Comment Report

Project Name:	2023-05 Modifications to FAC-001 and FAC-002 | SARs
Comment Period Start Date:	8/9/2023
Comment Period End Date:	9/7/2023
Associated Ballots:	

There were 37 sets of responses, including comments from approximately 117 different people from approximately 89 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 Project 2023-05 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 standard 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
WEC Energy Group, Inc.	Christine Kane	3,4,5,6		WEC Energy Group	Christine Kane	WEC Energy Group	3	RF
					Matthew Beilfuss	WEC Energy Group, Inc.	4	RF
					Clarice Zellmer	WEC Energy Group, Inc.	5	RF
					David Boeshaar	WEC Energy Group, Inc.	6	RF
ACES Power Marketing	Jodirah Green	1,3,4,5,6	MRO,RF,SERC,Texas RE,WECC	ACES Collaborators	Bob Soloman	Hoosier Energy Electric Cooperative	1	RF
					Nick Fogleman	Prairie Power, Inc.	1,3	SERC
					Lucia Beal	Southern Maryland Electric Cooperative	3	RF
					Tony Kroskey	Brazos Electric Power Cooperative, Inc.	1	Texas RE
					Jolly Hayden	East Texas Electric Cooperative, Inc.	NA - Not Applicable	Texas RE
					Bill Pezalla	Old Dominion Electric Cooperative	3,4,5,6	SERC
					Kylee Kropp	Sunflower Electric Power Corporation	1	MRO
					Andrew Anderson	Wolverine Power Supply Cooperative, Inc.	1	RF
					James Manning	North Carolina Electric Membership Corporation	3,4,5	SERC
Eversource Energy	Joshua London	1,3		Eversource	Joshua London	Eversource Energy	1	NPCC

					Vicki O'Leary	Eversource Energy	3	NPCC
MRO	Jou Yang	1,2,3,4,5,6	MRO	MRO NSRF	Bobbi Welch	Midcontinent ISO, Inc.	2	MRO
					Chris Bills	City of Independence, Power and Light Department	5	MRO
					Fred Meyer	Algonquin Power Co.	3	MRO
					Christopher Bills	City of Independence Power & Light	3,5	MRO
					Larry Heckert	Alliant Energy Corporation Services, Inc.	4	MRO
					Marc Gomez	Southwestern Power Administration	1	MRO
					Matthew Harward	Southwest Power Pool, Inc. (RTO)	2	MRO
					Bryan Sherrow	Board of Public Utilities	1	MRO
					Terry Harbour	Berkshire Hathaway Energy - MidAmerican Energy Co.	1	MRO
					Terry Harbour	MidAmerican Energy Company	1,3	MRO
					Jamison Cawley	Nebraska Public Power District	1,3,5	MRO
					Seth Shoemaker	Muscatine Power & Water	1,3,5,6	MRO
					Michael Brytowski	Great River Energy	1,3,5,6	MRO
					Shonda McCain	Omaha Public Power District	6	MRO
					George E Brown	Pattern Operators LP	5	MRO

					George Brown	Acciona Energy USA	5	MRO
					Jaimin Patel	Saskatchewan Power Cooperation	1	MRO
					Kimberly Bentley	Western Area Power Administration	1,6	MRO
					Jay Sethi	Manitoba Hydro	1,3,5,6	MRO
					Michael Ayotte	ITC Holdings	1	MRO
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
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
					Jim Howell, Jr.	Southern Company - Southern Company Generation	5	SERC
					Ron Carlsen	Southern Company - Southern Company Generation	6	SERC

Northeast Power Coordinating Council	Ruida Shu	1,2,3,4,5,6,7,8,9,10	NPCC	NPCC RSC	Gerry Dunbar	Northeast Power Coordinating Council	10	NPCC
					Alain Mukama	Hydro One Networks, Inc.	1	NPCC
					Deidre Altobell	Con Edison	1	NPCC
					Jeffrey Streifling	NB Power Corporation	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
					John Pearson	ISO New England, Inc.	2	NPCC
					Harishkumar Subramani Vijay Kumar	Independent Electricity System Operator	2	NPCC
					Randy MacDonald	New Brunswick Power Corporation	2	NPCC
					Dermot Smyth	Con Ed - Consolidated Edison Co. of New York	1	NPCC
					David Burke	Orange and Rockland	3	NPCC
					Peter Yost	Con Ed - Consolidated Edison Co. of New York	3	NPCC
					Salvatore Spagnolo	New York Power Authority	1	NPCC

					Sean Bodkin	Dominion - Dominion Resources, Inc.	6	NPCC
					David Kwan	Ontario Power Generation	4	NPCC
					Silvia Mitchell	NextEra Energy - Florida Power and Light Co.	1	NPCC
					Glen Smith	Entergy Services	4	NPCC
					Sean Cavote	PSEG	4	NPCC
					Jason Chandler	Con Edison	5	NPCC
					Tracy MacNicoll	Utility Services	5	NPCC
					Shivaz Chopra	New York Power Authority	6	NPCC
					Vijay Puran	New York State Department of Public Service	6	NPCC
					ALAN ADAMSON	New York State Reliability Council	10	NPCC
					David Kiguel	Independent	7	NPCC
					Joel Charlebois	AESI	7	NPCC
					Joshua London	Eversource Energy	1	NPCC
Southwest Power Pool, Inc. (RTO)	Shannon Mickens	2	MRO,SPP RE,WECC	SPP RTO	Shannon Mickens	Southwest Power Pool Inc.	2	MRO
					Liz Gephardt	Southwest Power Pool Inc.	2	MRO
					Debbie Currie	Southwest Power Pool Inc	2	MRO
					Mason Favazza	Southwest Power Pool Inc.	2	MRO

					Jonathan Hayes	Southwest Power Pool Inc.	2	MRO
					Mia Wilson	Southwest Power Pool Inc.	2	MRO
					Jeff McDiarmid	Southwest Power Pool Inc.	2	MRO
					Randy Cleland	Southwest Power Pool Inc.	2	MRO
					scott Jordan	Southwest Power Pool Inc.	2	MRO
					Matt Harward	Southwest Power Pool Inc.	2	MRO
					Sheri Maxey	Southwest Power Pool Inc.	2	MRO

1. Do you agree with the proposed scope as described in the Project 2023-05 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.

Thomas Foltz - AEP - 3,5,6

Answer	No
Document Name	

Comment

AEP disagrees that “qualified change” in aggregated DERs may be adequately defined. It is not clear what qualified changes among aggregations of DERs would necessitate a restudy or how changes among aggregations of DERs would translate to a qualified change at the transmission-distribution interface that would necessitate restudy. In addition, AEP does not believe the phrase “qualified change” should refer to the DP’s system or the distribution-transmission interface, but rather, to the DERs themselves.

AEP requests clarity in the SARs regarding how a DP or TP or PC would be able to determine what constitutes a qualified change among aggregations of DERs that would significantly affect the BES and thus merit restudy under FAC-002. In addition, other Functional Entities other than DPs may have to be held responsible to provide the necessary data regarding qualified changes, and the definition of qualified change may not be sufficient for them to know what data needs to flagged.

AEP is not persuaded that qualified change among aggregations of DERs should be introduced into FAC-001 and FAC-002. AEP believes that the currently required and periodic TPL-001 studies may be the more practical approach to addressing changes among aggregations of DERs, changes that may well be ongoing as DERs proliferate under evolving interconnection and performance standards.

The FAC-001 SAR states that the SPIDER whitepaper NERC Reliability Standards Review houses the “industry consensus” on technical changes to FAC-001. While we agree that it may house SPIDER consensus, that does not necessarily equate to industry consensus. We recommend replacing “industry” with “SPIDER” or remove the last half of that first sentence.

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

Eric Sutlief - CMS Energy - Consumers Energy Company - 3,4,5 - RF

Answer	No
Document Name	

Comment

This change, as worded, could cause issues with the ongoing process at MISO to implement an affected System process that will involve RERRAs making changes at the individual state level to comply. This additional requirement should be reworded to focus on encouraging changes like the effort ongoing at the MISO to continue to effectuate proper affected system processes.

Likes 0	
Dislikes 0	

Response

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

Answer	No
Document Name	

Comment

Southern Company supports the comments provided by EEI for the Project 2023-05 SARs. In addition, Southern Company supports the current efforts in the MOD-032 and TPL-001 SDT to include DER data collection and analysis for impacts of aggregate DER on the bulk power system and those standards are the appropriate place to include those considerations.

Adding the DP in the Applicability section for FAC-001-4 R3 and R4 is overly broad and should not be included. The distribution system is dynamic (i.e., substation bank and/or distribution feeder upgrades, FLISR, addition/removal of distribution cap banks which can alter reactive flow at the T-D interface, etc) and could lead to unnecessary evaluations to be performed as required by FAC-002-4.

Likes 0	
Dislikes 0	

Response

Leslie Hamby - Southern Indiana Gas and Electric Co. - 3,5,6 - RF

Answer	No
Document Name	

Comment

Southern Indiana Gas & Electric Company (SIGE) does not agree with the proposed scope as described in the Project 2023-05 SARs. SIGE concurs with Edison Electric Institute (EEI) that FAC-001-4 does not need to be changed to add DPs.

Additionally, SIGE agrees with EEI that the purpose of FAC-002 is to study the impacts of new or changed Facilities on the Bulk Electric System. SIGE agrees that aggregated DER resources that plan to enter the organized markets can and should be modeled through data provided by the Aggregators, but not the interconnecting DPs. We would also support data requirements for these resources similar to what is currently required for aggregated IBRs connected to the BES.

However, as EEI points out, even in aggregate, there are no direct connections of DERs on the BES. SIGE recognizes that aggregate DER resources may impact some regions, those impacts can be modeled in aggregate through approximations representing bulk resources without the need for representative data from specific DER resources. Moreover, DPs do not own these resources or have access to their data.

Likes 0	
Dislikes 0	

Response

Alan Kloster - 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) for question #1.

Likes 0	
Dislikes 0	

Response

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

Answer	No
Document Name	

Comment

FAC-001-4 SAR comments:

We believe the SAR title should be changed to “FAC-001 - Applicability of the DP for Interconnection Requirements”, as FAC-001 does not address Facility Ratings.

The “Project Scope” section of the SAR suggests that all registered DPs will be required to have interconnection requirements for “Distributed Energy Resources (DERs)”. We have two concerns with this project scope:

1) requiring all registered DPs to have interconnection requirements could result in an unnecessary regulatory burden under scenarios where a registered DP has not received a request to connect distributed energy resources on their distribution system, or the degree of such requests has not approached a level that would pose a material impact to the BES, and

2) the term “Distributed Energy Resources (DERs)” has not been defined with respect to NERC Reliability Standard applications in general, and in particular its meaning as intended under a proposed FAC-001-5 that would add DP applicability.

We believe the project scope should provide the standard drafting team with the flexibility to limit the scope of DP applicability. This could perhaps be accomplished by adding an “Applicable Distribution Provider” to the standard’s applicability/functional entities section with an appropriate description (similar to the “Applicable Generator Owner” clarification in FAC-001-4). The project scope should also provide the standard drafting team with the flexibility to define a “Distributed Energy Resource (DER)” as subject to FAC-001-5.

The “Project Scope” section of the SAR also notes that “some distribution facilities do not have an associated DP”, which we interpret to mean “registered DP”. While perhaps beyond the scope/purpose of a SAR, NERC should consider revising the registration criteria for a Distribution Provider in Appendix 5B of the NERC Rules of Procedure to help address this perceived reliability gap. There is also the possibility that some entities that are currently registered as a “UFLS-Only Distribution Provider” could have connected DERs.

FAC-002-4 SAR comments:

We understand the need for such coordination on the T-D interface when DPs have larger amounts of aggregate DER connected to their systems. We believe the standard drafting team should provide Planning Coordinators, through coordination with their Transmission Planners, the flexibility to determine a threshold(s) of new distribution connected resources that would require BES impact studies. As suggested in the SAR, the PC’s definition of a “qualified change” will also need to be revised to address changes to an existing distribution connected resource that would trigger a BES impact study.

Likes 0	
Dislikes 0	

Response

Jou Yang - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF

Answer	No
Document Name	

Comment

The MRO NSRF agrees Distribution Providers (DP) can be applicable for FAC-001 and should have interconnection requirements for Distributed Energy Resources (DERs). The MRO NSRF recommends that the Standards Drafting Team (SDT) work within the current framework of DP registration.

While the MRO NSRF understands the concerns from the SPIDERWG White Paper, this SAR proposes requirements, like collecting DER data (as that is one of the purposes of interconnection requirements), that do not meet the BES definition and are outside of NERC jurisdiction.

- NERC cannot and should not make mandatory and enforceable zero-defect standards that are outside of industry control.
- For NERC standards to work properly all entities must be NERC registered and subject to NERC jurisdiction in their role as the ERO under Section 215 of the Federal Power Act
- NERC should not transfer enforcement responsibilities for zero-defect NERC standards onto industry. NERC is the proper enforcement agency for the BES.
- The SPIDERWG information and study requirements (such as dynamic model information) would place barriers to entry for consumers unless the SDT identified a reasonable commercial level threshold.
- Small entities would not have engineers or modeling experts that would understand and be able to provide accurate model data rendering the steady-state, short-circuit and dynamic model data suspect and invalidating the SAR(s) premise of increased model accuracy. Data needed by

Transmission Planners (TPs) to accurately model the impacts of DERs are not readily available from Distribution Providers (DPs) and efforts to obligate these entities to obtain this information would be challenging.

The MRO NSRF suggests the SDT consider using the NERC GO-IBR definition and NERC registration effort as the next appropriate coordinated level of generation to consider. According to NERC's own research, the GO-IBR definition should capture 97.5% of generation that could impact the Bulk Electric System.

The MRO NSRF suggests the SDT consider developing a NERC GO-DER Aggregator definition that mirrors the GO-IBR levels and voltages as a way to capture small groups of DERs (such as virtual power plants) that want export power to the bulk power market. ISO markets may already have capacity accreditation requirements for entities that want to participate in the market.

Likes 0	
Dislikes 0	

Response

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

Answer	No
Document Name	

Comment

AZPS does not support the proposed scope of the FAC-001 and FAC-002 SARs for the following reasons:

- The purpose of both Reliability Standards does not align with the intent of changes as proposed in these SARs.
- The white paper used to support these SARs was not posted for industry review and comment and does not represent industry consensus as stated in the SARs.
- There is no need to create a NERC Requirement to provide DER Interconnection requirements as they are already publicly available.
- DER Interconnection standards fall under state jurisdiction and are not under the authority of NERC. For this reason, DPs should not be asked to collect modeling information from DERs as neither the DPs or NERC have the authority to require this information. The exception would be DER resources that are aggregated and plan to enter into organized markets. These resources could be modeled using information provided by the Aggregator.
- There are no direct connections of DERs on the BES and therefore they do not individually impact the BES. AZPS recognizes that aggregate DER resources may impact some regions. However, those impacts can be modeled in aggregate through approximations representing bulk resources without the need for data from specific DER resources. For DER resources that are aggregated and plan to enter into organized markets, resources could be modeled using information provided by the Aggregator.
- More clarity is needed in the Detailed Description section regarding how a TP might define a qualified change, what level of aggregated DERs should be considered, and what the process might look like including additional guidance on how to study.

Likes 0	
Dislikes 0	

Response

Harishkumar Subramani Vijay Kumar - Independent Electricity System Operator - 2	
Answer	No
Document Name	
Comment	

The Implementation Guidance for Reliability Standard FAC-002-4 currently provides that:
• a change in end-user Facility topology that may affect power flows on the BES could be considered by the PC in developing its definition of "qualified change" for purposes of required studies,
• the PC considers what is appropriate for its region in determining the definition of "qualified change".
As such, the proposed inclusion of DER in FAC-002 is not necessary as it is already a consideration in the development of a PC's definition of a "qualified change".
Furthermore, the proposed inclusion is redundant, as the impact of DERs is also required in the current Transmission Planning TPL-001-5.1 Reliability Standard.

Likes 0	
Dislikes 0	
Response	

Navodka Carter - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE	
Answer	No
Document Name	
Comment	

No, CenterPoint Energy Houston Electric, LLC (CEHE) does not agree with the proposed scope as described in the Project 2023-05 SARs.

FAC-001

CEHE does not agree that FAC-001-4 needs to be changed and the term Distribution Provider (DP) needs to be added to the standard. CEHE supports the comments as submitted by the Electric Institute (EEI) regarding changes to this SAR.

FAC-002

CEHE agrees with EEI that the purpose of FAC-002-4 is to study the impacts of qualified changes to the Bulk Electric System (BES) and supports the EEI statement, "even in aggregate, there are no direct connections of DERs on the BES." CEHE agrees that, "Aggregated DER resources that plan to enter into the organized markets can and should be modeled through data provided by the Aggregators, but not the interconnecting DPs."

CEHE agrees with EEI and its statement, "EEI does not support the argument that this Standard is needed because DERs are impacting the T-D interface. NERC Reliability Standards are intended to support the Reliable operation of the North American bulk power systems, not individual T-D interfaces." CEHE's Planning Coordinator, ERCOT, developed regional processes and procedures that address DERs at the local, regional level, which is where distribution is managed. Therefore, an additional NERC Standard is not needed.

Likes 0	

Dislikes 0	

Response

Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable	
Answer	No
Document Name	

Comment

General Comments: EEI does not support the proposed scope for FAC-001 or FAC-002 because both SARs go beyond NERC authority in imposing requirements on distribution providers that they cannot fulfill or in the case of FAC-001 are completely unnecessary. While we do not have concerns with DPs sharing their Interconnection Requirements for DERs (noting they are publicly available in every state), those interconnection standards fall under state, not federal regulation. EEI further notes that the purpose of both Reliability Standards do not align with the intent of changes as proposed in these SARs. EEI is additionally concerned that the white paper used to support and initiate these two SAR was not posted for industry review and comment. While the document was approved by the RSTC in September 2022, such approval does not constitute an industry consensus, as stated in both SARs. To address these concerns, the white paper should be posted for broad industry review and comment before using it to support these two SARs.

FAC-002 SAR Comments – EEI's specific concerns are as follows:

General Comment – EEI notes that the purpose of FAC-002 is to study the impacts of new or changed Facilities on the Bulk Electric System. Even in aggregate, there are no direct connections of DERs on the BES. While we recognize that aggregate DER resources are having impacts in some regions, those impacts can be modeled in aggregate through approximations representing bulk resources without the need for representative data from specific DER resources. Moreover, DPs do not own these resources or have access to their data. Obligating DPs to provide this data would be tantamount to requiring a TO to provide detailed generator information on a resource they do not own and falls below the level of NERC registration, meaning they have no ability to obtain or provide the desired data.

However, EEI agrees that aggregated DER resources that plan to enter into the organized markets can and should be modeled through data provided by the Aggregators, but not the interconnecting DPs. We would also support data requirements for these resources similar to what is currently required for aggregated IBRs that are currently registered GO connected to the BES.

We also note that at this time many regions are not uniformly impacted by DERs. For those regions where DERs are having significant impacts considerations should be given to Regional Reliability Standard which could provide a useful mechanism for validating requirements. Such efforts could provide useful models for future NERC Standards when needed.

Industry Need Section – EEI asks for additional supporting data that would validate that this SAR is needed at this time. While DER tripping has been shown to have contributed to some reported BPS disturbances in Regions where there has been substantial growth of DERs, not all areas or Regions have been similarly impacted. For this reason, EEI support Regional Reliability Standards in regions experiencing DER impacts to address those concerns.

We additionally do not agree that modifying FAC-002, at this time and in the manner proposed, because even in cases where there have been noticeable increases in distribution load pickup due to inferred DER tripping, the load pickup has been insignificant as compared to the loss of BPS IBR tripping. Moreover, the loss of DERs on their own would not be an appreciable area of concern if BPS connected IBRs were performing appropriately. For this reason, EEI recommends performance issues with IBRs be addressed through Project 2020-02 (Modifications to PRC-024 (Generator Ride-through) and Project 2023-02 (Performance of IBRs). We further note that DERs on the distribution system intentionally operate differently to ensure distribution personnel safety.

Purpose & Goal: EEI does not support the argument that this Standard is needed because DERs are impacting the T-D interface. NERC Reliability Standards are intended to support the Reliable operation of the North American bulk power systems, not individual T-D interfaces. Not all T-D interfaces are crucial to the reliable operation of the BPS. A first goal should be setting standards that address levels of impact that represent real and

meaningful impacts to the BPS. This should include defining levels of aggregated DERs that have the potential of impacting BPS reliability. Unless this is done, Planners will be required to develop impact studies without any defined level of impact on the BPS, let alone the BES; wasting scarce registered entity time and money.

Project Scope: As written there seems to be no limit to the level of aggregated DERs that the TP and PC would be required to study. While the language in the Project Scope makes it clear that the target is aggregated resource at the T&D interface, the scope does not include language that defines aggregation levels that would impact BES reliability or might trigger studies. It is also unclear how or why aggregated DERs that are supporting local distribution would be subject to "qualified changes". While changes to larger resources at a BPS or BES level can have significant impacts on reliability and should be studied before approving those changes, DERs are small resources that will be changed on an individual basis. The exception would be situations where the DER resources are operated in aggregate and entered into the organized markets. In this situation, EEI would support TP/PCs studying and approving those changes similar to other BPS and BES resources. However, we do not support subjecting individual DERs supporting local distribution and that do not have a meaningful impacts to the BPS or BES being applicable to the NERC Reliability Standards.

Detailed Description: More clarity is needed in the Detailed Description regarding what changes are intended to FAC-002-4. First, it is unclear how a TP might define a qualified change and what the process might look like. EEI also believes that there should be some defined level of aggregated DERs at a T&D interface that must be reached before requiring an impact study. EEI also does not agree that all T&D interfaces need to be studied from a DER aggregation standpoint since small numbers of DERs would not impact the BES. EEI is also concerned with the language giving TPs the authority to "define the specific DER information, as needed, to perform their studies" because it implies, they could require DPs to provide specific information they have no ability to collect or provide from entities who are not registered by NERC. EEI is additionally concerned that this goes beyond what is needed to model aggregated DER impacts. Please clarify why electricity end-user Facilities needs to be defined, as it pertains to DERs when DERs are generating resources? EEI also asks for clarity in what is intended where T-D interfaces do not have a single registered DP and how that might impact DER "qualified changes."

FAC-001 SAR Comments

Industry Need: EEI does not agree that FAC-001-4 needs to be changed to add DPs to this standard because DP interconnection requirements are publicly available in all states. EEI further notes that FAC-001, as currently written, is intended to ensure TOs and GOs document and make Facility interconnection requirements available so that entities seeking to interconnect will have the necessary information, which is already required in all states. While transmission planners may have a need to see those documents, there should be no issue with TPs acquiring this data since this data is already public record and there is no reason why FAC-001 needed to be changed to ensure TP have access to this information.

Relative to qualified changes, DERs (except those participating in the organized markets) are under state regulation and EEI does not agree that NERC has the authority to govern changes on distribution resources used for local distribution. EEI also does not agree that there are levels of aggregation that would allow NERC to claim jurisdiction, except in cases where certain aggregated resources chose to participate in organized markets. While we recognize that unanticipated changes in distribution load due to DER operation could impact BES Reliability, those changes should not be any more impactful than distribution load accelerating or tripping unexpectedly.

Project Scope: EEI does not support adding DPs to the Applicability section of FAC-001. DP interconnection requirements for DERs are publicly available to anyone who has a desire to review them, including TP and PCs.

Detailed Description: EEI does not support the statement that the SPIDERWG white paper titled NERC Reliability Standards Review represents an industry consensus for FAC-001-4, or any other Reliability Standard change. During the September 2022 RSTC meeting the white paper was presented to the RSTC for approval without any industry review and comment period. For this reason, we do not accept this document as representing an "industry consensus. EEI also disagrees with the statement in the SAR that a "revision is needed to address the impact of DERs on the BES", there are no DERs on the BES or BPS. DER are by definition distribution connected resources and unless designated to participate in the organized markets are intended to serve distribution load , which places them outside of Section 215 of the FPA. As stated in our comments above, DER interconnection requirements are publicly available, meaning a Reliability Standard is not needed to obtain those requirements. Additionally, as previously stated, qualified changes would be under the control of State Regulators, not NERC. For these reasons, we see no reason DPs should be added to FAC-001. EEI also does not agree that Implementation Guidance is needed because no change to FAC-001 is necessary.

Likes 0	

Dislikes 0	
Response	
Andy Fuhrman - Minnkota Power Cooperative Inc. - 1,5 - MRO	
Answer	No
Document Name	
Comment	
Minnkota supports comments submitted by the MRO NERC Standards Review Forum (NSRF) and ACES.	
Likes 0	
Dislikes 0	
Response	
Daniel Gacek - Exelon - 1,3	
Answer	No
Document Name	
Comment	
Exelon disagrees with the proposed scope for the reasons stated in the comments submitted by the EEI.	
Likes 0	
Dislikes 0	
Response	
David Jendras Sr - Ameren - Ameren Services - 1,3,6	
Answer	No
Document Name	
Comment	
Ameren supports EEI's comments on this project. Currently there is no method for the majority of DPs to access this data as they do not own these resources.	
Likes 0	
Dislikes 0	
Response	

Shannon Mickens - Southwest Power Pool, Inc. (RTO) - 2 - MRO, Group Name SPP RTO	
Answer	No
Document Name	
Comment	

Related to the FAC-001 SAR, the scope proposes to include the DP in the “Applicability” section and update the Reliability Standard Requirements to include DP Interconnection Requirements for Distributed Energy Resources (DERs). Further, as some distribution facilities do not have an associated DP, the project scope includes flexibility to address instances where the transmission to distribution interface does not have an associated DP and address any resultant reliability gaps.

Our initial concern for the FAC-001 SAR is that industry may need the assistance of the Institute of Electronic and Electrical Engineers (IEEE) 1547-2018 (and beyond) Standards to help coordinate some of these efforts. Additionally, our organization is concerned that the industry still doesn’t have a solid understanding of NERCs expectations for the IEEE Standards, and its potential impacts on the inclusion of the Distribution Energy Resource (DER) in NERC standards. The drafting team/NERC should create educational opportunities for industry to get a better understand of the document, as well as its adoption process.

The drafting team should consider revising the SAR to recognize the IEEE 1547-2018 document as a resource to develop standards related to the Interconnection process between the transmission and distribution entities.

Related to the FAC-002 SAR, there’s language in this SAR that suggests “revisions to the standard to ensure the TP and PC perform a study when aggregate DERs cause **qualified changes** to the transmission to distribution interface to conduct **Steady-state, short-circuit, and dynamics studies**, as necessary, to evaluate system performance under both normal and contingency conditions under R1.3.”

The SAR is silent on the criteria to determine an aggregated threshold. From our perspective, the Planning Coordinator (PC) and Transmission Planner (TP) should control the process to determine an aggregated threshold for their footprint given that each registered entity will have different tariff-based Interconnection Requirements.

Likes 0	
Dislikes 0	
Response	

Darcy O'Connell - California ISO - 2	
Answer	No
Document Name	
Comment	

The proposed inclusion of DER in FAC-002 as a defined requirement for study conflicts with the methodology of leaving “qualified change” as examples (as indicated in the FAC-002 Implementation Guidance) and up to the discretion of the PC to define. There is already an example in this guidance related to DER as something that may be studied as a qualified change of an end-user Facility. Also studying DERs is already covered In TPL-001, with supporting data collection in MOD-032 and adding this to FAC-002 is redundant.

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:

General Comments: EEI does not support the proposed scope for FAC-001 or FAC-002 because both SARs go beyond NERC authority in imposing requirements on distribution providers that they cannot fulfill or in the case of FAC-001 are completely unnecessary. While we do not have concerns with DPs sharing their Interconnection Requirements for DERs (noting they are publicly available in every state), those interconnection standards fall under state, not federal regulation. EEI further notes that the purpose of both Reliability Standards do not align with the intent of changes as proposed in these SARs

EEI is additionally concerned that the white paper used to support and initiate these two SAR was not posted for industry review and comment. While the document was approved by the RSTC in September 2022, such approval does not constitute an industry consensus, as stated in both SARs. To address these concerns, the white paper should be posted for broad industry review and comment before using it to support these two SARs.

FAC-002 SAR Comments – EEI's specific concerns are as follows:

General Comment – EEI notes that the purpose of FAC-002 is to study the impacts of new or changed Facilities on the Bulk Electric System. Even in aggregate, there are no direct connections of DERs on the BES. While we recognize that aggregate DER resources are having impacts in some regions, those impacts can be modeled in aggregate through approximations representing bulk resources without the need for representative data from specific DER resources. Moreover, DPs do not own these resources or have access to their data. Obligating DPs to provide this data would be tantamount to requiring a TO to provide detailed generator information on a resource they do not own and falls below the level of NERC registration, meaning they have no ability to obtain or provide the desired data.

However, EEI agrees that aggregated DER resources that plan to enter into the organized markets can and should be modeled through data provided by the Aggregators, but not the interconnecting DPs. We would also support data requirements for these resources similar to what is currently required for aggregated IBRs that are currently registered GO connected to the BES.

We also note that at this time many regions are not uniformly impacted by DERs. For those regions where DERs are having significant impacts considerations should be given to Regional Reliability Standard which could provide a useful mechanism for validating requirements. Such efforts could provide useful models for future NERC Standards when needed.

Industry Need Section – EEI asks for additional supporting data that would validate that this SAR is needed at this time. While DER tripping has been shown to have contributed to some reported BPS disturbances in Regions where there has been substantial growth of DERs, not all areas or Regions have been similarly impacted. For this reason, EEI support Regional Reliability Standards in regions experiencing DER impacts to address those concerns.

We additionally do not agree that modifying FAC-002, at this time and in the manner proposed, because even in cases where there have been noticeable increases in distribution load pickup due to inferred DER tripping, the load pickup has been insignificant as compared to the loss of BPS IBR tripping. Moreover, the loss of DERs on their own would not be an appreciable area of concern if BPS connected IBRs were performing appropriately. For this reason, EEI recommends performance issues with IBRs be addressed through Project 2020-02 (Modifications to PRC-024 (Generator Ride-through) and Project 2023-02 (Performance of IBRs). We further note that DERs on the distribution system intentionally operate differently to ensure distribution personnel safety.

Purpose & Goal: EEI does not support the argument that this Standard is needed because DERs are impacting the T-D interface. NERC Reliability Standards are intended to support the Reliable operation of the North American bulk power systems, not individual T-D interfaces. Not all T-D interfaces are crucial to the reliable operation of the BPS. A first goal should be setting standards that address levels of impact that represent real and meaningful impacts to the BPS. This should include defining levels of aggregated

DERs that have the potential of impacting BPS reliability. Unless this is done, Planners will be required to develop impact studies without any defined level of impact on the BPS, let alone the BES; wasting scarce registered entity time and money.

Project Scope: As written there seems to be no limit to the level of aggregated DERs that the TP and PC would be required to study. While the language in the Project Scope makes it clear that the target is aggregated resource at the T&D interface, the scope does not include language that defines aggregation levels that would impact BES reliability or might trigger studies. It is also unclear how or why aggregated DERs that are supporting local distribution would be subject to "qualified changes". While changes to larger resources at a BPS or BES level can have significant impacts on reliability and should be studied before approving those changes, DERs are small resources that will be changed on an individual basis. The exception would be situations where the DER resources are operated in aggregate and entered into the organized markets. In this situation, EEI would support TP/PCs studying and approving those changes similar to other BPS and BES resources. However, we do not support subjecting individual DERs supporting local distribution and that do not have a meaningful impacts to the BPS or BES being applicable to the NERC Reliability Standards.

Detailed Description: More clarity is needed in the Detailed Description regarding what changes are intended to FAC-002-4. First, it is unclear how a TP might define a qualified change and what the process might look like. EEI also believes that there should be some defined level of aggregated DERs at a T&D interface that must be reached before requiring an impact study. EEI also does not agree that all T&D interfaces need to be studied from a DER aggregation standpoint since small numbers of DERs would not impact the BES. EEI is also concerned with the language giving TPs the authority to "define the specific DER information, as needed, to perform their studies" because it implies, they could require DPs to provide specific information they have no ability to collect or provide from entities who are not registered by NERC. EEI is additionally concerned that this goes beyond what is needed to model aggregated DER impacts. Please clarify why electricity end-user Facilities needs to be defined, as it pertains to DERs when DERs are generating resources? EEI also asks for clarity in what is intended where T-D interfaces do not have a single registered DP and how that might impact DER "qualified changes."

FAC-001 SAR Comments

Industry Need: EEI does not agree that FAC-001-4 needs to be changed to add DPs to this standard because DP interconnection requirements are publicly available in all states. EEI further notes that FAC-001, as currently written, is intended to ensure TOs and GOs document and make Facility interconnection requirements available so that entities seeking to interconnect will have the necessary information, which is already required in all states. While transmission planners may have a need to see those documents, there should be no issue with TPs acquiring this data since this data is already public record and there is no reason why FAC-001 needed to be changed to ensure TP have access to this information.

Relative to qualified changes, DERs (except those participating in the organized markets) are under state regulation and EEI does not agree that NERC has the authority to govern changes on distribution resources used for local distribution. EEI also does not agree that there are levels of aggregation that would allow NERC to claim jurisdiction, except in cases where certain aggregated resources chose to participate in organized markets. While we recognize that unanticipated changes in distribution load due

to DER operation could impact BES Reliability, those changes should not be any more impactful than distribution load accelerating or tripping unexpectedly.

Project Scope: EEI does not support adding DPs to the Applicability section of FAC-001. DP interconnection requirements for DERs are publicly available to anyone who has a desire to review them, including TP and PCs.

Detailed Description: EEI does not support the statement that the SPIDERWG white paper titled NERC Reliability Standards Review represents an industry consensus for FAC-001-4, or any other Reliability Standard change. During the September 2022 RSTC meeting the white paper was presented to the RSTC for approval without any industry review and comment period. For this reason, we do not accept this document as representing an "industry consensus. EEI also disagrees with the statement in the SAR that a "revision is needed to address the impact of DERs on the BES", there are no DERs on the BES or BPS. DER are by definition distribution connected resources and unless designated to participate in the organized markets are intended to serve distribution load , which places them outside of Section 215 of the FPA. As stated in our comments above, DER interconnection

requirements are publicly available, meaning a Reliability Standard is not needed to obtain those requirements. Additionally, as previously stated, qualified changes would be under the control of State Regulators, not NERC. For these reasons, we see no reason DPs should be added to FAC-001. EEI also does not agree that Implementation Guidance is needed because no change to FAC-001 is necessary.

Likes 0	
Dislikes 0	

Response

Stephen Stafford - Georgia Transmission Corporation - 1 - SERC

Answer	No
Document Name	

Comment

Recently approved revisions to FAC-002 specify the PC define qualified changes for its PC area. The scope of this FAC-002-4 SAR states, "*The TP should be part of the definition of "qualified change" for these particular studies*." This statement seems to suggest this recent modification be undone and allow for the TP to define qualified changes as well. If so, this will exacerbate the potential that currently exists for many overlapping areas having different definitions for qualified change.

Likes 0	
Dislikes 0	

Response

Elizabeth Davis - PJM Interconnection, L.L.C. - 2 - RF

Answer	No
Document Name	

Comment

The SARs should be revised to require that the revisions to FAC-001 and FAC-002 provide clear guidelines regarding which DERs (such as individual DERs or aggregated DERs above a specified MW threshold) are required to go through the FAC-002 study process. This would provide clarity on how often future DERs would need to be aggregated and studied under FAC-002 and on whether aggregated DERs would need to be part of a TPL-001-5.1 study instead of a FAC-002 study.

In addition, the proposed inclusion of DER in FAC-002 as a defined requirement for study conflicts with the methodology of leaving "qualified change" as examples (as indicated in the FAC-002 Implementation Guidance) and up to the discretion of the PC to define. There is already an example in this guidance related to DER as something that may be studied as a qualified change of an end-user Facility. Also studying DERs is already covered In TPL-001 and adding this to FAC-002 is redundant.

Likes 0	
Dislikes 0	

Response

Andrea Jessup - Bonneville Power Administration - 1,3,5,6 - WECC	
Answer	No
Document Name	

Comment
BPA supports the idea of having DER standards that ensure increased DER deployment does not become a reliability concern for the bulk power system (BPS). BPA does not agree that modifications to FAC-001 and FAC-002 are the method to address concerns of increased DER deployment. BPA agrees with the statement “Because of NERC jurisdictional limitations, the identified concerns that potentially arise from increased DER deployment could be addressed through other means to achieve the same objective of maintaining BPS reliability”, provided in the SPIDERWG White Paper: October 2022. BPA believes reliable interconnection of DER can be provided through adoption and enforcement of appropriate standards by applicable regulatory bodies. MOD-032-1 requires Load Serving Entities to provide data for modeling and analysis of the BPS. Best methods in modeling (steady state, dynamic, and short circuit) aggregate load and generation equivalent models at the transmission-distribution interface, including the impact of increasing DER, and regular model validation are believed to be the best approach to ensure BPS reliability with increasing DER.

Likes 0	
Dislikes 0	

Response

Kennedy Meier - Electric Reliability Council of Texas, Inc. - 2	
Answer	No
Document Name	

Comment
Planning for extreme events under TPL-001-5.1 is based on facilities included in the BES and is also a consideration for FAC-002 studies. Consequently, the scope of the SARs should be expanded to include revising the BES definition to clarify when DERs are considered part of the BES and when they should be studied under FAC-002 and TPL-001. The SARs should also be revised to require that the revisions to FAC-001 and FAC-002 provide clear guidelines regarding which DERs (such as individual DERs or aggregated DERs above a specified MW threshold) are required to go through the FAC-002 study process. This would provide clarity on how often future DERs would need to be aggregated and studied under FAC-002 and on whether aggregated DERs would need to be part of a TPL-001-5.1 study instead of a FAC-002 study. In addition, the SARs should require the revised standards to clarify which functional entity or entities have the responsibility of addressing FAC-002 studies for DERs. This responsibility should generally rest with the TP; however, the PC may be the more appropriate entity if a system-wide impact study (such as a TPL-001-5.1 study) is required. The best approach may be to allow the TP and PC the flexibility to allocate the responsibility between themselves.

Likes 0	
Dislikes 0	

Response

Duane Franke - Manitoba Hydro - 1,3,5,6 - MRO	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF	
Answer	Yes
Document Name	
Comment	
None.	
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 RSC	
Answer	Yes
Document Name	
Comment	
NPCC RSC supports the SAR.	
Likes 0	
Dislikes 0	
Response	
Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF	
Answer	Yes

Document Name	
Comment	
The NAGF has no comments on the proposed SARs.	
Likes 0	
Dislikes 0	
Response	
Donna Wood - Tri-State G and T Association, Inc. - 1,3,5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Dwanique Spiller - Berkshire Hathaway - NV Energy - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Nicolas Turcotte - Hydro-Quebec (HQ) - 1,5	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes 0	
Response	
Junji Yamaguchi - Hydro-Quebec (HQ) - 1,5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
John Pearson - ISO New England, Inc. - 2	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Teresa Krabe - Lower Colorado River Authority - 1,5	
Answer	Yes

Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Alain Mukama - Hydro One Networks, Inc. - 1,3	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Matt Lewis - Lower Colorado River Authority - 1,5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Rachel Coyne - Texas Reliability Entity, Inc. - 10	
Answer	
Document Name	
Comment	
Texas RE agrees with the scopes of the SARs. Texas RE noticed the following statement in the FAC-002 SAR for FAC-002: “Further, as some distribution facilities do not have an associated DP, the project scope includes flexibility to address instances where the T-D interface does not have an	

associated DP and address any resultant reliability gap (page 2).” Texas RE requests more information and clarity on how the SDT would address a reliability gap that is a result of a registration issue.	
Likes 0	
Dislikes 0	
Response	

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

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

Answer	
Document Name	

Comment

The SARs indicate that the revised standards should ensure that all transmission to distribution interfaces (T-D interfaces), including those without a single registered DP, are included in language addressing when a qualified change is made that impacts the T-D interface. Without direct registration of DERs or the DPs to which DERs are connected, this directive may result in unreasonable compliance obligations for registered entities. The SDT for Project 2022-02 is currently encountering this challenge. NERC should revise its registration criteria to ensure registration of all entities necessary to fulfill this directive.

Likes 0	
Dislikes 0	

Response

Andrea Jessup - Bonneville Power Administration - 1,3,5,6 - WECC

Answer	
Document Name	

Comment

BPA is very concerned about DER data quality and the quality of transmission-distribution interface equivalent load and generation modeling necessary to capture the impacts of increasing DER and changing end user technologies. In place of modifying FAC-001 and FAC-002, efforts can be put towards modeling guidelines, methods, and validation, to ensure accurate BPS reliability studies are achieved. These modeling guidelines can be adopted and enforced by applicable regulatory bodies. The modeling guidelines can also determine when a transmission-distribution interface (t-to-d) point needs to be treated as a resource and potentially subject to existing FAC-001 and FAC-002 standards. For example, if the t-to-d point delivers power to the BPS equal to or exceeding a defined threshold, it is deemed a generator resource.

Likes 0	
Dislikes 0	

Response

Elizabeth Davis - PJM Interconnection, L.L.C. - 2 - RF

Answer	
Document Name	

Comment

The SARs indicate that the revised standards should ensure that all transmission to distribution interfaces (T-D interfaces), including those without a single registered DP, are included in language addressing when a qualified change is made that impacts the T-D interface. Without direct registration of DER or the DPs to which DER are connected, this directive may result in unreasonable compliance obligations for registered entities. The SDT for Project 2022-02 is currently encountering this challenge. NERC should revise its registration criteria to ensure registration of all entities necessary to fulfill this directive.

Likes 0	
Dislikes 0	

Response

Stephen Stafford - Georgia Transmission Corporation - 1 - SERC

Answer	
Document Name	

Comment

Regarding the “Detailed Description” of the FAC-001-4 SAR: It is unclear if the PC or the DP will define “qualified changes” related to DER. This description should be modified to clarify who will define “qualified changes” related to DER.

Additionally, regarding the proposed changes for R1 & R2 of FAC-001, although the wording was changed from "specified level of aggregate" to "aggregate”, the language still suggests that the SDT should determine a “specified level” of aggregated DER that is applicable to the standard. This is going to be problematic as the current industry efforts (including SPIDERWG) have not identified penetration levels of DER where BES reliability issues can be expected. It is unreasonable to expect an SDT to accomplish this during the course of this project if industry and regulatory entities have not done so to this point.

Regarding the proposed changes to R3 or R4 of FAC-001: Recent modifications to FAC-002 specify the PC determines what a qualified change is for its PC area. The PC is not an applicable Functional Entity in FAC-001. If the implication is that the DP should determine what a qualified change is on its system, there appears to be an opportunity for conflicting definitions where there is area overlap between the entities.

Regarding the “Detailed Description” of the FAC-002-4 SAR: There has been no tangible progress in addressing the modeling requirements of DER. Also, the exclusion from the BES definition of most generation that would qualify as DER along with there still being no industry or regulatory guidance on relevant penetration levels of DER make this recommendation premature and possibly unnecessary. These issues need to be addressed before it can be determined what, if any, PC and TP requirements are needed regarding DER.

Finally, all the above listed comments/concerns were previously submitted to SPIDERWG in January 2023. However, it appears that the issues were not addressed by the SPIDERWG.

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 notes that there needs to be a consistent definition for Distributed Energy Resources (DERs). *In addition, the NAGF is concerned that Transmission Planners (TPs) may request information for planning studies that includes distribution level DER facilities that outside of NERC jurisdiction. As such, Distribution Planners (DPs) should not be held accountable for providing such information.*	
Likes 0	
Dislikes 0	
Response	
Mark Garza - FirstEnergy - FirstEnergy Corporation - 1,3,4,5,6, Group Name FE Voter	
Answer	
Document Name	
Comment	
None.	
Likes 0	
Dislikes 0	
Response	
Alain Mukama - Hydro One Networks, Inc. - 1,3	
Answer	
Document Name	
Comment	
None	
Likes 0	
Dislikes 0	
Response	
David Jendras Sr - Ameren - Ameren Services - 1,3,6	
Answer	

Document Name	
Comment	
No comments.	
Likes 0	
Dislikes 0	
Response	
Andy Fuhrman - Minnkota Power Cooperative Inc. - 1,5 - MRO	
Answer	
Document Name	
Comment	
Minnkota supports comments submitted by the MRO NERC Standards Review Forum (NSRF) and ACES.	
Likes 0	
Dislikes 0	
Response	
Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators	
Answer	
Document Name	
Comment	
We at ACES believe that it is a worthwhile effort to update the NERC Reliability Standards to incorporate DER resources. However, we do have concerns with modifying Reliability Standards before the effective date of the previous reversion(s). Additionally, with the current number of active NERC projects, there are a lot of changes being proposed and/or implemented throughout the industry. It is our opinion that the current approach leads to inconsistencies and will result in confusion across the industry ultimately leading to the creation of even more projects. We recommend creating a single DER project to implement all the DER related changes in multiple phases. Thank you for the opportunity to comment.	
Likes 0	
Dislikes 0	
Response	
Harishkumar Subramani Vijay Kumar - Independent Electricity System Operator - 2	

Answer	
Document Name	
Comment	

The standard should not specify a predetermined DER MW / penetration level threshold. Since any potential threshold is system specific, the TP/PC should be the entity to determine it based on studies conducted on its system.

Likes 0	
Dislikes 0	
Response	

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

Answer	
Document Name	
Comment	

AZPS also supports the comments that were submitted by EEI on behalf of its members.

Likes 0	
Dislikes 0	
Response	

Jou Yang - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF

Answer	
Document Name	
Comment	

FAC-001 Applicability Section and Requirement R1 – Add DPs to the applicability section but no details are provided.

Comment: The MRO NSRF does support adding DPs to the applicability section of FAC-001. However, collecting the information desired is only available from the owners of those facilities, who generally fall below the NERC registration criteria. NERC DPs generally do not have the information required by planners to aide in the accurate study of DER on their distribution system. Furthermore, DPs have no ability to obligate DER owners to provide this level of information.

FAC-001 Requirement 2 – The SAR states that this requirement should be modified to specify a level of aggregate DER installations that would trigger a reliability impact study of affected systems.

Comment: The MRO NSRF does not support adding a requirement in FAC-001 to specify the level of aggregate DER installations. The MRO NSRF suggests the SDT consider developing a NERC GO-DER Aggregator definition that mirrors the GO-IBR levels and voltages as a way to capture small DERs (such as virtual power plants) that want export power to the bulk power market. ISO markets may already have capacity accreditation requirements for entities that want to participate in the market.

FAC-001 Requirement 3 or 4 – The SAR states that this requirement should ensure appropriate coordination studies be performed (this language is far too loose for a SAR) and what a qualified change is for the DP system.

Comment: The MRO NSRF does not agree that R3 or R4 should be modified to define what a qualified change is for the DP System. Qualified changes are to be defined by the PC as indicated in FAC-002-4 within Requirement R6. Adding this to FAC-001 would be duplicative to the language already approved in FAC-002-4 and subject industry to double jeopardy.

Additional Changes – Consideration should be given to regional, jurisdictional and penetration level differences for inclusion of applicability.

Comment: The MRO NSRF does not support this and requirements that do not meet the BES definition or may be outside of NERC jurisdiction. This language should be removed from the SAR.

Likes 0	
Dislikes 0	

Response

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

Answer	
Document Name	

Comment

We suggest the standard drafting team consider referencing IEEE's 1547 (Standard for Interconnecting Distributed Resources with Electric Power Systems) in FAC-001.

Likes 0	
Dislikes 0	

Response

Christine Kane - WEC Energy Group, Inc. - 3,4,5,6, Group Name WEC Energy Group	
Answer	
Document Name	
Comment	
Aggregate DER representation at the T-D interface must be used for BES reliability impact studies as Distribution Providers may not be able to obtain the specific DER data needed for more detailed representations since Distribution Providers do not own the majority of DERs. The study of BES reliability impacts of aggregate DER at T-D interfaces must be a coordinated planning effort between the local Transmission Owner and Distribution Provider. Not all T-D interfaces will be impacted in the same manner by DER penetration. That being said, it is expected that a significant level of aggregated DER at the T-D interface would be reached before a BES reliability impact study is performed.	
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	
No additional comments.	
Likes 0	
Dislikes 0	
Response	
Joshua London - Eversource Energy - 1,3, Group Name Eversource	
Answer	
Document Name	
Comment	
Although not directly related to FAC-001, Eversource would like to apprise the drafting team of the precedent that will be set if NERC is allowed jurisdiction over a state-regulated process. Currently, thousands of DERs apply to interconnect onto the Eversource distribution system each year. The proposed change will create an already strained administrative burden of requiring evidence for CMEP purposes (e.g. audits, etc.) that in relation to the change can only be described as astronomical. Secondly, Eversource is not the owner of these assets, so making it responsible for compliance	

obligations and data is perverse as gathering the data will amount to an undue burden that can be accomplished by other means. Rather than focusing on the DER and monitoring of the Distribution system, Eversource suggests NERC should direct its efforts on building resiliency into the Transmission system to make it more reliable when incidents do occur on the distribution system, i.e. add corrective measures that builds capabilities on the Transmission system when a large IBR disturbance occurs on the Distribution side of the Grid.	
Likes 0	
Dislikes 0	
Response	
Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF	
Answer	
Document Name	
Comment	
None.	
Likes 0	
Dislikes 0	
Response	
Duane Franke - Manitoba Hydro - 1,3,5,6 - MRO	
Answer	
Document Name	
Comment	
We identified the SAR for FAC-002 needs the following changes. 1. Under “Detailed Description”, paragraph-1 in page-3, we believe that DP will be part of the definition of “qualified changes”. 2. In page-3, section that is asking to indicate which Functional Entities the proposed standard(s) should apply, we recommend to move Distribution Provider to “Impacted” group and delete “Addition of”. DP is already identified as an applicable Functional Entity in FAC-002-4.	
Likes 0	
Dislikes 0	
Response	
Donna Wood - Tri-State G and T Association, Inc. - 1,3,5	
Answer	

Document Name	
Comment	
NA	
Likes 0	
Dislikes 0	
Response	