

House Energy and Environment Committee
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KCC Staff's Response to EPA's Clean Power Plan
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Overview of EPA's CAA 111(d) Rule

- EPA proposed its “existing power plant” rule under the Clean Air Act (CAA) Section 111(d) published in the Federal Register (Fed. Reg.) on June 18, 2014.
- EPA is referring to the proposed rule as the Clean Power Plan (CPP).
- CAA Section 111(d) is rarely used (used only five times).
- EPA's stated goal is to reduce carbon emissions by 30% compared to 2005 levels.
 - All emission reduction targets and modeling data are based on 2012 data.

Overview of EPA's CAA 111(d) Rule

- EPA has set specific carbon emissions rate goals for each state.
- The CPP sets a carbon emission limit for each state and sets out four building blocks that combined constitute the “best system of emission reduction”. The building blocks are:
 1. Block 1 - Heat rate improvements on affected coal units. EPA set at 6% efficiency gain.
 2. Block 2 – Increase capacity factor of existing or planned natural gas-fired combined cycle plants from 45% to 70%.
 3. Block 3 – Increase reliance on renewable generation. Kansas target is 20% increase in MWhs.
 4. Block 4 – Increase use of demand-side management & energy efficiency. EPA's projection is based on 1.5% annual growth.

Overview of EPA's CAA 111(d) Rule

- EPA has set specific carbon emissions rate goals for each state (cont.).
 - EPA's four building blocks are used as a formula to determine how many megawatt-hours (MWh's) can be re-dispatched away from coal to other sources.
 - EPA's proposed plan includes interim goals that each state must meet from 2020 to 2029, while meeting the final goal by 2030.
 - Kansas's 2012 Rate: 2,320 lbs. carbon/MWh
 - Kansas's Interim Rate in 2020: 1,707 lbs. carbon/MWh (74% of overall 35% Reduction)
 - Kansas's Final Rate in 2030: 1,499 lbs. carbon/MWh (35% Overall Reduction)

Overview of EPA's CAA 111(d) Rule

- EPA's timeline is highly aggressive.
 - Proposed plan issued in Fed. Reg. on June 18, 2014
 - Comments on proposed plan due to EPA on Dec 1, 2014 (Over 2 million comments filed).
 - Final rule originally scheduled for June 2015, but now scheduled for mid-summer 2015.
 - State compliance for single-state plans are due one year from issuance of final rule (mid-summer 2016), unless a one-year extension is granted by EPA. Debate as to whether EPA will grant extensions.
 - Multi-state plans have two years to file a compliance plan.
 - Majority of EPA's emission goal must be met by 2020.
 - Emission goal must be met by 2030.

Overview of EPA's CAA 111(d) Rule

- EPA claims states have “flexibility” to determine how to meet carbon emission standard. But reality is that options are limited.
- CAA Section 111(d) requires a “best system of emission reductions” that has been “adequately demonstrated”.
- The D.C. Circuit Court has interpreted an “adequately demonstrated system” to be one that can “be shown to be reasonably reliable, reasonably efficient, and ...reasonably... be expected to serve the interests of pollution control without becoming exorbitantly costly in an economic or environmental way.”

Overview of EPA's CAA 111(d) Rule

- State emission standards can be based on lowest-cost alternative.
- Compliance plans may take into account remaining useful life of electric generating units (EGUs).
- Air Quality standards promulgated by EPA are usually based on measures “inside the fence” or specific to the EGU.
- CPP focuses on approaches that are “outside the fence” or a state-wide emission standard.

Overview of EPA's CAA 111(d) Rule

- Coal-fired plants impacted by 111(d) in Kansas.
 - KC BPU – Nearman
 - KC BPU – Quindaro
 - KCP&L – LaCygne
 - Sunflower – Holcomb
 - Westar – Jeffery Energy Center
 - Westar – Lawrence
 - Westar – Tecumseh

The CPP Requires the Electric Grid to be Re-dispatched

Dispatch is defined as the operating control of an integrated electrical system involving operations such as: (1) the assignment of load to specific generating stations and other sources of supply to effect the most *economical* supply as the total or significant area loads rise and fall; (2) the control of operations and maintenance of high-voltage lines, substations, and equipment; (3) the operation of principle tie lines and switching; and (4) the scheduling of energy transactions with connecting electric utilities.

The CPP Requires the Electric Grid to be Re-dispatched

- Base-load units are defined as: A plant, usually housing high-efficiency steam-electric units, which is normally operated to take all or part of the minimum load of a system, and which consequently produces electricity at an essentially constant rate and runs continuously. These units are operated to maximize system mechanical and thermal efficiency and minimize system operating costs.

The CPP Requires the Electric Grid to be Re-dispatched

- In order to achieve carbon reductions at coal plants, the CPP requires re-dispatching away from coal to natural gas combined cycle plants (NGCC), renewable generation resources, and demand-side management & energy efficiency.
- Reliability concerns arise from fact that dispatch away from base-load coal-fired units is to – with the exception of NGCC – generation that is not base-load.
- The EPA's selection of re-dispatch as its method to reduce carbon emissions requires the expertise of both KDHE and the KCC.

KCC Staff Issues with CPP

- Under the Federal Power Act, states retain jurisdiction and control over generating facilities and intrastate electric reliability. The CPP invades Kansas' right to determine an appropriate generation mix for the state.
- The EPA is required to “adequately demonstrate” that the CPP will be reasonably reliable, reasonably efficient, and not exorbitantly costly. The EPA has not done so.
- The EPA's calculations to determine Kansas' carbon emission limits using the four building blocks are flawed and, as a result, the carbon emission reduction is too high.

KCC Staff Issues with CPP

- The carbon limits established by EPA for Kansas will create reliability issues:
 - The EPA's use of its Integrated Planning Model cannot establish grid reliability.
 - The Southwest Power Pool's Reliability Impact Assessment of the CPP indicates the potential for significant reliability issues.
 - The EPA intends for its four building blocks to be legally severable.
 - The EPA's proposed timeline for compliance is not possible.
 - Increased reliance on NGCC will increase the cost of natural gas and could create reliability issues.
 - Shifting generation from coal to renewables and Demand-Side Management/ Energy Efficiency creates reliability concerns.

KCC Staff Issues with CPP

- The Carbon limits set for Kansas will be exorbitantly expensive:
 - The Southwest Power Pool's Reliability Impact Assessment indicates significant new investment in generation and transmission assets will be required.
 - The CPP will lead to environmental dispatch rather than economic dispatch.

KCC Staff Issues with CPP

- The CPP does not recognize investments that states and utilities are already making:
 - The emission limit set for Kansas will result in stranded costs for existing coal generation resources as well as transmission resources.

KCC Staff Issues with CPP

- Other concerns:
 - The EPA's use of a state-wide emission guideline creates cross-subsidy issues between ratepayers.
 - The EPA's use of a state-wide emission guideline creates cross-subsidy issues between states as well as reliability issues.
 - The EPA's option to use a market-based approach is not feasible.
 - The EPA's CPP is essentially a federally mandated energy policy.

Questions?

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