STATUS OF MAJOR EPA REGULATIONS
AFFECTING COAL-FIRED ELECTRICITY GENERATION
January 25, 2015

CARBON REQUIREMENTS FOR EXISTING UNITS  In June 2014, EPA proposed carbon dioxide (CO₂) emission “guidelines” for existing fossil fuel-fired power plants under Section 111(d) of the Clean Air Act. EPA plans to finalize the “Clean Power Plan” (CPP) by the summer of 2015 and require states to submit implementation plans by the summer of 2016 (with limited time extensions available). The proposal sets CO₂ emission rate requirements for each of 49 states beginning in 2020; the requirements rely on decreased use of coal and increased use of natural gas, renewables, and nuclear for electricity generation, as well as reductions in the amount of electricity used by consumers. In total, officials from over 30 states have expressed opposition to the approach EPA has adopted in the 111(d) guidelines. Challenges to the proposal by Murray Energy and a number of states and industry groups are pending before the D.C. Circuit. Recently, EPA also announced that it would propose a federal plan this summer to implement the CPP in states that do not submit plans; the federal plan will be finalized in the summer of 2016.

IMPACTS  NERA’s analysis of the CPP projects double-digit electricity price increases in as many as 43 states and a nationwide cost of at least $41 billion per year.¹

CARBON REQUIREMENTS FOR NEW UNITS  In early 2014, EPA re-proposed New Source Performance Standards (NSPS) to control CO₂ emissions from new fossil fuel-fired power plants. The proposal requires new coal units to meet a CO₂ emissions rate of 1,100 pounds per megawatt-hour. Achieving this rate requires the use of carbon capture and storage technology (CCS) and, therefore, effectively bans new coal plants because CCS is prohibitively expensive. EPA plans to finalize the NSPS in the summer of 2015, along with the existing plant proposal (immediately above).

IMPACTS  The proposed NSPS will increase
reliance on natural gas to generate electricity and impede further development of CCS. ACCCE has recommended CO₂ emission rates that would allow efficient new coal plants to be built without CCS.²

**GHG PERMITTING**  In 2011, EPA began requiring new power plants that emit more than 100,000 tons of CO₂ per year and existing power plants that increase CO₂ emissions by more than 75,000 tons per year to undergo CAA permitting for CO₂ emissions and comply with Best Available Control Technology (BACT) requirements for CO₂ emissions. The D.C. Circuit upheld these permitting regulations. Later, the Supreme Court invalidated EPA’s position that power plants and other sources can be subject to permitting requirements based on their GHG emissions alone.  For CO₂ BACT to apply, Clean Air Act permitting must be triggered by another regulated pollutant (e.g., SO₂).  **IMPACTS** Currently, the impacts are uncertain. Industry and EPA have filed motions with the D.C. Circuit.

**MATS**  EPA finalized the Utility MACT rule³ (aka “Mercury and Air Toxics Standards” rule, or MATS) in December 2011. MATS requires existing and new coal-fired electric generating units to install emission controls for certain hazardous air pollutants by April 2015, with case-by-case one-year extensions available. The D.C. Circuit upheld MATS. However, the Supreme Court has agreed to consider whether EPA should have considered costs in determining whether it is “appropriate” to regulate hazardous air pollutant emissions from power plants. A decision is likely this summer. However, MATS compliance will continue while the Supreme Court is considering the rule. **IMPACTS** EPA estimated the annual cost of MATS to be $9.6 billion (2007$) in 2015 but did not provide an estimate of the total cost of the rule.⁴ NERA’s analysis for ACCCE projected the following for MATS: an annual cost of $10.4 billion (2010$) in 2015; total compliance costs of $94.8 billion; peak year job losses of 180,000 to 215,000 in 2015; and up to 23,000 megawatts (MW) of coal plant capacity retiring by 2015.⁵ As of January 2015, over 61,000 MW of coal capacity had announced retirement due to EPA regulations. For almost all retirements, MATS was named as the cause.⁶
CROSS-STATE AIR POLLUTION RULE  CSAPR was finalized by EPA in 2011 but vacated by the D.C. Circuit in 2012. EPA and environmental groups appealed the decision to the Supreme Court, which reversed the D.C. Circuit’s decision in April 2014. CSAPR has been reinstated and EPA began implementation of Phase 1 SO₂ and NOₓ requirements on January 1, 2015; Phase 2 will begin in 2017. Some issues that remain will be litigated further in the D.C. Circuit. IMPACTS The impacts of CSAPR are unknown at the present time due to the implementation of MATS and the large number of coal retirements resulting from MATS.

INTERSTATE TRANSPORT REQUIREMENTS  EPA has begun a process to help states develop “good neighbor” state implementation plans (SIPs) because of the agency’s 2008 ozone standard. EPA has identified as many as 24 states in the east and one to three states in the west that interfere with downwind attainment of the 2008 ozone standard. EPA plans to hold a webinar in February and a workshop this spring to discuss this information, as well as available NOₓ emission controls for power plants. IMPACTS The impacts of these new “good neighbor” SIPs are unknown but will likely include additional NOₓ emission controls on coal-fired power plants.

REVISION OF 2008 OZONE STANDARD  In late November 2014, EPA proposed to increase the stringency of the 2008 ozone standard to between 65 parts per billion (ppb) and 70 ppb. The current standard is 75 ppb. EPA is also taking comment on a standard as low as 60 ppb. Comments are due by March 17, 2015. IMPACTS For coal plants, further NOₓ controls could be required. NERA estimated for the National Association of Manufacturers that a worst-case 60 ppb ozone standard would reduce GDP by $270 billion per year, cause the loss of 2.9 million jobs per year, and cost households $1,570 per year. The NERA analysis is being updated.

REGIONAL HAZE  In 2012, EPA determined that compliance with CSAPR by power plants in the east satisfies a requirement to install best available retrofit technology (BART) to reduce emissions. Environmental groups have opposed this and litigation is ongoing. Additionally, states
have been developing implementation plans to improve visibility in national parks, but EPA has determined in many cases that more stringent emission control requirements should be imposed on coal-fired power plants through Federal Implementation Plans (FIPs). Litigation against EPA by several western states is ongoing. Recently, EPA proposed a FIP requiring more stringent SO₂ emission requirements for 15 coal units in Texas. Under a consent decree, EPA is required to finalize this FIP by September 2105. **IMPACTS** FIPs typically require coal-fired power plants to install more stringent SO₂ and/or NOₓ controls.

**EFFLUENT LIMITATION GUIDELINES** On April 19, 2013, EPA proposed new effluent limitation guidelines (ELGs) under the Clean Water Act for fossil-fuel and nuclear power plants. The proposed ELGs set limits on the amount of pollutants that can be discharged into surface waters. EPA intends to coordinate the ELG rule with the CCR rule (below). A consent decree requires EPA to issue a final ELG rule by September 30, 2015. **IMPACTS** EPA estimates the proposal would cost $185 million to $954 million per year but would not cause any coal retirements. However, NERA’s analysis for ACCCE indicates the proposed rule could cost approximately twice EPA’s estimate and cause up to 10,000 MW of additional coal retirements.

**COAL COMBUSTION RESIDUALS** In 2010, EPA proposed to regulate coal combustion residuals (CCRs) -- including fly ash, scrubber byproducts, and bottom ash -- as either a solid (nonhazardous) waste or a hazardous waste. EPA finalized the CCR rule on December 19, 2014, setting nationwide solid (non-hazardous) waste standards for CCR disposal. While this is a positive development, industry and allies are still concerned about the requirements. House Energy and Commerce Committee leadership have signaled their intention to develop a legislative solution to the CCR issue. **IMPACTS** EPA estimates the annual cost of the final CCR rule to be $509 million to $735 million annually.

**PM₂.₅ STANDARD** In late 2012, EPA finalized revisions to the national ambient air quality standard for PM₂.₅ (fine particles). The revised annual
primary standard for is now 12 micrograms per cubic meter (µg/m³), replacing the previous standard of 15 µg/m³. EPA is beginning implementation of the new standard, and nonattainment area designations are expected this year. (EPA has scheduled a workshop in February 2015 to begin the process to review and possibly revise the new 2012 standard.) **IMPACTS** A PM₂.₅ standard could lead to further reductions in SO₂ and NOₓ emissions. EPA’s analysis suggests that coal units would not be required to reduce emissions beyond levels required by CSAPR, CAIR, and MATS. However, the final impacts of the revised standard on the power sector are uncertain until the states and EPA develop implementation plans.

**316(b) RULE** In 2011, EPA proposed requirements for cooling water intake structures for existing power plants under Section 316(b) of the Clean Water Act and finalized the 316(b) rule in May 2014. Instead of requiring all existing power plants to install cooling towers, EPA’s final rule adopted more flexible regulations to reduce impingement and entrainment of aquatic organisms. Environmental groups have brought suit in three Federal Circuit Courts of Appeal seeking to overturn the 316(b) rule. **IMPACTS** EPA estimates the annual cost to the electric power sector of the agency’s final rule to be between $275 and $297 million.

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2 ACCCE’s May 2014 comments recommended that EPA set achievable CO₂ emission rates for three subcategories of new coal-fueled electric generating units: 1,915 lb CO₂/MWh for supercritical units using bituminous and subbituminous coals; 2,150 lb CO₂/MWh for all units using lignite coals; and 2,080 lbs CO₂/MWh for subcritical units burning bituminous and subbituminous coals. In response to the original 2012 proposal, ACCCE had suggested an emission rate of 1,900 lb CO₂/MWh for ultra-supercritical units.

3 MACT refers to “maximum achievable control technology.” The Clean Air Act (CAA) requires EPA to set MACT requirements for major source categories (such as coal-fired electric generating units) to control “hazardous air pollutants,” such as mercury, that are listed in the CAA.


6 ACCCE, *Coal Unit Shutdowns*, January 2015.


