

What's Ahead for Power Plants in Minnesota?

*Greenhouse Gas Performance Standards
under Section 111 of the federal Clean Air Act*



Franz T. Litz, Executive Director

Overview

- Brief Reflections on Non-GHG Rules
- Greenhouse Gas Performance Standards
 - Summary of EPA and State Roles
 - What is Possible in MN State Plan?
 - Options to Consider for Later Analysis
- Reflections on the Process Launched Today

Reflections on Non-GHG Rules

- Cross-State Air Pollution Rule–federal implementation plan can be replaced with a state plan:
 - More creative allowance distribution?
 - Energy efficiency or renewables set-aside?
- New Ozone NAAQS, New PM_{fine} NAAQS
 - New SIP measures; Action under Phase two of Cross-State Air Pollution Rule

Reflections on Non-GHG Rules

- New source performance standards for the oil & gas industry—will this make natural gas
- Rules Affecting Coal Plants:
 - Mercury & air toxics
 - Coal waste rule
 - Cooling water intake structures
- Flexibility? Not much for air toxics.
 - Retirement planning?

Reflections on Non-GHG Rules

- In combination, the new rules tend to:
 - Make energy efficiency investments more attractive; and
 - Depending on the price of natural gas, make renewables more attractive.
- Very clear that energy regulators and utilities need to consider how these rules change the context for planning purposes.

GHG Performance Standards

- New Source Performance Standards (NSPS) for new and modified sources. (Section 111 of the Clean Air Act)
- 111(d) applies to existing sources that emit a pollutant that is neither:
 - A criteria pollutant, i.e. a NAAQS pollutant
 - A hazardous air pollutant (HAP)

History of Section 111: the “40-year-old Virgin”

- Mostly used to cover new and modified sources with standards of performance.
- Section 111(d) has been applied to existing sources in two situations where the pollutants regulated were neither HAPs nor criteria pollutants:
 - Municipal Landfills
 - Sulfuric Acid Producers
- Various waste combustors have also been regulated using 111(d) under s. 129 of the Act

What Category of Sources?

- EPA establishes list of categories of sources based on §111(b) endangerment finding:

Those categories that “cause or contribute significantly to air pollution which may reasonably be anticipated to endanger public health or welfare”

- Revise “from time to time”
- Most categories of GHG emitters are already listed under general endangerment finding.

New Sources within Category

- For each category, EPA must issue New Source Performance Standards—
 - *Emissions limitation achievable using best demonstrated “system of emission reduction”, but cannot prescribe technology*
 - Must consider cost, energy and non-air quality impacts
 - Standards typically stated as emissions rate
 - Must be reviewed every 8 years and revised “if appropriate”

States (and their stakeholders) Play a Big Role

- Section 111(b) sets a “floor” states may exceed; consistent with Section 116 preservation of state authority
- Section 111(c) allows states to implement and enforce federal NSPS
- Section 111(g) provides governors with unique authority to petition for listing additional source categories and/or more stringent standards
- Section 111(d) calls for state plans to reduce emissions from existing sources within the category

How the State Plan Process Works

- EPA issues “guideline” to states calling for state plan to cover existing sources:
 - Description of system(s) of emissions reductions EPA considers adequately demonstrated
 - Degree of emissions limitation achievable, costs, and environmental impacts
 - Time periods for compliance
 - Other helpful information

Section 111(d) State Plans

- States must submit plan within 9 months of issuance of federal guideline:
 - Clean Air Act references SIP process for this planning exercise, including possibility for FIP
 - Under SIP process, EPA may only require minimum stringency, not manner of regulation—i.e., broad state discretion
 - Public notice and review required
 - State may consider “remaining useful life” of the existing sources to be covered

Section 111(d) State Plans

- Requirements for State Plans:
 - Emissions standards and compliance schedules “no less stringent” than those in guidelines
 - [“Allowance system”] or emissions rates
 - If more than 12 months granted for compliance, must give measurable milestones for progress
 - Monitoring and compliance

Stringency of State Plans

- States may adopt less stringent limits or longer compliance times than those in the EPA guidelines if they show:
 - Unreasonable cost due to age, location or basic process design
 - Physical impossibility of installing necessary control equipment
 - “Other factors specific to the facility or class of facility that make application of a less stringent standard or final compliance time significantly more reasonable”
- States may always be more stringent

Standard of Performance

The term “standard of performance” means a standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction and any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated. §111(a)(1)(emphasis added).

What instruments are allowed?

- Clear that emissions rate limitation is allowed. This is the most legally defensible choice.
- Emissions rate approach has been the approach to date. Section 111(b) cases uphold this approach.
- ASARCO case held in section 111(b) context that trading is not allowed, but:
 - Many argue this case has been overruled by Chevron decision;
 - Another argument is that section 111(d) allows more flexibility than section 111(b) for new sources.

Can the Standard be Cap and Trade?

- “Standard of performance” definition broad enough.
- What distinguishes section 111(b) for new sources from section 111(d) for existing sources?
 - Reference to SIP-like process in section 110, which in turn provides for “economic incentives such as fees, marketable permits, and auctions of emissions rights.”
 - Provision to take into account “remaining useful life” of the existing sources.

Can the Standard be Cap and Trade?

- The Bush EPA took the position that cap and trade is allowed as a standard under section 111(d), and this view has not been questioned by Obama EPA.
- Clean Air Mercury Rule (CAMR) proposed cap and trade for reducing mercury emissions from coal plants. (Tossed for other reasons).
- Administrator Jackson testified that emissions trading under the Clean Air Act would look very different from Waxman-Markey

What Other Measures are Possible under §111(d)?

- Definition of “standard of performance” is broad
- Reference to SIP-like process means states have broad discretion
- Ideas floated:
 - Emissions rate-based standards/Benchmarks
 - Retirement provisions
 - Rate-based trading mechanism

Looking Ahead to Process

- Unique chance to consider the impact of whole suite of rules.
- Given what we learn together, what should the state and its utilities do in planning for the future in the power sector?
- What should the state propose in its GHG performance standards plan?

Appendix

Arguments Against Cap and Trade

- ASARCO case stands for proposition that reductions must occur at each source.
 - Counter: no longer good law
 - Counter: only applies to section 111(b)
- Section 302 definition of performance standard should be read to require source-specific standards with “continuous emission” reductions from each.
 - Counter: definition in 111(a) governs
 - Counter: even if it doesn’t, then cap and trade meets continuous emission reduction requirement

Arguments Against Cap and Trade

- If Congress wanted to allow cap and trade, it would have expressly provided for it.
- Counter: reference to section 110 is arguably express reference to market-based instruments
- Congress intended to give EPA and the states broad discretion in section 111(d) context, as evidenced by the reference to SIP-like process

What Might §111 Cap and Trade look like?

- Issue: Scope.
- Issue: Offsets.
- Issue: Interstate, Inter-sector & International trading
- Issue: Temporal flexibility through banking, borrowing or longer compliance periods
- Issue: cost-containment mechanisms

What is “Achievable”?

EPA must demonstrate that the emissions limitation will be achievable at the time when it will be required:

- Can fairly project a regulated future
- Need not base standards on technology in existence now
- May rely on reasonable extrapolation of technology in other industries

How is Cost Considered?

EPA must consider the cost when setting the achievable emissions limitation:

- No established methodology
- Costs per ton used for SO₂ in cement: \$470/ton; \$12,000/ton for particulates
- Can EPA and states rely on modeled cap-and-trade prices considered “reasonable” in legislation?

Form of Standard?

- Output-based benchmarks to promote energy efficiency?
- Can EPA look beyond the emissions point to consider reductions through facility-wide energy conservation?
- Can trading be allowed?

Typical SIP Planning Process

- States have been doing SIP planning for decades
- Inventory emissions, propose measures, show emission reductions
- Long history of flexibility, state control over types and mix of measures
- SIP planning principles particularly appropriate here given long time scale