

DIFFERENTIATING RATES AND ALLOCATING EMISSIONS ALLOWANCES



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MN 111(d) Stakeholders Meeting, June 26, 2015

AGENDA FOR JUNE 26TH

- Welcome & Introductions
- Update on Activities
 - Midcontinent States Environmental & Energy Regulators
 - Regional Stakeholder Workshop June 5th in Detroit
 - Other activities?
- Recap of Steps in the Stakeholder Process
- Exploring Options for Differentiating Emissions Rates in a Rate-based Approach
- Exploring Options for Allocating Allowances in a Mass-based Approach
- Next Steps

UPDATES

PCA 111(d) MEETINGS IN 2015

- Stakeholder “Kickoff” Meeting February 20th to explore state’s objectives in developing a 111(d) plan.
- Webinar March 12th on Rate vs. Mass
- Meeting March 18th on Policy Pathways
- Webinar April 15th with MISO
- Meeting April 29th on Trading Ready Approaches
- Webinar May 18th on Tracking

PCA 111(d) MEETINGS IN 2015

- These meetings have been a chance to:
 - learn together,
 - surface preliminary stakeholder concerns and interests; and
 - generally prepare for the release of the final rule

RECAP OF THE 111(d) PROCESS

- EPA to issue final rule in August (?)
 - *Sets minimum stringency for each state in the form of state emissions goals*
 - *Establishes timeframe and rules for state plans*
 - *To propose a federal “backstop” plan*
- States then start with blank page
 - *Lots of options*
 - *Some threshold decisions will narrow the options to manageable set.*

RECAP OF THE PROCESS (CONT'D)

- Threshold Decisions—
 - *Rate- or mass-based plan?*
 - *Who to regulate?*
 - *How much flexibility?*
 - *Trading? within state? with other states?*
 - *“Self-correcting” plan?*
- What approach?
 - There are a limited number of self-correcting approaches

Regulated Entities?	Rate-based?	Mass-based?
Covered Power Plants <u>and</u> Other Entities	State Portfolio/Commitment Approach	State Portfolio/Commitment Approach
Utilities	Utility Rate Approach	Utility Budget Approach
	Utility Rate Approach w/ Optional Trading	Utility Budget Approach w/ Optional Trading
Plant/Unit Level	Full Rate-based Trading	Full Mass-based Trading

RECALL “TRADING READY” CONCEPT

- A state plan is “trading ready” if the state—when and if it wants to—can decide to allow its plant owners to use allowed tons or credits from another trading-ready state.
- Based on the idea of compatibility—in EPA’s eyes and in the states’ eyes.

APPLYING MULTIPLE RATES OR ALLOCATING MASS- BASED BUDGETS

WHAT ARE WE TRYING TO ACCOMPLISH?

Possible goals:

- Address situations where plant-owning entities are differently situated;
- Reward past or future actions;
- Compensate for or mitigate impacts; and/or
- Enhance environmental outcome.
- Other goals?

STARTING WITH THE STATE GOAL

RATE

EPA is expected to prescribe one, fuel-neutral rate for each state.

MASS

EPA is expected to permit a state to convert its rate to a mass budget, or provide a budget for each state.

HOW TO ALLOCATE/APPORTION EFFORT

RATE

A state could apply different rates to different utilities/plant owners, or different rates to different technology or fuel types.

MASS

A state could apportion effort through its allocation of allowed tons or allowances.

APPLYING MULTIPLE RATES IN A STATE

DIFFERENTIATING RATES

- Why might a state consider applying multiple rates?
 - Don't like the way a single rate applies across plants and/or portfolios
 - Growth histories of utilities, incl. levels of investment in specific areas
 - Concerns about impacts
 - Promote specific technologies
 - Other?

ISSUES WITH MULTIPLE RATES

- Multiple rates will make achievement of the state rate goal uncertain as compared to applying the EPA-prescribed rate to all utilities or units. Why?
 - Meeting state rate depends on what units operate and how much
 - It is difficult to predict how much individual plants will operate in the future
- If a state “guesses” wrong then corrective measures will be necessary

ISSUES WITH MULTIPLE RATES (CONT'D)

- If the approach does not achieve the state rate with certainty, then approach is not “self-correcting.”
 - Non-self-correcting plans require evaluations at scheduled milestones;
 - If at the milestone the state is more than 10% off track then “corrective measures” kick in.
 - What are the corrective measures?
- Uncertainty probably means state cannot trade with other states, at least without significant coordination and addressing the uncertainty

DECIDING ON MULTIPLE RATES

- Look at actual and projected emissions rates of existing plants, and for existing utilities/coops and compare these to EPA's proposed rate
- Consider whether differentiation is needed or desired
- Remember that “adjustments” to actual rates from RE and EE (and other creditable activities) are available
- Is being “trading ready” a priority? If so, multiple rates probably not a good idea.

ALLOCATING A MASS BUDGET

NEED TO DISTRIBUTE ALLOWANCES

- In a mass-based approach, state starts with a budget for each year the program is in place
- Budget = total number of allowed tons/allowances
- Every ton of carbon dioxide emitted must be covered by an allowed ton or allowance
- Need to distribute the allowances so that the covered power plants have allowances for compliance purposes

ALLOWANCES HAVE VALUE

- Allowances will have value unless the program is not binding, i.e. is very weak.
- Allowance value is expressed in dollars per ton cost
- Total value = allowance price x number of allowances
- MN will start with about 28 to 32 million tons
- What to do with this value?

POSSIBLE OBJECTIVES

- Apportion effort across utilities & plants
- Protect electricity consumers
 - low-income consumers
 - Industry
 - other or all customers
- Reward low-carbon generation and energy savings (past or future)
- Reward retirements
- Accommodate new plants
- Support other purposes

CONSIDER THE ECONOMIC EFFECTS

- Generators that need to “consume” allowances will include the value of the allowance in their MISO bids
- Like a fuel cost
- For example, a natural gas combined cycle plant might need $\frac{1}{2}$ ton for each MWhr generated. For each 2 MWhrs the generator bids to supply, it will add the cost/value of one allowance.
- The added cost shows up in wholesale electricity price whenever existing fossil plant sets the price.

THE ECONOMIC EFFECTS CONT'D

- Question of who, if anyone, captures and benefits from the allowance value:
 - Regulated utilities vs. merchant plants. Regulators will ensure that value of allowances benefits customers of the utility.
 - Cooperatives and public power—consider whether coop customers see the benefits of the free allowance
 - For merchant providers (very small % of supplied power in MN) many states have chosen the auction pathway to capture value of the allowance

DISTRIBUTION METHODS

- Free allocation based on one or more of the following factors:
 - Share of past emissions in baseline period
 - Share of past heat input (BTUs)
 - Share of past generation (output based)
 - Share of future generation (updating, output-based)
 - Share of consumption (load)
 - Customer class
 - Energy savings achieved
 - Zero-carbon generation
- Auction (or sale)

CROWD PARTICIPATION – CONSIDERATIONS FOR PCA

- Use the building blocks on utility by utility basis to allocate (rate or mass)
- Allocation to affected facilities
- Allocation based on share of emissions – either earlier baseline years, or use discretion in selecting baseline year
- Allocation based on generation (including zero carbon and/or renewable energy sources) – how to address out-of-state generation?
- Public interest outcome focused
- Allocating beyond rule-affected facilities (perhaps consider load served)
- Allocate to retiring facilities for certain period of time (like CSAPR)
- Consider energy efficiency in allocations
- Reward early action (perhaps if set asides are used); pre 2012, or pre-2020?
- Reliability (of electric system) reserve allowances
- consider capacity payments and others
- Auction – with resources going back to affecting customers, communities, workers, promoting solutions
- Budgeted allocations can incent desired actions; auctions not needed
- Utilities/regulating entities best positioned to give \$ back (low income customers, communities)
- Energy intensive industrial customers competing globally

WHY CHOOSE THESE METHODS?

- Share of past emissions in baseline period
 - Give the allowances based on compliance needs.
- Share of past heat input (BTUs)
 - Reward heat rate efficiency
- Share of past generation (output based)
 - Reward output efficiency
- Share of future generation (updating, output-based)
 - Encourage future output efficiencies, create a subsidy to operate
- Share of Consumption
 - Match value with consumers
- Customer class
 - Protect specific customer classes
- End-use Energy savings achieved
 - Reward demand-side EE
- Zero-carbon generation
 - Reward RE investments and purchases

AUCTIONS IN REGULATED MARKETS

- In competitive markets such as RGGI, most allowances are auctioned with revenues devoted to a range of public benefits (e.g., energy efficiency, low income consumers)
- In regulated markets, the public utility commission ensures that utilities use the value from free allocations to benefit customers (as opposed to shareholders).
 - Does this make auctions with allocation of revenue use redundant?

POSSIBLE ROLE FOR SET-ASIDES?

- Set-asides (or allowance reserves) can be used to achieve specific purposes:
 - New entrants
 - Energy efficiency
 - Renewables
 - Other things the state wants to reward or encourage

THANK YOU

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Please visit us at

www.ccap.org.