

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

**Transmission System Planning
Performance Requirements for
Extreme Weather**

)
)
)

Docket No. RM22-10-000

COMMENTS OF PJM INTERCONNECTION, L.L.C.

Pursuant to the Federal Energy Regulatory Commission’s (“FERC” or the “Commission”) June 16, 2022 Notice of Proposed Rulemaking in the above-captioned proceeding,¹ PJM Interconnection, L.L.C. (“PJM”) hereby submits the following comments and provides limited corrections to the proposal and record in this proceeding.

I. GENERAL COMMENTS

A. PJM Concurs with the Commission’s Stated Objectives, but is Concerned with the Manner in which the NOPR Proposes to Achieve those Objectives.

In the NOPR, the Commission proposed to utilize Section § 215(d)(5) of the Federal Power Act (“FPA”)² to direct the North American Electric Reliability Corporation (“NERC”) to submit modifications to Reliability Standard TPL-001-5.1 (Transmission System Planning Performance Requirements) that “address concerns pertaining to transmission system planning for extreme heat or cold weather events that impact the reliable operation of the Bulk-Power System.”³ In so doing, the Commission stated that “[e]xtreme heat and cold weather events are occurring with greater frequency” and, by extension, “the impact of concurrent failures of Bulk-Power System generators and transmission equipment and the potential for cascading outages that may be caused by extreme

¹ *Transmission System Planning Performance Requirements for Extreme Weather*, 179 FERC ¶ 61,195 (2022) (hereafter, the “NOPR”). See also 87 Fed. Reg. 38,020 (June 27, 2022) (“Comments are due August 26, 2022.”).

² 16 U.S.C § 824o(d)(5).

³ NOPR at P 1.

heat and cold events should be studied and corrective actions should be identified and implemented.”⁴

PJM fully supports the Commission’s stated objectives in the NOPR. However, PJM is concerned that the *manner* in which the Commission proposes to effectuate its goals, as presently described in the NOPR, may be missing an opportunity, and may ultimately frustrate the fulfillment of those stated objectives. In particular, PJM’s concerns center on two specific observations about the NOPR.

First, the NOPR appears to be thematically targeting what is often referred to as “resilience” or “enhanced reliability.”⁵ In PJM’s experience, this is a wide-ranging topic encompassing many different components, including not only extreme weather (*e.g.*, derechos, hurricanes, flooding, droughts, wildfires, and extreme hot or cold temperatures), but also gas pipeline contingencies, fuel security, minimum interregional transfer capability, reduction in “CIP-14” facilities,⁶ electromagnetic disturbances, and geomagnetic disturbances. All of these

⁴ *Id.* at P 2

⁵ Back in 2018, the Commission introduced the term ‘resilience’ to cover these activities and proposed a definition of the term. Given that some have objected to continued use of the term ‘resilience,’ PJM has rebranded the activity as ‘enhanced reliability’ for purposes of its comments in this and the related NOPRs. Whether the Commission wishes to continue to use the term ‘resilience’ or to rebrand the topic is of little consequence. However, as the Commission stated when the original resilience docket was closed, “the resilience and reliability of the bulk power system must—and will—remain one of the Commission’s paramount responsibilities and concerns.” *Grid Resilience in Regional Transmission Organizations and Independent System Operators*, 174 FERC ¶ 61,111 at 4 (2021) (“Order Terminating Resilience Docket”). See also *id.*, Clements and Christie Concurrence (“The issues attendant to grid resilience and reliability that this particular proceeding raised are compelling and must command this Commission’s future attention.”).

⁶ NERC developed reliability standard CIP-014-2 to identify and protect transmission stations and substations, and their associated primary control centers that, if rendered inoperable or damaged by physical attack, could result in instability, uncontrolled separation, or cascading. The standard requires transmission owners to conduct assessments to identify such critical facilities. Currently, however, no industry standard or uniform planning driver exists by which transmission providers can plan the regional transmission system specifically in order to mitigate CIP-014 facilities. PJM notes that it is also actively engaged through the Transmission and Substation Subcommittee (“TSS”) on the development of common connection requirement criteria concerning design philosophy, design requirements, and operating practices for grid enhancements. See <https://pjm.com/-/media/planning/design-engineering/maac-standards/recommendations-of-resilience-and-system-hardening-practices.ashx>.

components of “enhanced reliability” affect each other, and warrant close consideration, given the increasing frequency of these events over the past decade(s).

By extension, the topic of enhanced reliability correspondingly touches *several* aspects of the Commission’s jurisdiction—reliability (FPA § 215), wholesale rate (FPA §§ 201, 205), Congressional directives to ensure that planning meets the needs of load serving entities (FPA § 217), and transmission (FPA §§ 201, 205). However, rather than holistically addressing this wide-ranging topic by invoking the multiple bases of the Commission’s jurisdiction that are implicated by it, the NOPR proposes to address only *one* narrow component (extreme hot and cold weather), and utilize only *one* narrow avenue of the Commission’s statutory authority (FPA § 215(d)(5)). PJM is concerned with this approach. The issue of enhanced reliability, and the specific directives proposed in the NOPR, strongly implicate considerations that arise under other aspects of the Commission’s jurisdiction, such as transmission planning and cost allocation under the PJM Tariff. Accordingly, while FPA § 215 is one tool that can be used in addressing the issue of enhanced reliability, PJM does not believe that it should be the *primary* tool to address this multi-faceted and complex issue. Indeed, the text of FPA § 215 itself appears to support this conclusion, stating that FPA § 215 “*does not authorize the [Electric Reliability Organization (“ERO”)] or the Commission to order the construction of additional generation or transmission capacity or to set and enforce compliance with standards for adequacy or safety of electric facilities or services,*”⁷ and that “*the term ‘reliability standard’ . . . does not include any requirement to enlarge such facilities or to construct new transmission capacity or generation capacity.*”⁸ Thus, by relying exclusively on FPA § 215 to address this complex problem, in

⁷ 16 U.S.C. § 824o(i)(2) (emphasis added).

⁸ 16 U.S.C. § 824o(a)(3) (emphasis added).

isolation from the other bases of the Commission’s jurisdiction, PJM believes that the Commission may be unnecessarily limiting its options in developing the comprehensive solution that this issue warrants, and may be unintentionally setting a precedent that Section 215 is the primary vehicle for addressing these larger issues that, in PJM’s view, require a more comprehensive approach.⁹ Moreover, if the Commission intends to address these larger issues more broadly in a future NOPR, the proposed approach still runs the risk of diverting resources to addressing these issues piecemeal through responses to multiple NOPRs rather than more comprehensively and in an efficient manner.

Second, the NOPR proposes to assign the solution to this issue *exclusively* to NERC. PJM is concerned with this approach. While PJM continues to have a productive and engaging institutional relationship with NERC and PJM’s Compliance Enforcement Authority, ReliabilityFirst, Congress specifically established the Electric Reliability Organization (“ERO”) under an *independent* basis of organic jurisdiction (FPA § 215), completely exogenous to the Commission’s other statutory powers.¹⁰ As a result, NERC and the Regional Entities do not institutionally engage in any meaningful way with the ongoing specific planning processes taking place in PJM and other regions, as the rules and regulations governing these planning processes arise under Commission-jurisdictional tariffs (FPA §§ 201 and 205), and not under the

⁹ PJM submitted its Comments in the RM21-17 proceeding and repeats herein its specific proposals as to how the Commission could address these issues more holistically.

¹⁰ See, e.g., 16 U.S.C. § 824o(b)(1) (“The Commission shall have jurisdiction, within the United States, over the ERO certified by the Commission under subsection (c), any regional entities, and all users, owners and operators of the bulk-power system, including but not limited to the entities described in section 824(f) of this title, for purposes of approving reliability standards established under this section and enforcing compliance with this section. All users, owners and operators of the bulk-power system shall comply with reliability standards that take effect under this section.”); 16 U.S.C. § 824(e) (“The term ‘public utility’ when used in this subchapter and subchapter III of this chapter means any person who owns or operates facilities subject to the jurisdiction of the Commission under this subchapter (*other than facilities subject to such jurisdiction solely by reason of section . . . 824o . . . of this title*).” (emphasis added)).

Commission's reliability jurisdiction (FPA § 215). This means that the NERC stakeholder process that would develop and approve any modifications to TPL-001-5.1 under the NOPR is, by design, institutionally distanced from the important stakeholders in PJM (*e.g.*, states, Transmission Owners, load, suppliers) who are *already engaged* with PJM in many respects regarding planning for extreme hot and cold weather events, through PJM's existing Commission-approved planning processes. Additionally, because NERC and the Regional Entities do not institutionally engage in meaningful ways with the ongoing planning processes taking place in PJM and other regions, the implications of a reliability standard that directly impacts those planning processes raises concerns regarding how NERC and the Regional Entities would implement a corresponding compliance and enforcement regime after Commission approval of the modified standard. In other words, because NERC and the Regional Entities are institutionally oriented to *not* monitor or analyze Commission-jurisdictional tariffs and the planning processes therein, auditing and enforcement of reliability standard requirements that may interact with the rules and processes arising separately under Commission-jurisdictional tariffs may lead to confusion and disagreement between Compliance Enforcement Authorities and Registered Entities.

Accordingly, PJM is concerned that, as proposed, the NOPR may inadvertently create a singular and somewhat siloed approach that is not only exogenous to the institutional focus of the ERO (both in drafting and implementing/enforcing the standard), but is also unnecessarily distanced from key PJM stakeholders who are already engaged with PJM in planning for extreme hot and cold weather events in many respects, through PJM's existing Commission-approved planning processes.

As detailed below, PJM wishes to make clear that it is *not* implying that there is no role for NERC in working with the industry on enhanced reliability planning. PJM believes that NERC

can play an important role on a number of the elements of enhanced reliability planning, including the development of measures to determine the appropriate level of interregional transfer capability. Rather, PJM urges a better *sequencing* of the tasks and approach to the larger issue, with any assignment to NERC to develop standards only occurring:

- (a) once the Commission has set forth a road map for the industry to address the larger issue of enhanced reliability that PJM noted in its comments submitted in Docket No. RM21-17; and
- (b) fitting the specific narrow task outlined in this NOPR into that larger picture of comprehensive reforms.¹¹

B. Rather than Parsing the Approach Described in the NOPR, PJM Suggests a Number of Alternative Steps that the Commission Could Take to Effectuate the Important Objectives Identified in the NOPR.

Rather than parsing the steps needed to address enhanced reliability and defaulting to an immediate task of producing a standard governing consideration of extreme hot and cold temperatures as contemplated by the NOPR, PJM proposes a number of alternative steps that the Commission could take to effectuate the important objectives identified in the NOPR more holistically, and with better direction to the industry.

First, as outlined in PJM’s Comments in Docket No. RM21-17, the Commission should support efforts by Regional Transmission Organizations (“RTOs”) like PJM and transmission planners nationwide to engage in intermediate and long-term *enhanced reliability planning*, in addition to the long-term planning focused on the changing resource mix as is currently

¹¹ As noted above, additional elements of enhanced reliability planning include storm hardening, gas pipeline contingencies, fuel security, minimum interregional transfer capability, reduction in “CIP-14” facilities, electromagnetic disturbances and geomagnetic disturbances. *See also Building for the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection*, Initial Comments of PJM Interconnection, L.L.C., Docket No. RM21-17-000, at 14-20 (Aug. 17, 2022).

contemplated in Docket No. RM21-17.¹² There are multiple forms that this support could take, but one helpful action the Commission could take immediately is to harmonize the different planning NOPRs that are currently pending.¹³ This harmonization could address the broad issue of enhanced reliability planning comprehensively, utilizing NERC processes *in coordination* with and *appropriately sequenced* with other efforts such as the development of long-term scenario planning protocols and requirements.¹⁴ Another form of support the Commission could offer is the development of an actionable, enhanced reliability planning driver, and the integration of “enhanced reliability” as a factor in the 20-year planning processes proposed in the long-term planning NOPR, as further described in PJM’s August 17 comments in Docket No. RM21-17.

Second, the Commission could utilize its convening authority to bring together transmission planners, DOE, NERC, NOAA, and others, to address key national aspects of enhanced reliability, including criteria to analyze the other aspects of enhanced reliability described above, such as an appropriate level of interregional transfer capability, reduction of CIP-

¹² See *Building for the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection*, Initial Comments of PJM Interconnection, L.L.C., Docket No. RM21-17-000, at n.4 (Aug. 17, 2022) (“For purposes of these Comments, PJM focuses on three different planning horizons within the planning process: (i) the present five-year forward planning horizon to address short-term reliability and market efficiency needs, which PJM describes herein as ‘short-term planning;’ (ii) the six- to 15-year analysis that PJM undertakes today to consider the aggregate effects of many system trends including long-term load growth, impacts of generation deactivation, and broader generation development patterns, including renewable resources and storage technologies that may be under development, which PJM describes herein as ‘intermediate-term planning;’ and (iii) the NOPR’s proposed 20-year long-term planning process, which PJM describes herein as ‘Long-Term Regional Transmission Planning’ (the term the Commission uses in the NOPR). In the future, these three planning horizons will inform each other, just as the existing short-term planning and intermediate-term planning processes do today.”).

¹³ See *Building for the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection*, 179 FERC ¶ 61,028 (2022); *One-Time Informational Reports on Extreme Weather Vulnerability Assessments Climate Change, Extreme Weather, and Electric System Reliability*, 179 FERC ¶ 61,196 (2022).

¹⁴ For example, rather than focusing resources on developing a planning standard around extreme hot and cold temperatures, NERC could assist FERC, the national labs and the industry with developing appropriate measures of interregional transfer capability that would allow for proactive development of the grid to meet a number of reliability challenges, not just hot and cold temperatures.

14 vulnerabilities, gas/electric interdependencies, etc. PJM proposed such a process in Docket No. RM21-17, but it is equally applicable to determining the best path forward in this docket.

Third, the Commission could require that any NERC-specific processes utilized in addressing the issue of enhanced reliability be appropriately coordinated so as to avoid overlapping with individual RTO stakeholder work and otherwise straining RTO and state/stakeholder resources. As described above, the inputs and participation of PJM stakeholders like transmission owners, states, load interests, and suppliers are essential to addressing the issue of enhanced reliability, and any NERC-specific process should seek to supplement, rather than interfere with, the activities already underway by these groups through existing Commission-approved planning processes.¹⁵ Moreover, the participants in the NERC stakeholder process are not necessarily the same participants in RTO stakeholder processes, and the NERC stakeholder process, by definition, loses the regional focus that is a key part of the discussions and debates within each RTO's stakeholder process.

II. LIMITED COMMENTS ON SPECIFIC DIRECTIVES

As described above, PJM believes that the important objectives identified by the Commission in the NOPR can be achieved through a number of alternative means. However, if the Commission nonetheless pursues the approach described in the NOPR, PJM, at this time, provides the following limited comments on the specific directives. Generally, PJM believes that appropriately sequenced development of NERC guidelines on enhanced reliability planning would

¹⁵ For example, PJM's Open Access Transmission Tariff, Attachment M-4 addresses risk associated with critical transmission stations and substations identified pursuant to NERC reliability standard CIP-014-2. PJM has also its own internal established processes to ensure there are no new CIP-014 critical substations introduced as the network evolves. Nevertheless, a more comprehensive approach to addressing CIP-14 facilities and potentially using the planning process to limit the number of such facilities is needed to avoid a patchwork across each region and across the nation on this key issue.

be a better starting place, and should be coordinated to the extent possible for all three directives of the NOPR, as described in seriatim in the following subsections II(A)-II(C).

A. Establishing Benchmark Planning Cases

In the NOPR, the Commission proposed that the modified reliability standard developed by NERC should include benchmark events that responsible entities must study, as well as guidelines regarding which range of sensitivities must be applied to these benchmark event scenarios.¹⁶ The Commission explained that such benchmark events should be based on prior events and/or constructed based on meteorological projections.¹⁷

PJM believes that any NERC guidelines and criteria development should reflect statistically credible scenarios for the conditions planned to, taking into account meteorological projections. As indicated above, developing benchmark cases will, by definition, require scientific and meteorological expertise, and accordingly PJM encourages the Commission to engage with the national labs, RTOs, NOAA, and other agencies to develop extreme temperature (preferably extreme weather) “design threshold” metrics, as well as investigate targeted planning thresholds (e.g., one in fifty years event), should the Commission choose to pursue the approach outlined in the NOPR. Such metrics will necessarily drive the load levels and generation dispatch input parameters in power flow models against which Transmission Planners would conduct stress tests of their respective systems and, potentially, develop appropriate transmission upgrades based on corrective actions.

Importantly, PJM recommends that in defining “Wide-Area Event,” NERC take into account the idea that previous references to what are commonly viewed as ‘wide-area events’ may

¹⁶ NOPR at P 51.

¹⁷ *Id.*

not apply in the context of extreme heat/cold events. Indeed, the 2021 Winter Storm Uri event suggests the need for careful, scientific consideration of the geographic, meteorological, and electrical topology dimensions for such a definition.

NERC's recently developed TPL-007 GMD Standard that deals with the transmission system planned performance for geomagnetic disturbance events could offer guidance on development and analysis of Extreme Heat and Cold Weather Standard Benchmark Cases. For example, as with GMD events, Transmission Providers will have sufficient advance notice of expected system reliability impacts under extreme weather events. This means that planning studies can more effectively model the impacts of extreme events, their efficient mitigation measures, and operational procedures like demand response and known temperature-influenced impacts to generation output.

B. Transmission System Planning – Events, Methods and Approaches

In the NOPR, the Commission proposed that the modified reliability standard require planning for extreme heat and cold events using steady state and transient stability analyses expanded to consider a range of extreme heat and cold weather scenarios including the expected resource mix's availability during extreme heat and cold weather conditions, and including the broad area impacts of extreme heat and cold weather.¹⁸ The Commission also proposed several specific topics that NERC would be required to address in any modified reliability standard.¹⁹

PJM believes that extreme weather analysis could be classified under two categories: (1) ISO/RTO wide, and (2) localized. Both should employ steady state and dynamic analysis methods, without delving into extended, long-term simulations. Localized events would be considered

¹⁸ *Id.* at P 57.

¹⁹ *Id.*

based on their impact, such as leading to significant loss of load, *e.g.*, total load loss of 1000 MW or greater.²⁰ Any analysis should include the expected resource mix's availability during extreme weather conditions, and the broad-area impacts of extreme weather.

PJM agrees that probabilistic planning approaches and statistical methods should be implemented as part of Benchmark Case development and analysis. Doing so would help establish the baseline and sensitivity system conditions upon which deterministic approaches for go/no-go corrective action transmission build decisions would be made. The benefits of applying probabilistic methods, though, would require knowing in advance pre-established bounded parameter ranges, so reasonable selection of probabilistic method assumptions lead to Benchmark Cases that reflect statistically credible scenarios. This should be the result of coordinated analysis among RTOs, NOAA, DOE Labs, and NERC itself. Any Extreme Weather Standard should not permit different metrics based solely on the wishes of individual Balancing Authorities and individual Registered Entities.

Any new NERC standard that deals with extreme weather events must respect regional differences in the nature of constraints that would drive corrective actions. Some regions – like PJM – may face more steady state thermal and voltage load-serving reliability constraints under extreme heat/cold events. Other regions may tend to be more limited by transient stability constraints, for example. Likewise, PJM emphasizes the need for regional entity variance in the nature of the contingencies unique to each to be studied.²¹

²⁰ See NERC reliability standard CIP-014-2; PJM Manual 14-B, section 2.9.

²¹ PJM also notes that with greater levels of renewable, Inverter Based Resources (IBRs), special studies may be needed. With much higher IBR penetration level, a more material change to dynamic and steady state assessment will likely be needed to capture the impacts of higher penetration levels of IBRs and much reduced conventional generation support.

C. Corrective Action Plans

In the NOPR, the Commission proposed that the modified reliability standard requires corrective action plans that include mitigation for any instances where performance requirements for extreme heat and cold events are not met.²² The Commission placed particular emphasis on increases in interregional transfer capability as a means to address potential reliability issues during extreme weather events.²³

PJM agrees that a focus on enhanced interregional transfer capability to support import requirements is important, as well as a focus on the impact of region-wide, persistent extreme heat and cold under established and agreed-to performance requirements. Additionally, corrective actions like transmission switching and generation and transmission outage coordination are better suited for the operational-focused standards, and should *not* be a focus of a revised transmission-planning reliability standard.

Additionally, the Commission should reconsider “additional contingency reserves” as a potential corrective action. The concept has two distinct dimensions, neither of which are appropriate for a NERC standard in PJM’s view. To the extent that the Commission is speaking of operating horizon corrective action, then PJM notes that this issue is already being addressed through specific market rules concerning the procurement of primary reserves, some of which have been accepted by the Commission, but in the context of Section 205 filings. To have NERC auditing the implementation of such market rules would significantly blur oversight of compliance with one’s tariffs, which is in the realm of FERC Enforcement. In addition, through Section 215 (d)(6), Congress made clear that NERC standards are not to supersede existing market rules. This

²² *Id.* at P 84.

²³ *Id.* at P 85.

Congressional directive, which applies equally to the compliance function as FERC’s role over enforcement of its approved tariffs, should not become entangled with compliance reviews by the Regional Entities seeking to enforce standards that may not be consistent with those market rules. In addition, such operating procedures are, by definition, outside of the planning performance domain of TPL-001.

If, on the other hand, the Commission is speaking from a planning horizon perspective with respect to “additional contingency reserves” as a corrective action, then PJM presumes the Commission is referring to the idea of installed capacity reserves. If so, then PJM questions the Commission’s statutory authority to do so in the context of NERC Standard TPL-001 as contemplated by this NOPR. Moreover, an installed capacity reserve corrective action for extreme heat/cold has potentially far-reaching capacity market implications and must be expanded to address resilience more comprehensively in terms of both frequency and quantity of load loss.

As part of PJM’s current planning and market design processes, PJM performs resource adequacy analysis focused on extreme winter weather events with the purpose of monitoring the expected capability of the system to deal with the consequences of such events.²⁴ In addition, PJM has started to calculate resource adequacy metrics other than Loss Of Load Expectation (“LOLE”), such as Expected Unserved Energy (“EUE”) and Loss Of Load Hours (“LOLH”), with the objective of getting a more complete picture of the system’s resource adequacy under a wide variety of events.²⁵ All of the above has come together more recently at the Resource Adequacy Senior Task Force,²⁶ where PJM and stakeholders are discussing an extensive list of topics focused

²⁴ <https://www.pjm.com/-/media/committees-groups/committees/oc/2021/20210715/20210715-item-08-fuel-security-update.ashx>.

²⁵ <https://www.pjm.com/-/media/committees-groups/task-forces/rastf/2022/20220110/20220110-item-03-reliability-metrics-education.ashx>.

²⁶ <https://www.pjm.com/committees-and-groups/task-forces/rastf>.

on PJM's capacity market including reliability risk and risk drivers, resource adequacy procurement metrics (LOLE, LOLH, EUE), and need for a seasonal resource adequacy construct, among others. The outcome of these discussions and the potential resulting capacity market reforms are expected to enhance PJM's resource adequacy and resilience, ensuring that the PJM territory has enough resources to confront weather events that could occur at any point during the year.

III. COMMENTS ON PROPOSED IMPLEMENTATION

The NOPR proposes to direct NERC to submit modifications to Reliability Standard TPL-001-5.1 within one year of the effective date of a final rule, with compliance obligations for all proposed new or modified Reliability Standards beginning no later than 12 months from the date of Commission approval of the modified Reliability Standard.²⁷

PJM believes that a single year to develop and submit a modified reliability standard is insufficient, as is a single year for Registered Entity implementation. For one, these timeframes are not sequenced with any of the other activities associated with ensuring enhanced reliability planning, which PJM believes are urgently needed coming out of this suite of NOPRs. As a result, these tight timeframes will divert resources from the more comprehensive work that is needed in this area. Moreover, as referenced above, the complexities of this issue are wide-ranging, and PJM does not believe that meaningful stakeholder engagement can be accomplished within a one-year timeframe, either with respect to developing the modified standard or implementing it. Once a modified TPL-001 NERC standard is approved by the Commission, Transmission Providers like PJM will have responsibility to translate it into workable planning process methodologies and related stakeholder-approved manual language, very likely requiring more than a year for an

²⁷ NOPR at P 7.

initiative as expansive as this. And if this process is not thought through and sequenced with the other actions planned in response to the suite of NOPRs, the Commission will risk perpetuating piecemeal and uncoordinated approaches to compliance and implementation. Finally, PJM notes that prior instances of Commission-directed standards regarding physical security and geomagnetic disturbance on short time frames indicate a need to revise the standards *after* approval and implementation. As a result, a more sequenced, holistic approach, rather than an arbitrary one-year deadline to write a standard on one narrow issue, would be far more effective.

PJM also recommends that the Commission avoid “locking-in” Registered Entities with: (1) the same 12-month implementation period; and, (2) the same start date for that 12-month implementation period. Regions need flexibility, given the significant diversity of planning processes as well as the attendant meteorological patterns across respective geographies. As for compliance, PJM also encourages the Commission to permit regional variance (*e.g.*, in PJM, compliance would not start mid-stream of a Regional Transmission Expansion Plan (“RTEP”) process cycle. In PJM, a compliance obligation would make far better sense if it commenced *with* the case build process.

PJM also questions how this will be implemented in non-ISO/RTO regions. Should they not bear the same planning requirements so that consistency across the Eastern Interconnection (and within other interconnections) is achieved? Otherwise, a patchwork of grid strengthening would result and not meet the intended purposes of the NOPR in the first instance.

IV. LIMITED CORRECTIONS TO THE RECORD

Paragraphs 80, 81, and 82 of the NOPR are predicated on a premise that certain data and results are not shared. PJM disagrees with this premise, and offers the following information to correct the record in this proceeding.

The Commission states in relevant part that “. . . [t]he modeling data is then shared pursuant to the data requirements and reporting procedures developed by the transmission planner and planning coordinator as set forth in Reliability Standard TPL-001-5.1, Requirement R1.”²⁸ PJM notes that the modeling data is shared with the industry, as required under NERC Standard MOD-032, R4:

R4. Each Planning Coordinator shall make available models for its planning area reflecting data provided to it under Requirement R2 to the Electric Reliability Organization (ERO) or its designee to support creation of the Interconnection-wide case(s) that includes the Planning Coordinator’s planning area.

The NOPR states that “. . . there is no required sharing of such information—or required coordination—among planning coordinators and transmission planners with transmission operators, transmission owners, and generator owners, thus limiting the benefits of additional modeling.”²⁹ PJM disagrees with the premise of this statement. PJM and all the entities of the Eastern Interconnection, through participation in the Multi-regional Modeling Working Group (“MMWG”), make available the MOD-032 data through the future, seasonal models that are available to all stakeholders with appropriate CEII and non-disclosure agreements. Modeling data are shared with the industry through MOD-032, R4 in the various seasonal models. PJM shares its models and results with interested parties through its RTEP process and through various interregional planning processes.

The NOPR also states that “. . . NERC should require system information and study results sharing, and coordination among planning coordinators and transmission planners with transmission operators, transmission owners, and generator owners for extreme heat and cold

²⁸ NOPR at P 80.

²⁹ NOPR at P 81.

weather events.”³⁰ PJM notes that this is *already* part of the process of MOD-032, R4. If there are specific severe weather scenarios that will be added to interregional or RTEP planning processes, those results and assumptions will be made available to stakeholders.

V. CONCLUSION

In accordance with the foregoing, PJM respectfully requests that the Commission accept the comments submitted herein into the record in this proceeding. PJM urges a more holistic approach and stands ready to work with the Commission, states, and stakeholders on implementing this alternative instead of simply proceeding with this narrow NOPR proposal.

Respectfully submitted,

/s/ Thomas DeVita

Craig Glazer
Vice President – Federal Government Policy
PJM Interconnection, L.L.C.
1200 G Street, N.W.
Suite 600
Washington, D.C. 20005
(202) 423-4743
Craig.Glazer@pjm.com

Thomas DeVita
Assistant General Counsel
PJM Interconnection, L.L.C.
2750 Monroe Boulevard
Audubon, PA 19403
(610) 635-3042
Thomas.DeVita@pjm.com

On behalf of
PJM Interconnection, L.L.C.

August 26, 2022

³⁰ NOPR at P 82.

CERTIFICATE OF SERVICE

I hereby certify that I have this 26th day of August, 2022 caused a copy of the foregoing document to be served upon each person designated on the official service list compiled by the Secretary in this proceeding.

/s/ Jesse Jacobe

Jesse Jacobe

Senior Paralegal

PJM Interconnection, L.L.C.

2750 Monroe Boulevard

Audubon, PA 19403

(610) 666-8859

Jesse.Jacobe@pjm.com