent (5%) of allowances for renewable energy or energy efficiency.
    h. Missouri takes advantage of the Clean Energy Incentive Program.

Response: SPP has not performed a reliability assessment of a mass based approach or any of the suggested allowance allocation approaches, and cannot appropriately evaluate associated reliability implications without knowing what other states are including in their compliance plans.

4. If Missouri uses a mass-based approach without a new source complement and allocates fixed irrevocable allowances pro-rata based on an historical baseline without any set- asides, to what extent would your company's compliance approach likely rely upon purchasing allowances from the market and/or building new natural gas combined cycle capacity? Explain if and how this would this change if the new source complement and/or an alternative allowance allocation process were used?

Response: Not applicable to SPP.

5. Are you aware of an approach that Missouri may be able use in its plan to address emissions leakage to new units while minimizing cost and reliability impacts? If so, explain the approach. If not, which approaches to address emissions leakage in the state plan would be most likely to increase cost or cause reliability concerns?

Response: Not applicable to SPP.

6. If Missouri takes advantage of the Clean Energy Incentive Program, will your utility's current plans for plant investment be modified? If yes, please explain.

Response: Not applicable to SPP.

7. Are there drawbacks to Missouri taking advantage of the Clean Energy Incentive Program? If yes, please explain.

Response: Not applicable to SPP.

8. Are there drawbacks to setting aside allowances for renewable energy or energy efficiency projects other than the Clean Energy Incentive Program? If yes, please explain.

Response: Not applicable to SPP .

9. Are there drawbacks to auctioning allowances? If yes, please explain.

Response: Not applicable to SPP .

10. Is there a trading approach that will mitigate any anticipated reliability concerns or capacity constraints (i.e., is there a specific combination of states, RTOs, trading ready etc.)?

Response: Conceptually, compatible, market-based solutions in a large number of state compliance plans will facilitate liquid carbon trading markets, which can facilitate effective and efficient compliance platforms that mitigate potential impacts to grid operations/reliability. Additionally, the greater the liquidity in carbon trading markets, the

greater potential to mitigate the potential economic impacts to the dispatch of the electric grid. Consideration of trading ready provisions is one means of facilitating regional compliance.

11. Is there a trading approach that will minimize the estimated cost of compliance?

Response: See response to question 10.

12. Could another state's approach to CPP compliance (rate vs. mass, allocation approaches, trading approaches, new source complement, etc.) affect your utility's compliance with the CPP in Missouri? If yes, please explain.

Response: Not applicable to SPP.

13. Could another state's approach to CPP compliance affect your utility's compliance with the Renewable Energy Standard in Missouri? (For example choosing to bundle Emission Rate Credits with Renewable Energy Credits.) If yes, please explain.

Response: Not applicable to SPP.

14. To what extent will your utility's existing renewable resources or RECs and existing energy efficiency programs contribute to compliance with the CPP in Missouri? In other states? Please explain.

Response: Not applicable to SPP.

15. Will statutory or regulatory changes be needed to facilitate Missouri's compliance with the CPP? Please explain.

Response: Not applicable to SPP.

16. Does your utility anticipate any changes or impacts to its long-term planning or IRP related to the submission of transmission plans or reliability checks, and specifically as those changes relate to work with the RTOs or AECI?

Response: Not applicable to SPP.

17. Does MISO have any Attachment Y concerns that could cause a delay in implementing a state CPP compliance plan?

Response: Not applicable to SPP.

18. Does SPP envision a situation where there could be potential reliability conflicts between the CPP and North American Electric Reliability Corporation standards which will

compel delays in scheduled generator retirements?

Response: SPP is required to comply with the NERC Reliability Standards, and will take planning and operational actions necessary, to maintain the reliability of the electric grid. Nevertheless, CPP compliance will impact the capacity portfolio available to SPP to perform its planning and operational functions. If change in the capacity portfolio limits the availability of generation that is needed to manage local transmission security issues (whether due to a retirement or a CPP compliance limitation), SPP would attempt to develop transmission and operational plans that access the relevant capacity needed to reliably manage the issue. However, SPP does not control capacity, and it cannot prevent a generator from retiring. In these circumstances, if the relevant generation is not available (regardless of the reason), SPP would need to take other actions to manage the reliability issue, including potentially implementing load shedding. Sufficient time should be allowed to proactively evaluate each planned retirement so that appropriate, cost effective solutions can be implemented in a timely manner.

19. Does AECI envision a situation where there could be potential reliability conflicts between the CPP and North American Electric Reliability Corporation standards which will compel delays in scheduled generator retirements?

Response: Not applicable to SPP.

20. Does your utility expect adequate coordination between MISO, SPP, and AECI in order to facilitate CPP compliance? What is your utility doing to communicate with these entities regarding CPP compliance? Please explain.

Response: Not applicable to SPP.

21. What steps are MISO, SPP, and/or AECI taking to ensure adequate coordination with each other and their members regarding CPP compliance? Please explain.

Response: SPP, MISO, and AECI have begun discussions in an effort to develop a coordination plan that will be provided to Missouri and other affected states upon completion. The coordination plan is expected to include 1) general scoping and timing expectations for studies to be performed, 2) information needed from Missouri and other affected states to facilitate study performance, 3) and guidelines for coordination among the study participants.

22. What transmission and/or distribution upgrade or building needs does your utility anticipate as a result of the CPP (e.g., new lines, upgrades to transformers or substations, AMI)?

Response: With respect to transmission projects directly related to the impacts of CPP compliance plans, SPP is not able to answer this question at this time. However, as part of its established planning processes, SPP is currently performing a 10-year transmission planning evaluation that will consider and develop transmission solutions for two alternative CPP compliance approaches within the SPP region. A portfolio of transmission upgrades resulting from this planning effort is expected to be recommended for SPP Board approval in January 2017.

23. MISO and Platts recently estimated (http://www.platts.com/latest-news/electric-power/houston/misos-expected-cost-to-comply-with-us-cpp-varies-21631026) that changes in several factors, including the price of natural gas (between $2.30 to 6.30/MMBtu), could lead to large ranges in the potential cost of compliance with the CPP. How does your utility plan to mitigate the risk of compliance cost overruns due to natural gas market uncertainties?

Response: Not applicable to SPP.