

**UNITED STATES OF AMERICA
BEFORE THE
ENVIRONMENTAL PROTECTION AGENCY**

Carbon Pollution Emission Guidelines }
For Existing Stationary Sources: } **Docket No. EPA-HQ-OAR-2013-0602**
Electric Utility Generation Units }

COMMENTS OF PJM INTERCONNECTION, L.L.C

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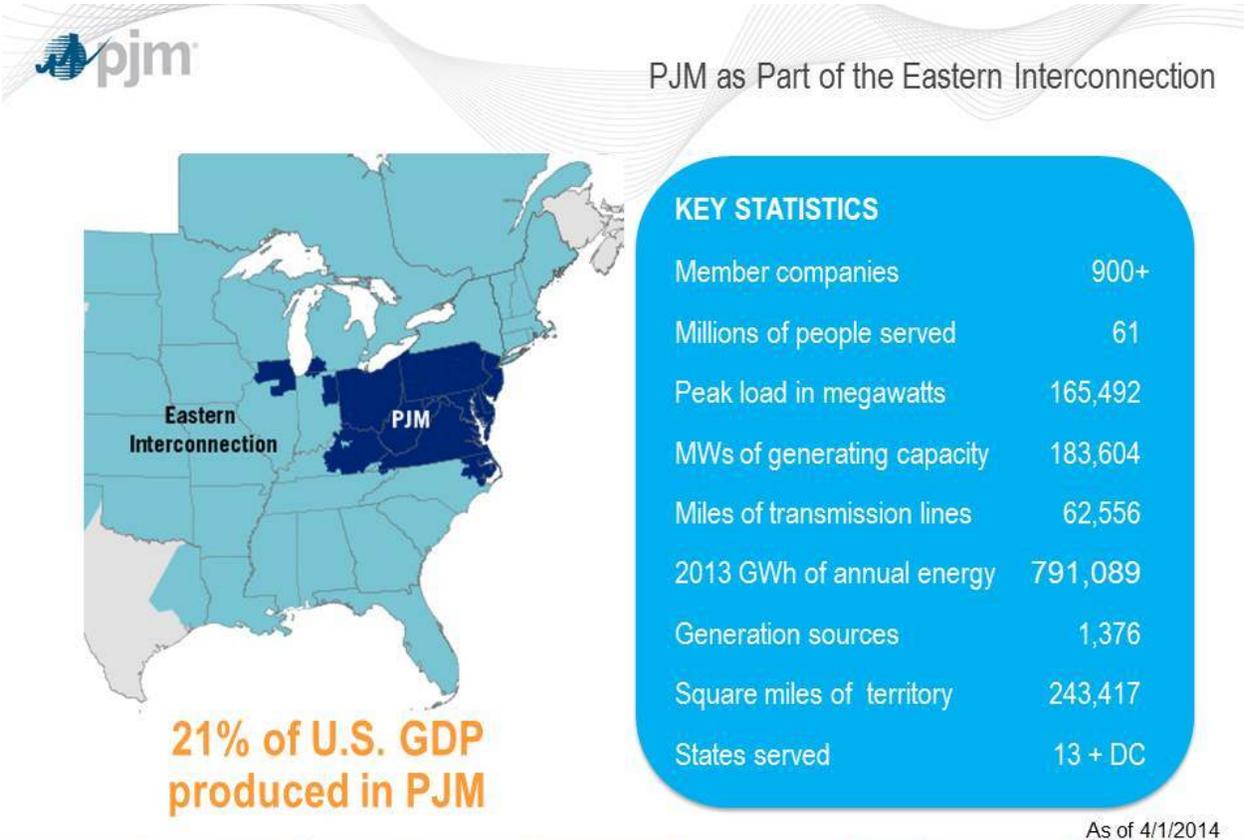
PJM Interconnection, L.L.C. (“PJM”), hereby respectfully submits these Comments in response to the rulemaking issued by the Environmental Protection Agency (“EPA”) on June 18, 2014, in this docket (“Proposed Rule”), proposing emission guidelines for states to follow in developing plans to address greenhouse gas emissions from existing fossil fuel-fired electric generation units (colloquially referred to as the “Clean Power Plan”).¹

I. PJM’s ROLE IN GRID OPERATIONS, PLANNING AND MARKETS

As illustrated below, PJM is a Federal Energy Regulatory Commission (“FERC”) approved “Regional Transmission Organization” that coordinates the transmission of wholesale electricity in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia. Acting as a neutral, independent party, PJM operates a competitive wholesale electricity market and manages the high-voltage electricity grid in its region to ensure bulk power reliability for more than 61 million Americans. Also, PJM’s region-wide commitment of resources on a day-ahead basis and dispatch in real time operations, region-wide resource adequacy construct, and long-term regional planning process provides a broad, interstate perspective that identifies the most effective and cost-efficient improvements to the transmission

¹ *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, 79 Fed. Reg. 34,829 (proposed June 18, 2014) (to be codified at 40 C.F.R. pt. 60).

system to ensure reliability and economic benefits on a system wide basis. These benefits are estimated to be \$2.2 billion per year.²



II. OVERVIEW AND APPROACH

PJM approaches the issue presented in the Proposed Rule with its core responsibilities in mind. As set forth in the PJM Operating Agreement, these core responsibilities include the safe and reliable operation of the transmission system and the operation of a robust, competitive and non-discriminatory electric power market in the PJM Region.³ The implication of operating the wholesale power markets on a non-discriminatory basis means that PJM is technology, fuel, age

² See, <http://pjm.com/~media/documents/presentations/pjm-value-proposition.ashx>

³ Amended and Restated Operating Agreement of PJM Interconnection, L.L.C., Section 7.7.

and size neutral with respect to the resulting resource mix that comes out of economic conditions and state and federal policy decisions, but with the caveat that reliability is the ultimate priority.

Through these comments, PJM does not intend to address the myriad of policy issues raised by the Proposed Rule as these are best left to states and other policymakers to address. Rather, through these comments, PJM provides specific constructive proposals to ensure that any Final Rule can be implemented in a manner which:

- Ensures overall reliability of the bulk power system; and
- Complements rather than frustrates the regional nature and benefits of regional grid operations while still respecting state prerogatives to establish individual state plans pursuant to section 111(d).

PJM is also cognizant of the specific stage of this proceeding. Although PJM intends to (and has already begun) extensive work with the states in its footprint, through these comments PJM wishes to identify those provisions in the Proposed Rule that it believes need to be modified to ensure that the Final Rule does not create impediments to ensuring reliability or allowing states to most efficiently address compliance. Although the Proposed Rule embraces these goals, it rightly asks whether there are any existing impediments to such efforts and whether further steps should be taken in the Final Rule to reduce any identified impediments.⁴ PJM appreciates the EPA's inquiry and sets forth specific areas for clarification or reform to ensure that the framework provides the promised flexibility that is so critical to cost-effective and efficient compliance with EPA's goals.

The comments discussed below are intended to support this outcome, and generally fall within these broad categories:

- “***Reliability Safety Valve***” (“***RSV***”) — a proposal to ensure that any federal section 111(d) rule or implementing State Plan (“State Plan”) includes a process

⁴ Proposed Rule at 34,899.

to assess and, as relevant, to mitigate, electric system reliability impacts resulting from the need to take compliance actions pursuant to the Rule;

- **Conforming Changes to the Rule to Accommodate an RSV** — Conforming changes to the Proposed Rule to incorporate the RSV at the identified key points in the rulemaking and compliance process;
- **Incentives/Disincentives to Regional Coordination** — Address aspects of the Proposed Rule which could inadvertently create disincentives to regional coordination on discrete implementation issues;
- **Compliance Measurement and Verification Protocols** — A proposed approach to incent coordination and consistency of compliance measurement and verification protocols to evaluate compliance with the Final Rule;
- **Treatment and Determination of “At-Risk” Nuclear Units** -- A proposed approach for flexibility in the determination of “at risk” nuclear units in a given state;
- **Clarification of What is Considered Under Construction** – PJM seeks clarification of the term “under construction” in the EPA target setting since the EPA determination is inconsistent with at least PJM’s categorization of units as “under construction;”
- **Consistency and Clarity in Rate to Mass Conversion Guidance** – PJM requests EPA to consider rate to mass conversion guidance that is clear, simple and consistent with the Proposed or Final Rule so that states and PJM may have a better idea regarding the need for a RSV in certain circumstances.

In addition to PJM-specific comments on the issues detailed above, PJM is joining the comments of the ISO/RTO Council (“IRC”) proposing inclusion of an RSV in the Final Rule. PJM has worked closely with its ISO/RTO colleagues on the development of the IRC RSV proposal embodied in the ISO/RTO Council Comments, and the specific proposals set forth in those comments have been re-stated here in Attachments A, B and C. The PJM-specific comments provided herein provide additional detail for consideration in the context of the RSV proposal.

III. COMMENTS

A. Reliability Safety Valve Proposal

Questions as to whether implementation of the Proposed Rule will have adverse reliability impacts have engendered much public debate and discussion. Although a variety of analyses, including those produced by the North American Electric Reliability Corporation (“NERC”), can help to identify issues and “bracket” potential reliability exposure, the true reliability impacts of the Proposed Rule cannot be fully evaluated without additional clarity as to the specifics of State Plans making definitive findings in this area difficult.⁵ However, there are preventative measures in the form of additional process provisions that should be put in place in the Final Rule to mitigate any future potential impacts to electric system reliability and therefore be clearly available to states and entities charged with ensuring bulk power reliability. Specifically, a “reliability safety valve” that provides a process for undertaking timely reliability assessments at various stages in the process as well as the requisite compliance and/or enforcement flexibility to implement any identified reliability solutions, would achieve this goal. Specific provisions are outlined below and summarized in Attachments A, B and C to these comments and those of the IRC.

The RSV proposal can help to ensure outcomes that address reliability issues without affecting the core policies underlying the 111(d) rule compliance design. A similar concept was submitted to the EPA by the ISO/RTO Council in 2012 in relation to the MATS rule to reflect the RSV concept. Although the proposal in response to the Proposed Rule differs slightly, the underlying reliability proposition is the same – namely, to allow for electric system reliability

⁵ PJM has committed to provide a reliability analysis utilizing the results of the analyses provided at the request of the Organization of PJM States, Inc. (“OPSI”). The results of its economic analyses undertaken in response to the request of OPSI are posted at <http://www.pjm.com/~media/committees-groups/committees/teac/20141009/20141009-summary-of-pjm-carbon-111-modeling.ashx>.

impact reviews at appropriate times and, where justified, provide for suitable compliance and/or enforcement flexibility to accommodate solutions to mitigate actions that would otherwise compromise reliability requirements.

Given the specific parameters of the Proposed Rule, PJM submits that a RSV is relevant during three stages in this process:

- (i) incorporation into the Final Rule to address reliability issues associated with the proposed 2020-2029 “glide-path” as set forth in the Proposed Rule;
- (ii) after submission and review of State Plans , and;
- (iii) during implementation of a State Plan in order to address unforeseen reliability concerns.

1. Proposed Changes to the Final Rule to Ensure up-Front Guidance on Ensuring Reliability During the 2020-2029 “Glidepath”

The Proposed Rule is clear that the proposed state targets, once set in the Final Rule, will be deemed “binding emission guidelines for state plans,”⁶ and will be subject to a “no backsliding” standard.⁷ Although the Proposed Rule does not mandate the means of achieving the proposed targets, the Proposed Rule assumes implicitly, if not explicitly, a level of achievability of the targets through some combination of individual re-dispatch of generation located in that state, heat rate improvements, renewable generation deployment and energy efficiency gains. While individual states will need to comment on the feasibility of these targets as applied to their state, the goal itself is not based on a state-specific reliability impact, but instead simply assumes that the target can be met during the compliance period with no adverse reliability impact. Moreover, the Proposed Rule as presently drafted requires compliance with a strict ten year averaging of emissions reductions over the 2020-2029 interim compliance period.

⁶ Proposed Rule at 34,892.

⁷ *Id.* at 34,917.

Although on a regional approach this “glide-path” may be achievable, there is little flexibility in the rule for specific conditions arising either at the outset or during the 2020-2029 compliance period that could make the strict averaging unachievable, in spite of the inter-temporal flexibility the “glide-path” offers to effectively bank and borrow emissions rate reductions over the initial 10-year “glide-path.”

Mindful of this particular stage of the process, PJM posits that an RSV to address these “up-front” identified reliability challenges can be addressed in the Final Rule in one of two ways:

- *Case by Case Relief*— Indicating in the Final Rule that a demonstrated reliability issue would allow a state or region to depart from the stricter averaging requirement during the interim 2020-2029 compliance period and instead propose a more appropriate state or regional “glide-path” so long as: (a) the 2030 compliance target is met and; (b) affirmative steps are being taken during the interim compliance period to timely and cost-effectively address the identified reliability issues; or
- *Relief Based on Defined “Triggering Events”* — As suggested in section III (A) of the October 30 Notice of Data Availability (“NODA”),⁸ amending the Proposed Rule to allow for defined exceptions to meeting the state specific average interim target, if specific infrastructure additions are not being added on a timely basis to meet the emissions averaging requirement during the interim compliance period such as additions of new electricity transmission or natural gas pipeline infrastructure.⁹

⁸ *Notice of Data Availability*, 79 Fed. Reg. 64,543, 64,548 (Oct. 30, 2014).

⁹ The NODA limits this suggestion of modifying the interim target to take into account “how quickly additional infrastructure could be developed to support any additional use of natural gas-fired generation by

The first approach outlined above would allow for case-by-case determinations to be made initially at the state level and ultimately approved by EPA based on specific fact circumstances presented at the time. The second would be more structural in nature by identifying those “triggering events” up front in the Proposed Rule and enumerating the process a state would use to justify its departure from the averaging requirement presently found in the Proposed Rule. Either of these approaches, or a combination of the two, authorized in the Final Rule would signal needed flexibility in the Final Rule (and the evidentiary showing required by a state or reliability entity to meet the standard) up front rather than simply leaving the issues to later litigation and enforcement actions during the compliance period itself.

Moreover, as delays in the siting and construction of electric transmission infrastructure could impact achievement of compliance through the use of renewable energy goals as much as the use of coal to gas re-dispatch goals and as the need for specific units to provide local voltage support or other localized needs could affect units that otherwise might wish to retire placing increased pressure on achieving compliance through the use of any other compliance options, the flexibility in developing a more state or region-specific “glide-path” should not be limited to use coal to gas re-dispatch as the NODA outlines. Rather, so long as a specific reliability issue affecting plan achievement can be supported by the applicable reliability authority, the ability of a state or region to tailor its “glide-path” trajectory should be available as an overall tool to ensure reliability without being artificially constrained solely to achievement of one particular method of compliance. Detailing of this RSV-style flexibility (and the evidentiary requirements

that date” for purposes of use of building block two. But as noted herein, PJM believes that state or region-specific adjustments to the interim targets should not be so limited to this particular building block.

surrounding same)¹⁰ would provide welcome certainty as the industry undertakes the significant action needed to bring itself into compliance with the Final Rule’s requirements by 2030.¹¹

2. Implementation of the RSV Through the State Plan Submittal and Review Process

A reliability safety valve is also appropriate when examining the specifics of a State Plan submitted in conformance with the Final Rule. Consistent with Section 111(b), the Proposed Rule grants the Administrator discretion to “review plan submittals for approvability” but does not specifically outline how the approval determination will be made.¹² Section 111(b) as well as the Proposed Rule both indicate that submitted State Plans must meet “energy requirements”, an otherwise undefined term.¹³ As the EPA has proposed that the “system” for purposes of defining the “Best System of Emission Reduction” can include improvements to virtually all aspects of the production, delivery and consumption of electricity, then “energy requirements” must correspondingly be read to include system needs as opposed to requirements of a particular unit or emissions control device. Although the Proposed Rule sets forth procedurally what needs to be included in a submitted State Plan, it says little about the criteria the Administrator will use in “approving” a submitted State Plan or how she will determine if the submitted State Plan

¹⁰ Specifically, PJM would propose that those states seeking an up-front adjustment through the process alluded to in the NODA, accompany their applications with evidence from the RTO/ISO (or, in non-RTO areas the regional reliability entity), detailing the reliability violations that would be projected to occur and the range (and timing) of construction of transmission or other infrastructure improvements that may be needed to correct same. This showing would then form the basis for a state or region to propose an alternative “glide-path” while still meeting the 2030 compliance target.

¹¹ PJM is sympathetic that inclusion of an RSV at this stage, or any other stage, should not provide a ready “loophole” that allows entities to avoid compliance through unsubstantiated reliability claims. The Final Rule should provide a narrow, but clear, path for states to petition EPA to revisit and modify the goals should achievement of such goal become not feasible. Independent analysis of RTOs/ISOs as well as review by the Federal Energy Regulatory Commission can provide two important checks and balances to ensure that any adverse reliability impacts are substantiated and documented.

¹² Proposed Rule at 34,838.

¹³ 42 U.S.C. § 7411(d).

meets “energy requirements” as required under Section 111(d). Although the Proposed Rule provides some explanation of what constitutes an “approvable” State Plan relative to the emissions requirements of the submitted State Plan, it notably omits any mention of review of the reliability impacts of a proposed State Plan as one of the essential criteria of an “approvable” State Plan.

It is possible that compliance approaches in one State Plan can create a regional reliability issue affecting another state and/or region. For example, a State Plan could include a restriction on the output (or equivalently, the run-time) of a generator located within the state’s borders, but when that limitation is reflected in a regional dispatch, it could create a transmission constraint or operational issue in another state(s) within the region or even within a neighboring region that leads to a NERC reliability criteria violation when considered in the transmission planning process and, thus, requiring the need for transmission upgrades to cure the reliability problem.¹⁴ Moreover, an output restriction does not automatically place a cost/price on that constraint in dispatch, and absent such a cost/price in the units’ offers, could result in using up all output or hours leaving PJM without sufficient resources to meet summer and winter peak conditions.

Another example of possible reliability impacts occurs when two states adopt very different plans. Consider two states, one with a rate-based target that does not include 111(b) resources and another with a mass-based target that does not include 111(b) resources. In the absence of these differences, new units would want to site in the mass-based state that would

¹⁴ For example, there are a number of instances in PJM where an EGU is owned by a utility in one state but is physically located in another. Moreover, PJM’s region-wide security constrained economic dispatch dispatches plants across the entirety of the region and co-optimizes the dispatch of energy and ancillary services across the larger region. As a result, actions in one state affecting a particular unit almost, by definition, have interstate impacts within the region.

help alleviate transmission constraints. However, given the posited differences, the incentives for new combined cycle units is to site in the rate-based state and for existing combined cycle resources in the rate-based state to want to run more than in the mass-based state. Such a situation could lead to exacerbating already existing congestion in moving power from the rate-based state to the mass-based state creating transmission reliability issues requiring upgrades due to increased transfer from existing resources in the rate-based state and lack of new resources in the mass-based state.

For these reasons, PJM suggests that an appropriate RSV can be used to address potential conflicts that could arise between State Plans and RSV reliability assessments and proposed solutions in multi-state regional dispatch areas, with a goal to ensure reliability reviews encompass a regional and even interregional analysis during the State Plan development process.

PJM is committed to working with the states within its region so that the reliability impacts of any considered State Plans are thoroughly reviewed and understood by the relevant state officials. In fact, PJM has already taken steps towards that effort. Nevertheless, the transmission grid is highly interconnected and effects triggered in one region or state can have far reaching implications for other regions and states. Yet, because of some of the targets and timelines required under the Proposed Rule, and the state-centric design of Section 111(d) in the first instance, the sort of regional review proposed by PJM, both in the formulation of a plan at the individual state level and its review at the federal level, is a critical element of ensuring grid reliability.

Given the importance of electric system reliability, the Final Rule should make clear that a well-supported state plan would be one that includes an analysis of any electric system

reliability impacts of the proposed State Plan on the RTO/ISO region as a whole as well as neighboring regions if applicable.¹⁵ The analysis would identify the nature of any reliability violations which could occur and provide a projection of the potential timing and cost of mitigation of same in order for the state to meet the interim and final compliance targets. Moreover, there should be an option for neighboring states or grid operators to be able to seek additional review of those submitted plans if the proposed plan will have an adverse reliability impact on that state or a neighboring group of states in the region.

Accordingly, the Final Rule should require that a State Plan include a reliability analysis which includes:

- an analysis by the RTO/ISO (or NERC Reliability Authority in non-RTO regions) of any regional or interregional reliability impacts;
- steps which are planned to address any such reliability impacts during the compliance period; and
- appropriate means for monitoring and addressing any future reliability impacts through potential State Plan modification or other means.

The submittal should be placed for public comment before acceptance by the Administrator and subject to consultation with the Federal Energy Regulatory Commission (“FERC”) and the Department of Energy as part of the review process.

3. Implementation of the RSV Through the Compliance Process

Finally, the Final Rule should incorporate the ability of the state or ultimately the Administrator, after notice and comment, to suspend the implementation of a particular aspect of an accepted State Plan if necessary to address any adverse unforeseen reliability impacts that may arise prior to or during the compliance period. Such action should, of course, not be taken

¹⁵ Pursuant to FERC Orders 890 and 1000, the borders of regions and protocols for interregional planning analyses have been submitted by Planning Authorities to the FERC through their compliance filings.

lightly and should be done in close consultation with reliability authorities and neighboring states in the region. Moreover, such action should be undertaken outside of the context of forbearance of use of enforcement authority but instead should be an option written into the Final Rule and individual state plans in the first instance. In this way, EGUs or any other entities identified in State Plans with compliance obligations can avoid the “Hobson’s Choice” of facing penalties for reliability violations versus penalties for non-compliance with Section 111(d) of the Clean Air Act.

Just as grid operations are dynamic and can change as a result of externalities, it is impossible to make a one-time static determination that reliability can be maintained over the life of a submitted State Plan. Accordingly, the RSV process should also be applied during the compliance stages to identify potential reliability issues and, as necessary, to enable entities to petition for a modification to a State Plan to address unforeseen reliability impacts within that state or a neighboring state. Petitioning entities should be able to seek modification to, or suspension of, the State Plan through a clearly defined and efficient process set forth in the Final Rule.

The length of time during which a suspension or modification is authorized should be driven by the time needed to implement cost effective, timely and efficient “work-a-rounds” that address the identified reliability problem. Such solutions could include maintaining a unit otherwise slated for retirement, construction of a new transmission line or the development of targeted and localized demand response and energy efficiency programs. It is important that the scope and burden of proof associated with such a petition be clearly identified in the Final Rule so these instances are limited to those situations where a potential reliability violation has been clearly identified and verified, and would include a showing that there are no compliance

alternatives (or other alternatives within the ambit of the State Plan) that are sufficient to address the non-compliance within the remaining time period for compliance. Verification of the reliability challenge and the time for alternative solutions to be implemented can be provided by independent entities, such as the region's RTO/ISO, with further review and comment by the state Public Utility Commissions, NERC, and FERC if so desired.

These requirements should be embodied in the Final Rule and clearly identified as limited options which should be exercised pursuant to a State Plan outside of the enforcement context. This would avoid the specter of citizen lawsuits or findings of non-compliance as *conditions precedent* to the ability of a state or the Administrator to grant the requested relief. Although the RSV adopted in the MATS rule was a successful model of RTO/EPA coordination and cooperation, implementation of the RSV in that instance needed to be accomplished through an awkward process of an EPA "Enforcement Memorandum" outside of the Rule itself which suggested enforcement forbearance in defined circumstances. Moreover, the MATS Reliability Safety Valve process did not remove the specter of citizen lawsuits for extensions beyond April 16, 2016. Rather, it required entities which could not meet the MATS deadlines of April 16, 2016 to first receive findings of non-compliance through an EPA Administrative Order which could be used against them in related civil litigation.

Section 111(d) provides a great deal more flexibility than was available to EPA under the MATS rule. Moreover, section 111(d) compliance plans will require a greater deal of regional coordination as a reliability compliance issue may affect a neighboring state requiring that state, rather than the original submitting state, to seek a modification. For these reasons, the traditional "forbearance from enforcement" model utilized in MATS is a poor fit for adjustments to State Plans needed to address demonstrated reliability challenges arising during the compliance period.

Accordingly, PJM requests that the availability of a limited RSV for demonstrated reliability problems which arise during the compliance period be written into the Final Rule itself as a permissible means that, if followed and approved by the Administrator, would not trigger a violation of the Rule itself. PJM, along with the ISO/RTO Council, proposes specific language in the Attachments appended to these comments to address this issue.

B. Need For Conforming Changes to The Proposed Rule

There are certain conforming changes to be made to provisions of the Proposed Rule to accommodate the RSV outlined above. PJM has identified at least three specific provisions of the Proposed Rule that should be modified and clarified to accommodate the RSV. These include:

- The provision¹⁶ of the Proposed Rule that once finalized, the interim and final targets will be “binding emission guidelines” for state plans, must be met by the states and may not be made “less stringent.”¹⁷
- The standard set forth in the Proposed Rule that to seek a modification of a target between the proposed and Final Rule, commenters must show that the cost to comply was significantly higher than that proposed by EPA;¹⁸ and
- The provision¹⁹ that “no backsliding” on overall plan emissions performance through a plan modification would be allowed.

Each of these provisions, although well-intentioned to avoid endless litigation over changes to the individual state targets, ignore the dynamic and ever-changing nature of the electric grid. As such, these provisions could work to handcuff both states seeking to comply with the rule as well as the agency itself as it seeks to adapt to changing conditions. In fact,

¹⁶ Proposed Rule at 34,892.

¹⁷ *Id.* at 34,898.

¹⁸ *Id.* at 34,893.

¹⁹ *Id.* at 34,917.

prudent planning and operation of the grid requires a discipline to “*expect the unexpected*” and be able to modify course appropriately. The above provisions, as written, are simply too sweeping in their reach and could unintentionally hamper efforts to provide a rule that ensures compliance progress while being flexible enough to adapt to reliability issues that could make full achievement during the compliance period infeasible in a given situation. Each of these provisions is discussed below.

1. Finality of the Individual State Target

The Proposed Rule seeks to “lock down” the individual state targets standards set forth in the Proposed Rule. In response to stakeholder comment, EPA, through the Notice of Data Availability (“NODA”) released on October 30, 2014,²⁰ has acknowledged stakeholder comments that some of the assumptions which went into Building Block 2 (and which were then used to develop the state standard) may have included overly- optimistic assumptions concerning the timely development of pipeline and transmission infrastructure needed to meet the Interim Target. Moreover, the Proposed Rule seeks comment on whether a regional standard should be considered that would not require the calculation of individual state goals.²¹ Finally, the individual state standards are dependent on assumptions regarding levels of energy efficiency, renewable generation development, pipeline and transmission infrastructure development and even heat rate improvements that themselves are highly dependent on particular fact situations.

PJM is not, through these Comments, seeking amendments to the proposed targets themselves as these are policy issues for the states and others to address. But PJM believes it most prudent for EPA to provide itself and all complying entities, including states, with the flexibility to adjust, or suspend those standards going forward if circumstances jeopardizing

²⁰ *Notice of Data Availability*, 79 Fed. Reg. 64,543 (Oct. 30, 2014).

²¹ Proposed Rule at 34,911-12.

reliability so warrant. In order to preserve this flexibility, EPA should clarify in the Final Rule that the “binding nature” of the targets does not foreclose the potential for suspension or modification of the requirement to meet that target (such as the interim targets and the related “glide-path” trajectory) should reliability issues which cannot be addressed during the compliance period interfere with strict achievement of an average emissions rate or total mass determination for a given state during the compliance period.

2. **The Standard of Review for Modifications to a Target**

In the Proposed Rule, EPA has indicated that it will only modify a proposed target upon a showing that the cost to comply was significantly higher than that proposed by EPA. Although increased cost is certainly an appropriate factor that should be flagged for consideration, overall achievability that does not adversely affect reliability is perhaps an even greater factor. And overall achievability relates to a host of issues *outside of pure cost alone* and can include matters as diverse as:

- the feasibility and effectiveness of a measurement and verification protocol for energy efficiency; to
- the time needed to construct major transmission upgrades; to
- regulatory approvals needed to ensure timely cost recovery of state-driven programs that promote efficiency heat improvements at power plants; to
- the marketing of energy efficiency programs; to
- the deployment and siting of new natural gas infrastructure and renewable resources and a host of other variables.

For these reasons, although PJM itself is not challenging the proposed state targets, PJM does believe that the proposed evidentiary burden for target modification in the Proposed Rule is too narrowly drawn in the Proposed Rule and asks for EPA consideration of legitimate claims for

changes to specific state targets outside of the strict showing of “significantly increased costs” set forth in the Proposed Rule.

3. *No “Backsliding” Provision*

The RSV set forth above contemplates modifications to a state plan during the compliance period and possible submission of amended plans to address demonstrated reliability challenges that are identified and verified. The Proposed Rule does not define the term “backsliding.” Although this term is commonly used in EPA parlance, for a rule as expansive as the Section 111(d) rule, where one state’s actions can have a significant impact on another state, inclusion of this provision may simply prove grist for litigation and an inflexible limitation on the Administrator’s desire to address legitimate reliability needs.

For example, RTOs have had the authority under their Tariffs to compensate generators for operating beyond their otherwise desired deactivation dates to address temporary needs to provide generation support in load pockets while various transmission fixes or other generation additions were being constructed. Technically, retaining generators otherwise slated for retirement through “Reliability Must Run” contracts, although limited and justified only for local reliability needs, could well be deemed “backsliding” and thus in violation of the Proposed Rule. Often RTOs and federal and state regulators need to make quick decisions on whether or not to allow a generator to continue in this manner.

It would be unwise for EPA to set up an enforcement “trap” (or the specter of citizen lawsuits) around such agreements by including in the Final Rule an absolute prohibition on “backsliding” governing any revised State Plan provision. What one could pejoratively describe as “backsliding” another could quite clearly justify as needed to ensure system reliability while alternative measures are being put into place. Central to the RSV is the ability to modify State

Plans when necessary to adapt to demonstrated and verified reliability issues that arise during the compliance period. A “no backsliding” provision, although an important goal that should be addressed by RTOs and others seeking such agreements, should not become its own legally enforceable sword to thwart attempts to make needed modifications to address unforeseen reliability issues that cannot be mitigated during the compliance period. As a result, PJM urges that EPA eliminate the rigidity of this language in the Proposed Rule and, at most, require that it be one matter to be considered in the Administrator’s review of any modifications to a State Plan filed to address unanticipated reliability issues.

IV. ADDITIONAL ISSUES IN RESPONSE TO EPA INQUIRY

A. Coordination of Compliance Measurement and Verification Protocols

The choice of whether or not states combine their efforts into developing a regional approach to compliance is a decision left to each individual state. Indeed, throughout the Proposed Rule, the EPA emphasizes the benefits of a regional approach or cooperation to achieving established targets.

PJM urges the Administrator to keep the door open for regional approaches to compliance. In this section, PJM submits comments on the Administrator’s request for comment as to whether there are additional incentives that should be included in the Final Rule.²²

Whether states seek to adopt a regional or state-specific approach to their overall compliance obligations under the Final Rule, there are certain intermediate steps where coordination across a region can provide significant benefit. One such area is compliance measurement and verification for compliance options such as energy efficiency in particular. PJM is not suggesting that a single compliance measurement or enforcement or other protocols should be required in the Final Rule. But the Administrator should consider providing

²² Proposed Rule at 34,899.

appropriate incentives for states to reach such regional agreements even if just in the area of compliance measurement and verification for specific building blocks so that there is an apples-to-apples comparison of reductions to achieve rate-based or mass-based targets across states.

Standardization or consistency of compliance measurement and verification and enforcement are prime examples of areas where regional approaches can meet state needs but also provide multi-state EGUs with a manageable means for compliance. Regional approaches to these elements can also help avoid the potential for perverse incentives that could lead to strategic behavior (gaming) regarding compliance and have detrimental market and reliability consequences that may otherwise occur should individual compliance measurement protocols be different in different states.

For example, consider two states, one with a “stringent”, and the other with a “lax” energy efficiency protocol. The state with the “stringent” protocol may be forced to rely on greater amounts of gas re-dispatch relative to the state with the “lax” protocols. This has an obvious market distortion impact and could lead to deployment of energy efficiency resources in a manner which is not necessarily cost-effective or as beneficial in reducing CO2 emissions. Moreover, in the absence of a regime where emissions rates/reductions could be exchanged across state lines, changing power flows could result in NERC transmission criteria violations, an undesirable reliability outcome. In the case of a regime where emissions reductions or rates could be exchanged across state lines, EGUs could buy credits from the state with “lax” protocols thereby finding a compliance loophole which could also change power flows in ways never envisioned resulting in transmission reliability issues. For this reason, PJM posits the following potential incentives that should be set forth in the Final Rule.

The Final Rule should make clear that EPA itself will undertake a greater degree of deference and light-handed regulation of compliance measurement and verification protocols against a state that is submitting these on a regional basis. A regional approach to compliance measurement and verification (preferably one that coincides with the dispatch of EGUs across the region) can work to avoid entities “leaning” on other states or unintended reliability outcomes such protocols between states as the entire region, rather than a single state, would also face a risk of non-compliance. This degree of “self-policing” in a region is exactly the type of deferential oversight that EPA should adapt as states are challenged to meet the complex requirements. Accordingly, the Final Rule should contain a statement of express deference in federal enforcement to states that have adopted regional approaches on matters with unique interstate attributes and impacts such as compliance measurement and verification.

B. Treatment of Nuclear Generation in Target Determinations

In the Proposed Rule, EPA seeks comment on the treatment of nuclear generation and its measurement of “at risk” generation.²³ The methodology outlined in the Proposed Rule appears to develop a strict percentage representing that percent of the nuclear fleet deemed at risk. That percentage (5.8% of the overall nuclear fleet) is then applied across all states that host nuclear facilities.

PJM believes that consistent with EPA’s desire for flexibility in development of State Plans, states should be able to justify and utilize in their State Plans more state-specific determinations of “at risk” nuclear generation within their state rather than being restricted to the numerical methodology set forth in the Proposed Rule. Those RTOs with capacity markets have tools available to assist states in ranking the competitiveness of individual units under an “at risk” showing. Although confidentiality provisions would limit the specifics of this information

²³ Proposed Rule at 34,871.

being spread on the public record, states and RTOs could develop state and regional formulae that would better allow for the identification of at risk nuclear plants in a given footprint with the EPA methodology than available solely as a default.

Moreover, EPA in its Integrated Planning Model (“IPM”) documentation has recently included fixed operations and maintenance costs on a unit specific basis that are a reasonable proxy for what can be considered going-forward costs, or in PJM parlance Avoidable Cost Rates.²⁴ Given this information, EPA is now well positioned to consider such state specific approaches to nuclear units “at risk” submitted as part of a State Plan. EPA should make clear in its Final Rule the flexibility of states to utilize such an approach.

C. Clarification of What it Means to be “Under Construction”

PJM notes that the Proposed Rule deems resources not yet in commercial operation, but under construction as of January 8, 2014, be considered as “existing resources” under 111(d).²⁵ PJM notes that the set of units considered “under construction” under the Proposed Rule does not match up with, and is in fact 3000-4000 MW less than, the set of combined cycle gas units that PJM would consider “under construction” as evidenced by signed Construction Service Agreements (“CSAs”). In PJM’s recently released OPSI-Requested Analysis, PJM included all units with CSAs as existing units for the purposes of meeting the PJM derived mass-based targets from the June 2nd Proposed Rule and November 6th Guidance. PJM requests that EPA provide a more formal definition of what it means to be “under construction” for the purposes of the rule to help PJM, OPSI, and other interested parties more accurately evaluate different compliance options and to develop more informed State Plans. PJM suggests that the term

²⁴ See United States Environmental Protection Agency, *Documentation for EPA Base Case v.5.13 Using the Integrated Planning Model*, EPA # 450R13002, November 2013, Chapter 4, Table 4-34, pp 4-62 to 4-64. See also PJM Tariff, Attachment DD, Sections 6.7 and 6.8.

²⁵ Proposed Rule at 34,876.

“under construction” should be tied to readily-identified benchmarks used in the interconnection process such as executed CSAs as noted above.

D. Consistency and Simplicity on Guidance for the Rate to Mass Conversion

In the June 2nd Proposed Rule, EPA provided the formula for deriving the target emissions rates in its Goal Computation Technical Support Document and associated appendices whereby the target emission rate in a given year was equivalent to 2012 adjusted fossil with adjustments for Building Blocks 1 and 2 emissions reductions divided by the sum of all 2012 fossil MWh, renewable MWh, nuclear “at-risk” MWh, new nuclear MWh, and energy efficiency MWh.²⁶ The Mass-based equivalent should then just be the target emission rate multiplied by the sum of all the aforementioned MWh.²⁷ This straightforward translation results in a constant mass basis from 2020 forward as shown in PJM’s OPSI Analysis.

The November 6th Guidance proposes a mass-based equivalent that omits new nuclear and energy efficiency MWh and incremental renewable energy after 2012 resulting in declining mass-based targets over time while holding MWh constant at 2012 MWh. Back calculating these rates using the June 2nd formula from the TSD, the November 6th Guidance implies emissions rates that are 15% to 35% lower than the emission rate targets published on June 2nd. The November 6th guidance, while appreciated, does not seem to provide clarity as to how a state is

²⁶ See, U.S. Environmental Protection Agency, Office of Air and Radiation, Goal Computation Technical Support Document, pp.8-18, available at <http://www2.epa.gov/sites/production/files/2014-06/documents/20140602tsd-goal-computation.pdf>. The formula in shortened equation form is Emissions Rate = [2012 fossil emissions adjusted for Building Blocks 1 (heat rate improvement) and 2 (coal to NGCC re-dispatch)] / [(2012 fossil MWh) + (Renewable MWh) + (Nuke at risk MWh) + (New Nuke MWh) + (Efficiency MWh)]. Appendices 1, 2, and 7 available at http://www2.epa.gov/sites/production/files/2014-06/20140602tsd-state-goal-data-computation_1.xlsx and http://www2.epa.gov/sites/production/files/2014-06/20140602tsd-plant-level-data-unit-level-inventory_0.xlsx

²⁷ Mass-based equivalent = [Emissions rate] x [(2012 fossil MWh) + (Renewable MWh) + (Nuke at risk MWh) + (New Nuke MWh) + (Efficiency MWh)]

to make the rate to mass conversion. Moreover, the guidance on its face appears to result in emissions rates and mass target that are not consistent with the Proposed Rule.

These different mass-targets and implied emissions rates result in very different “glide-paths” for State Plans to achieve compliance with the Proposed Rule. And while PJM does not endorse one particular method over another, PJM asks for clarity, consistency, and simplicity from EPA in its final guidance on rate to mass conversions to allow states, as they are formulating their State Plans, to fully understand their choice in rate-based or mass-based glide paths so they, and entities responsible for reliability such as PJM, can better gauge the possible reliability effects and the need for a RSV central to PJM’s comments in this proceeding. Although PJM appreciates the goal of flexibility, states should not be left guessing as to what constitutes an acceptable rate to mass conversion only to find their assumptions later questioned during EPA review of a submitted State Plan. Moreover, as noted previously, given the disparate impacts on a regional dispatch and siting of new generation of use of different rate and mass targets and different methodologies for the conversion of one to another, clarity in this area is especially important as states and regions analyze their compliance options.

V. CONCLUSION

PJM appreciates this opportunity to comment. As with our work on the MATS rule, both individually and through the ISO/RTO Council, PJM stands ready to work with its states, stakeholders and the EPA to ensure that any Final Rule allow for the continued provision of reliable and affordable electricity to the 61 million Americans we serve.

Respectfully submitted:

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ATTACHMENT A

IRC RECOMMENDED STATE PLAN COMPONENT DESCRIPTION

The IRC submits, for EPA’s consideration, the following title and description of the component recommended for incorporation into the Final Rule to facilitate consultation with appropriate entities responsible for reliability during State Plan development. The IRC recommends that the component be entitled “Description of Evaluation and Consideration of Impacts to State, Multi-State, and/or Regional Grid Reliability” and require that,

“A State Plan must consider the impact of the plan to grid reliability and describe the assessment performed to identify the potential impacts of the proposed State Plan to state, multi-state, and/or regional grid reliability performed by ISOs/RTOs in market areas and the NERC-registered entities responsible for reliability in the state and/or region, *e.g.*, reliability coordinator, planning coordinator, etc. with independent review by the NERC or the Regional Entity in non-market areas; any state, multi-state, and/or regional grid reliability issues identified as a result of the evaluation performed; and how the State Plan considered and/or addressed such impacts. This component should include, but is not necessarily limited to, a description of: (1) the type of reliability assessment (*e.g.*, long-term or short-term, local or regional); (2) the scope of the assessment [*e.g.*, transmission security and power flows (thermal, voltage, stability); resource adequacy (including fuel interdependencies); adequacy of ancillary services, operating reserves, and current operating and emergency plans; and generation resource interconnection, retirements, and operating parameters (including nuclear)]; (3) the assessment results (*e.g.*, any near- or long-term grid reliability impacts identified) including any inter-state or regional dependencies or impacts identified (if relevant); and (4) how the State considered and/or addressed the assessment results in the State Plan including identification of any revisions or inter-state and/or regional coordination.”

ATTACHMENT B

IRC RECOMMENDED APPROVABILITY CRITERIA

The IRC submits, for EPA's consideration, the following title and description of approvability criteria recommended for incorporation into the Final Rule to facilitate its review of the States' consultation with appropriate entities responsible for reliability during State Plan development. The IRC recommends that the criteria be utilized as general "approvability" criteria entitled "Demonstration of Grid Reliability" and require that,

"In developing its State Plan, a state must describe: (1) the assessment to identify the potential impacts of the proposed State Plan to state, multi-state, and regional grid reliability performed by ISOs/RTOs in market areas and the NERC-registered entities responsible for reliability in the state and/or region, *e.g.*, reliability coordinator, planning coordinator, etc. with independent review by the NERC or the Regional Entity in non-market areas prior to submission of the State Plan for review; (2) the results of such assessment including identification of any state, multi-state, and/or regional grid reliability issues; and (3) how the State considered and/or addressed these issues in its State Plan submittal. To be approvable, in the component entitled "Evaluation and Consideration of Impacts to State, Multi-State, and/or Regional Grid Reliability," the State Plan shall address:

- 1) Whether the reliability assessment meets the criteria set forth above;
- 2) Whether the results of the reliability assessment indicated near- or long-term state, multi-state, and/or regional grid reliability impacts;
- 3) Whether, where multi-state or regional impacts were identified, those impacts were coordinated with the impacted region or state(s); and
- 4) Whether the State Plan was revised to address identified state, multi-state, and/or regional impacts to reliability and, if not, how such impacts to reliability were addressed, *e.g.*, revision of impacted state's or region's State Plan."

ATTACHMENT C

IRC RECOMMENDED RSV PROCESS

The IRC submits, for EPA’s consideration, the RSV administrative process recommended for incorporation into the Final Rule. Specifically, the RSV should limit the scope of entities that are eligible to submit RSV petitions to EPA to those entities that have responsibility for grid reliability.²⁸ Other aspects of the process include establishing rules related to the reliability assessment to be performed in support of the petition, the entities qualified to perform that assessment, the process for submission of such petitions to EPA, and the role of relevant regulatory authorities, including the Federal Energy Regulatory Commission (“FERC”). Consistent with the above comments, the IRC offers the following RSV process for EPA’s consideration:

- A Qualifying Entity [defined as states with an approved State Plan (including state agencies, *e.g.*, Public Utility Commissions), the functional entity registered by NERC that is responsible for reliability within the affected area, *e.g.*, Reliability Coordinator, Planning Coordinator, etc. in ISO/RTO market areas, or the Regional Entity in vertically integrated areas, or an entity that has been assigned an entity-specific obligation under the State Plan (*e.g.*, emissions limit)] submits an appropriate RSV petition to EPA. If an entity other than the state with the approved State Plan petitions EPA under this mechanism, including a state seeking to modify another state’s State Plan, the entity must demonstrate that it has already requested the applicable state to submit such a petition to EPA and the applicable state has rejected that request.
- The petition must:
 - Describe the unforeseen, fully identified grid reliability issue (state, multi-state, and/or regional) arising from implementation of a State Plan that is approved or under development/review;
 - Provide independent verification of the grid reliability issue (state, multi-state, and/or regional) performed by ISOs/RTOs in market areas and the NERC-registered entities responsible for reliability in the state and/or region, *e.g.*, reliability coordinator, planning coordinator, etc. with independent review by NERC or the Regional Entity in non-market areas;
 - Provide an explanation regarding why the grid reliability issue (state, multi-state, and/or regional) cannot be addressed through a State Plan modification that would allow the State to return to compliance with its existing, approved compliance schedule and/or State Plan goals or performance expectations (including what alternatives (including potential corrective actions) were evaluated prior to submission of the RSV petition and why the results of those evaluations indicated that the state would be unable to return to compliance with its existing, approved compliance schedule and/or State Plan goals or performance expectations through such alternatives).
 - Provide a detailed mitigation strategy to address the negative impact to grid reliability (state, multi-state, and/or regional) arising from the State Plan that is the subject of the petition including the relevant implementation plan, including, but not limited to, the expected implementation timeframe and any necessary permitting authority required to effect the mitigation strategy or, where relief is sought prior to full identification of the

²⁸ RSV submissions should be limited to “Qualifying Entities” as defined above. The RSV process should not provide a loophole that allows entities to avoid compliance through unsubstantiated reliability claims or litigation over the standard itself.

mitigation strategy being developed, the immediate relief requested and the time period of such relief.

- Include supporting material and data including a grid reliability assessment performed by ISOs/RTOs in market areas and the NERC-Registered entities responsible for reliability in the state and/or region, *e.g.*, reliability coordinator, planning coordinator, etc. with independent review by NERC or the Regional Entity in non-market areas.²⁹ The assessment must explain the reliability issue (state, multi-state, and/or regional) in detail, including, but not limited to, the how the issue was identified, when it was discovered, and why it was not raised prior to State Plan approval); the negative impact on grid reliability arising from the State Plan that is the subject of the petition; and the identified mitigation strategy. Where the negative impact arising from a State Plan occurs in another state, the petition must explain what steps have been taken to address the impact.
- The EPA evaluates the petition in consultation with the FERC and/or relevant regulatory agencies/delegates to determine whether the grid reliability issue (state, multi-state, and/or regional) warrants the requested relief. In considering whether to authorize relief pursuant to an RSV proposal, EPA should give significant weight and deference to the assessment and/or verification provided.
- EPA grants or denies the relief requested in the Petition, which would be supported by and result from the mitigation strategy implementation timeline submitted in the Petition. More specifically, because mitigation strategies could involve multiple activities, including maintaining the availability of a resource otherwise impacted by the Final Rule/State Plan, completing a planned transmission addition, adding generation, or implementing authorized demand side management programs, the length of time for a compliance extension or any modification to the State Plan or approved compliance schedule to be authorized should be driven by the time needed to implement cost effective, timely, and efficient “mitigations” described in the RSV petition that address the identified grid reliability problem.
- The Qualifying Entity is notified and undertakes any necessary actions, *e.g.*, State Plan modification, to implement its mitigation strategy.
- The above process is undertaken pursuant to the provisions of the Rule itself outside of the enforcement process. A finding of violation against a state or an Electric Generating Unit is not a condition precedent to that entity receiving relief pursuant to this Section.

²⁹ By requiring independent assessment and, therefore, verification of the reliability issue posing a challenge to implementation of the Final Rule and/or State Plan, the EPA can fairly balance the continued reliability of electric system with the successful attainment of the objectives of the Final Rule.