

Consideration of FERC Order 896 Directives

Project 2023-07 Transmission System Planning Performance Requirements for Extreme Weather November 2024

On June 15, 2023, FERC issued a Final Rule, Order No. 896, directing NERC to develop a new or modified Reliability Standard to address a lack of a long-term planning requirement(s) for extreme heat and cold weather events. Specifically, FERC directed NERC to develop modifications to Reliability Standard TPL-001-5.1 or to develop a new Reliability Standard to require the following: (1) development of benchmark planning cases based on major prior extreme heat and cold weather events and/or meteorological projections; (2) planning for extreme heat and cold weather events using steady state and transient stability analyses expanded to cover a range of extreme weather scenarios including the expected resource mix's availability during extreme heat and cold weather conditions, and including the wide-area impacts of extreme heat and cold weather; and (3) development of corrective action plans that mitigate any instances where performance requirements for extreme heat and cold weather events are not met. FERC directed NERC to submit a new or revised standard within 18 months, or by December 2024. The below provides the directives from FERC Order 896 along with the drafting team's consideration of the directives.

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<p>P35. “[W]e direct NERC to: (1) develop extreme heat and cold weather benchmark events, and (2) require the development of benchmark planning cases based on identified benchmark events.”</p> <p>P36: “...As recommended by commenters, NERC should consider the examples of approaches for defining benchmark events identified in the NOPR (e.g., the use of projected frequency or probability distribution). NERC may also consider other approaches that achieve the objectives outlined in this final rule.”</p>	<p>The ERO has worked with respective subject matter experts, including climate experts, the six regions, etc., to explore extreme heat and extreme cold benchmark temperature events. NERC, in consultation with climate data subject matter expert consultants on the benchmark events, utilized publicly available modeled data to address the requirements of TPL-008-1 that define extreme heat and extreme cold benchmark temperature events.</p> <p>Specifically, based on the available data, the drafting team determined that extreme benchmark temperature events must: 1) consider no less than forty years of historical temperature data, 2) include recent temperature</p>

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	<p>data due to ongoing climate changes, and 3) represent one of the twenty worst extreme temperature conditions over the forty year period, based on a 3-day rolling average of daily maximum (heat) or minimum (cold) temperatures.</p> <p>The ERO will maintain a library of benchmark temperature events that meet these requirements. Responsible entities will be able to review and select benchmark temperature events from this library to assist with the development of benchmark planning cases. However, responsible entities may also identify benchmark temperature events via their own processes, provided that the event meets the criteria of Requirement R2 and is agreed upon by all PCs within the zone.</p> <p>Should the extreme heat and cold weather benchmark events provided not suffice for the entities zone, the Planning Coordinator (PC) in coordination with all PCs within its zone, may develop a common extreme heat and extreme cold weather benchmark event to use for the TPL-008-1 Standard.</p> <p>The drafting team developed requirements within TPL-008-1 to require PCs within zones to select one common extreme heat benchmark temperature event and one common extreme cold benchmark temperature event (Requirement R2). After selecting its benchmark events, the responsible entity is required to implement a process for coordinating the development of benchmark planning cases and sensitivity cases among the responsible entities (Requirement R3) and to develop benchmark planning cases and sensitivity cases (Requirement R4).</p>

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<p>P37. “Because the impact of most extreme heat and cold events spans beyond the footprints of individual planning entities, it is important that all responsible entities likely to be impacted by the same extreme weather events use consistent benchmark events. Doing so is important to ensuring that neighboring planning regions are assuming similar weather conditions and are able to coordinate their assumptions accordingly. As a result, defining the benchmark event in a manner that provides responsible entities significant discretion to determine the applicable meteorological conditions would not meet the objectives of this final rule.”</p>	<p>NERC, in consultation with climate data subject matter expert consultants on benchmark events, developed subregions or “zones” of North America that are likely to experience similar weather conditions. These zones also consider practical concerns with coordination such as the boundaries of Interconnections and Balancing Authority Areas.</p> <p>The drafting team developed Requirement R2 such that PCs within the same zone are required to select one common extreme heat benchmark temperature event and one common extreme cold benchmark temperature event. This process balances the opportunity to provide input with the need for common events to be modeled over wide areas.</p>
<p>P38. “[I]n developing extreme heat and cold benchmark events, NERC shall ensure that benchmark events reflect regional differences in climate and weather patterns.”</p>	<p>NERC, in consultation with climate data subject matter expert consultants on benchmark events, has utilized publicly available modeled data in the last forty-three years (1980-2022), as well as more than eighty years of projected hourly meteorology data from PNNL to ensure regional differences in climate and weather patterns are reflected in the zones depicted in Attachment 1 of TPL-008-1.</p> <p>A Map has been added to the TPL-008-1 Standard showing the zones split throughout the US and Canada. These are to be considered wide area, and regional differences went into consideration when developing the data based on extreme historical events over the past 40 years.</p>
<p>P39. “We also direct NERC to include in the Reliability Standard the framework and criteria that responsible entities shall use to develop from the relevant benchmark event planning cases to represent potential weather-related contingencies (e.g., concurrent/correlated generation and transmission outages, derates) and expected future conditions of the system such as changes in load, transfers, and generation resource mix, and impacts on generators sensitive to extreme heat or cold, due to the weather conditions indicated in the benchmark events. Developing such a</p>	<p>The directive is addressed in Requirements R3 and R4 of the proposed TPL-008-1 standard.</p> <p>Requirement R3 obligates the PC to implement a process to coordinate the development of the benchmark planning cases and sensitivity cases. This process shall include: 1) the selection of System models within the Long-Term Transmission Planning Horizon to serve as a starting point for the benchmark planning cases, 2) forecasted seasonal and temperature</p>

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framework would provide a common design basis for responsible entities to follow when creating benchmark planning cases. This would not only help establish a clear set of expectations for responsible entities to follow when developing benchmark planning events, but also facilitate auditing and enforcement of the Standard.”	<p>dependent adjustments for Load, generation, Transmission, and transfers within the zone to represent the selected benchmark temperature events, 3) assumed seasonal and temperature dependent adjustments for Load, generation, Transmission, and transfers outside of the zone as needed, and 4) the identification of changes to at least one of generation, real and reactive forecasted load, or transfers to serve as a sensitivity case.</p> <p>Requirement R4 obligates the responsible entity to develop benchmark planning cases and sensitivity cases for performing the Extreme Temperature Assessment which reflects System conditions from the selected benchmark events. Requirement R4 also references the NERC MOD-032 Reliability Standard that provides PCs and Transmission Planners a mechanism for obtaining the data needed to develop the benchmark planning cases.</p>
P40. “We also direct NERC to ensure the reliability standard contains appropriate mechanisms for ensuring the benchmark event reflects up-to-date meteorological data.”	Requirement R2 Part 2.1 requires that the temperature data collected to identify benchmark temperature events includes 40 years of data “ending no more than 5 years prior to the time the benchmark temperature events are selected”. This requirement ensures that the window of time considered for benchmark temperature events reflects up-to-date data. The up-to five-year gap was included due to potential lags in data sources.
P50. “[W]e...direct NERC to require that transmission planning studies under the new or revised Reliability Standard consider the wide-area impacts of extreme heat and cold weather. We direct NERC to clearly describe the process that an entity must use to define the wide-area boundaries. While commenters provide various views in favor of both a geographical approach and electrical approach to defining wide-area boundaries, we do not adopt any one approach in this final rule...NERC should consider the comments in this proceeding when developing a new or modified reliability standard that considers the broad area impacts of extreme heat and cold weather.”	<p>To understand the complexities of defining wide-area boundaries, the drafting team reviewed the extreme weather events mentioned within FERC Order No. 896, as well as the comments received during the FERC Order proceeding. In addition, NERC consulted with climate data subject matter experts who evaluated publicly available modeled data in the last forty-three years (1980-2022) and more than eighty years of projected hourly meteorology data from PNNL.</p> <p>The drafting team struck a balance between a geographical approach and an electrical approach by dividing North America into zones that are likely to experience similar weather conditions but also consider practical</p>

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	<p>concerns with coordination such as the boundaries of Interconnections and Balancing Authority Areas. These zones are depicted in Attachment 1 of TPL-008-1, and PCs will be required to coordinate with all PCs in the zone(s) they belong to.</p>
<p>P58. “[W]e...direct NERC to develop benchmark events for extreme heat and cold weather events through the Reliability Standards development process. We agree ... that the development of adequate benchmark events is critical and should be committed to the subject matter experts on the standards drafting team.”</p>	<p>The drafting team considered various approaches to developing benchmark temperature events. With assistance from NERC’s subject matter expert consultants, the drafting team identified the key components of temperature events that are necessary for the event to constitute an adequate benchmark temperature event. These components were included in Requirement R2.</p> <p>Specifically, based on the available data, the drafting team determined that extreme benchmark temperature events must: 1) consider no less than forty years of historical temperature data, 2) include recent temperature data due to ongoing climate changes, and 3) represent one of the twenty worst extreme temperature conditions over the forty year period based on a 3-day rolling average of daily maximum (heat) or minimum (cold) temperatures.</p> <p>The ERO will maintain a library of benchmark temperature events that meet these requirements. Responsible entities will be able to review and select benchmark temperature events from this library to assist with the development of benchmark planning cases. However, responsible entities may also identify benchmark temperature events via their own processes provided that the event meets the criteria of Requirement R2 and is agreed upon by all PCs within the zone.</p> <p>In addition to describing the minimum requirements of a benchmark temperature event, Requirement R2 obligates PCs within the same zone to coordinate in selecting one common extreme heat benchmark temperature event and one common extreme cold benchmark</p>

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	temperature event for completing the Extreme Temperature Assessment. This coordination is required to ensure the benchmark temperature event is reflected over a wide-area.
<p>P60. “[W]e...direct NERC to designate the type(s) of entities responsible for developing benchmark planning cases and conducting wide-area studies under the new or modified Reliability Standard...benchmark planning cases should be developed by registered entities such as large planning coordinators, or groups of planning coordinators, with the capability of planning on a regional scope.”</p> <p>P61: “We believe the designated responsible entities should have certain characteristics, including having a wide-area view of the Bulk-Power System and the ability to conduct long-term planning studies across a wide geographic area. The responsible entities should also have the planning tools, expertise, processes, and procedures to develop benchmark planning cases and analyze extreme weather events in the long-term planning horizon.”</p> <p>P62: “To comply with this directive, NERC may designate the tasks of developing benchmark planning cases and conducting wide-area studies to an existing functional entity or a group of functional entities (e.g., a group of planning coordinators). NERC may also establish a new functional entity registration to undertake these tasks. In the petition accompanying the proposed Reliability Standard NERC should explain how the applicable registered entity or entities meet the objectives outlined above.”</p>	<p>The drafting team discussed that the Transmission Planner (TP) and/or Planning Coordinator (PC) would be the responsible entities to address TPL-008-1 Requirements. Requirement R1 obligates both the TP and PC to identify their individual and joint responsibilities.</p> <p>Requirement R3 obligates each PC to implement a process for coordinating the development of benchmark planning cases and sensitivity cases, using the selected benchmark temperature events identified in Requirement R2. This process must be implemented in coordination with all PCs within the same zone.</p> <p>Requirement R4 obligates each responsible entity, as identified in Requirement R1, to use the coordination process developed in accordance with Requirement R3 and data consistent with that provided in accordance with the MOD-032 standard, supplemented by other sources as needed, to develop benchmark planning cases and sensitivity cases.</p> <p>The identification of joint and individual responsibilities in Requirement R1 provides a measure of flexibility for PCs and TPs to agree on a distribution of responsibilities. Thus, while PCs are responsible for implementing the case development process in Requirement R3, TPs may be responsible for providing data and completing the case development according to that process.</p> <p>The development of benchmark planning cases and sensitivity cases will require cooperation amongst many PCs and TPs. By requiring participation from all entities within a zone, TPL-008-1 ensures that the group of functional entities have a sufficient wide-area view of the Bulk Power</p>

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	System and the planning tools, expertise, processes and procedures necessary for developing benchmark planning cases and sensitivity cases.
<p>P72. “[W]e direct NERC to require functional entities to share with the entities responsible for developing benchmark planning cases and conducting wide-area studies the system information necessary to develop benchmark planning cases and conduct wide-area studies. Further, responsible entities must share the study results with affected transmission operators, transmission owners, generator owners, and other functional entities with a reliability need for the studies.”</p>	<p>The directive is addressed in proposed TPL-008-1 in Requirements R3, R4 and R11.</p> <p>Requirement R3 obligates each PC to implement a process for coordinating the development of benchmark planning cases, using the selected benchmark temperature events identified in Requirement R2, among all Planning Coordinators within a zone.</p> <p>Requirement R4 obligates each responsible entity, as identified in Requirement R1, to use the coordination process implemented in accordance with Requirement R3 and data consistent with that provided in accordance with the MOD-032 standard, supplemented by other sources as needed, to develop benchmark planning cases and sensitivity cases.</p> <p>Requirement R11 obligates each responsible entity, as identified in Requirement R1, to provide its Extreme Temperature Assessment results within 60 calendar days of a request to any functional entity that has a reliability related need and submits a written request for the information.</p>
<p>P73. “Because in this final rule we direct NERC to determine the responsible entities that will be developing benchmark planning cases and conducting wide-area studies, it is possible that the selected responsible entities under the new or modified Reliability Standard will not be able to request and receive needed data pursuant to MOD-032-1, absent modification to that Standard.”</p>	<p>The drafting team discussed and determined that data needed to address the Extreme Temperature Assessment would still be appropriate to receive through MOD-032. MOD-032 ensures an adequate means of data collection for transmission planning and requires applicable registered entities to provide steady-state, dynamic, and short circuit modeling data to their Transmission Planner(s) and Planning Coordinator(s). As outlined in Requirement R1 and Attachment 1 of MOD-032, MOD-032 allows various data collection such as in-service status and capability associated with demand, generation, and transmission associated with various case types, scenarios, system operating states, or conditions for the long-term planning horizon. MOD-032 also requires applicable registered entities to</p>

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	provide “other information requested by the Planning Coordinator or Transmission Planner necessary for modeling purposes” for each of the three types of data required. Because the drafting team determined the responsible entities that will be developing benchmark planning cases are limited to Planning Coordinators and Transmission Planners, they will be able to request and receive needed data pursuant to MOD-032. Thus, the drafting team believes that there is no need to update MOD-032.
P76. “[W]e...direct NERC to address the requirement for wide-area coordination through the standards development process, giving due consideration to relevant factors identified by commenters in this proceeding.”	The drafting team reviewed all the extreme weather events mentioned within the FERC Order 896. For this project, the drafting team focused the scope of Requirement R3 to require each PC to implement a process for coordinating the development of benchmark planning cases and sensitivity cases, using the selected benchmark temperature events identified in Requirement R2, among all PCs within a zone.
P77. “[W]e direct NERC to require in the new or modified Reliability Standard that responsible entities share the results of their wide-area studies with other registered entities such as transmission operators, transmission owners, and generator owners that have a reliability related need for the studies.”	This directive is addressed in proposed TPL-008-1 Requirement R11. Requirement R11 obligates each responsible entity to provide the wide-area study results within 60 calendar days of a request to any functional entity that has a reliability related need and has submitted a written request for the information.
P88. “[W]e direct NERC to require under the new or revised Reliability Standard the study of concurrent/correlated generator and transmission outages due to extreme heat and cold events in benchmark events as described in more detail below.” P92. “These contingencies (i.e., correlated/concurrent, temperature sensitive outages, and derates) shall be identified based on similar contingencies that occurred in recent extreme weather events or expected to occur in future forecasted events.”	This directive is addressed in proposed TPL-008-1 through Requirements R3 and R4. Per Requirement R3 Part 3.2, the benchmark planning case development process must include forecasted seasonal and temperature dependent adjustments for Load, generation, Transmission, and transfers within the zone. Per Requirement R4, the data necessary to build the benchmark planning cases must be provided via MOD-032, supplemented by other sources as needed. Any concurrent/correlated generator and transmission outages due to extreme heat and cold events in benchmark temperature events should be reflected in the model data and thus represented in the initial conditions of the benchmark planning cases.
P111. “[W]e direct NERC to require in the proposed new or modified Reliability Standard that responsible entities perform both steady state and	This directive is addressed in proposed TPL-008-1 through Requirement R8 and Table 1.

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transient stability (dynamic) analyses in the extreme heat and cold weather planning studies. In a steady state analysis, the system components are modeled as either in-service or out-of-service and the result is a single point-in-time snapshot of the system in a state of operating equilibrium. A transient stability (dynamic) analysis examines the system from the start to the end of a disturbance to determine if the system regains a state of operating equilibrium. Performing both analyses ensures that the system has been thoroughly assessed for instability, uncontrolled separation, and cascading failures in both the steady state and the transient stability realms.” (internal citations omitted).	<p>Requirement R8 requires the responsible entity to complete both steady state and transient stability analyses and document the assumptions and results.</p> <p>Table 1 obligates each responsible entity to perform both steady state and transient stability analyses and compare the study results against steady state and stability performance requirements.</p>
<p>P112. “[W]e direct NERC to define a set of contingencies that responsible entities will be required to consider when conducting wide-area studies of extreme heat and cold weather events under the new or modified Reliability Standard. We believe that it is necessary to establish a set of common contingencies for all responsible entities to analyze. Required contingencies, such as those listed in Table 1 of Reliability Standard TPL-001-5.1 (i.e., category P1 through P7), establish common planning events that set the starting point for transmission system planning assessments. Requiring the study of predefined contingencies will ensure a level of uniformity across planning regions—a feature that will be necessary in the new or revised Reliability Standard considering that extreme heat and cold weather events often exceed the geographic boundaries of most existing planning footprints.”</p> <p>P113: “[T]he contingencies required in the new or revised Reliability Standards should reflect the complexities of transmission system planning studies for extreme heat and cold weather events.”</p>	<p>This directive is addressed in proposed TPL-008-1 through Requirement R7 and Table 1.</p> <p>Requirement R7 requires the responsible entity to identify Contingencies for completing the Extreme Temperature Assessment. The rationale, for those Contingencies selected for evaluation, shall be available as supporting information.</p> <p>The Contingencies for each category in Table 1 of TPL-008-1 correspond to the well-established Contingencies defined in Reliability Standard TPL-001-5.1. Utilizing these well-established Contingencies will ensure a level of uniformity across planning regions.</p>
<p>P116. “[W]e direct NERC to require in the new or modified Reliability Standard that responsible entities model demand load response in their extreme weather event planning area. As indicated by several commenters, because demand load response is generally a mitigating</p>	<p>TPL-008-1 Requirement R4 meets this directive by requiring each responsible entity to develop benchmark planning cases using data consistent with that provided in accordance with the MOD-032 standard, supplemented by other sources as needed.</p>

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<p>action that involves reducing distribution load during periods of stress to stabilize the Bulk-Power System, its effect during an extreme weather event should be modeled.”</p> <p>P 117: “[I]n addressing this directive, we expect NERC to determine whether responsible entities will need to take additional steps to ensure that the impacts of demand load response are accurately modeled in extreme weather studies, such as by analyzing demand load response as a sensitivity, as is currently the case under Reliability Standard TPL-001-5.1.”</p>	<p>Specifically, Attachment 1 of MOD-032 requires information requested by the Planning Coordinator or Transmission Planner necessary for modeling purposes.</p>
<p>P124. “[W]e direct NERC to require the use of sensitivity cases to demonstrate the impact of changes to the assumptions used in the benchmark planning case. Sensitivity analyses help a transmission planner to determine if the results of the base case are sensitive to changes in the inputs. The use of sensitivity analyses is particularly necessary when studying extreme heat and cold events because some of the assumptions made when developing a base case may change if temperatures change – for example, during extreme cold events, load may increase as temperatures decrease, while a decrease in temperature may result in a decrease in generation. We... direct NERC to define during the Reliability Standard development process a baseline set of sensitivities for the new or modified Reliability Standard. While we do not require the inclusion of any specific sensitivity in this final rule, NERC should consider including conditions that vary with temperature such as load, generation, and system transfers.”</p> <p>P125. “We do not agree ... that responsible entities alone should determine the sensitivity cases that must be considered in the responsible entity’s study. ... We...believe that responsible entities should be free to study additional sensitivities relevant to their planning areas...cooperation will be necessary between responsible entities conducting extreme heat and extreme cold weather studies and other registered entities within their</p>	<p>This directive is addressed in proposed TPL-008-1 in Requirement R3, which requires all PCs within the same zone to coordinate to implement a process for developing benchmark planning cases and sensitivity cases. Sensitivity cases are used to demonstrate the impact of changes to the basic assumptions used in the benchmark planning cases. Per Requirement R3 Part 3.4, PCs must include provisions in the case development process to identify changes to generation, real and reactive forecasted Load, and/or transfers to develop sensitivity cases.</p> <p>The identification of changes for sensitivity cases within the coordinated process of Requirement R3 addresses the directive that precludes responsible entities from determining sensitivities alone. However, nothing prevents responsible entities from conducting additional sensitivity studies they find relevant to their planning areas.</p>

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<p>extreme weather study footprints to ensure the selection of appropriate sensitivities.”</p> <p>P134. “[W]e directs NERC to require in the new or modified Reliability Standard the use of planning methods that ensure adequate consideration of the broad characteristics of extreme heat and cold weather conditions. We further direct NERC to determine during the standard development process whether probabilistic elements can be incorporated into the new or modified Reliability Standard and implemented presently by responsible entities. If NERC identifies probabilistic elements which responsible entities can feasibly implement and that would improve upon existing planning practices, we expect the inclusion of those methods in the proposed Reliability Standard.”</p> <p>P138. “[W]e direct NERC to identify during the standard development process any probabilistic planning methods that would improve upon existing planning practices, but that NERC deems infeasible to include in the proposed Reliability Standard at this time. If any such methods are identified, NERC shall describe in its petition for approval of the proposed Reliability Standard the barriers preventing the implementation of those probabilistic elements. We intend to use this information to determine whether and what next steps may be warranted to facilitate the use of probabilistic methods in transmission system planning practices.”</p> <p>P152. “[W]e direct NERC to require in the new or modified Reliability Standard the development of extreme weather corrective action plans for specified instances when performance standards are not met. In addition, as explained below, we direct NERC to develop certain processes to facilitate interaction and coordination with applicable regulatory authorities or governing bodies responsible for retail electric service as appropriate in implementing a corrective action plan.”</p>	<p>The drafting team discussed probabilistic elements and determined while probabilistic analysis would be a good step forward, it would be better suited for the future as the methodology, process, and tools mature.</p> <p>Probabilistic assessment of generation and transmission facilities for the benchmark planning cases was discussed during the process of drafting the TPL-008-1 standard. However, based on the actual extreme heat and extreme cold events that have occurred, outages for generation and transmission facilities were unique for each of these events. Thus, it was challenging to draw correlation for the outages that occurred for different extreme heat and cold events for different regions and different timeframes. In addition, the data, available from these events, was limited to perform an adequate probabilistic assessment. Due to these reasons, the drafting team has decided not to pursue any probabilistic assessment for the current TPL-008-1 standard. This, however, does not preclude future development of probabilistic assessment when having additional data, as well as mature methodology, process and tools that can provide meaningful probabilistic assessment for generation and transmission outages under extreme temperature conditions.</p> <p>The directive is addressed in the proposed TPL-008-1 Requirement R9.</p> <p>When the benchmark planning case study results indicate the System is unable to meet performance requirements for P0 and P1 Contingencies, Corrective Action Plans (CAPs) must be developed. Additionally, in accordance with Requirement R9 Part 9.1, responsible entities shall make their CAP available to, and solicit feedback from, applicable regulatory authorities or governing bodies responsible for retail electric service issues.</p>

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P155. “[T]he Commission is not directing any specific result or content of the corrective action plan.”	
P157. “[W]e direct NERC to require in the new or modified Reliability Standard the development of corrective action plans that include mitigation for specified instances where performance requirements for extreme heat and cold events are not met—i.e., when certain studies conducted under the Standard show that an extreme heat or cold event would result in cascading outages, uncontrolled separation, or instability.”	The directive is addressed in the proposed TPL-008-1 Requirement R9. When the benchmark planning case study results indicate the system is unable to meet performance requirements for P0 and P1 Contingencies, Corrective Action Plans must be developed.
P158. “[W]e give NERC in this final rule the flexibility to specify the circumstances that require the development of a corrective action plan.”	
P165. “[w]e direct NERC to require in the new or modified Reliability Standard that responsible entities share their corrective action plans with, and solicit feedback from, applicable regulatory authorities or governing bodies responsible for retail electric service issues.”	The directive is addressed in the proposed TPL-008-1 Requirement R9. Requirement R9.1 requires the responsible entities to make their CAP available and solicit feedback from applicable regulatory authorities or governing bodies responsible for retail electric service issues.
P167. “Further, because an important goal of transmission planning is to avoid load shed, any responsible entity that includes non-consequential load loss in its corrective action plan should also identify and share with applicable regulatory authorities or governing bodies responsible for retail electric service alternative corrective actions that would, if approved and implemented, avoid the use of load shedding.”	This directive is addressed in proposed TPL-008-1 Requirement R9. As stipulated in Requirement R9 Part 9.2, when Non-Consequential Load Loss is utilized as an element of a CAP for a Table 1 P1 Contingency, the responsible entity must document the alternative(s) considered, and notify the applicable regulatory authorities or governing bodies responsible for retail electric service issues.
P188. “[W]e direct NERC to submit a new or modified Reliability Standard within 18 months of the date of publication of this final rule in the Federal Register. Further, we direct NERC to propose an implementation timeline for the new or modified Reliability Standard, with implementation beginning no later than 12 months after the effective date of a Commission order approving the proposed Reliability Standard.”	The directive is addressed with the publication of TPL-008-1 and will be filed with the regulatory government no later than December 23, 2024, within 18 months of the date Order No. 896 was published in the <i>Federal Register</i> . The implementation plan addresses Requirement R1 becoming effective 12 months from the effective date of the Commission order approving the

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	TPL-008-1. In addition, phased-in approaches have been provided for other Requirements needing additional time. See the TPL-008-1 Implementation Plan.
P193. “[W]e direct NERC to establish an implementation timeline for the proposed Reliability Standard. In complying with this directive, NERC will have discretion to develop a phased-in implementation timeline for the different requirements of the proposed Reliability Standard (i.e., developing benchmark cases, conducting studies, developing corrective action plans). However, this phased-in implementation must begin within 12 months of the effective date of a Commission order approving the proposed Reliability Standard and must include a clear deadline for implementation of all requirements.”	The implementation plan addresses Requirement R1 becoming effective 12 months from the effective date of the Commission order approving the TPL-008-1. In addition, phased-in approaches have been provided for other Requirements needing additional time. See the TPL-008-1 Implementation Plan.