UTILITY MACT – IMPACT AND COMPLIANCE STRATEGY

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Where We Are

- EPA working on MACT standards for all HAPs under CAA §112(d)
- Consent decree: EPA to propose rule by March 16, 2011, final rule by November 16, 2011
- Existing units not subject to §112(j) MACT hammer
- New units need to obtain case-by-case MACT limits: §112(g)
- State mercury emission limits remain in place if they were promulgated under State law (20 states)
- $97 million ICR completed September 4
MACT: CAA Section 112(d)

- New sources must adopt at minimum “the emission control that is achieved in practice by the best controlled similar source, as determined by the Administrator.”

- Existing sources (with certain exceptions) must adopt emission controls equal to the “average emission limitation achieved by the best performing 12 percent of the existing sources.”
MACT: Compliance Dates

- Normal MACT timing: 3 years after final rule effective date – 112(i)(3)(A)
- EPA Administrator (or State approved Program) can grant 1 year extension if more time “necessary for the installation of controls” – 112(i)(3)(B)
- Presidential exemption: not more than 2 years if President finds 1) technology to implement standard is not available and 2) in national security interests to do so. Additional 1 year extensions available – 112(i)(4)
MACT Rulemaking: Issues

- What HAPs will be included: surrogates?
- With multiple HAPs, what is “best performing unit(s)”
  - “Franken-plant” approach
- Subcategorization: “achieved” vs. “achievable”
- Monitoring concerns
  - demonstrating compliance with very low emission limits
- Inclusion of variability, non-detects in setting MACT limits
- Alternative % reduction limits; alternative health-based limits for non-carcinogens
Prelude: Industrial Boiler MACT

- MACT = FF + carbon injection + wet FGD + good combustion practices
- 11 subcategories of boilers, process heaters based on design of the various types of units
- Establishes limits for:
  - Mercury
  - Dioxin
  - PM (surrogate for non-mercury metals)
  - HCl (surrogate for acid gases)
  - CO (surrogate for non-dioxin organic air toxics)
- Limits based on fuel type for PM, HCl, Hg; by fuel type, boiler design for CO, dioxin
Possible Timeline for Environmental Regulatory Requirements for the Utility Industry

Ozone (O$_3$)  SO$_x$/NO$_x$  CAIR/Transport  Water

- **CAIR Vacated**
- **CAIR Remanded**
- **SO$_2$ Primary NAAQS**
- **CO$_2$ Primary Regulation (PSD/BACT)**
- **Transport Rule proposal issued (CAIR Replacement)**
- **Final Transport Rule Expected (CAIR Replacement)**
- **SO$_2$ Cap**
- **Ozone NAAQS Revision**
- **Effluent Guidelines proposed rule expected**
- **316(b) final rule expected**
- **PM Transport Rule**
- **Effluent Guidelines Compliance 3-5 yrs after final rule**
- **316(b) Compliance 3-4 yrs after final rule**
- **CO$_2$ Regulation (PSD/BACT)**
- **Final Transport Rule**
- **Ozone Transport Rule**
- **Transport Rule Phase II Reductions**
- **HAPS MACT Compliance 3 yrs after final rule**
- **Begin Compliance Requirements under Final CCB Rule (ground water monitoring, double liners, closure, dry ash conversion)**

- **CAMR & Delisting Rule vacated**
- **Begin CAIR Phase I Annual SO$_2$ Cap**
- **Begin CAIR Phase I Seasonal NO$_x$ Cap**
- **Proposed Rule for CCBs Management**
- **316(b) proposed rule expected**
- **Next PM-2.5 NAAQS Revision**
- **Final Rule for CCBs Mgmt**
- **HAPs MACT proposed rule**
- **HAPs MACT final rule expected**
- **Transport Rule Phase I Reductions**

- **PM/PM$_{2.5}$**
- **Ash**
- **Hg/HAPS**
- **CO$_2$**

-- Adapted from Wegman (EPA 2003) Updated 09.02.10
Industry Challenges

- Minimize economic impacts to consumers
- Continue environmental improvements
- Maintain system reliability
- Maintain fuel diversity options
- Obtain access to capital and cost recovery
- Negotiate myriad political landscapes
Industry’s Predicament

• Have to comply with pending EPA regulations on air (SO₂, NOₓ, HAPs, etc.), water, and coal ash on or around 2015
  – Will require retrofit, retirement or replacement of substantial portion of existing coal fleet in short period of time
  – Could impact reliability; need to assess feasibility; regional differences

• Could cost up to $200 billion/year by 2015
  – Industry already has capital expenditures of $80 billion annually
  – Can it be raised? At what cost?

• Need carbon policy or face possibility of stranding investments
  – Dramatically changes economic outlook and impacts on coal fleet
  – Implementation of EPA regulation of stationary sources begins in 2011
  – Regulation is less certain than legislation; litigation likely

• Need to resolve to help smooth the transition of current coal fleet
  – Need planning and investment certainty to meet future demand; ensure industry can meet regulations while maintaining system reliability
The Next 10 Years Are Critical

- Need better coordination within EPA on air, water and waste rules; carbon too
- EPA coordination with sister agencies
- New technologies need to be encouraged (and funded), and phased in logically
- Implementation schedule must factor in material and labor needs, retrofit windows
- Need to expedite consideration of permits