Comment Report

Project Name:	2023-07 Transmission System Planning Performance Requirements for Extreme Weather - Phase II | SAR
Comment Period Start Date:	6/13/2025
Comment Period End Date:	7/23/2025
Associated Ballots:	

There were 39 sets of responses, including comments from approximately 118 different people from approximately 83 companies representing 9 of the Industry Segments as shown in the table on the following pages.

Questions

1. Do you agree with the proposed scope described in the SAR? If you do not agree, or if you agree but have comments or suggestions for the project scope, please provide your recommendation or explanation.

2. Do you believe "wide area" should be defined? If yes, please provide a proposal or key points that the DT should consider when talking through whether "wide area" should be defined or not.

3. Do you believe coordination is needed among responsible entities regarding the sharing of data and studies for Transmission planning Energy Scenarios? If so, please provide justification to support your response.

4. In terms of normal and extreme natural events, should the DT use a projected frequency approach (e.g., weather events that occur 1 in 50 years)? If not, what approach(es) should be used?

5. Should the DT consider the lifecycle degradation of DER Facilities when developing energy scenario-based benchmark planning events? Please provide your recommendation or explanation.

6. Should the DT require the study of concurrent/correlated generator and transmission outages, layered with normal and extreme natural events? Please provide your recommendation or explanation.

7. Please provide any additional comments for the DT to consider, if desired.

Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
MRO	Anna Martinson	1,2,3,4,5,6	MRO	MRO Group	Shonda McCain	Omaha Public Power District (OPPD)	1,3,5,6	MRO
					Michael Brytowski	Great River Energy	1,3,5,6	MRO
					Jamison Cawley	Nebraska Public Power District	1,3,5	MRO
					Jay Sethi	Manitoba Hydro (MH)	1,3,5,6	MRO
					Husam Al-Hadidi	Manitoba Hydro (System Preformance)	1,3,5,6	MRO
					George Brown	Pattern Operators LP	5	MRO
					Amy Key	MidAmerican Energy Company (MEC)	1	MRO
					Seth Shoemaker	Muscatine Power & Water	1,3,5,6	MRO
					Michael Ayotte	ITC Holdings	1	MRO
					Angela Wheat	Southwestern Power Administration	1	MRO
					Joshua Phillips	Southwest Power Pool	2	MRO
					Patrick Tuttle	Oklahoma Municipal Power Authority	4,5	MRO
					Hayden Maples	Evergy	1,3,5,6	MRO
					Kirsten Rowley	MISO	2	MRO
					Andrew Coffelt	Kansas City Board of Public Utilities	1,3,5,6	MRO
Southern Company - Southern Company Services, Inc.	Colby Galloway	1,3,5,6	MRO,RF,SERC,Texas RE,WECC	Southern Company	Matt Carden	Southern Company - Southern Company Services, Inc.	1	SERC

					Joel Dembowski	Southern Company - Alabama Power Company	3	SERC
					Ron Carlsen	Southern Company - Southern Company Generation	6	SERC
					Leslie Burke	Southern Company - Southern Company Generation	5	SERC
Exelon	Daniel Gacek	1,3		Exelon	Daniel Gacek	Exelon	1	RF
					Kinte Whitehead	Exelon	3	RF
PJM Interconnection, L.L.C.	Elizabeth Davis	2	RF,SERC	ISO/RTO Standards Review Committee	Kirsten Rowley	Midcontinent ISO, Inc.	2	RF
					Gregory Campoli	New York Independent System Operator	2	NPCC
					Joshua Phillips	Southwest Power Pool, Inc. (RTO)	2	MRO
					Thomas Foster	PJM Interconnection, L.L.C.	2	RF
					Kennedy Meier	Electric Reliability Council of Texas, Inc.	2	Texas RE
					Ali Miremadi	California ISO	2	WECC
					Ali Miremadi	California ISO	2	WECC
Black Hills Corporation	Josh Schumacher	1,3,5,6		Black Hills Corporation Segments 1, 3, 5, 6	Trevor Rombough	Black Hills Corporation	1	WECC
					Josh Combs	Black Hills Corporation	3	WECC
					Sheila Suurmeier	Black Hills Corporation	5	WECC
					Josh Schumacher	Black Hills Corporation	6	WECC
Eversource Energy	Joshua London	1,3		Eversource	Joshua London	Eversource Energy	1	NPCC

					Vicki O'Leary	Eversource Energy	3	NPCC
Southern Indiana Gas and Electric Co.	Kati Barr	3,5,6		SIGE Voters	Kati Barr	Southern Indiana Gas and Electric Co.	6	RF
					Ryan Snyder	Southern Indiana Gas and Electric Co.	3	RF
					Larry Rogers	Southern Indiana Gas and Electric Co.	5	RF
FirstEnergy - FirstEnergy Corporation	Mark Garza	1,3,4,5,6		FE Voter	Julie Severino	FirstEnergy - FirstEnergy Corporation	1	RF
					Aaron Ghodooshim	FirstEnergy - FirstEnergy Corporation	3	RF
					Robert Loy	FirstEnergy - FirstEnergy Solutions	5	RF
					Mark Garza	FirstEnergy-FirstEnergy	1,3,4,5,6	RF
					Stacey Sheehan	FirstEnergy - FirstEnergy Corporation	6	RF
BC Hydro and Power Authority	Ming Jiang	1,3,5		BC Hydro	Patricia Robertson	BC Hydro and Power Authority	1	WECC
					Vijay Raghunathan	BC Hydro and Power Authority	5	WECC
Northeast Power Coordinating Council	Ruida Shu	10	NPCC	NPCC RSC	Gerry Dunbar	Northeast Power Coordinating Council	10	NPCC
					Deidre Altobell	Con Edison	1	NPCC
					Michele Tondalo	United Illuminating Co.	1	NPCC
					Stephanie Ullah-Mazzuca	Orange and Rockland	1	NPCC
					Michael Ridolfino	Central Hudson Gas & Electric Corp.	1	NPCC
					Randy Buswell	Vermont Electric Power Company	1	NPCC
					James Grant	NYISO	2	NPCC

Dermot Smyth	Con Ed - Consolidated Edison Co. of New York	1	NPCC
David Burke	Orange and Rockland	3	NPCC
Salvatore Spagnolo	New York Power Authority	1	NPCC
Sean Bodkin	Dominion - Dominion Resources, Inc.	6	NPCC
Silvia Mitchell	NextEra Energy - Florida Power and Light Co.	1	NPCC
Sean Cavote	PSEG	4	NPCC
Jason Chandler	Con Edison	5	NPCC
Shivaz Chopra	New York Power Authority	6	NPCC
Vijay Puran	New York State Department of Public Service	6	NPCC
David Kiguel	Independent	7	NPCC
Joel Charlebois	AESI	7	NPCC
Joshua London	Eversource Energy	1	NPCC
Joel Charlebois	AESI	7	NPCC
John Hastings	National Grid	1	NPCC
Erin Wilson	NB Power	1	NPCC
James Grant	NYISO	2	NPCC
Michael Couchesne	ISO-NE	2	NPCC
Kurtis Chong	IESO	2	NPCC
Michele Pagano	Con Edison	4	NPCC
Bendong Sun	Bruce Power	4	NPCC
Carvers Powers	Utility Services	5	NPCC
Wes Yeomans	NYSRC	7	NPCC
Emma Halilovic	Hydro One	1,3	NPCC
Philip Nichols	National Grid	1	NPCC
Emma Halilovic	Hydro One	1,3	NPCC

					Caver Powers	Utility Services	5	NPCC
Dominion - Dominion Virginia Power	Steven Belle	1,3		Dominion	Steven Belle	Dominion Energy	1	NA - Not Applicable
					Victoria Crider	Dominion Energy	3	NA - Not Applicable
					Sean Bodkin	Dominion Energy	6	NA - Not Applicable
					Barbara Marion	Dominion Energy	5	NA - Not Applicable

1. Do you agree with the proposed scope described in the SAR? If you do not agree, or if you agree but have comments or suggestions for the project scope, please provide your recommendation or explanation.

Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF

Answer	No
Document Name	

Comment

The SAR is extremely broad in scope, ill defined, and potentially redundant with existing high-priority projects. Consider a technical conference to obtain industry input prior to resubmitting SAR for official comment.

Likes 0	
Dislikes 0	

Response

Thomas Foltz - AEP - 3,5,6

Answer	No
Document Name	

Comment

AEP supports the overall scope and direction of this effort, as we believe incorporating the specified scenarios is a positive thing. That being said, we believe that the SAR could benefit from increased clarity and detail, as noted in our comments below.

Before it can provide substantive feedback on this SAR, AEP needs to be provided specificity on what exactly a “normal natural event” and an “extreme natural event” both are, as what is provided in the SAR is too generalized. In addition to definitions for each, it would be beneficial for industry to be provided actual examples of what the authors might have in mind. For example, are hurricanes intended to be included in some way? Droughts? Wildfires? Are these examples of what the SAR authors have in mind, or might it be something else entirely? If those *are* examples of what the SAR authors envision, how would they suggest those should be used as scenarios within a planning study?

Similar to the above, AEP likewise seeks specificity on DER-specific scenarios regarding what the SAR authors are envisioning, how they would be used for planning studies, and how that might that differ from what is already considered as a DER impact under TPL-001.

Likes 0	
Dislikes 0	

Response

Diana Aguas - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE

Answer	No

Document Name	
Comment	
CenterPoint Energy Houston Electric, LLC (CEHE) supports the comments submitted by the Edison Electric Institute (EEI).	
Likes 0	
Dislikes 0	
Response	
Kati Barr - Southern Indiana Gas and Electric Co. - 3,5,6, Group Name SIGE Voters	
Answer	No
Document Name	
Comment	
Southern Indiana Gas & Electric Company d/b/a CenterPoint Energy Indiana South (SIGE) supports the comments submitted by the Edison Electric Institute (EEI).	
Likes 0	
Dislikes 0	
Response	
Randy Peters - Manitoba Hydro - 1,3,5,6 - MRO	
Answer	No
Document Name	
Comment	
MH believes the impact of Normal Natural events (i.e seasonal demand variations, planned energy resource additions, resource variability as defined in the “Transmission Planning Energy Scenario, Technical Justification Document) is typically studied under TPL-001-5.1 assessment. So, there is no need to develop a new standard to address Normal Natural Events. It is recommended that SDT consider revising the SAR to only address the Extreme Natural Events as per the FERC Order 896 Directives.	
Likes 0	
Dislikes 0	
Response	
Pirouz Honarmand - Independent Electricity System Operator - 2	

Answer	No
Document Name	
Comment	

The IESO agrees with reviewing the associated Reliability Standards and ensuring that reliability risks introduced by the (1) normal and extreme natural events (not including extreme heat and cold), (2) gas-electric interdependencies, and (3) Distributed Energy Resources (DER) are properly addressed. However, the IESO does not believe that this review should start with the preconceived assumptions that modifications to Reliability Standards are required before the assessment is conducted; the review should drive its own conclusions, which could very well be that the standards are adequate. At the same time, the IESO does not agree that corrective actions plans (CAPs) are required anytime when BPS performance standards cannot be met in response to extreme events; rather, the scope of this review should include an assessment of when it is required to have CAPs requirements, and when the risk of violating BPS performance standards is acceptable (e.g., low likelihood - low impact situations).

Likes 0	
Dislikes 0	
Response	

Brian Lindsey - Entergy - 1,3,6	
Answer	No
Document Name	
Comment	

No. We suggest replacing the existing scope text with the following “The scope of the proposed project is to develop one or more new transmission planning Reliability Standards to address the issues and criteria described above. These standards will be developed in collaboration with related ongoing projects that involve transmission planning including existing Reliability Standards.”

Likes 0	
Dislikes 0	
Response	

Mark Garza - FirstEnergy - FirstEnergy Corporation - 1,3,4,5,6, Group Name FE Voter	
Answer	No
Document Name	
Comment	

FirstEnergy supports EEI comments which state:
EEI generally does not support the SAR. It was developed a couple of years ago and does not account for ongoing NERC projects that are addressing many of these issues, including the DER related aspects. This SAR is very prescriptive in some aspects and parts of the SAR are duplicative with other NERC high priority projects. The duplicative scope should be identified and removed and the remaining scope should be reviewed to determine if it is

appropriate to include in existing projects or if it should remain in this project. If the project was meant to only capture certain events such as wildfires, floods, and droughts, that should be clear.

Normal natural events are largely covered as part of TPL-001-5. The standard currently requires peak load and off-peak load cases, as well as the study of planned outages. Planned energy resource additions may be included, this depends on the entity's strategy for incorporating future assets into planning studies. It should be noted that these facilities are analyzed in interconnection studies (see FAC-002). However, including such facilities in annual planning studies may mitigate issues that would otherwise arise. Speculative facilities may also fail to materialize and result in wasted capital expenditures for CAPs. Thus, it is critical that entities be careful in selecting which future facilities are modeled in annual compliance assessments.

Extreme natural events are partially addressed through TPL-008-1. It should be noted that natural disasters cannot be "proactively" planned for with a meaningful level of accuracy. Predicting the path of a tornado is hard enough for weather forecasters when the storm system is active. Transmission Planners and Planning Coordinators are simply unable to know what facilities could be struck by a storm. Rather, they must use methods like N-2 or right-of-way outages to account for possible combinations of element outages.

Natural gas/electricity interdependencies are anticipated in TPL-001-5 Table 1 Steady State Extreme Event 3(a)(i). Since TPL-001-5 is an approved standard, it is helpful to consider how this event is situated relative to other events. As an extreme event, this event does not require a CAP, it requires an "evaluation of possible actions designed to reduce the likelihood or mitigate the consequences and adverse impacts of the event(s)". It is also optional as a potential "wide area" event. If NERC considers the risks associated with this event as increased, a simpler solution may be to require the analysis of this event as a planning event (e.g., Category P8).

Many of the above items are also considered in NERC Project 2024-02. This project is developing standards to address energy supply concerns in the long-term planning horizon. These plans require CAPs to address violations, and those CAPs may be transmission related.

The SAR states that TPL-001-5 "does not expressly require transmission planners and planning coordinators to consider in the long-term planning horizon … distributed energy resources events." This, may not account for ongoing NERC projects. The inclusion of DER data collection under MOD-032 will flow into TPL-001-5 (in addition to other standards, like MOD-033). No evidence is provided to demonstrate that DER "events" beyond the inclusion of the expected response during the existing analyses is necessary. The fact that DERs are distributed makes the single loss of all DERs aggregated at a delivery point extremely unlikely (unless all the load is lost too). Lack of DER output during scenarios like night-time conditions (commonly assumed for winter peak load), may be accounted for under MOD-032 data collection procedures.

Concurrent/correlated generator and transmission outages are already considered in TPL-001-5, both in planning event category P3, and in the assessment of planned outages. Further, TPL-008-1 requires data collection through MOD-032 which would include generator outages or derates for the conditions studied under that standard. It is not clear what the SAR is proposing that would be a realistic, useful addition to the above.

The energy scenarios described as a "minimum" are not justified as minimum scenarios, nor do they consider that the mandatory development of CAPs (which often require capital expenditure) for violations within these hypothetical scenarios is at odds with the goal of providing power to consumers as cost-effectively as possible. The baseline models for planning studies should always represent the most accurate and realistic forecasts. Considerations of alternative forecasts (or energy scenarios) may be done informationally as sensitivity studies. TPL-001-5 understands this, and thus CAPs are only required when violations occur in multiple sensitivity studies. This would indicate the violation risk is present for various changes in input assumptions and thus has a higher likelihood than violations that only occur under one alternative scenario.

We recommend the SAR be re-written to account for ongoing NERC projects and industry approved standards like TPL-008-1. In our view, no modification to TPL-001-5 is necessary, however, we acknowledge the standard could be strengthened in the way it addresses the issues discussed in the SAR. As a practical alternative, we suggest the DT for this project consider 1) modifications to the requirements for developing sensitivity cases to account for various energy scenarios (e.g., require a high-demand sensitivity for the peak load case), and 2) modifications to the extreme events so that events with increased risks (e.g., outage of two gas plants on the same pipeline) are evaluated as planning events.

Likes 0	
Dislikes 0	

Response

Richard Jackson - U.S. Bureau of Reclamation - 1,5	
Answer	No
Document Name	
Comment	

Reclamation does not agree on increasing the scope of FERC order 896 to include scenarios that should already be considered.

1. “Normal and extreme natural events” can include a variety of events from tornadoes, earthquakes, high winds, etc. These items should have already been considered and addressed while analyzing, construction, implementation of the BPS structure.

2. Gas-electric interdependencies and/or DER are already being addressed or have been addressed under other standards or have been analyzed under (1) above.

3. Due to the limited and stretched resources on industry with the current workload of inclusion of extreme weather events and DER resources at the industry level, the incorporation of this SAR at this time should be either removed or delayed until other standards have addressed all FERC orders. NERC should focus on those areas and existing standards that require updates first.

Likes 0	
Dislikes 0	
Response	

Anna Martinson - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO Group	
Answer	No
Document Name	2023-07_Unofficial Comment Form NSRF final.docx
Comment	

Project 2023-07 has an overly broad scope, as reflected by the size of this SAR (19 pages, which is unusual). As written, this is a multi-year, multi-phase project. Further, the SAR acknowledges overlaps and conflicts with 5 active projects:

Project 2022-02 Uniform Model Framework for IBR, - MOD-032 Project 2022-03 Energy Assurance with Energy-Constrained Resources - Planning Horizon, - TPL-001 Project 2022-04 EMT Modeling, Project – MOD-032, TPL-001 Project 2023-08 Modifications of MOD-031 Demand and Energy Data – MOD-031 Project 2024-02 Planning Energy Assurance – TPL-001

Accordingly, the MRO NSRF recommends that several actions should be undertaken to modify this SAR, as follows:

1. The SAR should be rewritten.

a. The Detailed Description section is explicitly prescriptive. The requirements are already written. (more detail provided in Question 7)

b. Each risk area language is duplicative contributing to the length of the SAR

c. The SAR does not address what a Normal and Extreme natural event is.

i. Why are we studying normal events? Has the industry not been studying and planning for normal events during its regular ongoing planning assessments over many decades?

ii. What is a normal event? The term is confusing. Is a week of sunny 73 degree days in June in Indiana a normal event? Or a rain shower in April? Or a week of temperatures in the 20s in Chicago in January

d. Break the SAR into 3 separate SARs

i. Extreme Natural events – drop normal events

ii. Natural Gas Interdependencies – this is already being addressed in the Energy Assurance projects – 2022-03 and 2024-02.

iii. Distribute Energy Resources (DERs) – already included with IBR projects

e. Multiple Scenario-based benchmark events are being asked for each of 3 risk areas; this could be difficult to implement. Extensive efforts were used to create the TPL-008

benchmark events; this SAR proposes several times the number of benchmark events required in TPL-008.

2. The SAR should address the conflicts it has with the standards in the other projects.

a. TPL-001 - in development in 3 other projects

b. MOD-032 – in development in 2 other projects

c. MOD-031 - in development in 1 other project

3. The SAR should address the differences between TPL-008-1 and Normal and Extreme Natural events.

4. Consider modifying TPL-008 Extreme Temperature to Extreme Natural events.

5. The interval of 3-5 years is too short. The time to develop benchmark scenarios and case studies will take a good portion of this time interval.

a. We suggest 5-7 years for periodic updates to benchmark events and planning cases, inputs, energy scenarios, assumptions, and other key data required to conduct studies.

b. Corrective Action Plans alone will take multiple years to implement.

6. Regarding Corrective Actions Plans (CAPs), what is expected by an entity? A firm financial commitment? EPACT 215 cannot require the building of transmission or generation. See Project 2024-01 for discussions regarding CAPs and the issues firm commitments, state regulators and long timeframes for implementation.

Likes 0	
Dislikes 0	

Response	
Daniela Atanasovski - APS - Arizona Public Service Co. - 1,3,5,6	
Answer	No
Document Name	
Comment	

AZPS supports the following comments that were submitted by EEI on behalf of its members:

EEI generally does not support the SAR. It was developed a couple of years ago and does not account for ongoing NERC projects that are addressing many of these issues, including the DER related aspects. This SAR is very prescriptive in some aspects and parts of the SAR are duplicative with other NERC high priority projects. The duplicative scope should be identified and removed, and the remaining scope should be reviewed to determine if it is appropriate to include in existing projects or if it should remain in this project. If the project was meant to only capture certain events such as wildfires, floods, and droughts, that should be clear.

Normal natural events are largely covered as part of TPL-001-5. The standard currently requires peak load and off-peak load cases, as well as the study of planned outages. Planned energy resource additions may be included, this depends on the entity's strategy for incorporating future assets into planning studies. It should be noted that these facilities are analyzed in interconnection studies (see FAC-002). However, including such facilities in annual planning studies may mitigate issues that would otherwise arise. Speculative facilities may also fail to materialize and result in wasted capital expenditures for CAPs. Thus, it is critical that entities be careful in selecting which future facilities are modeled in annual compliance assessments.

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Natural gas/electricity interdependencies are anticipated in TPL-001-5 Table 1 Steady State Extreme Event 3(a)(i). Since TPL-001-5 is an approved standard, it is helpful to consider how this event is situated relative to other events. As an extreme event, this event does not require a CAP, it requires an "evaluation of possible actions designed to reduce the likelihood or mitigate the consequences and adverse impacts of the event(s)". It is also optional as a potential "wide area" event. If NERC considers the risks associated with this event as increased, a simpler solution may be to require the analysis of this event as a planning event (e.g., Category P8).

Many of the above items are also considered in NERC Project 2024-02. This project is developing standards to address energy supply concerns in the long-term planning horizon. These plans require CAPs to address violations, and those CAPs may be transmission related.

The SAR states that TPL-001-5 "does not expressly require transmission planners and planning coordinators to consider in the long-term planning horizon … distributed energy resources events." This, again, fails to account for ongoing NERC projects. The inclusion of DER data collection under MOD-032 will flow into TPL-001-5 (in addition to other standards, like MOD-033). No evidence is provided to demonstrate that DER "events" beyond the inclusion of the expected response during the existing analyses is necessary. The fact that DERs are *distributed* makes the single loss of all DERs aggregated at a delivery point extremely unlikely (unless all the load is lost too). Lack of DER output during scenarios like night-time conditions (commonly assumed for winter peak load), should already be accounted for under MOD-032 data collection procedures.

Concurrent/correlated generator and transmission outages are already considered in TPL-001-5, both in planning event category P3, and in the assessment of planned outages. Further, TPL-008-1 requires data collection through MOD-032 which would include generator outages or derates for the conditions studied under that standard. It is not clear what the SAR is proposing that would be a realistic, useful addition to the above.

The energy scenarios described as a “minimum” are not justified as minimum scenarios, nor do they consider that the mandatory development of CAPs (which often require capital expenditure) for violations within these hypothetical scenarios is at odds with the goal of providing power to consumers as cost-effectively as possible. The baseline models for planning studies should always represent the most accurate and realistic forecasts. Considerations of alternative forecasts (or energy scenarios) may be done informationally as sensitivity studies. TPL-001-5 understands this, and thus CAPs are only required when violations occur in multiple sensitivity studies. This would indicate the violation risk is present for various changes in input assumptions and thus has a higher likelihood than violations that only occur under one alternative scenario.

We recommend the SAR be re-written to account for ongoing NERC projects and industry approved standards like TPL-008-1. In our view, no modification to TPL-001-5 is necessary, however, we acknowledge the standard could be strengthened in the way it addresses the issues discussed in the SAR. As a practical alternative, we suggest the DT for this project consider 1) modifications to the requirements for developing sensitivity cases to account for various energy scenarios (e.g., require a high-demand sensitivity for the peak load case), and 2) modifications to the extreme events so that events with increased risks (e.g., outage of two gas plants on the same pipeline) are evaluated as planning events.

Likes 0	
Dislikes 0	

Response

Keith Jonassen - ISO New England, Inc. - 2 - NPCC

Answer	No
Document Name	

Comment

The SAR should require the drafting team to develop a new standard. As written, the scope of this proposed work goes well beyond the scope of TPL-001.

Due to the number of standard drafting projects that are active within NERC and similar FERC efforts, it is recommended that NERC evaluate the timing of this project to proceed after other projects are completed to avoid potential conflicts with those existing higher priority projects.

Likes 0	
Dislikes 0	

Response

Colby Galloway - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC, Group Name Southern Company

Answer	No
Document Name	

Comment

Southern Company supports EEI comments.

Likes 0	
Dislikes 0	

Response	
John Brewer - National Energy Technology Laboratory - 9 - NA - Not Applicable	
Answer	No
Document Name	
Comment	

This commenter generally supports the comments submitted by EEI, ISO New England, and Duke Energy on this question. It is uncertain how one properly captures gas-electric interdependencies in a transmission planning study beyond application of traditional contingency analysis. Gas-electric contingencies have a longer temporal latency to full impact than the other two event types. To study gas-electric events and capture system drawdown effects from a supply disruption or fuel switching, one needs to model a time horizon beyond the duration of a traditional transient stability analysis performed under TPL standard family and falls toward the standards developed under 2022-03 and 2024-02.

SAR could benefit from increased clarity and detail, including defining normal and extreme natural events and elaborating why the events do not include extreme heat and cold (footnote #2 on page 2).

Each risk area has repetitive text and seems exclusive of other risks. If this is not a case, each risk area should also elaborate whether it includes other risks and how.

DT should also include NG experts.

Likes 0	
Dislikes 0	
Response	
Steven Belle - Dominion - Dominion Virginia Power - 1,3, Group Name Dominion	
Answer	No
Document Name	
Comment	

Dominion supports EEI's comments.

Likes 0	
Dislikes 0	

Response

Elizabeth Davis - PJM Interconnection, L.L.C. - 2 - RF, Group Name ISO/RTO Standards Review Committee

Answer	No
Document Name	

Comment

The ISO/RTO Council (IRC) Standards Review Committee (SRC) recommends not proceeding with the development of additional standards or requirements at this time. The industry is in the midst of a generational change with respect to standards and regulations and is still in the initial phases of implementing changes to address scenario analysis and extreme weather contingencies.

As the SAR acknowledges, there are at least five currently active projects that conflict with this SAR.

Project 2022-02 Uniform Model Framework for IBR (MOD-032)

Project 2022-03 Energy Assurance with Energy-Constrained Resources - Planning Horizon (TPL-001)

Project 2022-04 EMT Modeling (MOD-032 and TPL-001)

Project 2023-08 Modifications of MOD-031 Demand and Energy Data (MOD-031)

Project 2024-02 Planning Energy Assurance (TPL-001)

Within these projects, the industry is currently developing compliance approaches for FERC's Order No. 1920, which requires not only scenario analysis, but also extreme weather consideration. The SRC believes it is not appropriate to move forward with the development of additional standards and requirements in this space before entities have had an opportunity to implement the requirements already modified/created as a result of FERC Order No. 1920.

Additionally, FERC recently approved TPL-008, which requires development of Corrective Action Plans (CAPs) for certain extreme temperature conditions. The SRC believes the industry should have an opportunity to exercise the process designed in phase 1 of project 2023-07 to ensure the required steps and process of TPL-008 are appropriate, achievable, and evaluate the real-world impacts of these new processes.

In light of these significant FERC-directed changes, the SRC strongly believes that there may be more constructive ways to address outstanding weather-related reliability concerns rather than the approach proposed in this SAR. Industry should be able to devote time and bandwidth to learning lessons from the implementation of TPL-008 and FERC Order No. 1920 compliance in order to develop best practices.

The scope section indicates that this project is to "address the issues and criteria discussed in the White Paper in collaboration with those efforts to address directives from FERC Order No. 896 pertaining to the study of extreme heat and cold weather events." This is inconsistent with other parts of the SAR (and the background information above), which indicate the project would not address "extreme heat and cold." The SAR scope should be more targeted in identifying the specific items from FERC Order No. 896 (and the White Paper) that are to be addressed. Furthermore, an explicit link to the referenced White Paper should be available within the SAR, since the SAR scope relies so heavily on that White Paper. Consequently, this SAR does not have the information necessary for industry to adequately provide constructive comments. If the SAR is to move forward, the SRC recommends that this SAR be revised and reposted for another formal industry comment period before proceeding with any standard drafting work, especially since this project is currently categorized as a low priority project and there should therefore be adequate time to correct these defects in the SAR.

Additionally, the SAR should explicitly require the drafting team to develop an entirely new standard (and not provide the option for potentially revising an existing standard). The scope of

this proposed work appears to go well beyond the scope of TPL-001; the SAR should not even imply that this work should or could be added to the scope of the annual assessments required by TPL-001. Since the SAR references TPL-001 is several places, there is a heavy implication that TPL-001 is the standard to be revised. All references to "modify an existing standard" in the SAR should be removed. The SAR should be very clear that the expectation is the development of a new standard as well as specific scopes to be addressed. Any duplication with Phase 1 of Project 2023-07 should be avoided, and this SAR should instead contain only new scopes that are clearly identified.

In addition, Item G, subpart c under each of the scenarios (normal and extreme natural events, natural gas interdependencies, and DER) in the detailed description section requires sensitivity analysis. Since each of these scenarios seems to be a sensitivity in and of itself, and since other transmission planning Reliability Standards already require sensitivity analyses, it is duplicative and unnecessary to require additional sensitivities here. Consequently, Item G, subpart c should be removed from each scenario in the SAR. In general, the SAR is far too prescriptive in mandating detailed specific required actions in many areas (such as the aforementioned sensitivity analyses and the CAP requirement, which does not seem appropriate given that these scenarios are essentially sensitivity cases in the first place). The drafting team should have more discretion to be able to consider if many of the items that the SAR is mandating are the most effective means of meeting the reliability objective, especially since performance deficiencies in many of these areas may only be able to be effectively addressed by entities not registered with NERC.

Along these lines, NERC needs to address registration and jurisdictional issues related to gas-electric interdependency data before including this item in the SAR scope and implementing mandatory studies, data requirements, and CAPs related to gas infrastructure. Studies related to gas-electric interdependencies would require gas-electric data to be collected; consequently, a corresponding data collection/model development standard or process would need to be established prior to the creation of a requirement to study gas-electric interdependencies. This would require participation by those responsible for the natural gas pipelines and production facilities, which are not currently subject to NERC Reliability Standards. Without such new registrations and compliance obligations for those entities to provide data, placing compliance obligations on transmission planners to evaluate scenarios for gas-electric interdependencies virtually ensures transmission planners will be unable to comply or will find the studies to be a colossal waste of resources due to a lack of accurate data because the entities who have the data needed for the studies are not subject to any binding requirement to provide that data. If a study is performed with inaccurate data to meet a compliance requirement, it would be inappropriate to require entities to attempt to develop and implement mandatory CAPS based on such a flawed study.

Likes 0	
Dislikes 0	

Response

Richard Vendetti - NextEra Energy - 5

Answer	No
Document Name	

Comment

Nextera supports comments submitted by EEI:

EEI generally does not support the SAR. It was developed a couple of years ago and does not account for ongoing NERC projects that are addressing many of these issues, including the DER related aspects. This SAR is very prescriptive in some aspects and parts of the SAR are duplicative with other NERC high priority projects. The duplicative scope should be identified and removed, and the remaining scope should be reviewed to determine if it is

appropriate to include in existing projects or if it should remain in this project. If the project was meant to only capture certain events such as wildfires, floods, and droughts, that should be clear.

Normal natural events are largely covered as part of TPL-001-5. The standard currently requires peak load and off-peak load cases, as well as the study of planned outages. Planned energy resource additions may be included, this depends on the entity's strategy for incorporating future assets into planning studies. It should be noted that these facilities are analyzed in interconnection studies (see FAC-002). However, including such facilities in annual planning studies may mitigate issues that would otherwise arise. Speculative facilities may also fail to materialize and result in wasted capital expenditures for CAPs. Thus, it is critical that entities be careful in selecting which future facilities are modeled in annual compliance assessments.

Extreme natural events are partially addressed through TPL-008-1. It should be noted that natural disasters cannot be "proactively" planned for with a meaningful level of accuracy. Predicting the path of a tornado is hard enough for weather forecasters when the storm system is active. Transmission Planners and Planning Coordinators are simply unable to know what facilities could be struck by a storm. Rather, they must use methods like N-2 or right-of-way outages to account for possible combinations of element outages.

Natural gas/electricity interdependencies are anticipated in TPL-001-5 Table 1 Steady State Extreme Event 3(a)(i). Since TPL-001-5 is an approved standard, it is helpful to consider how this event is situated relative to other events. As an extreme event, this event does not require a CAP, it requires an "evaluation of possible actions designed to reduce the likelihood or mitigate the consequences and adverse impacts of the event(s)". It is also optional as a potential "wide area" event. If NERC considers the risks associated with this event as increased, a simpler solution may be to require the analysis of this event as a planning event (e.g., Category P8).

Many of the above items are also considered in NERC Project 2024-02. This project is developing standards to address energy supply concerns in the long-term planning horizon. These plans require CAPs to address violations, and those CAPs may be transmission related.

The SAR states that TPL-001-5 "does not expressly require transmission planners and planning coordinators to consider in the long-term planning horizon … distributed energy resources events." This, again, fails to account for ongoing NERC projects. The inclusion of DER data collection under MOD-032 will flow into TPL-001-5 (in addition to other standards, like MOD-033). No evidence is provided to demonstrate that DER "events" beyond the inclusion of the expected response during the existing analyses is necessary. The fact that DERs are *distributed* makes the single loss of all DERs aggregated at a delivery point extremely unlikely (unless all the load is lost too). Lack of DER output during scenarios like night-time conditions (commonly assumed for winter peak load), should already be accounted for under MOD-032 data collection procedures.

Concurrent/correlated generator and transmission outages are already considered in TPL-001-5, both in planning event category P3, and in the assessment of planned outages. Further, TPL-008-1 requires data collection through MOD-032 which would include generator outages or derates for the conditions studied under that standard. It is not clear what the SAR is proposing that would be a realistic, useful addition to the above.

The energy scenarios described as a "minimum" are not justified as minimum scenarios, nor do they consider that the mandatory development of CAPs (which often require capital expenditure) for violations within these hypothetical scenarios is at odds with the goal of providing power to consumers as cost-effectively as possible. The baseline models for planning studies should always represent the most accurate and realistic forecasts. Considerations of alternative forecasts (or energy scenarios) may be done informationally as sensitivity studies. TPL-001-5 understands this, and thus CAPs are only

required when violations occur in multiple sensitivity studies. This would indicate the violation risk is present for various changes in input assumptions and thus has a higher likelihood than violations that only occur under one alternative scenario.

We recommend the SAR be re-written to account for ongoing NERC projects and industry approved standards like TPL-008-1. In our view, no modification to TPL-001-5 is necessary, however, we acknowledge the standard could be strengthened in the way it addresses the issues discussed in the SAR. As a practical alternative, we suggest the DT for this project consider 1) modifications to the requirements for developing sensitivity cases to account for various energy scenarios (e.g., require a high-demand sensitivity for the peak load case), and 2) modifications to the extreme events so that events with increased risks (e.g., outage of two gas plants on the same pipeline) are evaluated as planning events.

Likes 0	
Dislikes 0	

Response

Josh Schumacher - Black Hills Corporation - 1,3,5,6, Group Name Black Hills Corporation Segments 1, 3, 5, 6

Answer	No
Document Name	

Comment

Black Hills Corporation agrees with EEI's comments and generally does not support the SAR. Parts of the SAR are duplicative with other ongoing NERC projects. The scope of the SAR should be reviewed to determine if it is appropriate to include in other existing projects. Reference the comments submitted by EEI for further details.

Likes 0	
Dislikes 0	

Response

Joshua London - Eversource Energy - 1,3, Group Name Eversource

Answer	No
Document Name	

Comment

Eversource supports the comments of EEI.

Likes 0	

Dislikes 0	
Response	
Hayden Maples - Evergy - 1,3,5,6 - MRO	
Answer	No
Document Name	
Comment	
Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) and Midwest Reliability Organization's NERC Standards Review Forum (MRO NSRF) on question 1	
Likes 0	
Dislikes 0	
Response	
Kristine Martz - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable	
Answer	No
Document Name	
Comment	

EEI generally does not support the SAR. It was developed a couple of years ago and does not account for ongoing NERC projects that are addressing many of these issues, including the DER related aspects. This SAR is very prescriptive in some aspects and parts of the SAR are duplicative with other NERC high priority projects. The duplicative scope should be identified and removed, and the remaining scope should be reviewed to determine if it is appropriate to include in existing projects or if it should remain in this project. If the project was meant to only capture certain events such as wildfires, floods, and droughts, that should be clear.

Normal natural events are largely covered as part of TPL-001-5. The standard currently requires peak load and off-peak load cases, as well as the study of planned outages. Planned energy resource additions may be included, this depends on the entity's strategy for incorporating future assets into planning studies. It should be noted that these facilities are analyzed in interconnection studies (see FAC-002). However, including such facilities in annual planning studies may mitigate issues that would otherwise arise. Speculative facilities may also fail to materialize and result in wasted capital expenditures for CAPs. Thus, it is critical that entities be careful in selecting which future facilities are modeled in annual compliance assessments.

Extreme natural events are partially addressed through TPL-008-1. It should be noted that natural disasters cannot be "proactively" planned for with a meaningful level of accuracy. Predicting the path of a tornado is hard enough for weather forecasters when the storm system is active. Transmission Planners and Planning Coordinators are simply unable to know what facilities could be struck by a storm. Rather, they must use methods like N-2 or right-of-way outages to account for possible combinations of element outages.

Natural gas/electricity interdependencies are anticipated in TPL-001-5 Table 1 Steady State Extreme Event 3(a)(i). Since TPL-001-5 is an approved standard, it is helpful to consider how this event is situated relative to other events. As an extreme event, this event does not require a CAP, it requires an "evaluation of possible actions designed to reduce the likelihood or mitigate the consequences and adverse impacts of the event(s)". It is also optional as a potential "wide area" event. If NERC considers the risks associated with this event as increased, a simpler solution may be to require the analysis of this event as a planning event (e.g., Category P8).

Many of the above items are also considered in NERC Project 2024-02. This project is developing standards to address energy supply concerns in the long-term planning horizon. These plans require CAPs to address violations, and those CAPs may be transmission related.

The SAR states that TPL-001-5 “does not expressly require transmission planners and planning coordinators to consider in the long-term planning horizon … distributed energy resources events.” This, may not account for ongoing NERC projects. The inclusion of DER data collection under MOD-032 will flow into TPL-001-5 (in addition to other standards, like MOD-033). No evidence is provided to demonstrate that DER “events” beyond the inclusion of the expected response during the existing analyses is necessary. The fact that DERs are *distributed* makes the single loss of all DERs aggregated at a delivery point extremely unlikely (unless all the load is lost too). Lack of DER output during scenarios like night-time conditions (commonly assumed for winter peak load), may be accounted for under MOD-032 data collection procedures.

Concurrent/correlated generator and transmission outages are already considered in TPL-001-5, both in planning event category P3, and in the assessment of planned outages. Further, TPL-008-1 requires data collection through MOD-032 which would include generator outages or derates for the conditions studied under that standard. It is not clear what the SAR is proposing that would be a realistic, useful addition to the above.

The energy scenarios described as a “minimum” are not justified as minimum scenarios, nor do they consider that the mandatory development of CAPs (which often require capital expenditure) for violations within these hypothetical scenarios is at odds with the goal of providing power to consumers as cost-effectively as possible. The baseline models for planning studies should always represent the most accurate and realistic forecasts. Considerations of alternative forecasts (or energy scenarios) may be done informationally as sensitivity studies. TPL-001-5 understands this, and thus CAPs are only required when violations occur in multiple sensitivity studies. This would indicate the violation risk is present for various changes in input assumptions and thus has a higher likelihood than violations that only occur under one alternative scenario.

We recommend the SAR be re-written to account for ongoing NERC projects and industry approved standards like TPL-008-1. In our view, no modification to TPL-001-5 is necessary, however, we acknowledge the standard could be strengthened in the way it addresses the issues discussed in the SAR. As a practical alternative, we suggest the DT for this project consider 1) modifications to the requirements for developing sensitivity cases to account for various energy scenarios (e.g., require a high-demand sensitivity for the peak load case), and 2) modifications to the extreme events so that events with increased risks (e.g., outage of two gas plants on the same pipeline) are evaluated as planning events.

Likes 0	
Dislikes 0	

Response

Timothy Singh - Salt River Project - 1,3,5,6 - WECC

Answer	No
Document Name	

Comment

SRP recommends the development of a new planning standard. The annual requirement for consideration of these issues is burdensome on the individual entities. TPL-001, performed annually is not intended to be used for extreme sensitivity studies. P7 events do not require CAPs, and inclusion of these scenarios would be out of alignment with that approach. Additionally, requiring these evaluations annually is unnecessary as they are unlikely to modify year over year. These requirements are more appropriately aligned to the TPL-008 standard performed every 5 years.

Likes 0	
Dislikes 0	

Response

Gizella Mali - PJM Interconnection, L.L.C. - 2 - RF	
Answer	No
Document Name	
Comment	
We do not believe it is appropriate to proceed with the development of additional standards or requirements at this time. As an industry, we are in the midst of a generational change with respect to standards and regulations and are still within the initial phases of implementing recent industry changes to address scenario analysis and extreme weather contingencies. The industry is currently developing compliance approaches for FERC's Order 1920 which requires not only scenario analysis, but also extreme weather considerations. We believe it is not appropriate to move forward with development of additional standards and requirements in this space until a time at which entities have had an opportunity to experience the impacts of Order 1920. Additionally, industry already has TPL-008 approved to develop CAP's for certain extreme temperature conditions. This was recently approved and we believe the industry should have an opportunity to exercise the process designed in phase 1 of 2023-07 to ensure the steps and process of TPL-008 are appropriate and implementable. With these large changes to compliance requirements and additional FERC orders, we strongly believe that now is not the appropriate time to develop more detailed weather standards, rather we should be learning lessons from the implementation of TPL-008 and FERC 1920 compliance in order to develop the best product under 2023-07.	
Likes 0	
Dislikes 0	
Response	
Dan Perry - TXNM Energy - 1,3,5 - WECC,Texas RE	
Answer	No
Document Name	
Comment	
TXNM Energy supports the comments submitted by EEI	
Likes 0	
Dislikes 0	
Response	

Devin Shines - PPL - Louisville Gas and Electric Co. - 1,3,5,6 - SERC,RF	
Answer	No
Document Name	
Comment	
PPL NERC Registered Affiliates support EEI's comments.	
Likes 0	
Dislikes 0	
Response	
Hillary Creurer - Allete - Minnesota Power, Inc. - 1	
Answer	No
Document Name	
Comment	
Minnesota Power supports EEI’s comments.	
Likes 0	
Dislikes 0	
Response	
Nick Leathers - Ameren - Ameren Services - 1,3,5,6 - MRO,SERC	
Answer	No
Document Name	
Comment	
Ameren agrees with EEI's comments.	
Likes 0	
Dislikes 0	
Response	
Kennedy Meier - Electric Reliability Council of Texas, Inc. - 2	

Answer	No
Document Name	
Comment	
ERCOT joins the comments submitted by the ISO/RTO Council (IRC) Standards Review Committee (SRC) and adopts them as its own.	
Likes 0	
Dislikes 0	
Response	
Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC	
Answer	No
Document Name	
Comment	

(1) Normal and extreme natural events (not including extreme heat and cold):

BPA does not agree with the scope of the SAR. BPA believes industry should be able to leverage the studies (such as: Long-term Reliability Assessments, Summer and Winter Reliability Assessments, Event Analysis & Situational Awareness, Performance Analysis, Year 20 extreme cold and heat studies, TPL-008-1, etc.) that NERC and WECC already conduct rather than issuing a new standard.

(2) Gas-electric interdependencies:

BPA believes the scope of this SAR should first reference the periodic studies noted above, as well as WECC's Gas Electric Interface study and NERC's Reliability Guideline: Natural Gas and Electrical Operational Coordination Considerations.

BPA believes the current NERC standards have overlapping requirements, such as TPL-001, which looks at a variety of fuel sources, including natural gas infrastructure (e.g., large gas pipelines).

(3) Distributed Energy Resources (DER):

BPA disagrees with the scope for inclusion of DER. TPL-001 looks at a variety of generation which would include DER. DPs currently provide DER information in the models they provide for TPL-001 (studies) and MOD-032 (collection). DER typically falls under the entities that have 'end users', e.g. DP.

BPA believes these examples further illustrate the lack of need for new/revised reliability standards in these areas.

Likes 0	
Dislikes 0	
Response	
Joseph Gatten - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC	

Answer	No
Document Name	
Comment	
Xcel Energy supports EEI comments	
Likes 0	
Dislikes 0	
Response	

Amy Wilke - American Transmission Company, LLC - 1

Answer	No
Document Name	
Comment	

ATC believes the SAR is too all-encompassing and that multiple aspects are already being addressed by other NERC projects.

- Project 2022-02 is modifying MOD-032 to capture IBR and DER modeling data.
- Project 2022-03 modified TOP-003-7 and BAL-007-1 to address operations/ operational planning for energy assurance.
- Project 2022-04 is modifying FAC-002, MOD-032 to capture dynamic IBR and DER data, and TPL-001 to require dynamic studies of IBR and DER.
- Project 2023-08 is modifying MOD-031-3 to allow PCs to obtain existing and forecasted DER information.
- Project 2024-02 is creating a new standard to capture energy assurance, which includes demand forecasting, demand response, resource capabilities and limitations (retirements, fuel supply constraints, outages, variable energy profiles, energy storage constraints), imports/ exports, transmission/ interface constraints, and any other factors.

Duplication with efforts of existing projects should be removed from the SAR before assigning to a drafting team. At a minimum, the SAR should also be broken into three separate SARs: one for Extreme Natural Events, one for Natural Gas Interdependencies, and one for DERs. Further, given progress in recent projects, including Project 2022-02 and 2022-04, the DER SAR may not be necessary or should be assigned to other projects like 2023-08. Additionally, normal events should be removed from the SAR as they are already covered under TPL-001. If the SAR authors feel normal events are not covered, the term “normal natural event” should be further defined to show how it is different from what is studied under TPL-001.

ATC also generally supports comments from EEI and the MRO NSRF.

Likes 0	
Dislikes 0	
Response	

Allie Gavin - International Transmission Company Holdings Corporation - 1 - MRO,RF

Answer	No
Document Name	

Comment
Project 2023-07 has an overly broad scope, as reflected by the size of this SAR (19 pages, which is unusual). As written, this is a multi-year, multi-phase project. Further, the SAR acknowledges overlaps and conflicts with 5 active projects: Project 2022-02 Uniform Model Framework for IBR, - MOD-032 Project 2022-03 Energy Assurance with Energy-Constrained Resources - Planning Horizon, - TPL-001 Project 2022-04 EMT Modeling, Project – MOD-032, TPL-001 Project 2023-08 Modifications of MOD-031 Demand and Energy Data – MOD-031 Project 2024-02 Planning Energy Assurance – TPL-001 This SAR is very prescriptive in some aspects and parts of the SAR are duplicative with other NERC high priority projects. The duplicative scope should be identified and removed, and the remaining scope should be reviewed to determine if it is appropriate to include in existing projects or if it should remain in this project. If the project was meant to only capture certain events such as wildfires, floods, and droughts, that should be clear. Normal natural events are largely covered as part of TPL-001-5. The standard currently requires peak load and off-peak load cases, as well as the study of planned outages. Planned energy resource additions may be included, this depends on the entity's strategy for incorporating future assets into planning studies. It should be noted that these facilities are analyzed in interconnection studies (see FAC-002). However, including such facilities in annual planning studies may mitigate issues that would otherwise arise. Speculative facilities may also fail to materialize and result in wasted capital expenditures for CAPs. Thus, it is critical that entities be careful in selecting which future facilities are modeled in annual compliance assessments. Extreme natural events are partially addressed through TPL-008-1. It should be noted that natural disasters cannot be "proactively" planned for with a meaningful level of accuracy. Predicting the path of a tornado is hard enough for weather forecasters when the storm system is active. Transmission Planners and Planning Coordinators are simply unable to know what facilities could be struck by a storm. Rather, they must use methods like N-2 or right-of-way outages to account for possible combinations of element outages. Natural gas/electricity interdependencies are anticipated in TPL-001-5 Table 1 Steady State Extreme Event 3(a)(i). Since TPL-001-5 is an approved standard, it is helpful to consider how this event is situated relative to other events. As an extreme event, this event does not require a CAP, it requires an "evaluation of possible actions designed to reduce the likelihood or mitigate the consequences and adverse impacts of the event(s)". It is also optional as a potential "wide area" event. If NERC considers the risks associated with this event as increased, a simpler solution may be to require the analysis of this event as a planning event (e.g., Category P8). Many of the above items are also considered in NERC Project 2024-02. This project is developing standards to address energy supply concerns in the long-term planning horizon. These plans require CAPs to address violations, and those CAPs may be transmission related.

The SAR states that TPL-001-5 “does not expressly require transmission planners and planning coordinators to consider in the long-term planning horizon … distributed energy resources events.” This, again, fails to account for ongoing NERC projects. The inclusion of DER data collection under MOD-032 will flow into TPL-001-5 (in addition to other standards, like MOD-033). No evidence is provided to demonstrate that DER “events” beyond the inclusion of the expected response during the existing analyses is necessary. The fact that DERs are *distributed* makes the single loss of all DERs aggregated at a delivery point extremely unlikely (unless all the load is lost too). Lack of DER output during scenarios like night-time conditions (commonly assumed for winter peak load), should already be accounted for under MOD-032 data collection procedures.

Concurrent/correlated generator and transmission outages are already considered in TPL-001-5, both in planning event category P3, and in the assessment of planned outages. Further, TPL-008-1 requires data collection through MOD-032 which would include generator outages or derates for the conditions studied under that standard. It is not clear what the SAR is proposing that would be a realistic, useful addition to the above.

The energy scenarios described as a “minimum” are not justified as minimum scenarios, nor do they consider that the mandatory development of CAPs (which often require capital expenditure) for violations within these hypothetical scenarios is at odds with the goal of providing power to consumers as cost-effectively as possible. The baseline models for planning studies should always represent the most accurate and realistic forecasts. Considerations of alternative forecasts (or energy scenarios) may be done informationally as sensitivity studies. TPL-001-5 understands this, and thus CAPs are only required when violations occur in multiple sensitivity studies. This would indicate the violation risk is present for various changes in input assumptions and thus has a higher likelihood than violations that only occur under one alternative scenario.

We recommend the SAR be re-written to account for ongoing NERC projects and industry approved standards like TPL-008-1. In our view, no modification to TPL-001-5 is necessary, however, we acknowledge the standard could be strengthened in the way it addresses the issues discussed in the SAR. As a practical alternative, we suggest NERC revise this SAR so that it is limited to consider 1) modifications to the requirements for developing sensitivity cases to account for various energy scenarios (e.g., require a high-demand sensitivity for the peak load case), and 2) modifications to the extreme events so that events with increased risks (e.g., outage of two gas plants on the same pipeline) are evaluated as planning events. Once the revision has been completed, it can be re-circulated for industry comment.

Likes 0	
Dislikes 0	

Response

Daniel Gacek - Exelon - 1,3, Group Name Exelon

Answer	No
Document Name	

Comment

Exelon is not opposed to developing Transmission System Planning Performance Requirements for the scenarios listed in the SAR. The proposed scope however would benefit from updates and clarifications. Exelon agrees with the comments submitted by the EEI for this SAR.

Likes 0	
Dislikes 0	

Response	
Amy Key - Berkshire Hathaway Energy - MidAmerican Energy Co. - 1,3	
Answer	No
Document Name	
Comment	
We agree with the MRO NSRF comments	
Likes 0	
Dislikes 0	
Response	
Tammy Porter - Oncor Electric Delivery - 1 - Texas RE	
Answer	Yes
Document Name	
Comment	
Based on the SAR, the risk identified is truly a factor to consider, but may need more rationale on details for what the criteria and parameters are to be considered in extreme natural events, gas-electric interdependencies constraints or what type of impact expected from DER events, such as the size and magnitude of natural events obtained from historical information. The approach and intent of this new proposal seems similar to that proposed by Standard TPL-007 (GMD).	
Likes 0	
Dislikes 0	
Response	
Kevin Conway - Western Power Pool - 4	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Rachel Coyne - Texas Reliability Entity, Inc. - 10	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

2. Do you believe “wide area” should be defined? If yes, please provide a proposal or key points that the DT should consider when talking through whether “wide area” should be defined or not.

Amy Key - Berkshire Hathaway Energy - MidAmerican Energy Co. - 1,3

Answer	No
Document Name	

Comment

We agree with the MRO NSRF comments

Likes 0	
Dislikes 0	

Response

Daniel Gacek - Exelon - 1,3, Group Name Exelon

Answer	No
Document Name	

Comment

We agree with the comments submitted by the EEI for this question.

Likes 0	
Dislikes 0	

Response

Allie Gavin - International Transmission Company Holdings Corporation - 1 - MRO,RF

Answer	No
Document Name	

Comment

Given TPL-008-1 is approved and entities will already be coordinating to accomplish the studies required therein, no competing method or definition for determining “wide areas” should be pursued. Also, “Wide Area” is already a defined term in the Glossary of Terms.

Likes 0	
Dislikes 0	

Response

Amy Wilke - American Transmission Company, LLC - 1	
Answer	No
Document Name	
Comment	
Wide Area has a definition in the NERC Glossary of Terms. Changing or further defining it may not provide additional benefits. ATC believes the Assessment Zones identified under TPL-008-1 should continue to be utilize for efficiency and to avoid confusion. ATC also generally supports comments from EEI and the MRO NSRF	
Likes 0	
Dislikes 0	
Response	
Joseph Gatten - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC	
Answer	No
Document Name	
Comment	
Xcel Energy supports EEI comments	
Likes 0	
Dislikes 0	
Response	
Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC	
Answer	No
Document Name	
Comment	
BPA understands that ‘Wide Area’ is already a defined Term in the NERC Glossary. BPA would suggest that a new Term be created and defined or redefine the current term. BPA believes this would reduce industry confusion if/when standards include language such as ‘wide area’.	
Likes 0	
Dislikes 0	
Response	

Kennedy Meier - Electric Reliability Council of Texas, Inc. - 2	
Answer	No
Document Name	
Comment	
ERCOT joins the comments submitted by the IRC SRC and adopts them as its own.	
Likes 0	
Dislikes 0	
Response	
Nick Leathers - Ameren - Ameren Services - 1,3,5,6 - MRO,SERC	
Answer	No
Document Name	
Comment	
Ameren agrees with EEI's comments.	
Likes 0	
Dislikes 0	
Response	
Hillary Creurer - Allete - Minnesota Power, Inc. - 1	
Answer	No
Document Name	
Comment	
Minnesota Power supports EEI’s comments.	
Likes 0	
Dislikes 0	
Response	
Devin Shines - PPL - Louisville Gas and Electric Co. - 1,3,5,6 - SERC,RF	

Answer	No
Document Name	
Comment	
PPL NERC Registered Affiliates support EEI's comments.	
Likes 0	
Dislikes 0	
Response	
Dan Perry - TXNM Energy - 1,3,5 - WECC,Texas RE	
Answer	No
Document Name	
Comment	
TXNM Energy supports the comments submitted by EEI	
Likes 0	
Dislikes 0	
Response	
Gizella Mali - PJM Interconnection, L.L.C. - 2 - RF	
Answer	No
Document Name	
Comment	
Wide Area is already a defined term in the NERC Glossary of Terms, we don’t see a benefit in redefining the term for purposes of this project. If the current defined term is not suitable for this project, an alternate term should be used.	
Likes 0	
Dislikes 0	
Response	
Timothy Singh - Salt River Project - 1,3,5,6 - WECC	
Answer	No
Document Name	

Comment	
This is already a NERC Defined term and in use in EOP-011 and in the definition of Reliability Coordinator.	
Likes 0	
Dislikes 0	
Response	
Kristine Martz - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable	
Answer	No
Document Name	
Comment	
Given TPL-008-1 is approved and entities will already be coordinating to accomplish the studies required therein, no competing method or definition for determining “wide areas” should be pursued. Also, “Wide Area” is already a defined term in the Glossary of Terms.	
Likes 0	
Dislikes 0	
Response	
Hayden Maples - Evergy - 1,3,5,6 - MRO	
Answer	No
Document Name	
Comment	
Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) on question 2	
Likes 0	
Dislikes 0	
Response	
Joshua London - Eversource Energy - 1,3, Group Name Eversource	
Answer	No
Document Name	
Comment	

Eversource supports the comments of EEI.	
Likes 0	
Dislikes 0	
Response	
Josh Schumacher - Black Hills Corporation - 1,3,5,6, Group Name Black Hills Corporation Segments 1, 3, 5, 6	
Answer	No
Document Name	
Comment	
Wide Area is already a defined term in the Glossary of Terms	
Likes 0	
Dislikes 0	
Response	
Richard Vendetti - NextEra Energy - 5	
Answer	No
Document Name	
Comment	
Nextera supports EEI comments Given TPL-008-1 is approved and entities will already be coordinating to accomplish the studies required therein, no competing method or definition for determining “wide areas” should be pursued. Also, “Wide Area” is already a defined term in the Glossary of Terms.	
Likes 0	
Dislikes 0	
Response	
Elizabeth Davis - PJM Interconnection, L.L.C. - 2 - RF, Group Name ISO/RTO Standards Review Committee	
Answer	No

Document Name	
Comment	
Wide Area is already a defined term in the NERC Glossary of Terms, and the SRC sees no benefit in redefining the term for purposes of this project. If the current defined term is not suitable for this project, an alternate term should be used.	
Likes 0	
Dislikes 0	
Response	
Steven Belle - Dominion - Dominion Virginia Power - 1,3, Group Name Dominion	
Answer	No
Document Name	
Comment	
Dominion supports EEI's comments.	
Likes 0	
Dislikes 0	
Response	
John Brewer - National Energy Technology Laboratory - 9 - NA - Not Applicable	
Answer	No
Document Name	
Comment	
This commenter concurs with those commenters who raise that “Wide Area” is already defined in the Glossary of Terms and in utilized in other approved standards. The DT should consider the relative size of various BAs or standard performing entities in the definition of the area of study and define it such that It encompasses a minimum geographic extent and not N+k BA. This will ensure consistency the definition of such that discrepancies do not occur where a small BA may identify as their area of study as their system and their immediate neighbors while a large BA such as PJM defines their study area as a large portion of their system that does not include neighboring BAs. The team should also consider whether the inclusion of NG interdependencies would require a different definition of wide area than the other considered scenarios.	
Likes 0	
Dislikes 0	
Response	

Colby Galloway - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC, Group Name Southern Company	
Answer	No
Document Name	
Comment	
Southern Company supports EEI comments.	
Likes 0	
Dislikes 0	
Response	
Keith Jonassen - ISO New England, Inc. - 2 - NPCC	
Answer	No
Document Name	
Comment	
Wide Area is already a defined term in the NERC Glossary of Terms. The current definition seems aimed at IROL calculations and not for planning assessments. Geographical areas may be more pertinent for the study similar to the weather zones created for TPL-008 and the extreme hot/cold events. Similar to TPL-008, each study area should need to select the same event from a list provided by NERC.	
Likes 0	
Dislikes 0	
Response	
Daniela Atanasovski - APS - Arizona Public Service Co. - 1,3,5,6	
Answer	No
Document Name	
Comment	
AZPS supports the following comments that were submitted by EEI on behalf of its members: Given TPL-008-1 is approved and entities will already be coordinating to accomplish the studies required therein, no competing method or definition for determining “wide areas” should be pursued. Also, “Wide Area” is already a defined term in the Glossary of Terms.	
Likes 0	
Dislikes 0	

Response	
Anna Martinson - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO Group	
Answer	No
Document Name	
Comment	
The NSRF does not see value in defining wide area.	
Likes 0	
Dislikes 0	
Response	
Richard Jackson - U.S. Bureau of Reclamation - 1,5	
Answer	No
Document Name	
Comment	
Wide Area is already defined in the NERC glossary of terms.	
Likes 0	
Dislikes 0	
Response	
Mark Garza - FirstEnergy - FirstEnergy Corporation - 1,3,4,5,6, Group Name FE Voter	
Answer	No
Document Name	
Comment	
FirstEnergy supports EEI's comments which state: Given TPL-008-1 is approved and entities will already be coordinating to accomplish the studies required therein, no competing method or definition for determining “wide areas” should be pursued. Also, “Wide Area” is already a defined term in the Glossary of Terms	
Likes 0	
Dislikes 0	

Response	
Brian Lindsey - Entergy - 1,3,6	
Answer	No
Document Name	
Comment	
No. The already-defined term "Wide Area" should not be overloaded in this way. If it is determined that a defined term is required for these standards, they should not use a term that is already defined to mean something else.	
Likes 0	
Dislikes 0	
Response	
Pirouz Honarmand - Independent Electricity System Operator - 2	
Answer	No
Document Name	
Comment	
The term is already defined in the Glossary of Terms and used in the definition of Reliability Coordinator. However, we are supportive of reviewing the term and confirming it is adequate for transmission planning purposes.	
Likes 0	
Dislikes 0	
Response	
Kati Barr - Southern Indiana Gas and Electric Co. - 3,5,6, Group Name SIGE Voters	
Answer	No
Document Name	
Comment	
Southern Indiana Gas & Electric Company d/b/a CenterPoint Energy Indiana South (SIGE) supports the comments submitted by the Edison Electric Institute (EEI).	
Likes 0	
Dislikes 0	

Response	
Diana Aguas - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE	
Answer	No
Document Name	
Comment	
CEHE supports the comments submitted by EEI.	
Likes 0	
Dislikes 0	
Response	
Randy Peters - Manitoba Hydro - 1,3,5,6 - MRO	
Answer	Yes
Document Name	
Comment	
Wide Area was already defined in the NERC Glossary of Terms in 2005 under Version 0 Reliability Standards. MH believes this definition may need to be revised to support current and future standard developments and other Reliability needs. The Wide Area can be defined in terms of geographical location, attributed to common extreme events or electrical proximity by considering the severity of the impact on the Bulk Power System. It is recommended that the SDT provide some provisions to Planning Coordinators to define the boundary of the widespread natural and/or extreme events based on their expertise and the information gathered from external resources (for example, meteorological data providers, government institutions) and the responsible functional entities.	
Likes 0	
Dislikes 0	
Response	
Thomas Foltz - AEP - 3,5,6	
Answer	Yes
Document Name	
Comment	

While AEP believes that “wide area” should be defined, we would not be able to provide any suggestions on how wide the planning studies should be until we have clarity regarding scenarios under the four categories.

Likes 0	
Dislikes 0	

Response

Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF

Answer	Yes
Document Name	

Comment

Duke Energy supports and recommends adoption of the EEI response for Question 2.

Likes 0	
Dislikes 0	

Response

Tammy Porter - Oncor Electric Delivery - 1 - Texas RE

Answer	Yes
Document Name	

Comment

The term “wide area” may vary among regions of the interconnection which may be analyzed incorrectly if not carefully defined. The DT should consider the following:

- The Reliability Coordinator may consider a “wide area” related to a weather zone rather than defined by geographic areas.
- Define the term according to the historical extreme events to serve as a reference to determine the wide area size (if enough data is available).
- Supports or complements the existing “Wide Area” definition from the NERC Glossary of Terms.
- Include critical gas/electricity interdependencies criteria and DER size (single or aggregate) impacts (if data is available).

Likes 0	
Dislikes 0	

Response

Kevin Conway - Western Power Pool - 4

Answer	Yes

Document Name	
Comment	
Wide Area should be defined by the NERC Region with condideration of geographical similarities, infrastructure capabilities, likelihood of weather patterns traveling through the designated area (hurricanes, tornados, atomospheric rivers, droughts, etc.), and other considerations that make a logical grouping of an area. WECC currently has defined many wide areas for extreme weather events an can be used as a model.	
Likes 0	
Dislikes 0	
Response	
Ming Jiang - BC Hydro and Power Authority - 1,3,5, Group Name BC Hydro	
Answer	
Document Name	
Comment	
There is not enough information in the SAR to comment. Once the term “wide area” is more fully defined, then entities can comment on whether the proposed use is feasible.	
Likes 0	
Dislikes 0	
Response	
Rachel Coyne - Texas Reliability Entity, Inc. - 10	
Answer	
Document Name	
Comment	
“Wide Area" is currently defined in the NERC Glossary of Terms as ***“The entire Reliability Coordinator Area as well as the critical flow and status information from adjacent Reliability Coordinator Areas as determined by detailed system studies to allow the calculation of Interconnected Reliability Operating Limits.***” In the context of this SAR, however, a key consideration should be the Planning Authority/Planning Coordinator (PA/PC) level boundary. The PA/PC is responsible for coordinating and integrating transmission facility and service plans, resource plans, and protection systems. Therefore, aligning the concept of 'wide area' with the PA/PC boundary may provide a more practical and consistent framework for long-term planning and extreme event assessments.	
Likes 0	
Dislikes 0	
Response	

3. Do you believe coordination is needed among responsible entities regarding the sharing of data and studies for Transmission planning Energy Scenarios? If so, please provide justification to support your response.

Kevin Conway - Western Power Pool - 4

Answer	No
Document Name	

Comment

No, the Transmission Planners and Planning Coordinators should identify the needed information and by their authority over other entities, require the submission of this information for planning studies.

Likes 0	
Dislikes 0	

Response

Diana Aguas - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE

Answer	No
Document Name	

Comment

The Transmission Planners and Planning Coordinators should identify the needed information and by their authority over other entities, require the submission of this information for planning studies.

Likes 0	
Dislikes 0	

Response

Kati Barr - Southern Indiana Gas and Electric Co. - 3,5,6, Group Name SIGE Voters

Answer	No
Document Name	

Comment

Southern Indiana Gas & Electric Company d/b/a CenterPoint Energy Indiana South (SIGE) supports the comments submitted by the Edison Electric Institute (EEI).

Likes 0	
Dislikes 0	

Response	
Mark Garza - FirstEnergy - FirstEnergy Corporation - 1,3,4,5,6, Group Name FE Voter	
Answer	No
Document Name	
Comment	
FirstEnergy supports EEI comments which state: PCs and TPs are accustomed to sharing data and do so either voluntarily, or with a simple requirement (see TPL-001-5 R8, TPL-008-1 R11, etc.). With respect to planning for Normal Natural Events, NERC should revise the SAR to recognize the appropriate role and responsibilities of the Planning Coordinator / Transmission Planner in developing an entity's ability to forecast or address. Items relating to energy-related scenarios should be addressed through engagement with Project 2024-02, and only transmission related normal and extreme natural weather events should be addressed through a continuation of Project 2023-07 efforts. Also, a focus on energy-related scenarios for the three identified risk areas is more appropriately the responsibility of the Resource Planner and analysis with energy-related scenarios as the focus increases the potential for solutions that require acquiring additional resources which is not within the (authority/responsibility/control) of the Planning Coordinator / Transmission Planner to address. Many changes to NERC standards relating to extreme events and energy-related scenarios are already underway since the release of the White Paper. Due to the high volume of changes currently being made to this family of standards by FERC Order 901 Milestones 3 and 4, it is our recommendation that where possible items be addressed through those initiatives. Items relating to energy-related scenarios should be addressed through engagement with Project 2024-02 and transmission-related normal and extreme natural weather events should be addressed through a continuation of Project 2023-07 efforts.	
Likes 0	
Dislikes 0	
Response	
Richard Jackson - U.S. Bureau of Reclamation - 1,5	
Answer	No
Document Name	
Comment	
Reclamation is not a TP and has no comments	
Likes 0	
Dislikes 0	
Response	
Daniela Atanasovski - APS - Arizona Public Service Co. - 1,3,5,6	
Answer	No

Document Name	

Comment

AZPS supports the following comments that were submitted by EEI on behalf of its members:

PCs and TPs are accustomed to sharing data and do so either voluntarily, or with a simple requirement (see TPL-001-5 R8, TPL-008-1 R11, etc.).

With respect to planning for Normal Natural Events, NERC should revise the SAR to recognize the appropriate role and responsibilities of the Planning Coordinator / Transmission Planner in developing “energy scenario-based benchmark Planning event and planning cases” that address several components that are outside of the planning entity’s ability to forecast or address. Items relating to energy-related scenarios should be addressed through engagement with Project 2024-02, and only transmission related normal and extreme natural weather events should be addressed through a continuation of Project 2023-07 efforts. [Supporting Comments: A focus on energy-related scenarios for the three identified risk areas is more appropriately the responsibility of the Resource Planner and analysis with energy-related scenarios as the focus increases the potential for solutions that require acquiring additional resources which is not within the (authority/responsibility/control) of the Planning Coordinator / Transmission Planner to address. Many changes to NERC standards relating to extreme events and energy-related scenarios are already underway since the release of the White Paper. Due to the high volume of changes currently being made to this family of standards by FERC Order 901 Milestones 3 and 4, it is our recommendation that where possible items be addressed through those initiatives. Items relating to energy-related scenarios should be addressed through engagement with Project 2024-02 and transmission-related normal and extreme natural weather events should be addressed through a continuation of Project 2023-07 efforts.

Likes 0	
Dislikes 0	

Response

Keith Jonassen - ISO New England, Inc. - 2 - NPCC

Answer	No
Document Name	

Comment

Coordination among responsible entities is generally necessary for studies, however, it is not clear who the responsible entities would be with what is outlined in the current version of the SAR. Coordination may be determined by the studied event. Coordination may be necessary with entities within the same area for local issues, or could be inter-area due to larger events ie. larger ice storms.

Likes 0	
Dislikes 0	

Response

Colby Galloway - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC, Group Name Southern Company

Answer	No
Document Name	

Comment

Southern Company supports EEI comments.	
Likes 0	
Dislikes 0	
Response	
Steven Belle - Dominion - Dominion Virginia Power - 1,3, Group Name Dominion	
Answer	No
Document Name	
Comment	
Dominion supports EEI's comments.	
Likes 0	
Dislikes 0	
Response	
Richard Vendetti - NextEra Energy - 5	
Answer	No
Document Name	
Comment	
Nextera supports EEI comments PCs and TPs are accustomed to sharing data and do so either voluntarily, or with a simple requirement (see TPL-001-5 R8, TPL-008-1 R11, etc.). With respect to planning for Normal Natural Events, NERC should revise the SAR to recognize the appropriate role and responsibilities of the Planning Coordinator / Transmission Planner in developing “energy scenario-based benchmark Planning event and planning cases” that address several components that are outside of the planning entity’s ability to forecast or address. Items relating to energy-related scenarios should be addressed through engagement with Project 2024-02, and only transmission related normal and extreme natural weather events should be addressed through a continuation of Project 2023-07 efforts. [Supporting Comments: A focus on energy-related scenarios for the three identified risk areas is more appropriately the responsibility of the Resource Planner and analysis with energy-related scenarios as the focus increases the potential for solutions that require acquiring additional resources which is not within the (authority/responsibility/control) of the Planning Coordinator / Transmission Planner to address. Many changes to NERC standards relating to extreme events and energy-related scenarios are already underway since the release of the White Paper. Due to the high volume of changes currently being made to this family of standards by FERC Order 901 Milestones 3 and 4, it is our recommendation that where possible items be addressed through those initiatives. Items relating to energy-related scenarios should be addressed through engagement with Project 2024-02 and transmission-related normal and extreme natural weather events should be addressed through a continuation of Project 2023-07 efforts.	
Likes 0	

Dislikes 0	
Response	
Josh Schumacher - Black Hills Corporation - 1,3,5,6, Group Name Black Hills Corporation Segments 1, 3, 5, 6	
Answer	No
Document Name	
Comment	
Black Hills Corporation agrees with EEI's comments. NERC should revise the SAR to recognize the appropriate role and responsibilities of the Planning Coordinator / Transmission Planner in developing "energy scenario-based benchmark Planning event and planning cases" that address several components that are outside of the planning entity's ability to forecast or address. Items relating to energy-related scenarios should be addressed through engagement with Project 2024-02, and only transmission-related normal and extreme natural weather events should be addressed through a continuation of Project 2023-07 efforts.	
Likes 0	
Dislikes 0	
Response	
Joshua London - Eversource Energy - 1,3, Group Name Eversource	
Answer	No
Document Name	
Comment	
Eversource supports the comments of EEI.	
Likes 0	
Dislikes 0	
Response	
Hayden Maples - Evergy - 1,3,5,6 - MRO	
Answer	No
Document Name	
Comment	
Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) and Midwest Reliability Organization's NERC Standards Review Forum (MRO NSRF) on question 3	

Likes 0	
Dislikes 0	
Response	
Kristine Martz - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable	
Answer	No
Document Name	
Comment	
PCs and TPs are accustomed to sharing data and do so either voluntarily, or with a simple requirement (see TPL-001-5 R8, TPL-008-1 R11, etc.). With respect to planning for Normal Natural Events, NERC should revise the SAR to recognize the appropriate role and responsibilities of the Planning Coordinator / Transmission Planner in developing “energy scenario-based benchmark Planning event and planning cases” that address several components that are outside of the planning entity’s ability to forecast or address. Items relating to energy-related scenarios should be addressed through engagement with Project 2024-02, and only transmission related normal and extreme natural weather events should be addressed through a continuation of Project 2023-07 efforts. Also, a focus on energy-related scenarios for the three identified risk areas is more appropriately the responsibility of the Resource Planner and analysis with energy-related scenarios as the focus increases the potential for solutions that require acquiring additional resources which is not within the (authority/responsibility/control) of the Planning Coordinator / Transmission Planner to address. Many changes to NERC standards relating to extreme events and energy-related scenarios are already underway since the release of the White Paper. Due to the high volume of changes currently being made to this family of standards by FERC Order 901 Milestones 3 and 4, it is our recommendation that where possible items be addressed through those initiatives. Items relating to energy-related scenarios should be addressed through engagement with Project 2024-02 and transmission-related normal and extreme natural weather events should be addressed through a continuation of Project 2023-07 efforts.	
Likes 0	
Dislikes 0	
Response	
Timothy Singh - Salt River Project - 1,3,5,6 - WECC	
Answer	No
Document Name	
Comment	
SRP recommends this not be addressed in TPL-001, as a new standard 'A', regionally coordinated effort performed every 5 years, make more sense.	
Likes 0	
Dislikes 0	
Response	

Dan Perry - TXNM Energy - 1,3,5 - WECC,Texas RE	
Answer	No
Document Name	
Comment	
TXNM Energy supports the comments submitted by EEI	
Likes 0	
Dislikes 0	
Response	
Devin Shines - PPL - Louisville Gas and Electric Co. - 1,3,5,6 - SERC,RF	
Answer	No
Document Name	
Comment	
PPL NERC Registered Affiliates support EEI's comments.	
Likes 0	
Dislikes 0	
Response	
Hillary Creurer - Allete - Minnesota Power, Inc. - 1	
Answer	No
Document Name	
Comment	
Minnesota Power supports EEI’s comments.	
Likes 0	
Dislikes 0	
Response	
Nick Leathers - Ameren - Ameren Services - 1,3,5,6 - MRO,SERC	
Answer	No

Document Name	
Comment	
Ameren agrees with EEI's comments.	
Likes 0	
Dislikes 0	
Response	
Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC	
Answer	No
Document Name	
Comment	
TPL-001, TPL-008, TOP-003, IRO-010, MOD-032, etc. already include requirements to share data and studies. BPA currently runs scenarios based on data shared from other entities. BPA understands that natural gas entities in the West are interested in learning more, but BPA believes this does not warrant the creation of a new standard. BPA understands that some regions are currently performing NG coordination during extreme events.	
Likes 0	
Dislikes 0	
Response	
Joseph Gatten - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC	
Answer	No
Document Name	
Comment	
Xcel Energy supports EEI comments	
Likes 0	
Dislikes 0	
Response	
Amy Wilke - American Transmission Company, LLC - 1	
Answer	No
Document Name	

Comment
Transmission Planners already collaborate regularly with their Planning Coordinators to support whichever studies the PC finds necessary. ATC believes completed studies can be treated similarly to R11 of TPL-008-1 where the data shall be provided within 60 calendar days of a request. ATC also generally supports comments from EEI and the MRO NSRF

Likes 0	
Dislikes 0	

Response

Tammy Porter - Oncor Electric Delivery - 1 - Texas RE	
Answer	Yes
Document Name	

Comment
The sharing of data and studies would be between Transmission Planners and Planning Coordinators. However, there is a possibility of data from DERs or gas-electric interdependencies that may not be completely available or may impact confidentiality risks. It is important to define the type of data sharing that would be coordinated and expected from the entities.

Likes 0	
Dislikes 0	

Response

Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF	
Answer	Yes
Document Name	

Comment
Duke Energy supports and recommends adoption of the EEI response for Question 3.

Likes 0	
Dislikes 0	

Response

Pirouz Honarmand - Independent Electricity System Operator - 2

Answer	Yes
Document Name	
Comment	
If there is a reliability need, then data should be shared between the responsible entities. It should be addressed in a similar fashion as in the current TPL-001-5.1.	
Likes 0	
Dislikes 0	
Response	
Brian Lindsey - Entergy - 1,3,6	
Answer	Yes
Document Name	
Comment	
Yes. One of the goals with the SAR request is to develop scenarios across a “wide area” including model and sensitivity development. To accomplish that, it will likely require coordination and the provision of data among TPs and PCs. Coordination can be difficult across PC/TP boundaries, so the requirements and process should be simplified as much as possible to ensure they have realistic expectations based on the availability or confidentiality of data. In some of the scenarios such as the “De-carbonization and Policy”, it would be better to rely on generic assumptions based on age or fuel type rather than drill down into the details and require entities to provide planned deactivation dates or anticipated responses to hypothetical policy changes. Studying “wide area” events may also require coordination on Corrective Action Plans if system performance requirements at not met at the seams between PC areas.	
Likes 0	
Dislikes 0	
Response	
Anna Martinson - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO Group	
Answer	Yes
Document Name	
Comment	
While the MRO NSRF believes coordination is needed, we also believe that a requirement is necessary given the ongoing coordination that exists today.	
Likes 0	
Dislikes 0	

Response	
John Brewer - National Energy Technology Laboratory - 9 - NA - Not Applicable	
Answer	Yes
Document Name	
Comment	
This commenter supports the comment of ISO New England. At a minimum, coordination of scenarios should be required to ensure that performing entities are not assuming coincident import transfers on the same lines and to coordinate any gas supply disruption scenarios that may impact a neighboring assessment area.	
Likes 0	
Dislikes 0	
Response	
Elizabeth Davis - PJM Interconnection, L.L.C. - 2 - RF, Group Name ISO/RTO Standards Review Committee	
Answer	Yes
Document Name	
Comment	
Yes, coordination, as appropriate and mutually agreed to, should be required among responsible entities regarding sharing of data (as done in TPL-008). This coordination should focus on scope, methodology, input assumptions, results, next steps, and commentary. Additionally, the SRC advises that while coordination is important, responsible entities should have appropriate latitude to determine how best to make use of study results from neighboring entities. The term Energy Scenarios is capitalized in this question, but it is not a defined term in the NERC Glossary of Terms. This question cannot be adequately answered without a common understanding of what is meant by “Transmission planning Energy Scenarios,” but coordination among responsible entities is generally necessary. Additionally, it is not clear who the responsible entities would be. In the case of gas-electric interdependencies, many of the necessary responsible entities are not currently registered with NERC or obligated to comply with NERC Reliability Standards.	
Likes 0	
Dislikes 0	
Response	
Gizella Mali - PJM Interconnection, L.L.C. - 2 - RF	
Answer	Yes
Document Name	

Comment
Yes, coordination should be required among responsible entities regarding sharing of data. This should be focused on scope, methodology, input assumptions, results, next steps and commentary. Additionally, we believe that while coordination is important, responsible entities should have appropriate latitude to determine how neighboring entities study results are incorporated. Please note Energy Scenarios is not a defined term and will need to be clearly defined for the purposes of coordination.

Likes 0	
Dislikes 0	
Response	
Rachel Coyne - Texas Reliability Entity, Inc. - 10	
Answer	Yes
Document Name	
Comment	
Coordination among all responsible entities is essential for the effective sharing of data and studies related to transmission planning, which increasingly involves complex, interdependent systems influenced by a changing resource mix and evolving load patterns. Texas RE noticed the term “Energy Scenarios” is capitalized in the question, but it is not currently a defined term in the NERC Glossary of Terms.	
Likes 0	
Dislikes 0	
Response	
Kennedy Meier - Electric Reliability Council of Texas, Inc. - 2	
Answer	Yes
Document Name	
Comment	
ERCOT joins the comments submitted by the IRC SRC and adopts them as its own.	
Likes 0	
Dislikes 0	
Response	

Daniel Gacek - Exelon - 1,3, Group Name Exelon	
Answer	Yes
Document Name	
Comment	
We agree with the EEI that responsible entites are already coordinating.	
Likes 0	
Dislikes 0	
Response	
Ming Jiang - BC Hydro and Power Authority - 1,3,5, Group Name BC Hydro	
Answer	Yes
Document Name	
Comment	
In general, BCH believes coordination is needed among responsible entities regarding the sharing of data and studies for Transmission planning Energy Scenarios, however we recommend wording to make the coordination effective and efficient.	
Likes 0	
Dislikes 0	
Response	
Randy Peters - Manitoba Hydro - 1,3,5,6 - MRO	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thomas Foltz - AEP - 3,5,6	

Answer	
Document Name	
Comment	

Once again, this cannot be answered until we know more about the scenarios and how wide the areas considered might need to be, which in turn would dictate what need there might be to require coordination among parties. Until we know what information is required and what the Transmission Planner might already have available, the degree of needed coordination cannot be estimated.

Likes 0	
Dislikes 0	
Response	

Allie Gavin - International Transmission Company Holdings Corporation - 1 - MRO,RF

Answer	
Document Name	
Comment	

PCs and TPs are accustomed to sharing data and do so either voluntarily, or with a simple requirement (see TPL-001-5 R8, TPL-008-1 R11, etc.).

With respect to planning for Normal Natural Events, NERC should revise the SAR to recognize the appropriate role and responsibilities of the Planning Coordinator / Transmission Planner in developing “energy scenario-based benchmark Planning event and planning cases” that address several components that are outside of the planning entity’s ability to forecast or address. Items relating to energy-related scenarios should be addressed through engagement with Project 2024-02, and only transmission related normal and extreme natural weather events should be addressed through a continuation of Project 2023-07 efforts. [Supporting Comments: A focus on energy-related scenarios for the three identified risk areas is more appropriately the responsibility of the Resource Planner and analysis with energy-related scenarios as the focus increases the potential for solutions that require acquiring additional resources which is not within the (authority/responsibility/control) of the Planning Coordinator / Transmission Planner to address. Many changes to NERC standards relating to extreme events and energy-related scenarios are already underway since the release of the White Paper. Due to the high volume of changes currently being made to this family of standards by FERC Order 901 Milestones 3 and 4, it is our recommendation that where possible items be addressed through those initiatives. Items relating to energy-related scenarios should be addressed through engagement with Project 2024-02 and transmission-related normal and extreme natural weather events should be addressed through a continuation of Project 2023-07 efforts with possible revisions to TPL-008.

Likes 0	
Dislikes 0	
Response	

Amy Key - Berkshire Hathaway Energy - MidAmerican Energy Co. - 1,3

Answer	
Document Name	

Comment	
This feels like an impossible question to answer. Coordination is critical, but the necessary coordination is already required by other standards and shouldn't be part of this project scope.	
Likes 0	
Dislikes 0	
Response	

4. In terms of normal and extreme natural events, should the DT use a projected frequency approach (e.g., weather events that occur 1 in 50 years)? If not, what approach(es) should be used?

Amy Key - Berkshire Hathaway Energy - MidAmerican Energy Co. - 1,3	
Answer	No
Document Name	
Comment	
We agree with the MRO NSRF comments	
Likes 0	
Dislikes 0	
Response	
Daniel Gacek - Exelon - 1,3, Group Name Exelon	
Answer	No
Document Name	
Comment	
We agree with the comments submitted by the EEI for this question.	
Likes 0	
Dislikes 0	
Response	
Allie Gavin - International Transmission Company Holdings Corporation - 1 - MRO,RF	
Answer	No
Document Name	
Comment	
We disagree that the standard should specify the exact frequency or probability to be evaluated. Consider that TPL-001-5 does not currently specify what level of confidence (e.g., 50/50, 90/10) must be utilized for normal peak load studies. Rather, the existing type of language used in TPL-001-5 is better: “by a sufficient amount to stress the System within a range of credible conditions that demonstrate a measurable change in System response”.	
Likes 0	
Dislikes 0	

Response	
Amy Wilke - American Transmission Company, LLC - 1	
Answer	No
Document Name	
Comment	
ATC notes that normal events are already covered under TPL-001-5.1. Extreme natural events should be covered under a separate standard, similar to TPL-008, and should utilize the regional Assessment Zones identified within TPL-008 Attachment 1: Extreme Temperature Assessment Zones. A new standard or requirement should not duplicate what is already done under TPL-001 for Extreme Events. Additional clarity will be needed on what to model beyond existing Extreme Event considerations. It would be appropriate to create additional modeling libraries for use with non-temperature extreme events, similar to how they are developed under TPL-008.	
Likes 0	
Dislikes 0	
Response	
Joseph Gatten - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC	
Answer	No
Document Name	
Comment	
Xcel Energy supports EEI comments	
Likes 0	
Dislikes 0	
Response	
Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC	
Answer	No
Document Name	
Comment	

BPA believes ‘projected frequency’ is less useful for planning studies. BPA believes studies of events of different types happening simultaneously are more valuable than a frequency approach, like 1 in 50 years. As an example, TPL-001 looks at wide area events based on system topology.

Likes 0	
Dislikes 0	

Response

Kennedy Meier - Electric Reliability Council of Texas, Inc. - 2

Answer	No
Document Name	

Comment

ERCOT joins the comments submitted by the IRC SRC and adopts them as its own.

Likes 0	
Dislikes 0	

Response

Rachel Coyne - Texas Reliability Entity, Inc. - 10

Answer	No
Document Name	

Comment

While a projected frequency approach can provide useful context, it should not be the sole basis for defining Transmission Planning under this standard. Historical frequency data may no longer be reliable due to events that were considered rare occurring more frequently in recent years.

Additionally, if extreme natural events are occurring with increasing frequency (which is one of the drivers for this SAR), the drafting team should consider whether a lower confidence interval should be used in order to capture more scenarios. A One-in-50-year event works out to a confidence interval of 98%. Alternatively, a probability distribution approach and a 90 or 95% threshold for planning purposes could be used (this is already mentioned in page 7, G.d.ii.2)

Likes 0	
Dislikes 0	

Response

Nick Leathers - Ameren - Ameren Services - 1,3,5,6 - MRO,SERC

Answer	No
Document Name	
Comment	
Ameren agrees with EEI's comments.	
Likes 0	
Dislikes 0	
Response	
Hillary Creurer - Allete - Minnesota Power, Inc. - 1	
Answer	No
Document Name	
Comment	
Minnesota Power supports EEI’s comments.	
Likes 0	
Dislikes 0	
Response	
Devin Shines - PPL - Louisville Gas and Electric Co. - 1,3,5,6 - SERC,RF	
Answer	No
Document Name	
Comment	
PPL NERC Registered Affiliates support EEI's comments.	
Likes 0	
Dislikes 0	
Response	
Dan Perry - TXNM Energy - 1,3,5 - WECC,Texas RE	
Answer	No
Document Name	

Comment	
TXNM Energy supports the comments submitted by EEI	
Likes 0	
Dislikes 0	
Response	
Gizella Mali - PJM Interconnection, L.L.C. - 2 - RF	
Answer	No
Document Name	
Comment	
The terms “normal natural events” and “extreme natural events” need to be better defined, especially with regard to the distinction between the two, as the detailed description section in the SAR is identical for both. Both have exactly the same requirements for performance and corrective action plans. It seems that a higher performance level would be desired for "normal" events and a less stringent requirement for corrective action plans would be prudent for "extreme" events. The SAR should include more details regarding expected system performance differences for normal events versus extreme events. Language similar to: "If the analysis concludes there is Cascading, an evaluation of possible actions designed to reduce the likelihood or mitigate the consequences of the event(s) shall be conducted" would be preferred, instead of mandating the use of corrective action plans. The most significant assumption in attempting to perform a transmission planning evaluation of these types of events is the availability of generation to meet the load. If a natural event takes a significant portion of generation capacity offline such that there is insufficient generation to serve load, no transmission solution will be able to mitigate that situation, so studying such scenarios will be of no value. If a natural event takes out all transmission in an area, adding more transmission facilities through corrective action plans may not provide much reliability value (as presumably those facilities would also be impacted by the natural event). Thus, it seems that hardening requirements at the facility level (e.g., weatherization of generating plants, flood prevention designs, etc.) in areas prone to such natural events would likely be a more effective and efficient means of achieving the underlying reliability goal than mandating the implementation of transmission CAPs based on detailed transmission assessments of hypothetical scenarios.	
Likes 0	
Dislikes 0	
Response	
Timothy Singh - Salt River Project - 1,3,5,6 - WECC	
Answer	No
Document Name	
Comment	

Temperature seems to work for this, but natural events are less likely to fit into this type of statistical box. Perhaps regional groups can develop options that are relevant to their area.

Likes 0	
Dislikes 0	

Response

Kristine Martz - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable

Answer	No
Document Name	

Comment

We disagree that the standard should specify the exact frequency or probability to be evaluated. Consider that TPL-001-5 does not currently specify what level of confidence (e.g., 50/50, 90/10) must be utilized for normal peak load studies. Rather, the existing type of language used in TPL-001-5 is better: “by a sufficient amount to stress the System within a range of credible conditions that demonstrate a measurable change in System response”.

Likes 0	
Dislikes 0	

Response

Hayden Maples - Evergy - 1,3,5,6 - MRO

Answer	No
Document Name	

Comment

Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) and Midwest Reliability Organization's NERC Standards Review Forum (MRO NSRF) on question 4

Likes 0	
Dislikes 0	

Response

Joshua London - Eversource Energy - 1,3, Group Name Eversource

Answer	No
Document Name	

Comment

Eversource supports the comments of EEI.

Likes 0	
Dislikes 0	

Response

Josh Schumacher - Black Hills Corporation - 1,3,5,6, Group Name Black Hills Corporation Segments 1, 3, 5, 6

Answer	No
Document Name	

Comment

Black Hills Corporation agrees with EEI's comments. We disagree that the standard should specify the exact frequency or probability to be evaluated. Consider that TPL-001-5 does not currently specify what level of confidence (e.g., 50/50, 90/10) must be utilized for normal peak load studies. Rather, the existing type of language used in TPL-001-5 is better: "by a sufficient amount to stress the System within a range of credible conditions that demonstrate a measurable change in System response".

Likes 0	
Dislikes 0	

Response

Richard Vendetti - NextEra Energy - 5

Answer	No
Document Name	

Comment

Nextera supports EEI comments

We disagree that the standard should specify the exact frequency or probability to be evaluated. Consider that TPL-001-5 does not currently specify what level of confidence (e.g., 50/50, 90/10) must be utilized for normal peak load studies. Rather, the existing type of language used in TPL-001-5 is better: "by a sufficient amount to stress the System within a range of credible conditions that demonstrate a measurable change in System response".

Likes 0	
Dislikes 0	

Response

Elizabeth Davis - PJM Interconnection, L.L.C. - 2 - RF, Group Name ISO/RTO Standards Review Committee	
Answer	No
Document Name	
Comment	

The terms “normal natural events” and “extreme natural events” need to be better defined, especially with regard to the distinction between the two, as the detailed description section in the SAR is identical for both. Both have exactly the same requirements for performance and CAPs. It seems that a higher performance level would be desired for "normal" events and a less stringent requirement for CAPs would be prudent for "extreme" events. The SAR should include more details regarding expected system performance differences for normal events versus extreme events. For extreme events, the SRC suggests using language similar to: "If the analysis concludes there is Cascading, an evaluation of possible actions designed to reduce the likelihood or mitigate the consequences of the event(s) shall be conducted" instead of mandating the use of CAPs.

The most significant assumption in attempting to perform a transmission planning evaluation of these types of events is the availability of generation to meet the load. If a natural event takes a significant portion of generation capacity offline such that there is insufficient generation to serve load, no transmission solution will be able to mitigate that situation, so studying such scenarios will be of no value. If a natural event takes out all transmission in an area, adding more transmission facilities through CAPs may not provide much reliability value (as presumably those facilities would also be impacted by the natural event). Thus, it seems that hardening requirements at the facility level (e.g., weatherization of generating plants, flood prevention designs, etc.) in areas prone to such natural events would likely be a more effective and efficient means of achieving the underlying reliability goal than mandating the implementation of transmission CAPs based on detailed transmission assessments of hypothetical scenarios.

Further, footnote 2 indicates that these natural events do not include extreme heat and cold. Consequently, the SAR should be clear about what “natural events” means and provide some examples (i.e. earthquakes, hurricanes, tornados, floods, etc.) and boundaries. The most significant issue with assessing these types of natural events (other than heat and cold) is that they impact the grid in very unpredictable ways—to the point that any benchmark scenario would effectively be nothing more than a hypothetical guess, and it does not seem prudent or cost-effective to implement CAPs based on a hypothetical guess. Additionally, such events often impact all elements of the grid (transmission, generation, distribution, and load) such that when transmission and generation assets are compromised due to a natural event, it will likely coincide with a need to serve a lower-than-normal level of load.

Additionally, transmission planning for gas-electric coordination will require close coordination with the state or local regulatory authorities that have jurisdiction over gas-fired generating resources and the gas infrastructure that supports those gas-fired generating resources. Consequently, transmission planning for gas-electric coordination is not only a transmission planning assessment, but also a consideration that will possibly require planning input assumptions from the state and local regulatory authorities that have jurisdiction over gas infrastructure and generating resources, as sometimes the most effective and economical way to address an identified reliability risk may involve action by entities subject to the jurisdiction of those regulatory authorities.

Likes 0	
Dislikes 0	
Response	

Steven Belle - Dominion - Dominion Virginia Power - 1,3, Group Name Dominion	
Answer	No
Document Name	
Comment	

Dominion supports EEI's comments.	
Likes 0	
Dislikes 0	
Response	
John Brewer - National Energy Technology Laboratory - 9 - NA - Not Applicable	
Answer	No
Document Name	
Comment	
The DT should consider following the approach identified in R2 of BAL-007. If a projected frequency approach is used, this should be specified as a minimum requirement with language included that allows for an entity to document and utilize alternate approaches with RC approval. During the drafting phase of BAL-007, that DT found that using a specific projected frequency approach would limit the flexibility of entities to study alternative scenarios that are locally specific and still meet compliance.	
Likes 0	
Dislikes 0	
Response	
Colby Galloway - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC, Group Name Southern Company	
Answer	No
Document Name	
Comment	
Southern Company supports EEI comments.	
Likes 0	
Dislikes 0	
Response	
Keith Jonassen - ISO New England, Inc. - 2 - NPCC	
Answer	No
Document Name	
Comment	

“Normal” events are already being considered in current studies, as part of TPL-001. “Normal” and “Extreme” natural events need to be better defined before a determination can be made on the projected frequency approach. If events are “normal” and entities have a history of handling them, is there really a need to study “normal” activities in the long term horizon.

The projected frequency approach would not be recommended for this Standard.

Likes 0	
Dislikes 0	

Response

Daniela Atanasovski - APS - Arizona Public Service Co. - 1,3,5,6

Answer	No
Document Name	

Comment

AZPS supports the following comments that were submitted by EEI on behalf of its members:

EEI disagrees that the standard should specify the exact frequency or probability to be evaluated. Consider that TPL-001-5 does not currently specify what level of confidence (e.g., 50/50, 90/10) must be utilized for normal peak load studies. Rather, the existing type of language used in TPL-001-5 is better: “by a sufficient amount to stress the System within a range of credible conditions that demonstrate a measurable change in System response”.

Likes 0	
Dislikes 0	

Response

Anna Martinson - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO Group

Answer	No
Document Name	

Comment

It is not possible to answer this question at this time until the issues around normal and extreme natural events, already discussed above in response to Question #1, are addressed. If the SAR moves forward with examining natural events, specificity is needed regarding who is defining the 1-50 year event and what the source for that information will be. Industry cannot be held accountable for producing historical weather and climate data.

Suggest that a standard common source, such as NOAA, be used for deriving weather data and events for each region is used.

Likes 0	

Dislikes 0	
Response	
Richard Jackson - U.S. Bureau of Reclamation - 1,5	
Answer	No
Document Name	
Comment	
Reclamation recommends performing a probabilistic analysis on extreme natural events and focus on the top 5 areas for greatest risk.	
Likes 0	
Dislikes 0	
Response	
Mark Garza - FirstEnergy - FirstEnergy Corporation - 1,3,4,5,6, Group Name FE Voter	
Answer	No
Document Name	
Comment	
FirstEnergy supports EEI comments which state: We disagree that the standard should specify the exact frequency or probability to be evaluated. Consider that TPL-001-5 does not currently specify what level of confidence (e.g., 50/50, 90/10) must be utilized for normal peak load studies. Rather, the existing type of language used in TPL-001-5 is better: “by a sufficient amount to stress the System within a range of credible conditions that demonstrate a measurable change in System response”.	
Likes 0	
Dislikes 0	
Response	
Brian Lindsey - Entergy - 1,3,6	
Answer	No
Document Name	
Comment	
No. The DT should evaluate whether a probabilistic approach is useful for these assessments and only require their use if necessary. Scenarios that are expected to have a larger impact to the BPS might warrant consideration for a probabilistic approach.	

Likes 0	
Dislikes 0	
Response	
Kati Barr - Southern Indiana Gas and Electric Co. - 3,5,6, Group Name SIGE Voters	
Answer	No
Document Name	
Comment	
Southern Indiana Gas & Electric Company d/b/a CenterPoint Energy Indiana South (SIGE) supports the comments submitted by the Edison Electric Institute (EEI).	
Likes 0	
Dislikes 0	
Response	
Diana Aguas - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE	
Answer	No
Document Name	
Comment	
CEHE supports the comments submitted by EEI.	
Likes 0	
Dislikes 0	
Response	
Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF	
Answer	No
Document Name	
Comment	
Implied use would be extremely broad in scope. Consider a technical conference to obtain industry input prior to resubmitting SAR for official comment.	
Likes 0	
Dislikes 0	

Response	
Kevin Conway - Western Power Pool - 4	
Answer	No
Document Name	
Comment	
For extreme natural events the DT should approach the frequency by both statistical and by designated recent events.	
Likes 0	
Dislikes 0	
Response	
Ming Jiang - BC Hydro and Power Authority - 1,3,5, Group Name BC Hydro	
Answer	Yes
Document Name	
Comment	
BCH would like to get a clarification on why NERC wants to deviate from “Benchmark Temperature Events” defined in TPL-008-1 which use top 40 hottest and coldest days. Is the intent to model hottest, coldest days, but also 1-in-50-year event?	
Likes 0	
Dislikes 0	
Response	
Pirouz Honarmand - Independent Electricity System Operator - 2	
Answer	Yes
Document Name	
Comment	
The IESO believe that the industry should develop criteria for credible events that should be observed when planning the grid. The developed criteria should be based on rigorous technical and economic analysis and accepted by the industry.	
Likes 0	
Dislikes 0	
Response	

Randy Peters - Manitoba Hydro - 1,3,5,6 - MRO	
Answer	Yes
Document Name	
Comment	
This probabilistic approach is consistent with typical transmission line/substation design practices and certain industry standards and guidelines.	
Likes 0	
Dislikes 0	
Response	
Tammy Porter - Oncor Electric Delivery - 1 - Texas RE	
Answer	Yes
Document Name	
Comment	
As weather event trends are becoming more frequent since the mid-1900s, and more available historical data becomes available, it is appropriate to use a projected frequency approach for severe weather events that occur 1 in 50 years.	
Likes 0	
Dislikes 0	
Response	
Thomas Foltz - AEP - 3,5,6	
Answer	
Document Name	
Comment	
Once again, this cannot be answered until we know exactly what the scenarios will be and how they will be used in planning studies.	
Likes 0	
Dislikes 0	
Response	

5. Should the DT consider the lifecycle degradation of DER Facilities when developing energy scenario-based benchmark planning events? Please provide your recommendation or explanation.

Tammy Porter - Oncor Electric Delivery - 1 - Texas RE

Answer	No
Document Name	

Comment

The DT should consider that not every region has complete access and control to DER facilities related to operational or performance data, thus the need for flexibility to apply engineering judgement and best practices to determine an acceptable lifecycle degradation of facilities if accurate data is not available. Also, there must be considerations needed regarding the type of technology, operations, and capacity of DER facilities (whether single or aggregate) included in studies. Degradation of solar panels, batteries or inverters may differ from conventional generators.

Likes 0	
Dislikes 0	

Response

Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF

Answer	No
Document Name	

Comment

Duke Energy supports and recommends adoption of the EEI response for Question 5.

Likes 0	
Dislikes 0	

Response

Thomas Foltz - AEP - 3,5,6

Answer	No
Document Name	

Comment

Any lifecycle degradation would likely be only a secondary factor as compared to DER forecasting.

Likes 0	
Dislikes 0	

Response	
Diana Aguas - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE	
Answer	No
Document Name	
Comment	
The DT should consider that some TPs do not have access to DER facilities related to operational or performance data and therefore will need flexibility to apply engineering judgement and best practices to determine an acceptable lifecycle degradation of DER facilities if accurate data is not available. Also, considerations need to be considered regarding the type of technologies, operations, and capacity of DER facilities included in studies.	
Likes 0	
Dislikes 0	
Response	
Kati Barr - Southern Indiana Gas and Electric Co. - 3,5,6, Group Name SIGE Voters	
Answer	No
Document Name	
Comment	
Southern Indiana Gas & Electric Company d/b/a CenterPoint Energy Indiana South (SIGE) supports the comments submitted by the Edison Electric Institute (EEI).	
Likes 0	
Dislikes 0	
Response	
Randy Peters - Manitoba Hydro - 1,3,5,6 - MRO	
Answer	No
Document Name	
Comment	
This can be done for large single DERs, but it is not practical for aggregated models (most of the DERs will be aggregated at the sub-transmission level in the interconnection-wide planning models).	
Likes 0	
Dislikes 0	

Response	
Brian Lindsey - Entergy - 1,3,6	
Answer	No
Document Name	
Comment	
No. There is no mention of this concept in the SAR or the white paper**.**	
Likes 0	
Dislikes 0	
Response	
Mark Garza - FirstEnergy - FirstEnergy Corporation - 1,3,4,5,6, Group Name FE Voter	
Answer	No
Document Name	
Comment	
FirstEnergy supports EEI comments which state: Industry likely doesn't have the level of quality data needed for this granularity to provide reliability value. DER capability and/or output should be provided to Transmission Planners and Planning Coordinators through MOD-032. That data should reflect the providing entity's highest confidence level projection given the specified conditions. Variations from this level can be accounted for in high-level sensitivities.	
Likes 0	
Dislikes 0	
Response	
Anna Martinson - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO Group	
Answer	No
Document Name	
Comment	
The MRO NSRF recommends against considering the lifecycle degradation of DER Facilities in the SAR, as this singles out DER Facilities for extra examination and assessment that is not required for other Facilities. Are the lifecycles of other Facilities considered for planning (transmission lines, transformers, hydroelectric plants, wind turbines, BES solar farms)?	

Likes 0	
Dislikes 0	
Response	
Daniela Atanasovski - APS - Arizona Public Service Co. - 1,3,5,6	
Answer	No
Document Name	
Comment	
AZPS supports the following comments that were submitted by EEI on behalf of its members: Industry likely doesn't have the level of quality data needed for this granularity to provide reliability value. DER capability and/or output should be provided to Transmission Planners and Planning Coordinators through MOD-032. That data should reflect the providing entity's highest confidence level projection given the specified conditions. Variations from this level can be accounted for in high-level sensitivities.	
Likes 0	
Dislikes 0	
Response	
Keith Jonassen - ISO New England, Inc. - 2 - NPCC	
Answer	No
Document Name	
Comment	
Not all DER resources are the same and may not degrade at the same rate. Some will be replaced while others may be retired. The varying in service dates could allow for more uniform assumptions for the studies.	
Likes 0	
Dislikes 0	
Response	
Colby Galloway - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC, Group Name Southern Company	
Answer	No
Document Name	
Comment	

Southern Company supports EEI comments.

Likes 0	
Dislikes 0	

Response

Steven Belle - Dominion - Dominion Virginia Power - 1,3, Group Name Dominion

Answer	No
Document Name	

Comment

Dominion supports EEI's comments.

Likes 0	
Dislikes 0	

Response

Elizabeth Davis - PJM Interconnection, L.L.C. - 2 - RF, Group Name ISO/RTO Standards Review Committee

Answer	No
Document Name	

Comment

The meaning of “lifecycle degradation” is not clear (and this term does not appear to be used within the SAR).

Additionally, the opening statement in the SAR asserts that TPL-001-5.1 does not require consideration of DER. This statement ignores that fact that revising TPL-001 to address issues related to DER in transmission planning is already included in the SPIDERWG SAR that the Standards Committee accepted on September 21, 2022, and assigned to Project 2022-02. It is not clear how this Transmission Planning Energy Scenarios SAR is intended to coordinate with that SAR, especially since the references to DER throughout this SAR seem to duplicate efforts that are already assigned to Project 2022-02 under the SPIDERWG SAR.

This SAR needs to be more concise and be clearer on the difference between an energy scenario and a benchmark event and a planning case. It seems that the intent of the SAR is to require assessment of additional planning cases representing the extremes of DER high/low output. If that is the intent, the SAR needs to convey that in a much more concise and clear manner. Furthermore, based on item B of the detailed description for DER, these “energy scenario-based benchmark planning event and planning cases” need to address “BPS support from DERs” and “DER outage scenarios.” "BPS support from DERs" is vague and should already be reflected based on expected DER capabilities and performance (items that are within the scope of the FERC Order No. 901 milestone 3 projects mentioned above). Transmission planners are not likely to have the authority to require specific support from DERs, and it seems a poor use of their limited resources to require them to evaluate DER capability sensitivities. "DER outage scenarios" would seem to be more of a contingency/event definition rather than an energy scenario. Low DER output scenarios such as no solar PV at night would seem to be captured by the variability scenarios. The current SAR mixes up these concepts and consequently is unclear and difficult to effectively review and comment on.

In addition, it appears that additional Functional Entities, such as Distribution Providers and Generator Operators, are needed to provide input assumptions to Transmission Planners and Planning Coordinators on the availability of DERs. In some state or local jurisdictions, future input assumptions on DER penetration in the distribution facilities used to serve loads will need to be provided by state or local regulatory authorities.	
Likes 0	
Dislikes 0	
Response	
Richard Vendetti - NextEra Energy - 5	
Answer	No
Document Name	
Comment	
Industry likely doesn't have the level of quality data needed for this granularity to provide reliability value. DER capability and/or output should be provided to Transmission Planners and Planning Coordinators through MOD-032. That data should reflect the providing entity's highest confidence level projection given the specified conditions. Variations from this level can be accounted for in high-level sensitivities.	
Likes 0	
Dislikes 0	
Response	
Josh Schumacher - Black Hills Corporation - 1,3,5,6, Group Name Black Hills Corporation Segments 1, 3, 5, 6	
Answer	No
Document Name	
Comment	
Black Hills Corporation agrees with EEI's comments. Industry likely doesn't have the level of quality data needed for this granularity to provide reliability value. DER capability and/or output should be provided to Transmission Planners and Planning Coordinators through MOD-032. That data should reflect the providing entity's highest confidence level projection given the specified conditions. Variations from this level can be accounted for in high-level sensitivities.	
Likes 0	
Dislikes 0	
Response	
Joshua London - Eversource Energy - 1,3, Group Name Eversource	
Answer	No

Document Name	
Comment	
Eversource supports the comments of EEI.	
Likes 0	
Dislikes 0	
Response	
Hayden Maples - Evergy - 1,3,5,6 - MRO	
Answer	No
Document Name	
Comment	
Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) and Midwest Reliability Organization's NERC Standards Review Forum (MRO NSRF) on question 5	
Likes 0	
Dislikes 0	
Response	
Kristine Martz - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable	
Answer	No
Document Name	
Comment	
Industry likely doesn’t have the level of quality data needed for this granularity to provide reliability value. DER capability and/or output should be provided to Transmission Planners and Planning Coordinators through MOD-032. That data should reflect the providing entity’s highest confidence level projection given the specified conditions. Variations from this level can be accounted for in high-level sensitivities.	
Likes 0	
Dislikes 0	
Response	
Timothy Singh - Salt River Project - 1,3,5,6 - WECC	
Answer	No

Document Name	
Comment	
The degradation of solar facilities is out of the control of the TP. The industry struggles to obtain adequate models as it is. Requiring the GOs to provide models based on projected lifecycle is unnecessary. A more realistic approach would be to include the evaluation of solar output degredation during a MOD-033 assessment.	
Likes 0	
Dislikes 0	
Response	
Gizella Mali - PJM Interconnection, L.L.C. - 2 - RF	
Answer	No
Document Name	
Comment	
The concept of “lifecycle degradation of DER facilities” is not defined and appears to be outside of the scope of the SAR.	
Likes 0	
Dislikes 0	
Response	
Dan Perry - TXNM Energy - 1,3,5 - WECC,Texas RE	
Answer	No
Document Name	
Comment	
TXNM Energy supports the comments submitted by EEI	
Likes 0	
Dislikes 0	
Response	
Devin Shines - PPL - Louisville Gas and Electric Co. - 1,3,5,6 - SERC,RF	
Answer	No
Document Name	

Comment	
PPL NERC Registered Affiliates support EEI's comments.	
Likes 0	
Dislikes 0	
Response	
Hillary Creurer - Allete - Minnesota Power, Inc. - 1	
Answer	No
Document Name	
Comment	
Minnesota Power supports EEI’s comments.	
Likes 0	
Dislikes 0	
Response	
Nick Leathers - Ameren - Ameren Services - 1,3,5,6 - MRO,SERC	
Answer	No
Document Name	
Comment	
Ameren agrees with EEI's comments.	
Likes 0	
Dislikes 0	
Response	
Kennedy Meier - Electric Reliability Council of Texas, Inc. - 2	
Answer	No
Document Name	
Comment	

ERCOT joins the comments submitted by the IRC SRC and adopts them as its own.	
Likes 0	
Dislikes 0	
Response	
Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC	
Answer	No
Document Name	
Comment	
BPA believes Entities that have DER Facilities would replace with another DER if degraded. BPA believes this would show up in load forecasts as a reduction in load.	
Likes 0	
Dislikes 0	
Response	
Joseph Gatten - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC	
Answer	No
Document Name	
Comment	
Xcel Energy supports EEI comments	
Likes 0	
Dislikes 0	
Response	
Amy Wilke - American Transmission Company, LLC - 1	
Answer	No
Document Name	
Comment	

DERs are being addressed under multiple projects, including Project 2022-02 for MOD-032 for steady state and Project 2022-02 for dynamic modeling and Project 2023-08. Remaining DER topics that do not overlap with existing efforts should be removed from the SAR or should be assigned to other projects like Project 2023-08. Additionally, ATC notes that all generation undergoes some lifecycle degradation, so DER should not be singled out.

ATC generally supports comments from EEI and the MRO NSRF.

Likes 0	
Dislikes 0	

Response

Amy Key - Berkshire Hathaway Energy - MidAmerican Energy Co. - 1,3

Answer	No
Document Name	

Comment

We agree with the MRO NSRF comments

Likes 0	
Dislikes 0	

Response

Kevin Conway - Western Power Pool - 4

Answer	No
Document Name	

Comment

Likes 0	
Dislikes 0	

Response

Pirouz Honarmand - Independent Electricity System Operator - 2

Answer	Yes
Document Name	

Comment

The IESO suggests that the lifecycle degradation requirements should be extended to all facilities using the same technology, irrespective of voltage level connection.

Likes 0	
Dislikes 0	

Response

Richard Jackson - U.S. Bureau of Reclamation - 1,5

Answer	Yes
Document Name	

Comment

As stated above, “Normal and extreme natural events” can include a variety of events from tornadoes, earthquakes, high winds, etc. These items should have already been addressed while analyzing construction/distribution of the BPS structure. As DER resources are fairly new, a thorough study of degradation of the life expectancy and efficiency of these units should be performed well before this event is considered.

Likes 0	
Dislikes 0	

Response

John Brewer - National Energy Technology Laboratory - 9 - NA - Not Applicable

Answer	Yes
Document Name	

Comment

The DT should consider the lifecycle degradation of all facilities unless it can be demonstrated that this is already captured in the proration from reported nameplate to operating capacity, as all other resource types also experience degradation. The DT should also consider environmental degradation as an input when developing the benchmark event for extreme natural events. It is known that solar panel output degrades as a function of increased temperature and energy storage systems experience temperature-based charge/discharge constraints. The DT should consider whether the collection of this information under a revision of MOD standards would be required for this to be successfully executed.

Likes 0	
Dislikes 0	

Response

Rachel Coyne - Texas Reliability Entity, Inc. - 10

Answer	Yes

Document Name	
Comment	
The lifecycle degradation of DER facilities should be considered when developing energy scenarios. Unlike traditional BPS and BES systems, DERs often lack regulatory oversight regarding maintenance, performance tracking, and end-of-life planning. As a result, their long-term reliability and availability degrade need to be captured in planning models.	
Likes 0	
Dislikes 0	
Response	
Daniel Gacek - Exelon - 1,3, Group Name Exelon	
Answer	Yes
Document Name	
Comment	
Exelon agrees that anticipated lifecycle changes will need to be included, however at this time Exelon agees with EEI's response to this question.	
Likes 0	
Dislikes 0	
Response	
Allie Gavin - International Transmission Company Holdings Corporation - 1 - MRO,RF	
Answer	
Document Name	
Comment	
Industry likely doesn’t have the level of quality data needed for this granularity to provide reliability value. DER capability and/or output should be provided to Transmission Planners and Planning Coordinators through MOD-032. That data should reflect the providing entity’s highest confidence level projection given the specified conditions. Variations from this level can be accounted for in sensitivities.	
Likes 0	
Dislikes 0	
Response	

6. Should the DT require the study of concurrent/correlated generator and transmission outages, layered with normal and extreme natural events? Please provide your recommendation or explanation.

Amy Key - Berkshire Hathaway Energy - MidAmerican Energy Co. - 1,3

Answer	No
Document Name	

Comment

We agree with the MRO NSRF comments

Likes 0	
Dislikes 0	

Response

Allie Gavin - International Transmission Company Holdings Corporation - 1 - MRO,RF

Answer	No
Document Name	

Comment

Concurrent/correlated generator and transmission outages are already considered in TPL-001-5, both in planning event category P3, and in the assessment of planned outages. Further, TPL-008-1 requires data collection through MOD-032 which would include generator outages or derates for the conditions studied under that standard. It is not clear what the SAR is proposing that would be needed beyond existing considerations.

Likes 0	
Dislikes 0	

Response

Amy Wilke - American Transmission Company, LLC - 1

Answer	No
Document Name	

Comment

Concurrent/ correlated generator and transmission outages area already studied under TPL-001, including for normal events. Extreme events could be studied similarly to how extreme temperatures are studied under TPL-008-1 Table 1 – Steady State & Stability Performance Events.

ATC generally supports comments from EEI and the MRO NSRF

Likes 0	

Dislikes 0	
Response	
Joseph Gatten - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC	
Answer	No
Document Name	
Comment	
Xcel Energy supports EEI comments	
Likes 0	
Dislikes 0	
Response	
Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC	
Answer	No
Document Name	
Comment	
BPA believes adding too many layers in studies/assessments result in severe events that have very low probability. BPA doesn't believe this is a valuable effort nor adds a reliability benefit. BPA believes it's not technically/economically justified to perform this work as part of NERC standards requirements. BPA suggests entities be allowed to add this as part of their own internal study work standards.	
Likes 0	
Dislikes 0	
Response	
Kennedy Meier - Electric Reliability Council of Texas, Inc. - 2	
Answer	No
Document Name	
Comment	
ERCOT joins the comments submitted by the IRC SRC and adopts them as its own.	
Likes 0	
Dislikes 0	

Response

Nick Leathers - Ameren - Ameren Services - 1,3,5,6 - MRO,SERC	
Answer	No
Document Name	
Comment	
Ameren agrees with EEI's comments.	
Likes 0	
Dislikes 0	

Response

Hillary Creurer - Allete - Minnesota Power, Inc. - 1	
Answer	No
Document Name	
Comment	
Minnesota Power supports EEI’s comments.	
Likes 0	
Dislikes 0	

Response

Devin Shines - PPL - Louisville Gas and Electric Co. - 1,3,5,6 - SERC,RF	
Answer	No
Document Name	
Comment	
PPL NERC Registered Affiliates support EEI's comments.	
Likes 0	
Dislikes 0	

Response

Dan Perry - TXNM Energy - 1,3,5 - WECC,Texas RE	
Answer	No
Document Name	
Comment	
TXNM Energy supports the comments submitted by EEI	
Likes 0	
Dislikes 0	
Response	
Gizella Mali - PJM Interconnection, L.L.C. - 2 - RF	
Answer	No
Document Name	
Comment	
Concurrent outages would be the result of the assumptions for developing the benchmark case or energy scenario, so it doesn't seem necessary to have a specific requirement associated with this item.	
Likes 0	
Dislikes 0	
Response	
Timothy Singh - Salt River Project - 1,3,5,6 - WECC	
Answer	No
Document Name	
Comment	
Equivalent to P7 extremes and those do not require CAPs	
Likes 0	
Dislikes 0	
Response	
Kristine Martz - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable	
Answer	No

Document Name	
Comment	
Concurrent/correlated generator and transmission outages are already considered in TPL-001-5, both in planning event category P3, and in the assessment of planned outages. Further, TPL-008-1 requires data collection through MOD-032 which would include generator outages or derates for the conditions studied under that standard. It is not clear what the SAR is proposing that would be a useful addition to the above.	
Likes 0	
Dislikes 0	
Response	
Hayden Maples - Evergy - 1,3,5,6 - MRO	
Answer	No
Document Name	
Comment	
Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) and Midwest Reliability Organization's NERC Standards Review Forum (MRO NSRF) on question 6	
Likes 0	
Dislikes 0	
Response	
Joshua London - Eversource Energy - 1,3, Group Name Eversource	
Answer	No
Document Name	
Comment	
Eversource supports the comments of EEI.	
Likes 0	
Dislikes 0	
Response	
Josh Schumacher - Black Hills Corporation - 1,3,5,6, Group Name Black Hills Corporation Segments 1, 3, 5, 6	
Answer	No

Document Name	
Comment	
Black Hills Corporation agrees with EEI's comments. Concurrent/correlated generator and transmission outages are already considered in TPL-001-5, both in planning event category P3, and in the assessment of planned outages. Further, TPL-008-1 requires data collection through MOD-032 which would include generator outages or derates for the conditions studied under that standard. It is not clear what the SAR is proposing that would be a useful addition to the above.	
Likes 0	
Dislikes 0	
Response	
Richard Vendetti - NextEra Energy - 5	
Answer	No
Document Name	
Comment	
Concurrent/correlated generator and transmission outages are already considered in TPL-001-5, both in planning event category P3, and in the assessment of planned outages. Further, TPL-008-1 requires data collection through MOD-032 which would include generator outages or derates for the conditions studied under that standard. It is not clear what the SAR is proposing that would be a useful addition to the above.	
Likes 0	
Dislikes 0	
Response	
Elizabeth Davis - PJM Interconnection, L.L.C. - 2 - RF, Group Name ISO/RTO Standards Review Committee	
Answer	No
Document Name	
Comment	
Concurrent outages would be the result of the assumptions for developing the benchmark case or energy scenario, so it doesn't seem necessary to have a specific requirement associated with this item. Also see the SRC's response to Q4.	
Likes 0	
Dislikes 0	

Response	
Steven Belle - Dominion - Dominion Virginia Power - 1,3, Group Name Dominion	
Answer	No
Document Name	
Comment	
Dominion supports EEI's comments.	
Likes 0	
Dislikes 0	
Response	
Colby Galloway - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC, Group Name Southern Company	
Answer	No
Document Name	
Comment	
Southern Company supports EEI comments.	
Likes 0	
Dislikes 0	
Response	
Daniela Atanasovski - APS - Arizona Public Service Co. - 1,3,5,6	
Answer	No
Document Name	
Comment	
AZPS supports the following comments that were submitted by EEI on behalf of its members: Concurrent/correlated generator and transmission outages are already considered in TPL-001-5, both in planning event category P3, and in the assessment of planned outages. Further, TPL-008-1 requires data collection through MOD-032 which would include generator outages or derates for the conditions studied under that standard. It is not clear what the SAR is proposing that would be a useful addition to the above.	
Likes 0	
Dislikes 0	

Response	
Anna Martinson - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO Group	
Answer	No
Document Name	
Comment	
Concurrent/correlated outages are already considered in TPL-001 for P3 and assessment of planned outages, TPL-008 also has extreme conditions plus contingency events which can include loss of generator/transformer so this may also already be covered or need additional clarity on what is needed beyond existing considerations.	
Likes 0	
Dislikes 0	
Response	
Richard Jackson - U.S. Bureau of Reclamation - 1,5	
Answer	No
Document Name	
Comment	
Reclamation recommends performing a probabilistic analysis on extreme natural events and focus on the top 5 areas for greatest risk	
Likes 0	
Dislikes 0	
Response	
Mark Garza - FirstEnergy - FirstEnergy Corporation - 1,3,4,5,6, Group Name FE Voter	
Answer	No
Document Name	
Comment	
FirstEnergy supports EEI comments which state: Concurrent/correlated generator and transmission outages are already considered in TPL-001-5, both in planning event category P3, and in the assessment of planned outages. Further, TPL-008-1 requires data collection through MOD-032 which would include generator outages or derates for the conditions studied under that standard. It is not clear what the SAR is proposing that would be a useful addition to the above.	

Likes 0	
Dislikes 0	

Response

Brian Lindsey - Entergy - 1,3,6

Answer	No
Document Name	

Comment

No. Generator and transmission outages caused by the conditions of the event should be included as part of the event.

Likes 0	
Dislikes 0	

Response

Kati Barr - Southern Indiana Gas and Electric Co. - 3,5,6, Group Name SIGE Voters

Answer	No
Document Name	

Comment

Southern Indiana Gas & Electric Company d/b/a CenterPoint Energy Indiana South (SIGE) supports the comments submitted by the Edison Electric Institute (EEI).

Likes 0	
Dislikes 0	

Response

Diana Aguas - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE

Answer	No
Document Name	

Comment

The DT should consider that some TPs do not have access to generator and transmission outage data to incorporate in the studies, therefore making it a requirement will trigger additional concerns and burden on TPs.

Likes 0	
Dislikes 0	
Response	
Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF	
Answer	No
Document Name	
Comment	
Question 6 requires additional detail regarding the phrase concurrent/correlated generator and transmission outages and normal and extreme natural events - response withheld pending clarification.	
Likes 0	
Dislikes 0	
Response	
Tammy Porter - Oncor Electric Delivery - 1 - Texas RE	
Answer	No
Document Name	
Comment	
The DT should consider that not every region will have complete access to generator or transmission outage information to incorporate in the studies, thus making it a requirement will trigger additional concerns about confidentiality issues, what entity is required to provide the data, and how that data is shared. A recommendation to the DT is to finalize the implementation of the new standard requirements before incorporating additional conditions.	
Likes 0	
Dislikes 0	
Response	
Daniel Gacek - Exelon - 1,3, Group Name Exelon	
Answer	Yes
Document Name	
Comment	

As stated in the EEI comments, this is already considered by existing standards.

Likes 0	
Dislikes 0	

Response

John Brewer - National Energy Technology Laboratory - 9 - NA - Not Applicable

Answer	Yes
Document Name	

Comment

The DT should require the study of concurrent/correlated outages as these have been seen historically.

Likes 0	
Dislikes 0	

Response

Keith Jonassen - ISO New England, Inc. - 2 - NPCC

Answer	Yes
Document Name	

Comment

Concurrent outages utilized in the assumptions for developing the benchmark case or energy scenario caused by the extreme natural events should be studied.

Likes 0	
Dislikes 0	

Response

Pirouz Honarmand - Independent Electricity System Operator - 2

Answer	Yes
Document Name	

Comment

The current TPL-001-5.1 standard already requires outages of generation and transmission elements being correlated with normal and extreme events. Any additional system conditions to be studied in conjunction with extreme natural events should be carefully identified and have solid rationale. Moreover, any requirement such as CAPs to mitigate the effects of such conditions would need to be carefully analyzed through technical, social and economic lenses.

We also consider that mandatory CAPs requirements should not be imposed bluntly across the continent; rather, entities should have flexibility in addressing system performances due to those extreme events in a way that is adequate to their own areas.

Likes 0	
Dislikes 0	

Response

Kevin Conway - Western Power Pool - 4

Answer	Yes
Document Name	

Comment

Since extreme weather evens can affect both generation supply and transimission availablity, concurrent and correlated generation and transmission outages are appropriate.

Likes 0	
Dislikes 0	

Response

Rachel Coyne - Texas Reliability Entity, Inc. - 10

Answer	Yes
Document Name	

Comment

Likes 0	
Dislikes 0	

Response

Randy Peters - Manitoba Hydro - 1,3,5,6 - MRO	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thomas Foltz - AEP - 3,5,6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

7. Please provide any additional comments for the DT to consider, if desired.	
Tammy Porter - Oncor Electric Delivery - 1 - Texas RE	
Answer	
Document Name	
Comment	
N/A	
Likes 0	
Dislikes 0	
Response	
Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF	
Answer	
Document Name	
Comment	
As stated above, SAR is very broad, ill defined, and potentially redundant with existing high-priority projects. Consider a technical conference to get industry input prior to submitting a SAR for official comment.	
Likes 0	
Dislikes 0	
Response	
Thomas Foltz - AEP - 3,5,6	
Answer	
Document Name	
Comment	
AEP requests more specificity and detail in this SAR and requests that it be shared again with industry in a subsequent comment period. Doing so would allow industry to more fully understand the SAR, as well as develop and provide substantive feedback.	
Likes 0	
Dislikes 0	
Response	

Pirouz Honarmand - Independent Electricity System Operator - 2	
Answer	
Document Name	
Comment	

We suggest that the following steps should be taken during the proposed standards modifications are developed:

- A robust risk analyses of natural extreme events (which should also recognize the difference between localized natural extreme events and wide-area extreme events) should be conducted, followed by a detailed cost analysis impact where CAPs are considered to correct system performances when such events are observed.
- An analysis of potential compounding effects on investments, since reliability initiatives such this one to make natural extreme events observable in determining the system reliability as well as federal and states/provincial policies on decarbonization will take place almost at the same time.

Likes 0	
Dislikes 0	
Response	

Brian Lindsey - Entergy - 1,3,6	
Answer	
Document Name	
Comment	

1. Energy scenarios as described in the white paper describe potential changes to the system load and resource mix. While these would be useful for a TP or PC developing sensitivity cases for TPL-001 Planning Assessments, they are not informative for the kinds of studies the SAR and white paper are trying to develop.

2. “Normal natural events” as described in the white paper and SAR are generally dealt with in TPL-001 assessments. The white paper’s statement that TPL-001’s sensitivity requirements aren’t sufficient neglects that load level and generation dispatch are linked; if load is increased, generation must increase to match. Additionally, TPL-001 requires that planned resource additions are included in the assessment models. There may also be opportunity to better define the Off-Peak requirement in TPL-001 to captured what is expected of the “Seasonal Demand Variations” scenario.

3. “Extreme natural events” related to wide area weather events are studied in TPL-008 per Order 896. Attempting to study more localized extreme natural events such as tornados, floods, earthquakes, or hurricanes is nearly impossible to do usefully due to the unique nature of these events that effectively result in random impacts (both in location of the event and effect it has on facilities due to the different characteristics of each storm). Every natural event is different, and it’s impossible to predict accurately how a future event would impact the BPS.

4. DER issues and their study in transmission planning are being addressed in Project 2020-02. Several scenarios listed for DERs are duplicating work in that project and should not be included here.

5. The rationale for studying only P0 events in steady-state and P1-P7 events for stability, when conducting studies for the Benchmark Events, needs to be better explained within the Detailed Description section of the SAR and supported by a technical rationale.

6. The SAR should not dictate that the new Reliability Standard(s) must require Corrective Action Plans since it was not directed by a FERC Order. It should be left open for the drafting team to determine whether a CAP should be required guided by a technical foundation document.

7. Overall, the SAR is vague and fails to provide adequate direction. While the risk section of the SAR lists several risks, it does not clearly state how the project brings a reliability benefit to the BES. The goals section of the SAR does not state how the project will address those risks to provide a benefit to reliability.
The detailed description should not try to lay out actions item-by-item or try to follow the structure of the Order 896 directives. Provide clear statements on how this project is to address the identified risks and the expected reliability benefit, then let the standard drafting team develop the standard(s) based on those statements and the referenced white paper.

Entergy suggests the following revision to the SAR to better present the risks and goals of the project. Entergy does not at this time support the text of this revision, believing it will need to be updated based on our and other entities' comments. Instead, this presents the intent of the existing text in a manner that enables the drafting team to effectively create a product that meets the stated needs. Further revisions to the SAR should strive for this level of detail.

What is the risk to the Bulk Electric System (What Bulk Electric System (BES) reliability benefit does the proposed project provide?):

In recent years, events related to (1) normal and extreme natural events, (2) gas-electric interdependencies and (3) distributed energy resources (DER) events have spanned the continent in recent years and demonstrate the challenges associated with planning, particularly those events that affect a wide area or that occur during periods when the Bulk-Power System (BPS) must meet unexpectedly high demand. Extreme weather events have occurred with greater frequency in recent years and are projected to occur with even greater frequency in the future. Dependency on natural gas is increasing as it is becoming a more significant share of the dispatchable resources due to large thermal plant retirements and increases in renewables. Lastly, DER has been and continues to be, an area that has been shown to create impacts on the BPS planning as well as its operation.

This project will improve reliability by ensuring that Transmission Planners and Planning Coordinators are assessing the impact of these events in planning studies.

Purpose or Goal (What are the reliability gap(s) or risk(s) to the Bulk Electric System being addressed, and how does this proposed project provide the reliability-related benefit described above?):

The current transmission planning Reliability Standard TPL-001-5.1 – Transmission System Planning Performance Requirements does not expressly require transmission planners and planning coordinators to consider in the long-term planning horizon (1) normal and extreme natural events, (2) gas-electric interdependencies and (3) distributed energy resources (DER) events. In particular, Reliability Standard TPL–001–5.1, Table 1, provisions 3. b (steady state) and 2. j (stability) require analyses to be performed for certain events based upon operating experience but do not expressly require these three types of impacts.

This project will improve BES reliability by modifying TPL-001 and/or creating new standards which require TPs and PCs to include these sorts of events in planning studies.

Project Scope (Define the parameters of the proposed project):

The scope of the proposed project is to revise TPL-001 and/or develop one or more new transmission planning Reliability Standards to address the issues and criteria described above. These standards will be developed in collaboration with related ongoing projects that involve transmission planning including existing Reliability Standards.

Detailed Description (Describe the proposed deliverable(s) with sufficient detail for a drafting team to execute the project. If you propose a new or substantially revised Reliability Standard or definition, provide (1) a technical justification10 for developing a new or revised Reliability Standard or definition, which includes a discussion of the risk and impact on the reliability of the BES, and (2) a technical foundation document (e.g., research paper) to guide the development of the Standard or definition):

Using the Transmission Planning Energy Scenarios Technical Justification Document, October 2023 ("White Paper"), the drafting team shall develop or update Reliability Standard(s) addressing the risks identified above that:

A. Identify the appropriate Functional Entities to perform each requirement of the standard(s)

B. Identify criteria for selecting benchmark events to study.

C. If appropriate, identify how probabilistic methods can be used to develop benchmark events.

D. Require studying the selected events in steady-state and transient stability analyses.

E. Establish the contingency conditions that must be studied.

F. Define the expected performance criteria for the BES in the studies.

G. Define requirements for developing Corrective Action Plans to mitigate any failure to meet the expected performance criteria and determine whether evaluation of possible actions designed to reduce the likelihood or mitigate the consequences and adverse impacts of the event are more appropriate for certain scenarios.

H. Determine an appropriate periodicity for the studies.

Likes 0	
Dislikes 0	

Response

Mark Garza - FirstEnergy - FirstEnergy Corporation - 1,3,4,5,6, Group Name FE Voter

Answer	
Document Name	

Comment

FirstEnergy supports EEI comments which state:
This SAR is very prescriptive and potentially duplicative with other NERC high priority projects. The duplicative scope should be identified and removed, and the remaining scope should be reviewed to determine if it is appropriate to include existing projects or if it should remain in this project. If the project was meant to only capture certain events such as wildfires, floods, and droughts, that should be clear.

Likes 0	
Dislikes 0	

Response

Richard Jackson - U.S. Bureau of Reclamation - 1,5

Answer	
Document Name	

Comment

As stated above Reclamation believes that with the limited and stretched resources on industry with the current workload of inclusion of extreme weather events and DER resources at the industry level, as well as the other multitude of standards that require more urgent updating, the incorporation of this SAR at this time should be discarded or heavily delayed.

Likes 0	
Dislikes 0	

Response

Anna Martinson - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO Group

Answer	
Document Name	

Comment

The MRO NSRF supports NERC's long-term goal of addressing, at least to some degree, the impact of extreme weather in long-term planning assessments. However, care must be taken so that the matter is approached intelligently, efficiently, and with consensus. The SAR should not attempt to do all things and address all possible areas (large and small) simultaneously. This is a large SAR with multiple separate risks attempting to be mitigated. As written, this will be a multi-year project with several phases.

To that end, and in concordance with the comments supplied above, the MRO NSRF recommends that the SAR be rewritten as follows:

High-level edits:

1) This SAR needs to be a new TPL standard, NOT a revision of TPL-001

a. Modify TPL-008 to extend from Temperature Extremes to Extreme Natural Events.

2) remove DER from scope (already being addressed in other projects, no need to duplicate or overlap)

3) remove "normal weather events" from scope (not only is "normal" ambiguous, but normal weather has been an underlying assumption in all previous planning assessments).

4) do not define "wide area"

5) A new SAR for a new TPL standard should be developed to focus solely on natural gas interdependencies.

a. Consider a new family of standards for gas resources or energy resources.

6) re-write Detailed Description section as follows:

a. Develop one or more new Reliability Standard(s) to address extreme natural events

b. Develop energy scenario-based benchmark planning event and planning cases that address:

i. seasonal demand variations,

ii. planned energy resource additions, and

iii. iii) resource variability (including natural gas).

c. Address weather-related factors that would impact the assessment:

i. a standard common source for deriving weather data for each region,

ii. geographical regional differences in climate and weather patterns,

iii. available transfers, and

iv. generation resource mix (including natural gas)

d. Identify responsible functional entities for developing:

i. benchmark events,

ii. planning cases,

iii. entities to conduct studies over a wide area, and

iv. corrective action plans.

e. Conduct transmission system planning studies for extreme natural events over the long-term planning horizon for:

i. steady-state,

ii. transient stability, and

iii. sensitivity (either collaborating with neighboring planners or under the aegis of the Planning Coordinator).

f. Consider modification to the traditional planning approach(es) using probabilistic techniques.

g. Regarding Corrective Actions Plans (CAPs), what is expected by an entity? A firm financial commitment? EPACT 215 cannot require the building of transmission or generation.

h. Establish an appropriate implementation timeline to address identified risks.

i. Establish a periodicity for conducting the assessments (e.g., every 5-7 years)

j. Establish a method and interval (e.g., every 5-7 years) for periodic updates to benchmark event and planning cases, inputs, energy scenarios, assumptions, and other key data required to conduct studies.

k. Refer to the Transmission Planning Energy Scenarios Technical Justification Document, October 2023 (“White Paper”), as needed, in addressing each of the items above or for further guidance.

Likes 0	
Dislikes 0	

Response

Daniela Atanasovski - APS - Arizona Public Service Co. - 1,3,5,6

Answer	
Document Name	

Comment

AZPS supports the following comments that were submitted by EEI on behalf of its members:

This SAR is very prescriptive and potentially duplicative with other NERC high priority projects. The duplicative scope should be identified and removed, and the remaining scope should be reviewed to determine if it is appropriate to include in existing projects or if it should remain in this project. If the project was meant to only capture certain events such as wildfires, floods, and droughts, that should be clear.

Likes 0	
Dislikes 0	

Response

Keith Jonassen - ISO New England, Inc. - 2 - NPCC

Answer	
Document Name	

Comment

In recent SDT activities CAPs have been added to Long-Term Horizon studies. CAPs are not recommended for Long-Term studies. Instead, there should be a process to document recommendations to address any identified issues from the studies, with applicable notifications to regulatory or governmental agencies as required/requested.

There should be a low number of events required to be studied. Attempting to study every possible event will create excessive or duplicate work for entities.

To reiterate the Question 1 Response: Due to the number of standard drafting projects that are active within NERC and similar FERC efforts, it is recommended that NERC evaluate the timing of this project to proceed after other projects are completed to avoid potential conflicts with those existing higher priority projects.

Likes 0	
Dislikes 0	

Response

Colby Galloway - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC, Group Name Southern Company

Answer	
Document Name	

Comment

Southern Company supports EEI comments.

Furthermore, Southern Company considers this SAR very prescriptive and potentially duplicative with other NERC high priority projects. The duplicative scope should be identified and removed, and the remaining scope should be reviewed to determine if it is appropriate to include in existing projects or if it should remain in this project. If the project was meant to only capture certain events such as wildfires, floods, and droughts, that should be clear.

Likes 0	
Dislikes 0	

Response

John Brewer - National Energy Technology Laboratory - 9 - NA - Not Applicable

Answer	
Document Name	

Comment

This commenter supports the supplemental comments filed by Duke Energy and AEP.

Likes 0	
Dislikes 0	

Response

Steven Belle - Dominion - Dominion Virginia Power - 1,3, Group Name Dominion

Answer	
Document Name	

Comment

Dominion supports EEI's comments.

Likes 0	
Dislikes 0	

Response

Elizabeth Davis - PJM Interconnection, L.L.C. - 2 - RF, Group Name ISO/RTO Standards Review Committee

Answer	
Document Name	

Comment

Throughout this SAR, the term “long-term planning horizon” (or a similar term such as “long term transmission planning,” uncapitalized) is used. The team should clarify if each instance of this usage is intended to mean “Long-Term Transmission Planning Horizon” as defined in the NERC Glossary of Terms. If the Glossary definition is the intended definition, that means that the intent of this SAR is to “cover years six through ten or beyond.” Accurately reflecting the generation mix in the studies contemplated by this SAR (particularly for transient stability analysis) is essential, especially if the results of these studies would result in mandatory CAPs (i.e., spending real dollars on transmission infrastructure). However, in many areas of the country, generation development is highly deregulated and left to market forces rather than planned and mandated by a central authority. In these cases, confirmed plans for generation development more than 5 years out are rare. Thus, any projected generation scenario for this long term horizon is highly speculative, and any dynamic models for such generators are not likely to be accurate representations of generator response (industry has already grappled with difficulties in obtaining accurate generation models for interconnection studies only a few years prior to commissioning—the studies proposed by this SAR would require accurate models for generators several years further into the future). At the end of the day, this SAR seems to be mandating very detailed studies of hypothetical scenarios involving highly speculative generation assumptions. As such, any drafting team should carefully consider if it is appropriate to require CAPs based on the results of such studies, and the SAR should give the drafting team the flexibility to avoid requiring CAPs.

The SAR needs to be clearer about the distinctions between energy scenarios and benchmark events and how these differ from terms used in TPL-001: bases cases, sensitivity cases,

planning events (contingencies), and extreme events (contingencies). Overall, the SAR is very confusing in the way it uses these terms. The SAR essentially presents the same process for each scenario, but some scenarios seem to be more related to evaluating certain events (contingencies) while others are more related to evaluation under certain system conditions (base case). The SAR should be clear about whether each of the four scenarios requires a separate base case development (which seems appropriate for high/low DER penetration cases, etc.) or just needs evaluation of different contingency events (which seems appropriate for gas-electric impacts and natural events that are not heat/cold related).

In addition, the SAR suggests that benchmark cases are to look at a predefined set of combinations. The SRC would prefer that the groups that are performing studies have freedom to develop their own unique credible combinations of system/weather conditions to access based on regional conditions.

With these comments, the SRC recommends that NERC first reconsider the need for this SAR, and then reconsider the language, objectives, and timing of this SAR. The SRC respectfully requests that NERC address the undefined terms and unclear terminology in the SAR, as well as consider the impacts of FERC Order No. 1920 and Order No. 896 that relates to newly approved TPL-008 on this work. The SRC requests that NERC delay the development of the requirements proposed within this SAR until existing efforts are more fully developed and implemented, as further discussed in the SRC’s response to Q1.

Likes 0	
Dislikes 0	
Response	
Richard Vendetti - NextEra Energy - 5	
Answer	
Document Name	
Comment	
This SAR is very prescriptive and potentially duplicative with other NERC high priority projects. The duplicative scope should be identified and removed, and the remaining scope should be reviewed to determine if it is appropriate to include in existing projects or if it should remain in this project. If the project was meant to only capture certain events such as wildfires, floods, and droughts, that should be clear.	
Likes 0	
Dislikes 0	
Response	
Joshua London - Eversource Energy - 1,3, Group Name Eversource	
Answer	
Document Name	
Comment	
Eversource supports the comments of EEI.	
Likes 0	
Dislikes 0	
Response	
Hayden Maples - Evergy - 1,3,5,6 - MRO	
Answer	
Document Name	
Comment	

Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) and Midwest Reliability Organization's NERC Standards Review Forum (MRO NSRF) on question 7

Likes 0	
Dislikes 0	

Response

Kristine Martz - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable

Answer	
Document Name	

Comment

This SAR is very prescriptive and potentially duplicative with other NERC high priority projects. The duplicative scope should be identified and removed, and the remaining scope should be reviewed to determine if it is appropriate to include in existing projects or if it should remain in this project. If the project was meant to only capture certain events such as wildfires, floods, and droughts, that should be clear.

Likes 0	
Dislikes 0	

Response

Timothy Singh - Salt River Project - 1,3,5,6 - WECC

Answer	
Document Name	

Comment

The studies being proposed in this SAR do not belong in TPL-001, and provide no value performed year over year. Please create a TPL-009 and set the study frequency accordingly. SRP highly recommends this be limited to Regional studies if the TP has facilities.

Likes 0	
Dislikes 0	

Response

Gizella Mali - PJM Interconnection, L.L.C. - 2 - RF

Answer	
Document Name	

Comment

With these comments, we believe that NERC needs to take another look at the standard language and timing of this SAR. Respectfully we ask that NERC address un-defined terms and unclear terminology and well as consider the impacts of Order 1920 and TPL-008 on this work, and ultimately delay the development of these requirements until a time that these efforts are more fully developed. See Q1 for additional commentary.

Likes 0	
Dislikes 0	

Response

Dan Perry - TXNM Energy - 1,3,5 - WECC,Texas RE

Answer	
Document Name	

Comment

This SAR is very prescriptive and potentially duplicative with other NERC high priority projects. The duplicative scope should be identified and removed, and the remaining scope should be reviewed to determine if it is appropriate to include in existing projects or if it should remain in this project. If the project was meant to only capture certain events such as wildfires, floods, and droughts, that should be clear.

Likes 0	
Dislikes 0	

Response

Ruida Shu - Northeast Power Coordinating Council - 10, Group Name NPCC RSC

Answer	
Document Name	

Comment

The NPCC Reliability Standards Committee (RSC) supports the Standard Authorization Request (SAR).

Likes 0	
Dislikes 0	

Response

Hillary Creurer - Allete - Minnesota Power, Inc. - 1

Answer	
Document Name	

Comment

Minnesota Power supports EEI’s comments.

Likes 0	
Dislikes 0	

Response

Nick Leathers - Ameren - Ameren Services - 1,3,5,6 - MRO,SERC

Answer	
Document Name	

Comment

Ameren agrees with EEI's comments.

Likes 0	
Dislikes 0	

Response

Rachel Coyne - Texas Reliability Entity, Inc. - 10

Answer	
Document Name	

Comment

Texas RE recommends defining the term Distributed Energy Resources (DER) in the NERC Glossary of Terms. The System Planning Impacts from Distributed Energy Resources Working Group (SPIDERWG) has defined DER as: "***A Distributed Energy Resource (DER) is any source of electric power located on the distribution system.***"

If the drafting team intends to use this definition in the context of this proposed standard, it should be formally included in the NERC Glossary of Terms to ensure consistency and clarity across all standards and planning efforts.

Texas RE noticed the following typos in the SAR:

- Pages 4 and 7 – Add a close the parenthesis on this bullet: ii. Using extreme natural event meteorological data from reliable sources **(**e.g., national laboratories, regional transmission operators (RTO), National Oceanic and Atmospheric Administration (NOAA), Environment Canada, and other local, state, and federal agencies and organizations.
- Page 16 – Update the version of TPL-007 from version 1 to version 4 in this sentence: The costs associated with a revised and one or more new Reliability Standard(s) are anticipated to be comparable to those associated with a responsible entity’s experience in the performance of TPL-007**-4** – Transmission System Planned Performance for Geomagnetic Disturbance Events for each identified risk area.

- Page 16 close the parenthesis in this sentence: To assist the NERC Standards Committee in appointing a drafting team with the appropriate members, please indicate to which Functional Entities the proposed standard(s) should apply **(**e.g., Transmission Operator, Reliability Coordinator, etc. See the NERC Rules of Procedure Appendix 5A:
- Page 17 - Revise “was” to “were”: Yes, the White Paper and this SAR **were** developed as an ERO Enterprise collaboration, which is comprised of technical staff from NERC and NERC’s six Regional Entities.
- Page 3, footnote 8. Change “of to “or” in this sentence: The subject matter experts charged with defining “wide area” will need to consider revising the defined term **or** creating a different term.

Likes 0	
Dislikes 0	

Response

Kennedy Meier - Electric Reliability Council of Texas, Inc. - 2

Answer	
Document Name	

Comment

ERCOT joins the comments submitted by the IRC SRC and adopts them as its own.

Likes 0	
Dislikes 0	

Response

Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC

Answer	
Document Name	

Comment

The white paper noted a 3-5 year time period as adequate to perform these studies. BPA disagrees and believes the frequency of studies should be no shorter than every six-10 years. BPA believes studying every 3 years is excessive for a 1 in 50-year event.

BPA understands there are vast differences in load and resource needs across the interconnection. BPA believes the extreme events outlined in the SAR scope would be better, more effectively, handled at a regional level.

Likes 0	
Dislikes 0	

Response

Joseph Gatten - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC

Answer	
Document Name	
Comment	
Xcel Energy supports EEI comments	
Likes 0	
Dislikes 0	
Response	

Amy Wilke - American Transmission Company, LLC - 1

Answer	
Document Name	
Comment	
The Energy Scenarios SAR appears to overlap significantly with other NERC standards project efforts, and duplication should be removed or a clearer explanation should be given for how it is different. The SAR should be broken into three separate SARs: one for Extreme Natural Events, one for Natural Gas Interdependencies, and one for DERs (which could be assigned to other DER-related projects, if necessary). ATC also generally supports comments from EEI and the MRO NSRF	
Likes 0	
Dislikes 0	
Response	

Allie Gavin - International Transmission Company Holdings Corporation - 1 - MRO,RF

Answer	
Document Name	
Comment	
This SAR is very prescriptive and potentially duplicative with other NERC high priority projects. The duplicative scope should be identified and removed, and the remaining scope should be reviewed to determine if it is appropriate to include in existing projects or if it should remain in this project. If the project was meant to only capture certain events such as wildfires, floods, and droughts, that should be clear.	
Likes 0	
Dislikes 0	
Response	

Daniel Gacek - Exelon - 1,3, Group Name Exelon	
Answer	
Document Name	
Comment	
We agree with the comments submitted by the EEI for this question.	
Likes 0	
Dislikes 0	
Response	
Amy Key - Berkshire Hathaway Energy - MidAmerican Energy Co. - 1,3	
Answer	
Document Name	
Comment	
We agree with the MRO NSRF comments	
Likes 0	
Dislikes 0	
Response	