EPA's Proposed Carbon Emission Standards for New and Existing Power Plants




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Let's turn the answers on.

Clean Air Act 111(d)—BSER Building Blocks

- Block #1—heat rate improvements
  - 6% heat rate improvement at existing coal facilities; 4% savings from best practices and 2% savings from new equipment
- Block #2—increased utilization of natural gas
  - Increased dispatch to natural gas combined cycle units to run at 70% capacity factor, displacing coal generation
- Block #3—increased deployment of zero-emitting resources
  - Increased deployment of renewables based on existing regional renewable portfolio standards
- Building Block #4—energy efficiency
  - Assumed annual increase in end-use energy efficiency of 1.5% of load; 10.7% average cumulative increase

Clean Air Act 111(d)—BSER Treatment of Hydro

- Hydro generation not included as a renewable resource nor was it used to set the state emission targets
- Existing hydro generation *was* used to calculate renewable energy target for Building Block 3
- Does not appear that existing hydro can be used in achieving the emission rate goal, though incremental hydro may be used

Clean Air Act 111(d)—Legal & Policy Issues

- Little precedent exists on the application and interpretation of Clean Air Act § 111(d)
- Proposed "outside the fence" (i.e., introduction of redispatch, renewables, and energy efficiency) approach for establishing BSER has not been tested in court
- The proposed rule could render traditionally state-run programs such as RPS and energy efficiency programs federally enforceable
- Litigation has already been filed, which may impact timing

Clean Air Act 111(d)—Legal & Policy Issues

- Treatment of new natural gas combined cycle units is not clear (calculation of BSER does not included NGCC)
- States have significant discretion in how compliance action will be allocated to affected entities or other entities
- No credit for “early” action i.e., deployment of renewables or energy efficiency prior to 2012
- Use of 2012 baseline may not be representative for some states
  - e.g., high hydro year reduces fossil generation; coal units may have been in an outage

Clean Air Act 111(d)—Treatment of Renewables

- To calculate BSER, EPA treated all generation sources based on physical location
  - Proposal suggests that for compliance purposes states may take into account emissions reductions from renewable energy measures implemented by the state, whether they occur in that state or in other states
  - Similar cross-state treatment is not proposed for redispatch of natural gas or energy efficiency measures
- EPA proposal suggests that renewable resources could be used for compliance with 111(d) as well as for generating RECs for RPS compliance purposes

Clean Air Act 111(d)—Interstate Issues

- If no state collaboration, there is a potential for 49 separate programs
- States taking different approaches could create issues
  - Power price impacts
  - Transmission flows
  - Siting of new capacity
- Multi-state programs could have advantages but will be challenging, particularly given required timeframe (multi-state plans by 2018)
- Multi-state plans may require:
  - Additional time
  - Enabling state legislation
  - Program and enforcement reciprocity
  - Interstate crediting/trading mechanism
  - Consistent mandatory reporting rules