

Central Regional Technical Conference on EPA's Clean Power Plan (AD15-4)
Pre-Filed Statement of Michael Schnitzer on behalf of Entergy
March 31, 2015

Overview

I would like to thank the Commission and Staff for the opportunity to appear at the Central Regional Technical Conference on the Clean Power Plan ("CPP") on behalf of Entergy.¹ The single most important thing this Commission can encourage EPA to do in the Final Rule is to facilitate the voluntary use of mass-based compliance plans by states. Mass-based compliance, in combination with RTO markets, provides the most efficient way to achieve CO₂ reductions while minimizing reliability problems. In contrast, widespread use of rate-based CPP compliance plans would increase the cost of realizing the targeted CO₂ emission reductions while also putting large strains on centralized energy and capacity markets and undermining the efficiencies that have been achieved by those markets. Unfortunately, the rule as proposed does not facilitate the use of mass-based compliance; in fact, in many cases it discourages states from electing mass-based compliance because they would end up with more stringent limits than if they elected rate-based compliance.

Why would rate-based compliance be less efficient and have negative effects on organized markets? Such plans would require limits on the dispatch of individual units or groups of units, irrespective of costs, to allow states to manage their fleet-wide emission rates. For instance, under rate-based compliance plans, coal units and some older natural gas units would effectively become analogous to "storage hydro" facilities, with a limited amount of annual energy to be deployed for maximum benefit. This would likely be accomplished through some form of self-scheduling, more stringent operational limits, and/or much higher offer prices into the energy market to significantly limit the unit's dispatch.

While RTOs and regional Balancing Authorities² (BAs) can and do cope with some level of self-scheduled or fuel-limited resources, widespread use of rate-based compliance would result in an order of magnitude increase in self-scheduling or other operating restrictions. Having large amounts of such non-dispatchable or dispatch-limited generating capacity will result in an inefficient dispatch (compared to what could be obtained under mass-based compliance) with higher production costs. It also could

¹ "Entergy" refers to Entergy Services, Inc., on behalf of the six Entergy Operating Companies, all of which are members of MISO: Entergy Arkansas, Inc., Entergy Gulf States Louisiana, L.L.C., Entergy Louisiana, LLC, Entergy Mississippi, Inc., Entergy New Orleans, Inc., and Entergy Texas, Inc. This statement concerns policy issues associated with implementation of the CPP, assuming it is enacted. Due to legal and other concerns, Entergy opposes the current Proposed Rule on several grounds that are stated in the company's comments filed with EPA on December 1, 2014. This statement does not modify those legal positions. However, if the rule does go forward in some form, Entergy believes it is preferable for it to be implemented in an efficient fashion that minimizes disruption to organized electric markets.

² Balancing Authorities are the entities responsible for ensuring that electrical supply and demand within their boundaries are matched ('balanced') on a moment-to-moment basis, net of scheduled transfers among BAs. Each RTO is a single BA for its entire market area; there are other multi-state BAs that are not RTOs, such as the Southern Company BA.

have reliability implications.³ Indeed, the scope of necessary reliability safety valve (RSV) mechanisms would almost certainly be more extensive if there is widespread adoption of rate-based compliance plans.

In contrast, mass-based compliance would be compatible with existing organized wholesale markets. In fact, RTO markets in which CO₂ prices are included in generators' energy market offers would deliver the most cost-effective and efficient emissions reductions with less impact on reliability. Under mass-based compliance, each state would have a budget of CO₂ emissions rights which could be used by generators in the state or sold. Each generator would incorporate the cost (or opportunity cost) of its carbon emissions per MWH of generation into its energy market offers. The RTO or BA dispatch would be optimized taking these costs into account. So long as the aggregate required CO₂ reductions are feasible, any generator needed for reliability could be dispatched when needed.⁴ While high-emitting units might be called upon infrequently (because the CO₂ costs increase their offer price), a mass-based approach would not "require" any particular unit to retire.⁵ At a minimum, widespread adoption of mass-based compliance -- while not a complete solution for the reliability issues that have been identified with respect to the Proposed Rule's compliance timelines -- should improve the prospects for avoiding the more severe reliability concerns. Many commenters who assert that RTOs can handle CPP implementation without major reliability problems are (implicitly or explicitly) assuming widespread use of mass-based compliance by the states in the RTO.

Establishing clear rules that allow states to elect mass-based compliance, combined with the opportunity for voluntary bilateral trading of CO₂ emission rights with entities in other states that have adopted a mass-based approach, would facilitate multi-state compliance without the complexities of developing multi-state compacts and/or joint compliance plans. With approved state plans that rely on mass-based compliance, and with an EPA endorsement of voluntary bilateral trading of mass-based emission rights, the efficiencies of organized markets can be utilized across multiple states even if not every single state in an RTO opts for mass-based conversion. Indeed, this would be the case whether a state's generators are in an RTO, multiple RTOs, and/or non-RTO areas.

³ This is a view shared by other commenters. See, for instance, the comments of Andy Ott of PJM at the Eastern Regional Technical Conference on the CPP held in this docket on March 11, 2015. "[H]aving plans that simply put a price on carbon, would be the most economically efficient way of complying with the rule, but it is not a given that will happen," PJM Executive VP of Markets Andrew Ott said. "The other way states have dealt with existing environmental regulations is to place run-time limits on specific generation. **That is not a big problem now with how few units have such curbs, but it could turn into one if the CPP makes the practice much more common,**" he added." See *Utility Markets Today*, March 12, 2015, emphasis added.

⁴ Mass-based approaches avoid reliability problems so long as there are emission rights available to be purchased. But if the aggregate required reduction in a particular time period is not feasible when reliability constraints are taken into account, using a mass-based approach won't solve the reliability problem.

⁵ RMR arrangements might sometimes be necessary where market revenues at lower levels of dispatch are not sufficient to support continued operation.

FERC Priorities for EPA

FERC should strongly encourage/assist EPA to structure the rule to facilitate the adoption of mass-based compliance by states that choose to pursue this approach. This requires improvement of the regulatory language in four specific areas:

- EPA should provide a clear conversion formula for mass-based compliance that does not penalize states (relative to a rate-based plan), in particular for load growth.
 - EPA should provide a clear and equitable opportunity for states with multiple Balancing Authorities to pursue mass-based compliance for one BA and rate-based compliance for another BA.
 - EPA should confirm that if states elect mass-based compliance plans and elect interstate trading, then entities in those states can trade emission rights bilaterally with entities located in other states that make the same election (mass-based compliance plans with interstate trading.)
 - EPA should affirm that states that commit to use mass-based compliance in their state compliance plans and commit to interstate trading will get the “extra time” allotted for states that elect regional compliance, because by choosing this approach they are electing a compliance method that will result in coordination among multiple states.
1. Conversion formula: It is essential that EPA improve the Proposed Rule to provide a clear, no-risk conversion methodology that makes mass-based conversion attractive relative to the rate-based approach -- or at least puts it on a level playing field, which the Proposed Rule does not. The approach to translating the emission rate targets into mass-based goals that EPA discussed in the Notice of Data Availability⁶ is complex and, for many states, would not be an attractive alternative. For example, the rate-based compliance targets have a built-in accommodation for load growth because compliance is measured on a pounds/MWH basis, not total tons emitted. In contrast, EPA’s example of a mass-based conversion approach is based on an EPA-approved forecast of state-specific load growth, with the state at risk if actual load growth turns out to be higher. That asymmetric risk must be addressed in the Final Rule so that mass-based compliance is not disadvantaged.
 2. Split states: Many RTO states are “split states,” including 13 of the 15 states in MISO. This means that these states are split between multiple Balancing Authorities -- the MISO BA and one or more other BAs. For instance, Mississippi includes parts of three multi-state BAs -- it has some generators located in the MISO BA, some are in the Southern Company BA, and some are in the TVA BA. It may thus be necessary for some states to “subdivide” their compliance obligation between rate-based compliance in one BA and mass-based compliance in another BA. The Proposed Rule does not provide a transparent procedure for doing so.
 3. Bilateral trades permitted without limitation among entities in states with mass-based compliance plans: The Final Rule should make clear that bilateral trades of emission rights (tons of CO₂) are permitted among states (or portions of states) that have elected mass-based compliance and interstate trading in their state implementation plans, subject only to protocols

⁶ Translation of the State-Specific Rate-Based CO₂ Goals to Mass-Based Equivalents Technical Support Document (Nov. 6, 2014), Attachment to Docket ID EPA-HQ-OAR-2013-0602-22187.

for tracking and audit.⁷ This would remove a barrier to realizing the benefits of mass-based compliance and will also promote a more uniform price on CO₂. There is no need or benefit to requiring states to negotiate complicated regional compliance plans which would reallocate or socialize the compliance obligation among states or establish joint compliance liability.

4. Deadline for filing state compliance plans. I would like to echo Chairman Mary Nichols of the California Air Resources Board (CARB), and the other Western regulators who wrote to FERC on this issue, asking that the Final Rule affirm that a state will qualify for the available extension for regional compliance as long as it is *committed to coordinating action with other states*. FERC should make it clear to EPA that states that are in RTOs and that commit to file mass-based state implementation plans are in fact committing to multi-state compliance, in part through the RTO energy market, even though no separate multi-state compliance plan needs to be negotiated.

Market Design Implications of Rate-Based Compliance

At prior CPP technical conferences, the Commission has inquired as to whether the adoption of rate-based compliance plans will have implications for RTO market design. In a word, the answer is “yes.” Rate-based compliance plans in RTO states will likely require significant changes in market design and will ultimately result in inefficiency in the central markets. An illustrative, but not exhaustive, set of market design issues is described below:

- Capacity markets – A dramatic increase in the number of resources that are effectively “fuel limited” or “hours limited” will present a number of capacity market issues. The first is resource qualification – is a minimum level of availability required for a resource to qualify as a capacity resource? How does this choice interact with the performance incentive aspects of RTO capacity market design? A second issue is the must-offer obligation – currently capacity resources in many RTOs including MISO have an obligation to offer or schedule the full available amount of capacity each day and hour. Will this “must offer” obligation need to be modified in some fashion to reflect operational limits due to rate-based SIPs, or will the must-offer requirement remain in place, in which case units would likely need to rely on high-priced energy offers to limit their dispatch? What are the reliability implications of choosing one approach over the other? Would required reserve margins potentially be affected in areas using rate-based compliance? For RTOs with mitigation of capacity market offers, how will the energy and ancillary services offset calculation be modified to reflect changes in the energy offers of a unit?
- Energy markets -- Depending on how the “must offer” question is resolved, redispatch opportunities to address real time constraints may be limited, and current SCUC and SCED models that assume the units can be dispatched to their rated capacity will have to be modified.⁸ In addition, mitigation-related changes in energy market design will be required.

⁷ Such trading would not be dependent on membership in the same RTO or BA, so long as there is adequate tracking and reporting.

⁸ At the Eastern Regional Technical Conference, Andy Ott of PJM stated: “‘PJM has a wide array of states with different views on the CPP and if they decide to take different courses of action to comply with it that could create a situation where the RTO has to balance its grid using emergency operations. Its economic algorithms would not be able to solve all the competing goals for the grid,’ he added. ‘That would be the point where we would start to get concerned – to say we actually have so many limits on

RTO tariffs include provisions for mitigation of energy market offers to prevent any exercise of market power. Currently, incremental cost is the basis for mitigated offer levels. Under rate-based compliance plans, where units may be “bid up” in energy markets to limit output as discussed above, will the mitigation provisions need to be revised? How will an allowable offer premium be determined?

- RMR or System Support Resources – The tariff provisions of some RTOs, including MISO, currently allow the RTO to prevent a unit from retiring if it is needed, for a transition period, to maintain reliability. If a rate-based SIP requires or results in the retirement of a unit needed to maintain reliability, what happens? Will there be a reliability safety valve and will it match up with the current tariff provisions, or will modifications be required?

Frequently Asked Questions about Mass-Based Compliance and Regional Compliance

Finally, I would like to briefly address some questions that have been raised regarding mass-based compliance and regional compliance:

- ***Can regional compliance only be accomplished through a regional plan that participating states must negotiate?*** No. As explained above, once states have chosen mass-based compliance, and have EPA-approved mass-based state implementation plans, bilateral trading of emission rights can be implemented without a complicated regional agreement or reallocation of emission rights among states.
- ***Won't regional compliance create winners and losers, or force some states to subsidize others?*** I heard this discussed by some panelists at the technical conference in Washington, but the answer is “no.” The CPP imposes widely disparate burdens and costs on states based on each state’s current mix of generation and EPA’s assumptions about the states’ renewable energy and energy efficiency targets. Mass-based compliance takes that as a given, but provides an opportunity for a more efficient and lower cost regional solution for everyone through bilateral trading of emission rights and an economic regional dispatch. Put another way, the CPP itself would create winners and losers if target emission rates vary widely by states in the Final Rule. State adoption of mass-based compliance plans will neither exacerbate nor eliminate this problem but, in fact, will reduce the overall costs of meeting the disparate burdens imposed by the CPP.
- ***If some states in an RTO elect mass-based compliance, and others elect rate-based compliance, won't that mean that the mass-based states are unfairly imposing costs on the rate-based states because wholesale prices will rise?*** This concern was raised by a commissioner at the Washington D.C. technical conference, and is a reasonable question, but I think the answer is “no.” Higher LMPs only translate to higher costs for a utility’s customers if the utility is a net buyer in the RTO energy markets. If a state “self-supplies” from its own generation, then the higher LMPs do not increase its costs. For a state in an RTO, this means that it can pursue rate-based compliance without concern about LMPs, so long as the state is not a net buyer in the RTO. And if the state is a net buyer in the RTO, it has no grounds to

the runtime for units that we can't manage economically,’ Ott said. ‘That would start to impact operational reliability,’ he added.” See *Utility Markets Today*, March 12, 2015.

complain about paying for CPP compliance in other states as reflected in the LMP price it pays for its net purchases. Thus a state that concludes that its utilities can best comply by shifting their own coal generation to their own natural gas and renewables will be able to do so, even if adjoining states in the RTO choose a different approach. It will, as noted earlier, have to put operational limits on its generators' dispatch by the RTO, in order to avoid having them dispatched above the state's own load obligations and violating the state's rate-based emissions targets. This in turn raises the opposite prospect -- that by electing rate-based compliance, states will be in effect withholding some cost effective compliance from the market, thus raising costs overall.

- ***Can non-RTO Balancing Authorities implement mass-based compliance?*** Yes. If the BA includes states or parts of states that have elected mass-based compliance, then the BA would need to require that every generator in the BA located in such states must have or obtain an emission right in order to dispatch.
- ***How does mass-based compliance compare to the safe harbor alternative proposal discussed by EEI and Exelon?***⁹ Under the safe harbor proposal, EPA would establish a price per ton on CO₂, and any state that reflected that price in its dispatch would be in compliance with the interim goals. Under mass-based compliance plans, the bilateral market would determine the price of CO₂ emission rights. Both approaches are compatible with wholesale markets and economic dispatch. The safe harbor proposal would defer the need for mass-based implementation plans for participating states, but when applied in multi-state RTOs it would require agreement about how to rebate among states the excess CO₂ revenues that would be collected by the RTO.

In conclusion, although mass-based compliance is not a solution to the CPP's other issues, it would make the CPP more compatible with organized markets and, ultimately, allow for a more efficient means of compliance with the CPP. The organized RTO markets are well equipped to implement mass-based compliance plans. In contrast, rate-based compliance plans, if widely adopted, have the potential to harm organized markets. FERC should strongly encourage EPA to facilitate mass-based compliance by improving the formula for converting from rate to mass including a reasonable allowance for growth, by providing essential clarity on split states, by affirming that trading of emission rights across state lines is permitted without a multi-state agreement, and by providing extra time for filing state plans when states commit to mass-based compliance. The Commission may also want to consider other ways of encouraging mass-based compliance.

Thank you.

⁹ The "safe harbor" alternative proposal is noted in EEI's comments to EPA "Comments of the Edison Electric Institute on Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generation Units Docket No. EPA-HQ-OAR-2013-0602 (December 1, 2014) at 166. See also prepared testimony of Kathleen Barron, on behalf of Exelon Corporation filed in FERC Docket No. AD15-4 at 7-9.