Comment Report

Project Name:	2022-03 Energy Assurance with Energy-Constrained Resources | SARs
Comment Period Start Date:	6/22/2022
Comment Period End Date:	7/21/2022
Associated Ballots:	

There were 34 sets of responses, including comments from approximately 87 different people from approximately 65 companies representing 10 of the Industry Segments as shown in the table on the following pages.

Questions

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

2. Provide any additional comments for the SARs drafting team 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
Independent Electricity System Operator	Helen Lainis	2	MRO,NA - Not Applicable,NPCC,SERC,WECC	IRC	Helen Lainis	Independent Electricity System Operator	2	NPCC
					Kathleen Goodman	ISO New England	2	NPCC
					Charles Yeung	Southwest Power Pool	2	SERC
					Bobbi Welch	Midcontinent ISO, Inc.	2	MRO
					Ali Miremadi	California ISO	2	WECC
					Greg Campoli	New York ISO	2	NPCC
Tacoma Public Utilities (Tacoma, WA)	Jennie Wike	1,3,4,5,6	WECC	Tacoma Power	Jennie Wike	Tacoma Public Utilities	1,3,4,5,6	WECC
					John Merrell	Tacoma Public Utilities (Tacoma, WA)	1	WECC
					Marc Donaldson	Tacoma Public Utilities (Tacoma, WA)	3	WECC
					Hien Ho	Tacoma Public Utilities (Tacoma, WA)	4	WECC
					Terry Gifford	Tacoma Public Utilities (Tacoma, WA)	6	WECC
					Ozan Ferrin	Tacoma Public Utilities (Tacoma, WA)	5	WECC
Duke Energy	Kim Thomas	1,3,5,6	FRCC,RF,SERC,Texas RE	Duke Energy	Laura Lee	Duke Energy	1	SERC
					Dale Goodwine	Duke Energy	5	SERC
					Greg Cecil	Duke Energy	6	RF
FirstEnergy -	Mark	1,3,4,5,6		FE Voter	Julie Severino	FirstEnergy -	1	RF

FirstEnergy Corporation	Garza					FirstEnergy Corporation		
					Aaron Ghodooshim	FirstEnergy - FirstEnergy Corporation	3	RF
					Robert Loy	FirstEnergy - FirstEnergy Solutions	5	RF
					Tricia Bynum	FirstEnergy - FirstEnergy Corporation	6	RF
					Mark Garza	FirstEnergy-FirstEnergy	4	RF
Southern Company - Southern Company Services, Inc.	Pamela Hunter	1,3,5,6	SERC	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
					Jim Howell	Southern Company - Southern Company Services, Inc. - Gen	5	SERC
Northeast Power Coordinating Council	Ruida Shu	1,2,3,4,5,6,7,8,9,10	NPCC	NPCC Regional Standards Committee	Gerry Dunbar	Northeast Power Coordinating Council	10	NPCC
					Randy MacDonald	New Brunswick Power	2	NPCC
					Glen Smith	Entergy Services	4	NPCC
					Alan Adamson	New York State Reliability Council	7	NPCC

David Burke	Orange & Rockland Utilities	3	NPCC
Harish Vijay Kumar	IESO	2	NPCC
David Kiguel	Independent	7	NPCC
Nick Kowalczyk	Orange and Rockland	1	NPCC
Joel Charlebois	AESI - Acumen Engineered Solutions International Inc.	5	NPCC
Mike Cooke	Ontario Power Generation, Inc.	4	NPCC
Salvatore Spagnolo	New York Power Authority	1	NPCC
Shivaz Chopra	New York Power Authority	5	NPCC
Deidre Altobell	Con Ed - Consolidated Edison	4	NPCC
Dermot Smyth	Con Ed - Consolidated Edison Co. of New York	1	NPCC
Peter Yost	Con Ed - Consolidated Edison Co. of New York	3	NPCC
Cristhian Godoy	Con Ed - Consolidated Edison Co. of New York	6	NPCC
Nurul Abser	NB Power Corporation	1	NPCC
Randy MacDonald	NB Power Corporation	2	NPCC
Michael Ridolfino	Central Hudson Gas and Electric	1	NPCC

					Vijay Puran	NYSPS	6	NPCC
					ALAN ADAMSON	New York State Reliability Council	10	NPCC
					Sean Cavote	PSEG - Public Service Electric and Gas Co.	1	NPCC
					Brian Robinson	Utility Services	5	NPCC
					Quintin Lee	Eversource Energy	1	NPCC
					John Pearson	ISONE	2	NPCC
					Nicolas Turcotte	Hydro-Qu?bec TransEnergie	1	NPCC
					Chantal Mazza	Hydro-Quebec	2	NPCC
					Michele Tondalo	United Illuminating Co.	1	NPCC
					Paul Malozewski	Hydro One Networks, Inc.	3	NPCC

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

Donna Wood - Tri-State G and T Association, Inc. - 1,3,5	
Answer	No
Document Name	
Comment	
It would be very difficult to assess all of the different scenarios. This would require the development of thousands of different hypothetical models to run contingencies against. In the end, any gaps that are identified from these hypothetical studies would be impractical to justify mitigation five plus years out. Proving with evidence that we studied all possible scenarios for all hours would be a substantial burden on the industry. Another area of concern is that the audit would be highly subjective. We recommend this be developed in a best practices document rather than a compliance standard.	
Likes 1	Oncor Electric Delivery, 1, Khan Gul
Dislikes 0	
Response	

Gul Khan - Oncor Electric Delivery - 1 - Texas RE	
Answer	No
Document Name	
Comment	
The proposed scope is very broad and it isn't clear as to how effective the effort put in, in terms of Corrective Action Plans, can be.	
Likes 0	
Dislikes 0	
Response	

Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF	
Answer	No
Document Name	
Comment	
The NAGF appreciates the opportunity to comment on the Project 2022-03 SARs. The NAGF provides the following comments for consideration: a) It is the NAGF's opinion that the SARs are generally well written.	

b) Please elaborate on and provide clarification as to how the creation of the defined terms will be accomplished. Will this be undertaken by the Standard Drafting Team? Are these defined terms intended for inclusion in the NERC Glossary of Terms?

c) The SARs appear to be broadly written and does not provide the specifics regarding the proposed deliverables in the "Detailed Description" section. This is critical to ensuring the Standard Drafting Team has the proper direction to move the project forward and to produce the desired results.

Likes 0	
Dislikes 0	

Response

Glenn Barry - Los Angeles Department of Water and Power - 1,3,5,6

Answer	No
Document Name	

Comment

This current draft looks at Energy Assurance only from a supply-side point of view. System conditions that affect *delivery* of adequate supplies are also problem areas that need to be addressed. The conditions listed can also affect transmission availability. In addition, the recently-common practice of shutting off power as a means of fire prevention in lieu of having adequate system capability to withstand wind while energized is an Energy Assurance issue, although not a reliability one at the BES level, so far.

It is recommended that this SAR action consider the following ideas:

- While extensively showing concern for fuel and variable resources it neglects to consider the impacts of all types of storage. Consider broadening the scope to specifically include energy storage and the terminology associated with energy storage.
- To maintain highly evolved TPL and TOP standard families, requirements towards generation fuel supplies should be included within a different Reliability Standard.

Energy storage should be considered and analyzed in the scope of this project. It is realistically the most limited fuel resource, and it should be thoroughly discussed and analyzed in depth. As a limited resource energy storage is normally measured in hours and not days like typical fuel supplies. In addition, to benefit from storage as a resource it should not be depleted, fully discharged, and/or needed for reserves. Furthermore, In the future when evaluating energy assurance and constrained resources storage must be accounted for in size (MW) and in duration (MWH), this will prevent excluding future electrical system composition which is an important part of the analysis.

Likes 0	
Dislikes 0	

Response

Dana Showalter - Electric Reliability Council of Texas, Inc. - 2

Answer	No
Document Name	

Comment

ERCOT generally agrees with the purpose and scope of this project. However, ERCOT is concerned the specific a solution – using a corrective action plan (CAP) to resolve resource adequacy issues.

Resource adequacy involves public policy and markets as well as reliability. A PC or RC may identify resolutions to issues identified in studies or assessments they perform with changes in each of those areas, but are not necessarily the appropriate entity to act on the resolution. ERCOT encourages the standard drafting team (SDT) to consider mandating studies to identify issues and possible solutions to inform policy makers and NERC entities. At the same time, the SDT should proceed with caution to ensure resulting standard changes do not implicate changes to market design or state commission rules.

The SAR provides the SDT flexibility to identify issues and solutions as well as to identify where to document new requirements. However, specifically requiring a CAP appears premature. A CAP is a defined NERC term and, generally, identifies actions to remedy a problem *within* an entity; it does not define or assign actions to *other* entities. The SDT should have flexibility to determine how to address identified issues.

Additionally, NERC Registered Entities may not have vision to or control of all issues and entities in the fuel delivery supply chain. The Planning Coordinator and Reliability Coordinator may have certain information but have very little impact on generation availability. Generator Owners and Operators, on the other hand, have insight into unit availability, but may not be able to affect change. Further, public policy may create additional challenges. For example, in Texas, by rule, residential gas service has priority over power generation gas service, which can reduce the value of an assessment.

As such, ERCOT recommends modifying the SAR to give the SDT flexibility to determine how identified solutions are to be implemented while considering the issues addressed in these comments.

Likes 0	
Dislikes 0	

Response

Michelle Amarantos - APS - Arizona Public Service Co. - 1,3,5,6

Answer	No
Document Name	

Comment

While AZPS agrees that there is a need to accurately assess Resource Adequacy, AZPS does not agree that this type of assessment should be included in Transmission Planning or Transmission Operations standards. These functions do not control generator availability and may not have adequate access to the information required to perform these types of studies, particularly in areas that have a single Transmission Planner or Planning Coordinator.

Likes 0	
Dislikes 0	

Response

Stephen Stafford - Georgia Transmission Corporation - NA - Not Applicable - SERC

Answer	No

Document Name	
Comment	
The scope of these two SARs appear to be the same and would seem to create significant overlap between the Standard Drafting Teams assigned to address the respective SARs. Additionally, the scope of each SAR is extremely broad and, from experience, would leave the assigned SDT(s) with a significant burden to bound the scope of their efforts to address identified issues which would likely lead to a lengthy standard development process. GTC believes that the SARs should be revised to state more specifically the issues an operations-based SDT would need to address and what a long-term planning-based SDT would likewise address.	
Likes 0	
Dislikes 0	
Response	
Sean Bodkin - Dominion - Dominion Resources, Inc. - 3,5,6	
Answer	No
Document Name	
Comment	
The affected standards by the SAR are TPL-001-5.1, EOP, and TOP. There are currently two open projects affecting the identified standards (Project 2022-02 Modifications to TPL-001-5.1 and MOD-032-1 and Project 2021-07 Extreme Cold Weather Grid Operations, Preparedness, and Coordination) , additionally TPL-001-5.1 has an effective date of July 1, 2023 with implementation through 2029. Establishing an additional project prior to effective dates and completion of outstanding projects, creates the potential for confusion by entities and contradiction and duplication of efforts by drafting teams. Dominion Energy recommends delaying this SAR until the existing projects have had an opportunity to complete their work and an evaluation performed if this SAR is still necessary.	
Likes 0	
Dislikes 0	
Response	
Alison Mackellar - Constellation - 5,6	
Answer	No
Document Name	
Comment	
Constellation agrees with the goal of the project to provide better energy assurance assessments and metrics. This is a timely and necessary project given the risks posed by extreme weather and other man-made disruptive events. Fuel security is a critical topic given its importance to the resiliency and reliability of the electric grid. Nuclear units provide fuel-secure, carbon-free baseload generation, yet have faced premature retirement in certain cases due to the market not appropriately compensating these attributes. Fuel security is thus a serious emerging issue affecting grid reliability as fuel-secure baseload carbon-free generators that are not appropriately compensated exit the market and use of natural gas generators susceptible to fuel supply interruption increase.	

As drafted, the SARs are broadly written and do not provide enough detail on what baseline elements need to be considered in such assessments to ensure the assessments are effectively considering risks to fuel security and grid reliability. We recommend that the description of the industry need, purpose/goal, and project scope be revised to more precisely target the assessment gap that needs to be filled by the project with respect to energy assurance assessments and fuel security. We also suggest that the SAR include a requirement for NERC to develop a fuel security design-basis threat Reliability Guideline to ensure assessments account for a consistent baseline of threats in the assessments. The Reliability Guideline can be revised by NERC, with industry's support, over time as new threats emerge and the standard drafting team can include standard requirements to assess, at a minimum, the baseline threat elements included in the Guideline.

Constellation supports requiring action in the standard on any findings from the energy assurance assessments, but questions whether mandating Corrective Action Plans (CAP) is the most effective approach. Energy assurance issues present reliability challenges, but also will raise questions as to how existing market mechanisms currently in place should be changed (and/or new market mechanisms developed) to sufficiently insent corrective actions. The SARs should provide flexibility to the standard drafting team in the SARs to establish market mechanisms that address issues uncovered in the assessments.

Kimberly Turco on behalf of Constellation Segments 5 and 6

Likes 0	
Dislikes 0	

Response

Kimberly Turco - Constellation - 5,6

Answer	No
Document Name	

Comment

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Kimberly Turco on behalf of Constellation Segments 5 and 6

Likes 0	
Dislikes 0	

Response

Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC

Answer	No
Document Name	

Comment

Comments common to both the “Energy Assessments with Energy–Constrained Resources in the Operations and Operations Planning Time Horizons” and “Energy Assessments with Energy– Constrained Resources in the Planning Time Horizon” SARs proposed scope:

Structural comments on the “Project Scope” section (pages 3-5):

- We believe the 1st sub-bullet (that starts with “Create defined terms…”) should be a primary bullet apart from the primary bullet that states “Create requirement(s) to accomplish the following:”. The development of defined terms under the project would not constitute a standard “requirement”, but would aid a common understanding by the industry of terms potentially to be used in the language of standard requirements developed under the project.
- The “Create requirement(s) to accomplish the following:” primary bullet should have sub-bullets that outline the possible new standard requirements to be considered. If performing “energy reliability assessments” is one of the objectives, make that a sub-bullet and then list all of the early requirement considerations for these assessments underneath. The primary bullet that states “Energy reliability assessments should be required to:”, and its sub-bullets, should be rolled under this.

The “Create defined terms…” sub-bullet ends with “(refer to Appendix B for proposed definitions to key terms)”. What/where is the “Appendix B” referred to?

Under the primary bullet “Energy reliability assessments should be required to:”, it is suggested that such assessments be “coordinated between areas to synchronize interchange assumptions”. While a laudable concept, we believe the execution of such a requirement would be challenging and therefore recommend it be removed from the scope as a potential mandatory requirement. Perhaps the entity performing the assessment should just identify what interchange assumptions were used.

Comments on the “Energy Assessments with Energy– Constrained Resources in the Planning Time Horizon” SAR:

We believe the bullet that states “When predefined criteria are not met, require development of Corrective Action Plans” should be removed from the project scope. The purpose of the proposed energy reliability assessments for the planning horizon should be to inform the interested stakeholders based on a common understanding of NERC defined terms and entity established criteria. The entities performing these assessments may have limited authority to develop and oversee actionable Corrective Action Plans. The energy reliability assessments suggested in the SAR may only be useful to help inform stakeholders about potential energy supply challenges in the planning horizon. “Corrective actions”, which presumably in some cases will involve the addition of varying types of supply resources, will be developed and implemented by entities who have an obligation to serve and/or entities with an interest in marketing a supply resource.

Likes 0	
Dislikes 0	

Response	
Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC	
Answer	No
Document Name	
Comment	

BPA Transmission Planning does not agree that a SAR is warranted to address Resource Adequacy concerns. BPA Planning believes this is a Resource Adequacy issue and not a Transmission Reliability issue, which is the focus of the NERC Reliability Standards. Resource Adequacy issues are dealt with in different forums than NERC. Transmission capacity and deliverability to the load centers was not the primary issue for the recent disturbance events of the last few years in the CAISO and ERCOT footprints. Those events were primarily the result of Resource Adequacy issues, which are governed by State PUC-driven requirements, not NERC. It is inappropriate to revise Transmission Reliability Standards to force entities to carry the proper amount of Balancing Reserves needed for minimum resource reliability. Any transmission import deficiencies to an area are planned for in existing standards. In addition, Balancing Authority function applicability already exists regarding frequency performance.

It is unclear how a Reliability Standard related to Transmission Reliability can be developed that requires a CAP for resource inadequacy. The logical solution is to acquire more resources, and that is an Integrated Resource Plan/Resource Adequacy issue, not an issue that Transmission entities can resolve.

It appears LSEs or ISOs assessing energy resource adequacy are most appropriate to target for any new Standards. The problem in the ERCOT example is not having enough peak resources when a large portion either tripped off or were unavailable due to extreme weather. This is an issue for resource adequacy decision-makers, not a transmission entity.

Likes 0	
Dislikes 0	
Response	
Kim Thomas - Duke Energy - 1,3,5,6 - SERC,RF, Group Name Duke Energy	
Answer	No
Document Name	
Comment	

Duke Energy generally supports the proposed scope but views existing SAR language as extremely broad. It is suggested SARs be amended to further define deliverables to ensure SDT work scope and direction are well defined to achieve desired results. For example, as written: (a) it would be difficult to assess the different scenarios and models needed to conduct the indicated reliability assessments, (b) it is uncertain how the requested data would be utilized, (c) it is not clear which NERC Functional Entities would perform the proposed tasks, and (d) clarity is needed on expectations regarding when corrective action plans are required. Additionally, further consideration is needed to define the types of resource inadequacy scenarios that require assessment and the expected mitigating actions that would be acceptable. The precursor assumptions to any analysis must be based on Resource Planner input from resource adequacy analysis yet there is no mention of their involvement in the SAR. The analysis proposed by the SAR due to expanded uncertainty is largely an extension of the resource adequacy process and how to mitigate inadequate availability through modifications to energy infrastructure, operations, or contracts.

Likes 0	

Dislikes 0	
Response	
Matthew Harward - Southwest Power Pool, Inc. (RTO) - 2 - MRO,WECC	
Answer	No
Document Name	
Comment	
SPP recommends the drafting team consider other options for outlining resource adequacy goals outside of the TPL standard. TPL standards are focused on transmission facilities and may not be suitable for resource adequacy requirements, and adding requirements for resource adequacy could detract from the purpose and effectiveness of TPL. SPP would caution that NERC has limited authority over resource adequacy; with individual states having the authority for matters such as the planning reserve margin that utilities may carry and their Integrated Resource Plans (IRP) – a gap exists which the NERC standard may fail to close and render the requirements ineffective.	
Likes 0	
Dislikes 0	
Response	
Andy Bochman - DOE / Idaho National Lab - NA - Not Applicable - NA - Not Applicable	
Answer	Yes
Document Name	
Comment	
Hi there. Appreciate the challenges the "energy transition" is bringing to both planners and operators. The new mix alone, that includes so much more generation variability is a massive issue. However, would also recommend more attention be paid to system degradation from climate change-exacerbated extreme weather phenomenon. Where backward looking IRPs have used 100- or 500-year events to describe probabilities, I'd argue those methods are no longer valid, or at least not nearly as helpful as they used to be. Recommend commttee examines the potential efficacy for planners of leveraging data from downscaled global climate models. One effort already in (early) motion is EPRI's READi resilience and adaptation initiative. https://www.epri.com/READi. Happy to contribute more if/when the time is right. Yours, Andy	
Likes 0	
Dislikes 0	
Response	
Tom Whynot - Manitoba Hydro - NA - Not Applicable - MRO	
Answer	Yes

Document Name	
Comment	
I agree with the proposed scope of the SAR's, the growing complication of intermittent power generation from a diverse sources puts the system at risk if long term planning does not provision for it, and operationally where outages are taken in excess that shortchange reliable operating reserves.	
Likes 0	
Dislikes 0	
Response	
Leonard Kula - Independent Electricity System Operator - 2	
Answer	Yes
Document Name	
Comment	
We generally agree with the scope, intent, and goals of the standard. The topic of energy adequacy requires more well-defined assessments, including a common set of terms defining assumptions, events, and measures. However, requiring a set of Corrective Action Plans that address self-defined voluntary criteria seems ineffective for achieving an adequate level of reliability with respect to energy adequacy. The industry should strive to define a minimum set of criteria for energy adequacy, and a minimum set of events for which the criteria must be satisfied within each Planning Authority and Reliability Coordinator area.	
Likes 0	
Dislikes 0	
Response	
Pamela Hunter - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC, Group Name Southern Company	
Answer	Yes
Document Name	
Comment	
Southern Company generally supports the scope of the SAR.	
Likes 0	
Dislikes 0	
Response	
Rachel Coyne - Texas Reliability Entity, Inc. - 10	

Answer	Yes
Document Name	
Comment	

Texas RE agrees with and supports the goal of the two Standard Authorization Requests. The FERC, NERC, Regional Entity Staff Report on the February 2021 Cold Weather Outages in Texas the South Central United States (Join Inquiry Report) noted that prior to the February 2021 event, "ERCOT, MISO, and SPP anticipated winter reserve margins of 50 percent, 49 percent, and 59 percent, respectively, in the NERC seasonal assessment." (Joint Inquiry Report, at 210). While the Joint Inquiry Report acknowledged that these planning scenarios were not necessarily intended "to predict energy requirements and operational scenarios," the disconnect between these capacity forecasts and the ultimate need to shed firm load during the February event highlights that requirements for responsible entities to further evaluate the risks related to energy availability as part of their operations and planning time horizon activities and then create Corrective Action Plans to address identified energy availability risks are necessary.

Texas RE particularly agrees with the proposed SARs' focus on achieving a level of consistency across the industry in terms of energy reliability assessment implementation in the operations and planning time horizons, including accounting for uncertainty related to both supply and demand across all hours of the applicable study period. Although Texas RE agrees with the SAR that differences in electric systems, resource mixes, climate, and operating philosophies, preclude "one-sized fits all" energy reliability assessments, Texas RE does recommend the SDT consider whether certain minimum or baseline criteria can be incorporated in energy reliability assessments to drive consistency and support reliable operational and planning assumptions and the development of Corrective Action Plans where appropriate. In Texas RE's experience, such criteria provide clarity and predictability for entities in developing energy reliability assessments and oversight expectations.

Likes 0	
Dislikes 0	
Response	

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

Answer	Yes
Document Name	
Comment	

ISO-NE agrees with the proposed scope of the SARs.

Likes 0	
Dislikes 0	
Response	

Eve Stromer - Entergy - 1,3,5,6 - SERC

Answer	Yes
Document Name	

Comment	
None	
Likes 0	
Dislikes 0	
Response	
Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable	
Answer	Yes
Document Name	
Comment	
EEI supports the scope of the SARs.	
Likes 0	
Dislikes 0	
Response	
Carl Pineault - Hydro-Qu?bec Production - 1,5	
Answer	Yes
Document Name	
Comment	
It would be relevant, to provide a simplified process for entities where a significant part of the production is ensured by a resource stored on-site.	
Likes 0	
Dislikes 0	
Response	
JT Kuehne - AEP - 3,5,6	
Answer	Yes
Document Name	
Comment	
AEP is in support of both SARs on Energy Assessments with Energy-Constrained Resources and provides the following recommendations for drafting	

team's consideration when drafting new or modifications to the standards.

- Regional differences should be recognized when determining the energy assessments requirements. Definition for "extreme events" should be developed so the scenario sensitivity cases can be defined, accordingly. Extreme events are system conditions that significantly deviate from what is considered system normal (and studied under current standards) for that region for that time of the year in terms of expected load levels, availability of generation resources (by fuel type or regional renewable differences), and/or operational status of transmission facilities to deliver those generation resources to load.
- Number of required scenarios (i.e., study cases) to be considered in an energy reliability assessment should be flexible to "*account for uncertainty related to both supply and demand across **all hours of the studied period***" (as stated in the scope of the SAR on page 4).

Likes 0	
Dislikes 0	

Response

Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC Regional Standards Committee

Answer	Yes
Document Name	

Comment

We generally agree with the scope, intent, and goals of the standard. The topic of energy adequacy requires more well-defined assessments, including a common set of terms defining assumptions, events, and measures. However, requiring a set of Corrective Action Plans that address self-defined voluntary criteria seems ineffective for achieving an adequate level of reliability with respect to energy adequacy. The industry should strive to define a minimum set of criteria for energy adequacy, and a minimum set of events for which the criteria must be satisfied within each Planning Authority and Reliability Coordinator area.

Likes 0	
Dislikes 0	

Response

Karen Frank - Midcontinent ISO, Inc. - 2 - MRO,SERC,RF

Answer	Yes
Document Name	

Comment

MISO supports the joint comments from the ISO/RTO Council's Standards Review Committee. In addition, MISO provides the following comment which applies to both SARs.

Regarding proposed bullet #8, under "sources of uncertainty" (page 3 and below), existing Loss of Load Expectation (LOLE) modeling tools preclude MISO from studying the uncertainty associated with transmission capacity as a means to drive the need for system enhancements or improvements. The LOLE study used to set Planning Reserve Margin Requirements (PRMR) does not explicitly model transmission constraints; however, the capacity for each unit modeled is limited by its interconnection service. Whether a resource is deliverable is applied during the conversion of accreditation to Zonal Resource Credits (ZRC) used in the capacity market. However, the Planning Resource Auction (PRA) itself does have Capacity Import Limits, Capacity Export Limits, and Local Clearing Requirements that have to be respected in the auction clearing and can lead to different prices in different

Local Resource Zones (LRZs).

- Transmission capacity and deliverability to the load centers, including imports.

Rather, MISO addresses the issue of deliverability to load centers another way. Generators must secure sufficient transmission to meet deliverability requirements as part of the generator interconnection process.

Likes 0	
Dislikes 0	

Response

Helen Lainis - Independent Electricity System Operator - 2 - NA - Not Applicable, Group Name IRC

Answer	Yes
Document Name	

Comment

The IRC SRC supports the concepts outlined in the draft Standards Authorization Request (SAR)s for the Planning Horizon and the Operations Horizon and appreciates the opportunity to provide input.

Following are some suggestions we believe will serve to increase the fruitfulness of this project.

1. On page 3 of the Planning Horizon SAR it states, “To achieve *the level of consistency* needed across the industry, energy reliability assessments for the planning (>one year) time horizon and the mitigation of identified risks must be mandated and codified in NERC Reliability Standard requirements.” (Emphasis added)

With regard to “level of consistency,” the SRC notes that many regions are already performing studies using LOLE, LOLH, EUE, etc. metrics. In addition, many regions are in the process of developing means to perform energy reliability assessment studies. Singular metrics or measurements may not translate well across regions. Therefore, the SAR needs to be broad and flexible enough to accommodate the use of different methodologies across NERC’s footprint.

2. The IRC SRC is concerned with the using of the term Corrective Action Plan (CAP) to address identified risks. CAP is a NERC defined term which requires the applicable entity to develop a list of actions and an associated timetable for implementation to remedy a specific problem. There may be elements in the CAP that are not within the purview of the applicable entity to implement, and may require other stakeholders to actualize them (e.g., state/provincial regulatory authorities or governing bodies responsible for generation construction and retail electric service issues/load shedding). As such, the IRC SRC recommends that the term CAP be replaced with ‘proposed plan’ to recognize that the plan may require actions beyond the purview of the NERC and FERC.

3. The standard drafting team needs to build flexibility within the standards to address the fact that resolving the identified energy adequacy risks may create compliance obligations for the Responsible Entities that are beyond their purview. Any plan that is developed may not be fully implemented, as resolutions may impact NERC-registered entities that may not be named as responsible entities within the standard as well as require alignment with state/provincial resource procurement policy and approval by applicable regulatory/governing bodies.

4. Regarding proposed bullet #6 under “sources of uncertainty” (page 3 and below), the IRC SRC recommends variability be applied to all generating resources and not limit it to renewables.

- Variability of potential renewable profiles/availability.

Likes 0	
Dislikes 0	
Response	
Eric Sutlief - CMS Energy - Consumers Energy Company - 3,4,5 - RF	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Steven Rueckert - Western Electricity Coordinating Council - 10	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Israel Perez - Salt River Project - 1,3,5,6 - WECC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Mark Garza - FirstEnergy - FirstEnergy Corporation - 1,3,4,5,6, Group Name FE Voter	

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Alan Kloster - Evergy - 1,3,5,6 - MRO	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Jennie Wike - Tacoma Public Utilities (Tacoma, WA) - 1,3,4,5,6 - WECC, Group Name Tacoma Power	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Elizabeth Davis - PJM Interconnection, L.L.C. - 2 - SERC,RF	
Answer	
Document Name	
Comment	
The SAR appropriately identifies the importance of energy reliability assessments and the development of corrective action plans re: same. There is no question that these are appropriate actions to be taken by each planning authority. Moreover, there is no question that such short term analysis as it	

relates to Operations fit within NERC's mission to ensure security of the BES.

When it comes to the *planning* directives in the SAR, NERC's role becomes more unclear. Of course, we recognize that NERC already has promulgated the TPL-001 standard to address an analysis of single largest contingencies. But the SAR proposes to have NERC, through both its standard setting and compliance process, overseeing a host of issues that are far beyond today's TPL-001 standard and therefore raise the question whether these issues are ones best addressed through the NERC process.

For one, Section 215(i)(2) of the Federal Power Act makes clear that NERC's standard setting authority does not reach into the subject of adequacy[2] Moreover, Section 215(d)(6) makes clear that should existing market rules conflict with the NERC standards, the market rules effectively trump the standards unless and until FERC rules otherwise.[3] Many regions use market tools such as capacity market accreditation requirements and obligations to achieve the goals set forth in the SAR. Finally, FERC has, through its Long Term Planning NOPR, set forth its expectations that Planning Authorities undertake these and similar analyses to better identify the impact of the changing resource mix, fuel related issues and others through a scenario development process that would then form the basis for regional planning as required under FERC Order 890 and Section 217 (the native load provisions) of the Federal Power Act. FERC's NOPR also makes clear that stakeholder input on these issues and the development of plans (which are essentially the 'corrective action plans' contemplated in the SAR as they relate to planning) are to be undertaken on a regional basis with significant input from states and stakeholders in that region.

For these reasons the NERC stakeholder body needs to ensure that this process:

a.not create a set of isolated analyses in place of the holistic future planning of vulnerabilities from the changing resource mix are analyzed consistent with the FERC NOPR (should it become a Final Rule);

b. not establish a NERC-focused stakeholder processes that, in outlining requirements of what needs to be studied, could well end up duplicating the stakeholder processes contemplated by the NOPR and

c. consider whether the NERC compliance process is the best way to 'police' the kind of planning that both the SAR and the FERC NOPR are seeking.

In short, the well-stated and well-intentioned SAR could end up:

a. either subdividing issues that need to be addressed in a more holistic way through the forward planning process contemplated by the NOPR or

b. effectively subsuming the larger planning process reforms set forth in the NOPR and causing the potential for confusion or inaction while one or more processes awaits conclusion of the other.

Moreover, the type of analyses listed in the SAR are so broad (although appropriate) that NERC's role and oversight over planning could inevitably end up with 'scope creep' that impinges on the steps that Planning Authorities need to undertake to comply with the NOPR (should it become a Final Rule in the near future) in a timely way.

PJM believes that the NERC process could be useful to identify common inputs that should be utilized in each of the regional planning processes so as to ensure that each region within an Interconnection is working off a common set of inputs and analysis. This, of course, does not mean that each region needs to come up with a singular approach or 'action plan' but would ensure that, given the interconnected nature of the BES within each Interconnection, there are some common factors that are being studied so as to avoid one region unduly 'leaning' on another solely as a result of having used entirely different factors to analyze in their planning process. PJM believes that modifying the SAR to focus more on establishing the common inputs (which may lead to an outcome that does not necessarily result in promulgation of a standard) would provide the needed consistency while still respecting regional differences within an Interconnection.

PJM also would caution that the NERC compliance process may not be the best fit for enforcing what is essentially an enhanced planning process. Such processes today are answerable both to the FERC and the states where each Planning Authority is operating or, in the case of public power, to their respective Boards and City Councils. This is even more the case with our Canadian counterparts where each provincial regulator plays a significant role in oversight of the planning processes. For these reasons, PJM would caution against automatically defaulting to the development of a standard or the imposition of the NERC audit and compliance process in this instance.

PJM appreciates the opportunity to comment and appreciates consideration of these comments. We support the goals and need for comprehensive planning for vulnerabilities as outlined in the SAR but suggest the above cautions and consideration of potential alternative paths to meet this very valid

goal.

[2] 16 U.S.C. § 824o(i)(2) (“This section does not authorize the ERO or the Commission to order the construction of additional generation or transmission capacity or to set and enforce compliance with standards for adequacy or safety of electric facilities or services.”).

[3] 16 U.S.C. § 824o(d)(6) (“The final rule adopted under subsection (b)(2) shall include fair processes for the identification and timely resolution of any conflict between a reliability standard and any function, rule, order, tariff, rate schedule, or agreement accepted, approved, or ordered by the Commission applicable to a transmission organization. Such transmission organization shall continue to comply with such function, rule, order, tariff, rate schedule or agreement accepted, approved, or ordered by the Commission until—(A) the Commission finds a conflict exists between a reliability standard and any such provision; (B)the Commission orders a change to such provision pursuant to section 824e of this title; and (C)the ordered change becomes effective under this subchapter.”).

Likes 0	
Dislikes 0	

Response

2. Provide any additional comments for the SARs drafting team to consider, if desired.

Helen Lainis - Independent Electricity System Operator - 2 - NA - Not Applicable, Group Name IRC

Answer	
Document Name	

Comment

1. The IRC SRC encourages the SARs drafting team to continue to consider the joint ISO/RTO Council (IRC) Policy Input filed with the NERC Board of Trustees in January 2022.

- · Allow flexibility in the standards to account for regional risks
- · Develop performance metrics to drive and justify investment when needed
- Develop complementary requirements to compel the provision of all data needed for a comprehensive energy study
- · Engage the Reliability Assessment Subcommittee to develop the technical parameters needed to perform energy assessments
- · Engage other organizations/agencies as needed to address fuel assurance and energy adequacy

Likes 0	
Dislikes 0	

Response

Matthew Harward - Southwest Power Pool, Inc. (RTO) - 2 - MRO,WECC

Answer	
Document Name	

Comment

The NERC RAS' Probabilistic Assessment Working Group that considers fuel risk in itsseasonal studies – can the objectives of this SAR be accomplished within existing processes and avoid a new standard?

Not all resources that contribute to system performance are subject to NERC registration. To be effective (and fair from a cost perspective) all resources must be included in these studies. How can that be achieved?

Likes 0	
Dislikes 0	

Response

Kim Thomas - Duke Energy - 1,3,5,6 - SERC,RF, Group Name Duke Energy

Answer	
Document Name	

Comment

Duke Energy generally supports EEI’s comments submitted for these SARs.

Likes 0	
Dislikes 0	

Response

Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name NPCC Regional Standards Committee

Answer	
Document Name	

Comment

It will be important to ensure that the assessment methodology developed is not overly prescriptive in terms of methodology and not software specific, in order to provide Planning Coordinators with the ability to tailor the analysis to their individual system and energy adequacy risks.

Definition of an appropriate energy adequacy metric (similar to the LOLE target of 1 day in 10 years) would allow areas to incorporate this into their planning processes and refer to the standard as the source of planning assumptions.

The standard should provide guidance on what contingencies are to be considered (e.g. loss of single-fuel generators supplied by a single gas pipeline system, multi-day low renewable generation periods that deplete storage resources, etc.) and tested against the selected adequacy metric.

It would be helpful to consider whether multiple levels of assessment detail should be incorporated into the standard at different time intervals (i.e. Comprehensive, Intermediate, and Interim assessments). These assessment periods may cover different time periods, and where possible, should dovetail with other resource planning assessments.

The standard should clearly outline expectations for analyzing time periods outside the peak load period (this may be inherent to the selected metric, but if not, guidance would be important).

We agree the standard should define common terms for energy assessments, including time periods to assess, minimum assumptions for demand levels, resources, transmission, and contingency events, including common modes of energy interruption, to test for energy adequacy.

We prefer to see the standards define minimum criteria that must be demonstrated under a specified set of demand, transmission, and resource assumptions while the system is subjected to a minimum set of contingency events. Some of these events may not be applicable to all areas, but they should be broad enough that each system is minimally tested for energy adequacy.

Ideally, in the long-term planning time frame Planning Authorities should be able to demonstrate that the probability of unsupplied energy demand does not exceed specified criteria, while in the operational-planning time frame, Reliability Coordinators should be able to demonstrate that the system has a sufficient energy margin to supply the specified forecasted demand, or that expected demand can be supplied while withstanding selected events.

Although conducting an analysis of extreme events is informative, we believe it is a distraction within standards, unless those events are part of the mandatory requirements. Standards should emphasize a minimum set of events that must be tested and minimum criteria that either must be demonstrated or shown to be addressed by time-limited corrective action plans.

It is understood that many parts of the grid have unique design characteristics and also potentially unique energy vulnerabilities, however, the industry should be able to define common energy adequacy criteria and a wide enough set of events that can minimally test each area for energy adequacy.

The standard should emphasize "energy adequacy", as this is a common issue for all systems, and not fuel adequacy. Although fuel interruption must be an important consideration, areas can be exposed to energy inadequacy for various reasons other than fuel shortages.

Since energy assessments and energy adequacy criteria are relatively new and not uniformly applied, the goal of energy reliability assurance may be more effectively achieved in the long run by developing these standards in stages, and focusing on the most critical or plausible aspects and the most consequential vulnerabilities first.

Likes 0	
Dislikes 0	

Response

JT Kuehne - AEP - 3,5,6

Answer	
Document Name	

Comment

On June 16, 2022, FERC issued a Notice of Proposed Rulemaking (NOPR) on “Transmission System Planning Performance requirements for Extreme Weather” which proposes to direct NERC to submit modifications to TPL-001-5.1 within one year of the effective date of a final rule. Consideration should be given to coordinating the “Energy Assessments with Energy-Constrained Resources in the Planning Time Horizons” SAR with the stakeholder comments provided to that NOPR.

Likes 0	
Dislikes 0	

Response

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

Answer	
Document Name	

Comment

It is unclear what actions a SAR is expecting transmission entities to take regarding “Energy Assurance” concerns. The SAR seems to be implying that Transmission entities will need to take resource procurement actions. In other words, if an “Energy Assessment” is deficient, the SAR is expecting the transmission entity to somehow address the imbalance by procuring new resources. Not only is that impractical, it seems to exceed NERC functional entity boundaries.

The reliability of the Transmission system is not intrinsically impacted by resource inadequacy; load will be shed in the model if there are inadequate resources for the power flow simulations. Power flow simulations conducted to assess transmission reliability (because of physics) do not permit gen/load imbalances, and so “Energy Assessments” as-proposed would have a meaningless distinction for transmission entities assessing reliability of the transmission system.

This SAR seems focused on a '*quality of service'* concern (e.g. Loss of Load Expected, Expected Unserved Energy). PCM and other economic simulations can inform risks of energy imbalances on a time-horizon basis; but making the transmission entity responsible to take Corrective Actions to improve said '*quality of service'* concern seems to go beyond the definitions for NERC Functional Entities. Transmission entities are functionally separate from Resource Owners or Load Serving Entities. BPA believes, and suggests, it would be far more beneficial, and appropriate, for NERC to defer to the State PUCs that actually establish the acceptable quality of service regarding Resource Adequacy (LOLE and EUE targets). Revising

Transmission Reliability standards is both an ineffective and inappropriate mechanism to address this *'quality of service'* problem.	
Likes 0	
Dislikes 0	
Response	
Carl Pineault - Hydro-Qu?bec Production - 1,5	
Answer	
Document Name	
Comment	
It would be relevant, to provide a simplified process for entities where a significant part of the production is ensured by a resource stored on-site.	
Likes 0	
Dislikes 0	
Response	
Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable	
Answer	
Document Name	
Comment	
Reference the Energy Assessments with Energy – Constrained Resources in the Planning Time Horizon SAR: EEI suggests that the SDT reference both TPL-001-4 and the soon to be effective TPL-001-5.1 (effective on July 1, 2023) in the Industry Needs section of the SAR. While the language is the same in both versions of the TPL-001 Standard, it should be made clear the concern identified in the SAR exists in both versions of the Reliability Standard. Additionally, Transmission Planners should be included in the list of drafting team candidates for this SAR since they play a principal role in TPL-001.	
Likes 0	
Dislikes 0	
Response	
Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC	
Answer	

Document Name	
Comment	

Comments on the “Energy Assessments with Energy– Constrained Resources in the Planning Time Horizon” SAR:

In the SAR section that addresses “which Functional Entities the proposed standard(s) should apply” (page 6), we believe the Resource Planner should be added to the primary group along with the Planning Coordinator.

The existing BAL-502-RF-03 standard, applicable in the ReliabilityFirst Corporation (RF) region, could serve as a starting point template for a NERC-wide standard for the planning horizon.

Likes 0	
Dislikes 0	
Response	
Kimberly Turco - Constellation - 5,6	
Answer	
Document Name	
Comment	

Constellation has no additional comments.

Kimberly Turco on behalf of Constellation Segments 5 and 6

Likes 0	
Dislikes 0	
Response	
Alison Mackellar - Constellation - 5,6	
Answer	
Document Name	
Comment	

Constellation has no additional comments.

Kimberly Turco on behalf of Constellation Segments 5 and 6

Likes 0	
Dislikes 0	
Response	
Eve Stromer - Entergy - 1,3,5,6 - SERC	
Answer	
Document Name	
Comment	
None	
Likes 0	
Dislikes 0	
Response	
Alan Kloster - Evergy - 1,3,5,6 - MRO	
Answer	
Document Name	
Comment	
Evergy supports and includes by reference the comments of the Edison Electric Institute (EEI) for question #2.	
Likes 0	
Dislikes 0	
Response	
Dana Showalter - Electric Reliability Council of Texas, Inc. - 2	
Answer	
Document Name	
Comment	
Due to the complexity and size of this project, ERCOT believes the SDT should have sufficient, diverse membership to address the issues raised in ERCOT's response to Question 1. Further, the SDT must have the knowledge, ability and time to identify and coordinate any overlap in responsibilities and expectations in existing NERC Reliability Standards, mitigating conflicts and avoiding redundancy. Finally, the SDT should be aware of data currently provided to PCs and RCs and ensure they - or other entities - can perform assessments to acquire data necessary to perform assessments.	

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's comments, which state:

Reference the Energy Assessments with Energy– Constrained Resources in the Planning Time Horizon SAR:

EEI suggests that the SDT reference both TPL-001-4 and the soon to be effective TPL-001-5.1 (effective on July 1, 2023) in the Industry Needs section of the SAR.

While the language is the same in both versions of the TPL-001 Standard, it should be made clear the concern identified in the SAR exists in both versions of the Reliability Standard.

Additionally, Transmission Planners should be included in the list of drafting team candidates for this SAR since they play a principal role in TPL-001.

Further, FirstEnergy does not agree that a reliability standard should result in additional penalties for a GO if generating capacity requirements are not met due to a fuel shortage caused by unforeseen events. FirstEnergy generators already participate in the PJM capacity market and are required to provide generating capacity based on summer ICAP testing results. A generator is assessed financial penalties by PJM if it cannot meet its generating capacity requirements.

The RC and BA, not the GO, should be responsible for developing a CAP if generation capacity demands are not met during periods of constrained resources. It is the responsibility of the Transmission Grid Operator (e.g., PJM), not the GO, to ensure that adequate generating resources are available during periods of constrained resources. Operating characteristics of IRBs are the cause of constrained resources and mitigation actions over-and-above PJM generating capacity requirements should not be placed on fossil generation resources

For the Energy Assessments with Energy–Constrained Resources in the Operations and Operations Planning Time Horizons Concerned, only the RC and BA are listed as Primary Functional Entities. FirstEnergy suggests adding GO/GOP to provide that information on whether fuel availability is assured or not to RC/BA. This will prevent obtaining information from on other functional entities not directly responsible and help streamline information in a timely fashion. In summary, it should be RC/BA/GO/GOP as primary with TO/TOP/DP impacted.

Likes 0	
Dislikes 0	

Response

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

Answer	
Document Name	

Comment
No additional comments.

Likes 0	
Dislikes 0	

Response

Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF	
Answer	
Document Name	

Comment
The NAGF provides the following additional comments for consideration: a) It is not clear which NERC entities will perform the proposed tasks identified. The NAGF notes that GO/GOPs in deregulated markets participate in the trading of fuel as well as power, and they must not seek, have or use in either respect any information providing an unfair advantage that is not available to other market participants. b) Entities with the wide-area overview of generation, load, and transmission are best suited for performing energy risk assessments and developing system mitigations for energy-constrained resources.

Likes 0	
Dislikes 0	

Response

Pamela Hunter - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC, Group Name Southern Company	
Answer	
Document Name	

Comment
• NERC should allow and consider a mix of representatives from Operations and Planning since both SARs will be addressed simultaneously. • The SDT should keep in mind the increase in workload and should attempt to minimize any potential burden that this type of Standard might add. • Southern Company supports EEI’s comments submitted for this SAR.

Likes 0	
Dislikes 0	

Response

Steven Rueckert - Western Electricity Coordinating Council - 10

Answer	
Document Name	

Comment

No Comments.

Likes 0	
Dislikes 0	

Response

Leonard Kula - Independent Electricity System Operator - 2

Answer	
Document Name	

Comment

- We agree the standard should define common terms for energy assessments, including time periods to assess, minimum assumptions for demand levels, resources, transmission, and contingency events, including common modes of energy interruption, to test for energy adequacy.
- We prefer to see the standards define a minimum criteria that must be demonstrated under a specified set of demand, transmission, and resource assumptions while the system is subjected to a minimum set of contingency events. Some of these events may not be applicable to all areas, but they should be broad enough that each system is minimally tested for energy adequacy.
- Ideally, in the long-term planning time frame Planning Authorities should be able to demonstrate that the probability of unsupplied energy demand does not exceed a specified criteria, while in the operational-planning time frame, Reliability Coordinators should be able to demonstrate that the system has a sufficient energy margin to supply the specified forecasted demand, or that expected demand can be supplied while withstanding selected events.
- Although conducting analysis of extreme events is informative, we believe it is a distraction within standards, unless those events are part of the mandatory requirements. Standards should emphasize a minimum set of events that must be tested and a minimum criteria that either must be demonstrated or shown to be addressed by time-limited corrective action plans.
- It is understood that many parts of the grid have unique design characteristics and also potentially unique energy vulnerabilities, however, the industry should be able to define a common energy adequacy criteria and a wide enough set of events that can minimally test each area for energy adequacy.
- The standard should emphasize "energy adequacy", as this is a common issue for all systems, and not fuel adequacy. Although fuel interruption must be an important consideration, areas can be exposed to energy inadequacy for various reasons other than fuel shortages.
- Since energy assessments and energy adequacy criteria are relatively new and not uniformly applied, the goal of energy reliability assurance may be more effectively achieved in the long run by developing these standards in stages, and focusing on the most critical or plausible aspects and the most consequential vulnerabilities first.

Likes 0	
Dislikes 0	

Response

Tom Whynot - Manitoba Hydro - NA - Not Applicable - MRO	
Answer	
Document Name	
Comment	
The planning standard I expect to be the more complex of the two proposed standards to draft. The operations standard can focus on two main criteria. 1. The benchmark for what is energy assurance considering reliability? Guaranteed to be dispatchable in a required time frame, and assurance that the Generation's upstream fuel supply is secure and will last the duration of the aggravating system condition. 2. The benchmark for what is energy assurance considering time, how long should an entity require fuel/energy assurance for? With a planned outage(s), energy guaranteed to last the outage(s) duration. In system intact conditions, standardize an energy assurance duration requirement (weeks/month/years? of guaranteed fuel reserves?) The qualifiying critera could be standardized on all sources, but could also differ depending on the type: nuclear, diesil, coal, natural gas, solar, wind, hydro. Some generation sources will surely be disqualified from having energy assurance, or a rating on that Gen's level of energy assurance could be created.	
Likes 0	
Dislikes 0	
Response	
Andy Bochman - DOE / Idaho National Lab - NA - Not Applicable - NA - Not Applicable	
Answer	
Document Name	
Comment	
N/A. Thanks.	
Likes 0	
Dislikes 0	
Response	