EPA 111(D) STAFF ANALYSIS #6: EMISSIONS TRADING

TO: Commissioners

FROM: Public Policy Bureau (Robin Arnold, Bob Decker, Margo Schurman)

SUBJECT: EPA 111(d)—Staff Analysis #6: Emissions Trading

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CC: PSC Electric

This is the sixth in a series of staff reports to the Commission on EPA's 111(d) Final Rule, which seeks to reduce carbon dioxide emissions from electric power plants. Each staff report addresses a particular and significant element of the Final Rule.

This report addresses emissions trading[1], which is a concept refined and expanded in the final rule and receives considerable emphasis by EPA. Here are some of EPA's points about emissions trading:

- Trading is a proven approach to address pollution and will provide states and affected power plants with another mechanism to achieve their emission goals.
- Emissions trading is a market-based policy tool that creates a financial incentive to reduce emissions where costs are the lowest.
- Market-based approaches have benefits including reduced compliance cost, early reduction incentives, increased flexibility, and ensured reliability.

EPA has suggested different trading options that states can use. Those options would essentially be based on the basic plan structure a state has chosen, i.e., rate-based or mass-based goals (see summary of rate- and mass-based compliance methods in staff report #5).

For a state that chooses a rate-based plan, the unit of trading is an Emission Rate Credit ("ERC"). ERCs would be issued based on one MWh of electric generation (or reduced electricity use) with zero associated CO_2 emissions. An affected electric utility generating unit ("EGU") can earn ERCs by emitting below its specified CO_2 emission rate. ERCs can also be issued for measures that provide substitute generation, e.g., renewable energy for affected EGUs, or avoid the need for generation, e.g., energy efficiency, from affected EGUs.

If an affected EGU emits above its specified emission rate, it would be required to acquire a sufficient number of ERCs to bring its emission rate into compliance. ERCs can be bought or sold, or banked for use in future years.

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[1] This report contains the essential elements of emissions trading that are clearly outlined and defined in the Final Rule. Additional concepts, yet to be finalized by the EPA, will include the responsibility of administration of the trading program, compliance requirements, rules of trading, as well as others.

For a state that chooses a mass-based plan, the unit of trading is called an "allowance." Allowances would be issued in units of tons of emissions. A state plan can design an allowance trading system based on a number of different methods, including:

- An emissions budget trading program that uses a budget of available allowances. The number of allowances for distribution would be equivalent to the mass emissions during the compliance period. Allowances would be distributed by direct allocation to each affected EGU.

- An allowance auction.

- An allowance set-aside. A small, finite number of allowances would be set aside for distribution at a future time. The remaining allowances would be distributed to affected EGUs. The set-aside allowances could then, for example, be used to incentivize an affected EGU (or utility) to incorporate additional renewable energy or energy efficiency measures in order to earn the additional allowances, or they could be used in conjunction with (and in addition to) the Clean Energy Incentive Program[2].

Each affected EGU would be required to surrender the number of allowances that would be sufficient to cover the EGU's emissions during the compliance period. Allowances may be purchased or transferred to other entities participating in the program, or banked for future use.

Another provision of the Final Rule allows states, which may be using either a rate-based or mass-based plan, to make affected EGUs "trading ready." That designation would allow individual power plants to use reductions from other entities within the state or another state to achieve required CO_2 reductions without needing an up-front agreement or multi-state plan with the other state(s).

Interstate trading requires participating states to share similar compliance approaches: mass-based states cannot trade with rate-based states, or vice versa. EPA has proposed a Federal Plan[3] that contains model rules for each type of emission trading program (rate-based and mass-based) that states can adopt or modify in their compliance plans.

Additionally, a tracking mechanism must be outlined in the state plan and subsequently approved by the EPA in order for a state to utilize any trading program. A rate-based tracking system of ERCs would need to account for the generation of ERCs, holdings of ERCs in compliance accounts for affected EGUs (or in general accounts), deduction of ERCs for compliance, and the transfer of ERCs between accounts. Additional data would include a record of ownership, dates of ERC issuance, transfer information including buyer and seller, and unique identification of each ERC. The tracking system requirements are similar to that already used for Renewable Energy Credits (RECs).

[2] The Clean Energy Incentive Program (CEIP) will be discussed in a future staff analysis. EPA intends to allow a comment period once the CEIP is published in the Federal Register.
[3] The Proposed Federal Plan will be published in the Federal Register in upcoming weeks, after which will follow a comment period.

Evaluation, Measurement, & Verification (EM&V[4]) procedures would be required to quantify and verify MWh from renewable energy, demand-side energy efficiency, and other eligible measures used to generate ERCs.

A mass-based tracking system of allowances would be similar to the rate-based system for ERCs, though the requirements for EM&V would vary greatly based on the design of the trading system submitted in a state plan.

Given the scope of Montana's challenge in meeting the emission reduction goal[5] of 111(d), it is imperative that state policy makers understand the concepts and details of trading systems in order to determine the role that trading may play in a state's compliance plan.

[4] EM&V guidelines will be discussed in a future staff analysis, and included in the comment period after publication in the Federal Register.

[5] Montana must reduce its emissions by 47% (rate-based method) or 37% (mass-based method) by 2030.