Report of the 2015
Federal Environmental Regulation Impact Assessment Task Force

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Federal Environmental Regulation Impact Assessment Task Force

HCR 168 of the 2015 Regular Session created the task force in order to convene representatives from Kentucky's economic, educational, scientific, industrial, and political sectors to study the consequences of federal environmental regulations on the affordability and reliability of electricity generation and to formulate recommendations on how to cope with those consequences. The task force is required to submit its findings and recommendations to the Legislative Research Commission by December 31, 2016.

Task Force Activity

The task force met three times during the 2015 Interim to discuss different aspects of the Clean Power Plan of the US Environmental Agency (EPA).

EPA's Clean Power Plan

Explanation of Differences Between EPA's Finalized Carbon Dioxide Emission Rate Targets for Power Plants in Kentucky and Previously Proposed Targets. The deputy secretary for Climate Policy, Energy and Environment Cabinet, explained how the EPA's Clean Power Plan (CPP), received in early August, affects Kentucky's existing power plants. The current fleet of power plants average a CO_2 emissions rate of 2,166 pounds of CO_2/MWh. The proposed target rate was 1,763 pounds of CO_2/MWh. In the finalized rule, Kentucky's target rate is 1,286 pounds of CO_2/MWh, which amounts to a 41 percent rate reduction from current levels and 27 percent rate reduction from that which was proposed. Coal-fired generation, which currently accounts for 93 percent of the commonwealth's power, would have to drop to 38 percent and be replaced with natural gas to reach the final target rate. Given the steep decline in emissions mandated by the finalized plan, the cabinet believes the EPA's intention is for states not to rely on natural gas but to develop renewable energy resources.

States are expected to submit a state implementation plan (SIP) by September 6, 2016, that will detail how they will comply with their emissions targets. A state can receive a 2-year extension if it submits an initial SIP that meets all the requirements. If a state fails to submit a SIP, a federal implementation plan (FIP) will be implemented. The FIP will be either a rate-based or mass-based cap-and-trade plan. The FIP offers less flexibility and will likely be more onerous than a state-crafted SIP.

Attorney General's Lawsuit to Block the Clean Power Plan. The chief deputy attorney general said that Kentucky is actively involved in litigation with 15 other states on this plan. A petition for extraordinary writ had been filed, in which the plaintiff states are arguing that the EPA is double-regulating carbon dioxide, which is already regulated under a different section of the Clean Air Act. The petition for review will discuss all possible legal arguments that the joining states can bring forth.

Potential Impacts on Grid Reliability of Clean Power Plan Compliance. The director of reliability assessment and system analysis for North American Electric Reliability Corporation (NERC) testified that the initial CPP rule caused two major concerns for NERC: timing and

reliability assurance. There was an increase in total reduction from 30 percent to 32 percent in the final CPP rule, which may be difficult for some states to attain. There are also significant increases in renewable energy and energy efficiency within the Clean Energy Incentive Plan. The EPA projects trading to be a large mitigating factor for attaining compliance goals.

In November 2014, NERC conducted an initial reliability review of the EPA's CPP. It highlighted potential reliability impacts such as accelerated changes to the resource mix, the impacts on essential reliability services characteristics and increased dependency on natural gas, displacement or retirement of baseload capacity, expansion of natural gas and variable resources, and potential transmission needs. It also served as a platform to inform policy discussions on bulk-power systems reliability. NERC determined that Kentucky is going to need more transmission, and construction of the necessary infrastructure to increase transmission capacity will take a long time. For example, a new urban, 20-mile, 115-kV transmission line takes 64 months to complete. The reliance on gas-fired generation is growing based on gas prices that have been at historic lows, and the CPP will accelerate this reliance.

NERC is working on a comprehensive guidance document to provide recommendations and guidance for states seeking to comply with the CPP. The guidance document will be ready in January 2016, and analysis of the finalized version of the CPP is scheduled to be completed in March 2016.

Compliance With Rate-Based or Mass-Based Emissions Targets Under the Clean Power Plan. The secretary and deputy secretary for Climate Policy, Energy and Environment Cabinet, presented information on whether the commonwealth should choose to comply with the CPP's rate-based CO_2 emission target or the mass-based CO_2 emission target. Meeting the rate-based target would require reducing the average amount of CO_2 emitted per megawatt hour from the total generation fleet, while the mass-based emission target would require the total amount of CO_2 emitted within the commonwealth per year to be reduced.

According to an analysis performed by the cabinet, the rate-based target is more onerous than the mass-based reduction requirement for Kentucky. To meet the final rate-based emissions target, Kentucky would have to replace 60 percent of its coal generation with natural gas combined cycle plants. Given projected electricity demand, choosing the mass-based emissions target will allow the commonwealth to continue to use more coal-fired generation for longer and would reduce the potential for stranding existing generation assets. Opting to meet the mass-based target would also allow the commonwealth to trade emissions allowances with other states that choose to meet the mass-based target.