

Utility<sup>1</sup> name:

Contact information of person completing 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)?
2. Please provide the estimated cost of compliance with the final Section 111(d) rule based on each of the following scenarios or assumptions<sup>2</sup>:
  - 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<sub>2</sub> 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

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<sup>1</sup> For purposes of these questions, “Utility” is used generically to refer to investor-owned, municipal, rural electric cooperative, RTO, AECL.

<sup>2</sup> The form of the questions and representative scenarios should not be interpreted as a decision by the State of Missouri to pursue any particular path of compliance.

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.
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<sub>2</sub> 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.
- 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 change if the new source complement and/or an alternative allowance allocation process were used?
- 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?
- 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.
- 7. Are there drawbacks to Missouri taking advantage of the Clean Energy Incentive Program? If yes, please explain.
- 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.
- 9. Are there drawbacks to auctioning allowances? If yes, please explain.
- 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.)?

11. Is there a trading approach that will minimize the estimated cost of compliance?
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.
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.
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.
15. Will statutory or regulatory changes be needed to facilitate Missouri's compliance with the CPP? Please explain.
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?
17. Does MISO have any Attachment Y concerns that could cause a delay in implementing a state CPP compliance plan?
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?
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?
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.
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.

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)?
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?