Utility name: Empire District Electric Company

Contact information of person completing questions:

Tim Wilson, Director of Energy Supply Services
602 S. Joplin Ave.
Joplin, MO 64801
417-625-6512
twilson@empiredistrict.com

1. Please identify planned unit retirements

a. Unit, capacity, date of planned retirement? No planned retirements associated with the Clean Power Plan (CPP) at this time.
b. Plan for load replacement and rationale/estimated cost associated with that plan. Empire will submit its triennial Integrated Resource Plan (IRP) by April 1st, 2016. It will detail our load replacement plan, among other things, at this point in time for the next 20 years.
c. Are these planned retirements a result of the Clean Power Plan? No planned retirements associated with the CPP at this time.
d. Has your utility modified its retirement plans based on the final Section 111(d) rule? Empire modeled and performed sensitivity analysis regarding the CPP in its IRP to be filed April 1st, 2016. We do not have the results available at this time.
e. Is there a possibility that these plans will change based on the state compliance plan? Yes.
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)? Costs associated with any asset retirement would depend on timing and the specific generator to be retired.

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. 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: Although the allowance allocation methodologies listed below would result in slightly different costs the primary factor would be the cost and availability of allowances. In addition, the cost and availability of allowances will depend on what the other utilities do for compliance in the state as well as the region. Empire believes the most cost effective and easiest way to implement the CPP would be a trading-ready, mass-based approach based on some sort of multi-year allowance methodology that provides current and future allocations based on historic operating data to account for variables that are out of the control of the EGU (demand/weather/equipment failures etc.)

i. CO2 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

These scenarios and outcomes will depend on the unit retiring and the company retiring them. Empire believes the best and most appropriate approach would be for the allowances to remain, in perpetuity, with the company retiring the Electric Generating Unit's (EGU).

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

These scenarios and outcomes will depend on what projects are built and when and who is building them. Empire does have an existing NGCC that will be affected by any allowance distribution tied to its generation. Allowance set-asides, if structured correctly, can be beneficial so long as they aren't taken from existing affected EGU.

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

These scenarios and outcomes will depend on what projects are built and when and who is building them as well as market pricing of allowances and availability. Any new EGU should fall under New Unit regulations. Empire believes any set-aside program should be a Federal program and should not come from existing EGU's.

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: Empire modeled and performed sensitivity analysis regarding the CPP in its IRP to be filed April 1st, 2016. We do not have the results available at this time.

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. Empire modeled and performed sensitivity analysis regarding the CPP in its IRP to be filed April 1st, 2016. We do not have the results available at this time. Any new EGU should fall under New Unit regulations. Empire believes any set-aside program should be a Federal program and should not come from existing EGU's.

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. Empire believes any set-aside program should be a Federal program and should not come from existing EGU's.

h. Missouri takes advantage of the Clean Energy Incentive Program. Empire believes any set-aside program should be a Federal program and should not come from existing EGU's.

3. Please describe any anticipated reliability issues or capacity constraints if Missouri implements a compliance plan that includes the following scenarios or assumptions: Please refer to the Southwest Power Pool (SPP) responses for this section.
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.

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? Empire's

compliance approach would be based upon whatever alternative is more economic for our customers, regardless of the allocation method. This would determine whether we purchased allowances or retired units or built new ones.

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? The Missouri Department of Natural Resources (MDNR) has the option of analyzing and addressing leakage on its own. This may include allocating allowances to units or simply doing nothing.

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. Empire believes the Clean Energy Incentive Program (CEIP), if structured properly, could be beneficial to renewable investment. But it needs to be a Federal plan and not taken from existing EGU's. Renewable generation naturally is advantaged in a carbon constrained market.

7. Are there drawbacks to Missouri taking advantage of the Clean Energy Incentive Program? If yes, please explain. Yes. If allowances are re-distributed from existing EGU's it could increase compliance cost for Missouri customers.

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. Yes. If allowances are re-distributed from existing EGU's it could increase compliance cost for Missouri customers.

9. Are there drawbacks to auctioning allowances? If yes, please explain. Empire does not foresee any drawbacks to auctioning allowances at this time.

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.)? Please see SPP's response.

11. Is there a trading approach that will minimize the estimated cost of compliance? Empire prefers an unconstrained trading approach in order to minimize cost impact and maximize availability and liquidity of allowances.

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. Yes. Again, Empire prefers a large trading market where it can trade not only among the states where it has EGU's but also others. This will help reduce compliance costs in Missouri.

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. Empire does not anticipate this to be an issue. Empire's wind PPA's used for the Missouri Renewable Energy Standard compliance were online before 2012 and will not be part of any other CPP program.

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. Empire's existing renewable resources will indirectly contribute to compliance in all states as each megawatt-hour of energy produced by a renewable resource potentially offsets a megawatt-hour of fossil-fired generation.

15. Will statutory or regulatory changes be needed to facilitate Missouri's compliance with the CPP? Please explain. Empire does not believe statutory or regulatory changes need to be made to comply with the CPP.

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? Empire expects there could be transmission and reliability impacts related to the CPP but we do not know what they could be at this time.

17. Does MISO have any Attachment Y concerns that could cause a delay in implementing a state CPP compliance plan? Please refer to SPP's comments.

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? Please refer to SPP's comments.

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? Please refer to AECI's comments.

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. Yes. Empire is an active member of SPP and a full participant in its working groups.

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. Please refer to SPP's comments.

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)? Empire expects there could be transmission and/or distribution impacts related to the CPP but we do not know what they could be at this time.

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? Empire modeled and performed sensitivity analysis regarding the CPP, including natural gas price sensitivity, in its IRP to be filed April 1st, 2016. However, we do not have the results available at this time. Empire believes in having a balanced mix of energy resources including simple and combined cycle natural gas, coal, hydro and wind. This protects our customers from not only natural gas market uncertainties but also other fuel-related uncertainties.