

**UNITED STATES OF AMERICA  
BEFORE THE  
U.S. ENVIRONMENTAL PROTECTION AGENCY**

<b>New Source Performance</b>	<b>)</b>	<b>EPA-HQ-OAR-2023-0072</b>
<b>Standards for Greenhouse Gas</b>	<b>)</b>	
<b>Emissions from New, Modified,</b>	<b>)</b>	
<b>and Reconstructed Fossil Fuel-</b>		
<b>Fired Electric Generating Units;</b>		
<b>Emission Guidelines for</b>		
<b>Greenhouse Gas Emissions from</b>		
<b>Existing Fossil Fuel-Fired Electric</b>		
<b>Generating Units; and Repeal of</b>		
<b>the Affordable Clean Energy Rule</b>		

**JOINT COMMENTS OF ELECTRIC RELIABILITY COUNCIL OF TEXAS, INC.;**  
**MIDCONTINENT INDEPENDENT SYSTEM OPERATOR, INC.; PJM**  
**INTERCONNECTION, L.L.C.; AND SOUTHWEST POWER POOL, INC.**

**December 20, 2023**

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Generating Units; Emission Guidelines for  
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JOINT COMMENTS OF ELECTRIC RELIABILITY COUNCIL OF TEXAS, INC.; MIDCONTINENT INDEPENDENT SYSTEM OPERATOR, INC.; PJM INTERCONNECTION, L.L.C.; AND SOUTHWEST POWER POOL, INC.

Electric Reliability Council of Texas, Inc.(ERCOT), the Midcontinent ISO (MISO), PJM Interconnection (PJM) and the Southwest Power Pool (SPP) ('Joint ISO/RTOs') appreciate the opportunity to respond to the EPA's Supplemental Notice of Proposed Rulemaking request for comments published in the Federal Register on November 20, 2023. We provide these comments from our perspective not only as Independent System Operators and Regional Transmission Organizations, but, importantly, also as Balancing Authorities – entities that ensure electricity supply and demand stay balanced in order to maintain the security, safety and reliability of the electric grid – under the reliability construct administered by the North American Electric Reliability Corporation (NERC) under the oversight of the Federal Energy Regulatory Commission (FERC).

**I. Introduction and Summary**

The Joint ISOs/RTOs' August 8, 2023 comments to EPA on its Proposed Greenhouse Gas (GHG) Rule, detailed a number of their concerns with: (a) certain provisions of the proposed Rule and (b) its incremental impact on bulk power system reliability and investment in generation needed to maintain such reliability. The Joint ISOs/RTOs' comments outlined in detail, among other things, concerns with the proposed timelines and provisions that could accelerate the pace of retirements of generation needed to support load demands and system stability given an increasing amount of intermittent renewable generation on the grid. Those comments documented for each entity that the current and future pace of retirements of generation with the attributes needed to maintain reliability is significantly exceeding the pace of new additions of generation to the grid with those same attributes. The comments noted that certain provisions of the proposed Rule would only work to exacerbate those troubling trends. Moreover, the situation is different today than what existed at the time of issuance of the Clean Power Plan. When developers began to favor natural gas generation over coal generation in 2008, the ensuing transition had limited impact on reliability because the reliability attributes of the

resources were quite similar. In addition, the shale gas revolution was underway that allowed for a ready replacement for retiring coal generation. Today, the reliability attributes of most of the new resources coming online are not similar to the units they are displacing, and they require far greater capacity and transmission to provide equivalent reliability<sup>1</sup>.

The Joint ISOs/RTOs' initial comments outlined several proposals that, if incorporated into the Final Rule, would help to ameliorate, but not eliminate, those reliability issues. In these Supplemental Comments and in a spirit of providing constructive proposals, the Joint ISOs/RTOs propose several reliability assurance mechanisms or 'reliability safety valves' that would address both:

- Near-term and immediate needs for unit-specific relief that will allow units to run during system emergencies; and
- Longer-term regional reliability challenges that would require targeted relief from certain provisions of the Rule in order to ensure that each region can continue to meet its target reserve margin.

In proposing this suite of options, the Joint ISOs/RTOs fully recognize that Section 111 of the Clean Air Act contemplates a shared responsibility between the state environmental regulators and the EPA. In a similar vein, the Joint ISOs/RTOs urge EPA to recognize that for multi-state RTOs, resource adequacy is a *regional issue* and not solely an issue that can be fully addressed by a single state crafting or amending a single state plan. As further explained below, each of the options suggested herein is fully compatible with the cooperative federalism structure of Section 111. As a result, the Joint ISOs/RTOs urge consideration of these options, including combinations of these options, to ensure that the Rule ultimately adopted does not hinder the goals of maintaining system reliability on a regional level.

Although the Joint ISOs/RTOs continue to believe that the proposed Rule and associated implementation timelines would accelerate the retirement of generators with the attributes needed to support grid reliability, in the interest of providing constructive, good-faith proposals, these comments are focus on options that would not require fully suspending or delaying the Rule. Without waiving our previously stated concerns with the Rule, the Joint ISOs/RTOs propose herein several 'reliability safety valve' options that would help to address both near-term/immediate reliability needs and longer-term regional reliability issues that could arise during Rule implementation. The Joint ISOs/RTOs certainly hope that none of these reliability assurance mechanisms will need to be utilized. However, in our view, it would be imprudent to adopt a rule that does not contain measures to ensure reliability.<sup>2</sup>

In its recently released 2023 Long Term Reliability Assessment<sup>3</sup>, NERC described North America's modern reliability challenges as follows:

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<sup>1</sup> [MISO Attributes Roadmap](#), December 14, 2023  
[Electric Reliability Council of Texas, Inc. \(ERCOT\) comments regarding the Environmental Protection Agency's \(EPA\) proposed withdrawal and replacement of the Regional Haze Federal Implementation Plan for the State of Texas](#), page 4, August 2, 2023

[PJM Manual 21A: Determination of Accredited UCAP Using Effective Load Carrying Capability Analysis](#)

<sup>2</sup> In addition, the Joint ISOs/RTOs reiterate herein their request for establishment of reliability 'check-in's' during the implementation of the Rule. This review could be national in scope and is in addition to, and not a substitute for, the more targeted regional reliability mechanisms outlined in these Comments.

<sup>3</sup> [NERC 2023 Long-Term Reliability Assessment](#), page 10, December 13, 2023

*“Environmental regulations and energy policies that are overly rigid and lack provisions for electric grid reliability have the potential to influence generators to seek deactivation despite a projected resource adequacy or operating reliability risk; this can potentially jeopardiz[ing] the orderly transition of the resource mix. For this reason, regulators and policymakers need to consider effects on the electric grid in their rules and policies and design provisions that safeguard grid reliability.”*

With this in mind, the Joint ISOs/RTOs encourage EPA to consider its past efforts to address reliability issues in the context of the Clean Power Plan rule.<sup>4</sup> In adopting that rule, the EPA cataloged various changes that were based on the reliability concerns presented, which included the following:

- Allowing significant flexibility in how the applicable emission performance standards or state goals are met
- Providing a sufficient implementation time frame to ensure reliability
- Including a requirement that each State plan demonstrate that it considered reliability issues in the development of the plan
- Providing a mechanism for a state to revise its plan to address changes in circumstances that could impact reliability
- Including a reliability safety valve to provide a path for states to address emergency situations that threaten reliability
- Committing to working with FERC and DOE during implementation of the rule to ensure reliable generation and transmission.

The Joint ISOs/RTOs recommend incorporating similar changes to the proposed Rule, as well as expanding provisions to address concerns regarding regional resource adequacy given the greater breadth of this Rule and the circumstances that have made the reliability issues far more acute than what was in existence at the time of the Clean Power Plan.

## **II. Response to Specific Questions in the November 20, 2023 Supplemental Notice**

With the above focus in mind, the Joint ISOs/RTOs respond to the inquiries raised in the November 20, 2023 supplemental notice of proposed rulemaking. Specifically, in response to the EPA’s request for comment on specific mechanisms to address reliability challenges stemming from implementation of the proposed Rule, the Joint ISOs/RTOs detail below at least four options for consideration, along with the corresponding legal authority.

a. Supplemental Notice Topic #1 – Tools and mechanisms already available to balancing authorities, RTOs, ISOs and other reliability authorities to address reliability challenges.

i. Response:

At the outset, it should be noted that collectively, the Joint ISOs/RTOs serve customers in restructured states as well as states still exercising traditional state regulation over generation.

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<sup>4</sup> [Clean Power Plan Final Rule](#), page 214, October 23, 2015

Moreover, PJM and the MISO have reliability responsibilities over regions that include both regulatory models within one ISO/RTO footprint. The Joint ISOs/RTOs respond to this inquiry with a review of existing tools and mechanisms in both traditionally regulated states and restructured states. However, as described in more detail below, these existing tools and mechanisms available are inadequate to account for either the local or regional reliability impacts of the proposed Rule.

1. *Mechanisms in Traditionally Regulated States*

In traditionally regulated states, the state PUC has authority to direct the construction of new generation by the vertically integrated investor-owned utilities they regulate,<sup>5</sup> and potentially the ability to prohibit a generator from retiring. However, even in those states, load is served from a combination of merchant generation that is not subject to the same degree of state regulation as well as generation from traditional vertically integrated utilities subject to state regulation.<sup>6</sup> In addition, for states that are part of an RTO or ISO, the state's resource adequacy requirements and responsibilities are shared within the region so as to prevent one state from "leaning" on neighboring states.

Moreover, as ISOs/RTOs in regions with vertically integrated utilities face imminent reliability challenges, there is no one entity that can simply order a unit to operate, if that unit owner is otherwise facing violations of its environmental compliance obligations should it run. Section 202(c) of the Federal Power Act is an extremely limited tool allowing the Secretary of Energy to override environmental requirements for only up to 90-day periods. Moreover, an applicant for 202(c) relief needs to show imminent harm given the emergency nature of the statute. *Quite simply, no unit owner will continue to invest and maintain a plant that otherwise would be environmentally limited or rendered uneconomic based on the mere possibility of an ISO/RTO receiving Section 202(c) emergency relief in isolated circumstances.*

Finally, there is no ability for ISOs/RTOs to direct a unit that has served the ISO/RTO with a retirement notice to continue to operate. As a result, although ISOs/RTOs can offer units Reliability Must Run Agreements (RMR) as an out-of-market solution to provide compensation to a unit that otherwise would retire, there is no obligation for the unit to accept an RMR agreement or accede to a request from the RTO/ISO to withdraw its planned deactivation.

2. *Existing Mechanisms in Restructured States*

In restructured states, there is a similar lack of authority to order units that have provided the ISO/RTO notice of a planned deactivation to rescind that deactivation. As noted above, RMR agreements can be offered but need not be accepted by the unit owner. Also, the Section 202(c) remedy is at best short-term solution and requires an imminent closure of a plant. As noted in the context of vertically integrated states but even more relevant in areas consisting of restructured states, no unit owner will continue to invest to maintain a unit simply on the hope that the Secretary of Energy will grant a last minute reprieve from violations of their environmental compliance requirements.

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<sup>5</sup> The state PUC traditionally has no authority over generation owned by cooperatives, municipal utilities or merchant generation selling into the wholesale market.

<sup>6</sup> This is particularly true for merchant renewable generation which exists in those states but often serves designated customers through long term PPAs rather than through direct regulation by the state PUC.

By the same token, the states that have restructured their electricity markets have effectively ceded their ability to order new generation. Rather, they depend on the market to send price signals to attract new generation and retire unneeded generation. The markets have worked quite well in achieving that goal. In PJM during the Mercury and Air Toxics Standard (MATS) rule transition, the market efficiently replaced 20,000 MW of coal generation with new, cleaner, natural gas generation that took advantage of the shale gas revolution that was occurring simultaneously. However, as PJM detailed in its 4R's (Resource Retirements, Replacements and Risks) Report<sup>7</sup>, the markets cannot instantly replace policy-driven unit retirements with units that provide the same or even enhanced reliability services. MISO, ERCOT and SPP provided similar information and analyses in the initial Joint Comments<sup>8</sup> filed in the instant proceeding earlier this year. However, the instant proposed Rule depends on the development of new technologies (and their supporting infrastructure) that, as many commenters have explained, are not nearly developed enough to allow timely replacement of the retiring generation. Recent news on CO2 pipeline cancellations<sup>9</sup>, natural gas-fired power plant cancellations<sup>10</sup>, power plants retiring<sup>11</sup>, hydrogen production costs exceeding estimates<sup>1213</sup> and load growth doubling<sup>14</sup> heighten our concerns.

For all these reasons, the existing tools, without supporting provisions in EPA's Final Rule, are simply inadequate to account for both the local and regional reliability impacts of the proposed Rule. It is for this reason that the Joint ISOs/RTOs submit the "Reliability Safety Valve" options outlined below.

b. Supplemental Notice Topics #2 through #4

1. "Circumstances and conditions that should be accounted for in a mechanism or mechanisms to address reliability concerns";
2. "The technical form and structure of such a mechanism or mechanisms, such as an extension of the compliance date or a temporary alternative standard of performance, and supporting details describing whether such a mechanism or mechanisms should be automated to enable extensions"; and
3. "Detailed descriptions of other reliability mechanisms or ways to address commenter's reliability concerns, including phase-in considerations for small entities."

i. Response:

The Joint ISOs/RTOs outline several mechanisms to address these questions with reference to two distinct scenarios:

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<sup>7</sup> [Energy Transition in PJM: Resource Retirements, Replacements and Risks](#), February 24, 2023

<sup>8</sup> [Comments of Joint ISOs/RTOs on USEPA Proposed GHG Rule](#), Appendices

<sup>9</sup> [Cancellation of Navigator CO2 pipeline raises critical issues for several industries](#), October 25, 2023

<sup>10</sup> [After 8-year effort, another proposed natural gas power plant in Allegheny County is nixed](#), November 13, 2023

<sup>11</sup> [Recent deactivation notices from Eddystone, Wagner and Warrior Run](#)

<sup>12</sup> [Hydrogen Shot Technology Assessment: Thermal Conversion Approaches](#), December 5, 2023

<sup>13</sup> [Leaked draft | US Treasury guidance for clean hydrogen producers even stricter than EU Delegated Acts on hourly matching](#), December 5, 2023

<sup>14</sup> [PJM 2024 Preliminary Load Forecast](#), Posted November 20, 2023

- Near-term and immediate needs for unit-specific relief that will allow units to run during system emergencies; and
- Longer-term regional resource adequacy challenges that would require targeted relief from certain provisions of the Rule in order to ensure that the region can continue to meet its approved reserve margin.

1. Immediate and Near-Term Unit Specific Relief for Units Needed to Run During System Emergencies

Unit-specific relief for emergencies may be addressed in the following ways, drawing from language in proposed and promulgated EPA rules. The first approach, which is employed in the Effluent Limitations Guidelines proposed rule,<sup>15</sup> is one model. Under that Rule, coal units are allowed to operate beyond the date required for ceasing combustion of coal in the following limited circumstances for grid reliability:

- (1) An emergency order issued by the Department of Energy under Section 202(c) of the Federal Power Act,
- (2) A reliability must run agreement issued by a Public Utility Commission, or
- (3) Any other reliability-related order or agreement issued by a competent electricity regulator [or organization] (e.g., an independent system operator) which results in that electric generating unit operating in a way not contemplated when the certification was made; or
- (4) The operation of the electric generating unit was necessary for load balancing in an area subject to a declaration under 42 U.S.C. 5121 *et seq.*, that there exists:
  - (i) An “Emergency,” or
  - (ii) A “Major Disaster,” and
  - (iii) That load balancing was due to the event that caused the “Emergency” or “Major Disaster” in paragraph (a)(4) of this section to be declared.

The Joint ISOs/RTOs recommend expanding the use of similar permit conditions for affected units, not just retiring coal units, incorporating circumstances that allow for the automatic and timely operation of units as needed for reliability. This pre-approved, automated process provides, most importantly, for a rapid response, and also avoids the need for the EPA and the state to go through the time and resource consuming process of revising a state implementation plan. This may be used to address both immediate-term and longer-term reliability issues.

A second approach employed in the Clean Power Plan<sup>16</sup>, allows a unit to operate for reliability for an initial period of up to 90 days. During this period, the unit(s) may meet an alternative standard established by the EPA. Additionally, unit emissions above what is normally allowed in the State plan

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<sup>15</sup> [Supplemental Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category](#), Proposed March 29, 2023

<sup>16</sup> [Clean Power Plan Final Rule](#), page 216, October 23, 2015



are not counted towards the State plan goals, nor unit requirements, nor are they considered an exceedance/violation of the State plan. After the initial 90 days, should the unit(s) need to continue operating under the reliability assurance mechanism, the State would need to revise its plan to incorporate the reliability-required operations and account for and offset the emissions.

Both of these models, previously adopted by the EPA, demonstrate conditions and circumstances that could be used in the Final Rule to account for immediate, near-term and, in certain instances, longer-term reliability concerns.

## 2. Provisions Needed to Address Resource Adequacy and other Regional Reliability Issues

As noted above, resource adequacy (and the related reliability issues) is a *regional issue*. A resource adequacy challenge occurs when the total accredited megawatt rating of all of the resources in the region (including generation and demand response resources) is insufficient to meet the Balancing Authorities' required reserve margin to meet its projection of load either seasonally, annually or both.

Resource adequacy is assessed on an annual basis by determining, on a forward basis, the needed reserve margin<sup>17</sup>. That reserve margin determination is based on a forecast of load and is correlated with the risks of outages of needed generation to meet that load forecast, particularly during peak conditions. ISOs/RTOs project their future reserve margins annually and address any reserve deficiencies through market mechanisms such as capacity and/or energy markets, or, in the case of vertically integrated regions, through the provision of information to states regarding projected reserve margin shortfalls, which states are then required to address through their IRP plans and other regulatory mechanisms to ensure their utilities have adequate generation and reserve to serve their native load. The proposals outlined below are focused on those resources that are identified through either market clearing or state IRP plans as capacity resources and are therefore needed to meet the region's resource adequacy needs.

For purposes of explaining the options below, the Joint ISOs/RTOs focus on 'resource adequacy' since shortfalls in resource adequacy as a result of retirements cannot simply be addressed overnight and would require the development of new resources that can take considerable time to permit and build. Although the options below focus on resource adequacy, they could, for purposes of the Rule, consist of any reliability related services (such as ancillary services) that the region indicates will fall short based on a forward annual projection of system needs. As a result, the Final Rule could refer to these as 'needed reliability services'.

## 3. Options for Addressing Resource Adequacy Issues in the Context of the Final Rule

The Joint ISOs/RTOs herein propose four options for EPA consideration in crafting a "Reliability Safety Valve" that would provide a reliability assurance mechanism to address potential resource adequacy issues that could arise as a result of the promulgation of the Final Rule. As noted previously, the Joint ISOs/RTOs have crafted these options recognizing the limitations of Section 111, including:

- Those that should be addressed through specific changes to the Proposed Rule;

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<sup>17</sup> [NERC BAL-502-RF-03 Planning Resource Adequacy Analysis, Assessment and Documentation](#)

- Those that should be addressed by providing clarity in the Final Rule on how enforcement discretion will be utilized in situations where resource adequacy issues have been identified and verified by the FERC or an appropriate regional regulatory authority;
- Those that should be addressed by providing in the Final Rule clear guidance to the states as to what are key elements to ensure plan approval;
- Those that could be addressed in the Final Rule by providing acceptable options for consideration by the states working regionally with their local ISO/RTO or Balancing Authority.

For each option, we identify its means of implementation as well as the legal authority for EPA to implement that option. The Joint ISOs/RTOs do not present these options as the ‘final word’ on options available to EPA to address these issues. Indeed, elements of each of these options can be put together to further support reliability under the Final Rule.

a. *Option One – Providing Up-Front, Clear Criteria on the Use of the Remaining Useful Life and Other Factors Provision (RULOF) and Enforcement Discretion*

i. *Means of Implementation:* Clarification in the Final Rule on the Use of EPA’s Enforcement Discretion when confronted with FERC and Balancing Authority – supported Resource Adequacy Challenges.

**Description:** As part of promulgation of the MATS rule, the EPA utilized its authority under Section 113(a) of the Clean Air Act to exercise enforcement discretion. EPA’s Enforcement Response Policy Memorandum<sup>18</sup> outlined the specific means for the owner/operator of reliability critical generators to seek an Administrative Order from EPA, in which ISOs/RTOs and other Balancing Authorities identify reliability issues. The EPA’s use of enforcement discretion was strengthened by a corresponding Presidential Memo<sup>19</sup> that directed EPA among other things, to:

*“Promote early, coordinated, and orderly planning and execution of the measures needed to implement the MATS Rule while maintaining the reliability of the electric power system. Consistent with Executive Order 13563, this process should be designed to ‘promote predictability and reduce uncertainty,’ and should include engagement and coordination with DOE, the Federal Energy Regulatory Commission, State utility regulators, Regional Transmission Organizations, the North American Electric Reliability Corporation and regional electric reliability organizations, other grid planning authorities, electric utilities, and other stakeholders, as appropriate.”*

For purposes of the proposed Rule, clear up-front guidance needs to be provided to unit owners facing decisions, potentially years in advance, as to whether to comply with the Rule or retire their unit. For this reason, the triggers for the exercise of enforcement discretion need to be spelled out in the

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<sup>18</sup> [The Environmental Protection Agency's Enforcement Response Policy Memorandum for Use of Clean Air Act Section 113\(a\) Administrative Orders In Relation to Electric Reliability and the Mercury and Air Toxics Standard](#), December 16, 2011

<sup>19</sup> [Presidential Memorandum -- Flexible Implementation of the Mercury and Air Toxics Standard Rule](#), December 21, 2011

Final Rule consistent with the RULOF authority of Section 111(d) and the requirement in Section 111(a) for the Administrator to take into account “energy requirements”<sup>20</sup>.

Under this option, the Joint ISOs/RTOs propose that the Final Rule include clear provisions that provide:

1. When an ISO/RTO or other Balancing Authority identifies that compliance with the rule would result in a shortfall in meeting its region’s resource adequacy and other reliability requirements (over which the EPA could seek comments and review by FERC, or other appropriate regulatory authority<sup>21</sup>, compliance deadlines would be tapered to allow units to maintain operation during the period of the projected resource adequacy shortfall. The ‘tapering’ could be in the form of an extension of the compliance period but could also be more modest modifications such as adjustments to the capacity factor limitations, all to be determined based on the unique facts and circumstances and how problematic is the particular reliability shortfall;
2. Initially, the resource adequacy shortfall will be identified by the ISO/RTO or relevant Balancing Authority certifying that it is projecting falling below its reserve margin over the next six years<sup>22</sup>. That projection will need to be supported by documentation evidencing declining projected and actual reserve margins. The documentation would also detail the expected replacement of retiring generation with Rule-compliant generation with the attributes needed to ensure reliability as evidenced by the interconnection queue.<sup>23</sup> The EPA could seek comments from the FERC or other appropriate regulatory authority, which would then submit comments to EPA confirming its conclusion based on its review of the submittal.<sup>24</sup>
3. The review, although six years forward, would be conducted and adjusted annually and EPA’s promulgation of its guidance on enforcement discretion would be renewed or amended annually based on the submitted analysis and the comments provided by the FERC or other appropriate regulatory authority.
4. The actual implementation of that enforcement discretion and the proposed “tapering” of the implementation of the Rule could be accompanied by an overall relaxation of the compliance time period for the year. But as noted above, it also could be addressed through tapering of other provisions of the Rule such as modifying the capacity factor limitations for gas units under the Rule or other measures tailored to the particular circumstances and

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<sup>20</sup> [42 U.S.C. Chapter 7411\(a\)\(1\) Standards of Performance for New Stationary Sources](#)

<sup>21</sup> Unlike other ISOs/RTOs, ERCOT and its market participants are not subject to FERC’s jurisdiction over public utilities under the Federal Power Act, rather ERCOT is subject to the comprehensive authority of the Public Utility Commission of Texas.

<sup>22</sup> The six-year look ahead is set to conform to the time necessary for a state to develop and secure an approved State Implementation Plan that incorporates generator investment decisions. This will allow the initial State Implementation Plan to incorporate any needed reliability assurance mechanisms. The ISOs/RTOs will review and revise this need on an annual basis.

<sup>23</sup> The replacement generation in the aggregate needs to provide a similar set of attributes for ensuring reliability as the retiring generation. For example, each of the Joint ISOs/RTOs are taking steps, through enhanced accreditation of different resource types, to reflect the realities that one megawatt of thermal generation cannot simply be replaced with one megawatt of renewable generation given the intermittent nature of renewable generation. On the other hand, , incentives and increased accreditation for energy storage technologies can help to ensure that the replacement generation provides the equivalent if not superior reliability attributes relative to the retiring generation.

<sup>24</sup> In the context of presenting Comments on the Clean Power Plan, the FERC outlined its proposed process for providing Comments to the EPA. See FERC Docket No. PL12-1-000. That process could equally work in the submission of comments by FERC for the GHG Rule.

arrived at after consultation with the affected unit owner, the ISO/RTO or BA, and the state environmental agency. The type and degree of tapering of implementation is fact-specific and largely depends on how far away the region is in its forward analysis from meeting its target reserve margins.

ii. Legal Authority – EPA has always retained enforcement discretion. This proposal would simply provide clearer up-front guidance in the exercise of that enforcement discretion. However, the use of that enforcement discretion will still be dependent on the particular facts and circumstances presented by the ISOs/RTOs and relevant Balancing Authority. Moreover, Section 111(d) does allow for consideration of the Remaining Useful Life and Other Factors concerning units. Section 111(a) requires consideration of ‘energy requirements’. As EPA stated in the Clean Power Plan Rule<sup>25</sup>:

*“Under CAA section 111(d)(1)(B), state plans must provide for the implementation and enforcement of standards of performance for affected EGUs. The EPA does not believe a state that establishes standards of performance for affected EGUs without taking reliability concerns into consideration satisfactorily provides for the implementation of such standards of performance as required by CAA section 111(d)(1)(B), as a serious reliability issue would disrupt the state’s provision of implementation of the state plan.”* (emphasis added).

As such, EPA required states to demonstrate that they considered reliability issues in the development of their state plans. These provisions provide clear authority for consideration of reliability issues in the crafting of the Final Rule and in its enforcement.

b. Option Two – Creation of a Sub-Category of Units Needed for Reliability

i. Means of Implementation: Specific Change to the Proposed Rule

The Joint ISOs/RTOs propose the creation of a specific sub-category of units needed to ensure system reliability as part of the Final Rule. To address region-wide or multi-zone projected resource adequacy and reliability issues (such as a projected shortage of specific ancillary services), the sub-category can be populated by a specific quantity of megawatts of capacity that would be needed and a corresponding relaxation of certain provisions of the Rule across the fleet within that Balancing Authority for an identified discrete time period.

**Description:** This second category is available on a multi-year forward basis (e.g. looking ahead for the next five years) to address *future forecasts* of reliability concerns projected by the ISO/RTO or BA. The identification of needed megawatts of capacity to address resource adequacy and shortfalls of needed regional reliability services would allow for future competition among various resources (including different forms of generation as well as demand response) to fill the need through the ISO/RTO’s existing resource adequacy or ancillary service procurement processes or through new processes developed to identify eligible capacity. Competition would help to incent new technologies to develop to meet that need and help to limit the duration and specifics of particular actions relaxing provisions of the Rule.

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<sup>25</sup> [Clean Power Plan Final Rule](#), page 215, October 23, 2015

Given the multi-year implementation period of the GHG rule, it is appropriate to allow ISOs/RTOs and BAs identifying resource adequacy needs in the future to populate the sub-category proactively rather than wait until specific retirement notices are received. Moreover, identified future reliability issues can be addressed in multiple ways—either through retention of existing units, new units coming online or new technologies such as long duration storage developing and being deployed to address the future reliability need.

Given that the solution to an identified regional reliability need may not be unit-specific, it is appropriate for the ISO/RTO to identify a shortfall in megawatts needed to meet its reliability criteria and allow competition (or, in some cases, individual state actions) to address that need. Accordingly, if an ISO/RTO identifies a regional reliability need that will be exacerbated by the provisions of the GHG rule (such as retirements of needed fossil generation without a similarly paced replacement of that generation in like kind), the ISO/RTO can propose to EPA an identification of a number of MWs that it projects it will be short and seek relaxation of specific provisions of the Rule to accommodate that number of megawatts being maintained. For example, the relaxation could consist of a relaxation for the gas fleet of the GHG Rules proposed capacity factor limitations coupled with a relaxation of other provisions governing other resources. No one unit would receive this relaxation, rather individual units would still be subject to competition and incorporation of the costs of meeting the new revised provision in their bids. Only the most cost effective and efficient resource would be chosen for a given delivery year. The degree to which new units compliant with the rule would have been developed and cleared within the bid stack (thus displacing the less compliant units) would then affect whether the requested MW quantities could be relaxed for the next capacity procurement or the next state IRP plan. The ISO/RTO identification of MWs for which it seeks sub-category inclusion would be reviewed by ISO/RTO stakeholders and subject to challenge before the FERC (or in the case of ERCOT the Texas PUC) as this identification is uniquely tied to future reliability needs within the jurisdictional province of those regulators. The EPA would deem the ISO/RTO action (or any FERC or state PUC ruling on the ISO/RTO action) presumptively approvable for purposes of populating the sub-category.

As with the unit-specific provisions, non-ISO/RTO regions do not have the independence feature that avoids a mixing of proprietary with reliability interests. As a result, in these areas any proposal would need to be approved by both the applicable state environmental and economic regulators. In the case of a multi-state Balancing Authority, approval from each of its states will be needed to the extent that planning and resource adequacy is addressed on a company-wide basis.

ii. Legal Authority – Design of the Program and creation of Subcategories of units are clearly within EPA’s authority to design an ‘inside the fence’ regulatory program and create differing regulatory treatments of units through the creation of subcategories.

c. Option Three – Providing Clear Guidance to the States, Regarding what would Constitute an Acceptable State Plan, Within the Context of a Regional Reliability Safety Valve to Address Regional Resource Adequacy Issues.

i. Means of Implementation: Guidance to the States in the Final Rule.

**Description:** Another option, the Joint ISOs/RTOs propose, would recognize that compliance plans are, in the first instance, developed by states and then subject to approval by EPA. Accordingly,

under this Option Three, the Joint ISOs/RTOs propose that the EPA use its ultimate authority to review and approve or reject state plans to detail in the Final Rule what would constitute an acceptable state plan related to resource adequacy issues. In short, the EPA would not be dictating to the states exactly what needs to be in their plans, but would be detailing ‘guard rails’ that would define, as a necessary component, provisions for states operating in regions under a single ISO/RTO or BA to craft regional reliability mechanisms in order for the collection of state plans to receive final approval by EPA.

Specifically, under this Option the EPA would indicate in the Final Rule that states would need to work with their ISO/RTO or BA and build in an expedited, if not automated, process that would allow for the plan to be modified upon the identification of a resource adequacy or other reliability issue. As explained above, because resource adequacy is a regional issue, the states in that region would need to agree on the modifications to their plan (including extending deadlines) upon identification and verification of a regional resource adequacy or reliability issue.

ii. Legal Authority – EPA retains ultimate authority to approve or reject state plans. In approving state plans under Section 111(d), EPA must take into account “energy requirements”<sup>26</sup>. EPA would in the Final Rule be providing guidance to the states as to how it will exercise that authority and would establish the “guardrails” of what would constitute an acceptable plan while, at the same time, not dictating a particular mechanism for inclusion in the state plans.

d. Option Four – Suggesting to the States in a Given Region Served by an ISO/RTO or Balancing Authority the Creation of a Bank of Regional Reliability Allowances Available to Unit Owners Only During Emergency Conditions.

i. Means of Implementation: Guidance to the states as to what would constitute an acceptable option to address regional reliability requirements.

**Description:** This option would encourage states to adopt market-based mechanisms such as allowance trading with a particular focus on creation of a regional bank of reliability allowances for use during system emergencies in the event there is insufficient availability of allowances otherwise available on the marketplace to ensure compliance. To be clear, unit owners would still have to meet their compliance obligations using the “inside the fence” options available under the Rule. This bank of allowances is supplemental and only available during actual or forecasted emergencies upon certification by the ISO/RTO or BA as to the additional need for such allowances. In this way, this proposal does not constitute an entirely separate compliance path outside of the fence line of the plant and therefore does not, in and of itself, run afoul of the Supreme Court’s admonition as to the limits of EPA’s reach in *West Virginia vs EPA*.<sup>27</sup>

Specifically, guidance would be provided to states that EPA would find acceptable the creation of a bank of “regional reliability allowances” which would be available to unit owners in the region should emergency conditions or resource adequacy issues arise in a given region as certified by the ISO/RTO or BA and confirmed by FERC. The allowances would only become available if there is insufficient liquidity of available allowances for units needed to meet the reliability needs of the region.

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<sup>26</sup> [42 U.S.C. Chapter 7411\(a\)\(1\) Standards of Performance for New Stationary Sources](#)

<sup>27</sup> [West Virginia v. EPA](#), June 30, 2022

Unit owners would compete for those allowances through a market-based auction which could be administered by the ISO/RTO or by a third party as the region decides. The size of the allowance pool to be made available would be based on modeling of the need and potential shortfalls developed by the ISO/RTO as part of their ongoing resource adequacy analyses.

Moreover, to ensure that emission targets can ultimately be met, provisions could be made by the region to borrow from their emissions target for a given year and ‘pay back’ those emissions in future years through retirement of those allowances or other measures to ensure no net impact on emissions to the extent that resource adequacy and reliability issues are ameliorated through this mechanism.

ii. Legal Authority – EPA would be suggesting to the states options for market based mechanisms to address reliability challenges in the region. Because the allowances outlined above would only be available on an emergency basis, they would not supersede the requirement that individual units undertake required “inside the fence line” measures so as not to run afoul of the Supreme Court’s holding in *West Virginia vs. EPA*<sup>28</sup>.

c. Supplemental Notice Topic #5

*“What Information would be ample and appropriate, but not overly burdensome to substantiate the need for and use of such a mechanism or mechanisms including any appropriate documentation from balancing authorities, RTOs or ISOs?”*

i. Response: NERC requires Planning Coordinators in the ReliabilityFirst region to conduct a Resource Adequacy Analysis, Assessment and Documentation annually<sup>29</sup>. These reports or similar analysis and documentation, would be appropriate information to aid in determining regional resource adequacy concerns. Regarding reliability concerns of generators electing to retire, the ISOs/RTOs associated deactivation analyses identifying reliability impacts of retirements could also be provided. These documents may also be used in support of a State plan revision necessary for reliability. When generators are needed to operate to avert emergency situations the Energy Emergency Alerts (EEA) or other warnings provided in advance of an EEA issued by the Balancing Authority could be submitted to support the emergency relief for a specific event.

d. Supplemental Notice Topic #6

*“Lessons learned from the architecture of any previously proposed or finalized reliability mechanisms and the use of such mechanisms in practice.”*

i. Response: Reliability mechanisms such as the enforcement discretion provisions of the MATS rule<sup>30</sup> have been used in only limited circumstances; however, that does not mean these mechanisms are not valuable. The proposed Rule is far more sweeping than the MATS rule in the number and type of units that are impacted. In addition, the mismatch between the pace of retirements vs. the pace of new

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<sup>28</sup> [West Virginia v. EPA](#), June 30, 2022

<sup>29</sup> [NERC BAL-502-RF-03](#)

<sup>30</sup> [The Environmental Protection Agency's Enforcement Response Policy Memorandum for Use of Clean Air Act Section 113\(a\) Administrative Orders In Relation to Electric Reliability and the Mercury and Air Toxics Standard](#), December 16, 2011

substitute generation with the reliability attributes needed is a more recent phenomenon and did not exist at the time of the MATS rule, where natural gas generators, having similar reliability attributes, were a substitute for the retiring coal units. The Effluent Limitations Guidelines proposal addresses the potential need for retiring units to continue operating for reliability. Other ad hoc mechanisms have been employed in the Coal Combustion Residuals Rule and others to address coordinating the timing of installation of controls with reliability needs. The reliability provisions in the Clean Power Plan, as mentioned earlier, could provide added assurance of maintaining reliability. Each of these are helpful but given the more sweeping nature of the proposed Rule and the number of affected units, are not replacements for a more comprehensive reliability safety valve to address resource adequacy and short term reliability needs triggered by units considering retirement when faced with otherwise having to comply with the proposed Rule.

Retirement decisions are made years in advance with unit owners today contemplating the impact of the proposed Rule and other EPA rules on the long term viability of their unit. Decisions regarding whether to retire or continue investment will need to be made very soon after the proposed Rule is finalized. The Joint ISOs/RTOs point out this fact to note that the more open-ended enforcement discretion guidelines adopted in the MATS rule or the more limited coordination of timing of installation of controls that EPA adopted in implementing its Coal Combustion Residuals rule will simply not suffice on their own, given the timelines of the proposed Rule. Additionally, the reliability provisions of the Clean Power Plan are a good base to start from; however, they do not adequately address regional resource adequacy concerns. For these reasons, the Joint ISOs/RTOs propose the above set of options for consideration by the EPA as next steps in this Rulemaking.

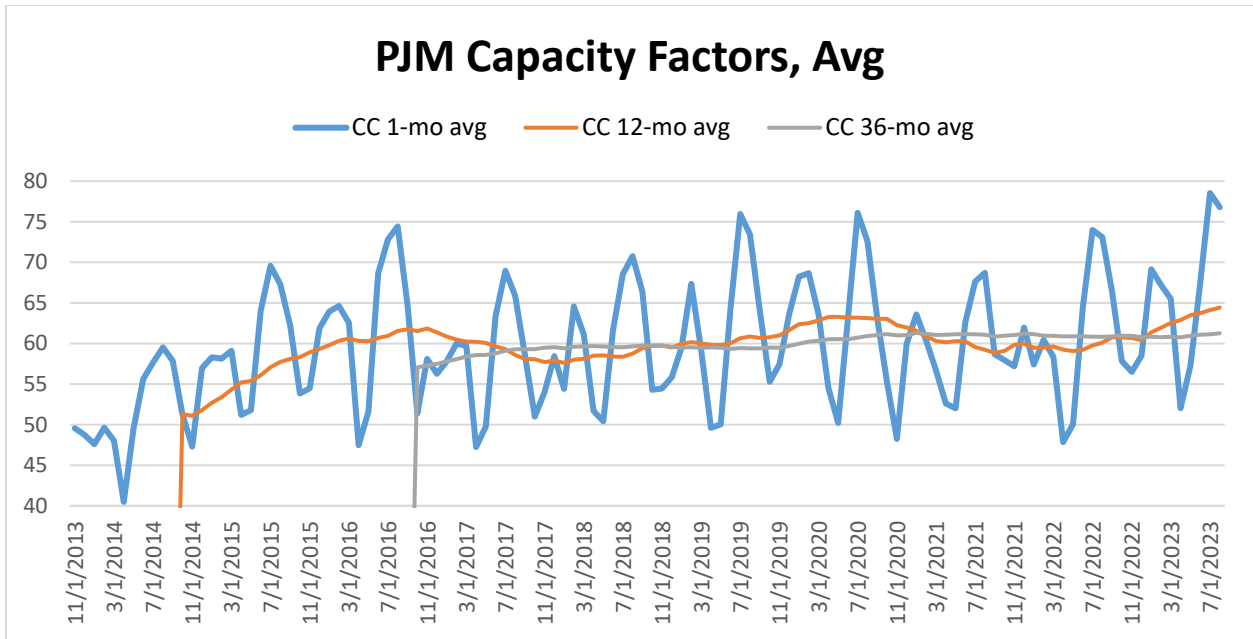
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As noted previously, the options outlined above are presented in the spirit of trying to provide constructive solutions for EPA's consideration of the reliability issues that the proposed Rule could well trigger, particularly in the area of straining regional resource adequacy and associated reliability attributes and services. They are not intended to represent the entire universe of options and can be combined in various ways to effectuate the intended goal of preserving reliability while meeting the environmental goals of the Rule. The Joint ISOs/RTOs appreciate EPA's continued engagement with us on these issues and stand ready to continue to work with all parties with these two goals in mind.

***Additional items discussed that will help minimize reliability impacts of a final rule:***

1. ***Multi-year Compliance*** – Employing a 3-year average for meeting performance standards, coupled with a higher capacity factor exclusion allows for the inherent variability and increasing use of existing natural gas combined cycle units, which are necessary to maintain reliability until the services they provide can be replaced at scale. Exhibited below is the difference in average capacity factors of combined cycle units in PJM measured on a monthly basis, a 12-month rolling average and a 36-month rolling average. As shown, the average capacity factors, which have been increasing, climb above 75% at times when measured on a monthly basis. When measured over a 36-month rolling period the average capacity factors are closer to 62%.





Note: Information derived from S&P Global, Regional Integrated/North America subscription

2. **Inclusion of Scheduled “Reliability Check-In’s” re: Reliability Issues as well as Progress on the Regional Deployment of CCS and Co-Firing Infrastructure** – In their initial Comments, the Joint ISOs/RTOs proposed a series of “check-in’s” to be established in the Final Rule. Those “check-ins” with the Balancing Authorities as well as States and Other Stakeholders would review potential or actual reliability issues that have developed regionally or nationwide that may not have been anticipated as well as the progress being made in individual regions on the development and siting of the infrastructure needed to meet the BSER technologies identified in the Final Rule – namely carbon capture and sequestration or co-firing with hydrogen. To the extent that other technologies have been identified to meet the Final Rule’s intended goals, those too would be reviewed in this context. This review would be in addition to, not as a replacement for, the more targeted “reliability safety valves” outlined above.

The Joint ISOs/RTOs urge inclusion of these reviews, at least on a two-year basis, into the Final Rule. Absent some kind of “check-in” to make sure the technology is developing as assumed will be the case by 2030, it is extremely difficult to envision how the Final Rule would meet the “adequately demonstrated” test of BSER under the Clean Air Act. A “check-in: allows modification of expectations if those technologies do not develop as hoped.

The Joint ISOs/RTOs look forward to working with all stakeholders and urge consideration of the Comments as EPA crafts its Final Rule.

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