Comment Report

Project Name:	Project 2020-01 Modifications to MOD-032-1
Comment Period Start Date:	3/24/2020
Comment Period End Date:	4/24/2020
Associated Ballots:	

There were 56 sets of responses, including comments from approximately 146 different people from approximately 114 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 SAR? 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 SAR 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
MRO	Dana Klem	1,2,3,4,5,6	MRO	MRO NSRF	Joseph DePoorter	Madison Gas & Electric	3,4,5,6	MRO
					Larry Heckert	Alliant Energy	4	MRO
					Michael Brytowski	Great River Energy	1,3,5,6	MRO
					Jodi Jensen	Western Area Power Administration	1,6	MRO
					Andy Crooks	SaskPower Corporation	1	MRO
					Bryan Sherrow	Kansas City Board of Public Utilities	1	MRO
					Bobbi Welch	Omaha Public Power District	1,3,5,6	MRO
					Jeremy Voll	Basin Electric Power Cooperative	1	MRO
					Bobbi Welch	Midcontinent ISO	2	MRO
					Douglas Webb	Kansas City Power & Light	1,3,5,6	MRO
					Fred Meyer	Algonquin Power Co.	1	MRO
					John Chang	Manitoba Hydro	1,3,6	MRO
					James Williams	Southwest Power Pool, Inc.	2	MRO
					Jamie Monette	Minnesota Power / ALLETE	1	MRO
					Jamison Cawley	Nebraska Public Power	1,3,5	MRO
					Sing Tay	Oklahoma Gas & Electric	1,3,5,6	MRO
					Terry Harbour	MidAmerican Energy	1,3	MRO

					Troy Brumfield	American Transmission Company	1	MRO
PPL - Louisville Gas and Electric Co.	Devin Shines	3,5,6	RF,SERC	Louisville Gas and Electric Company and Kentucky Utilities Company	Charles Freibert	PPL - Louisville Gas and Electric Co.	3	SERC
					JULIE HOSTRANDER	PPL - Louisville Gas and Electric Co.	5	SERC
					Linn Oelker	PPL - Louisville Gas and Electric Co.	6	SERC
Westar Energy	Douglas Webb	1,3,5,6	MRO,SPP RE	Westar-KCPL	Doug Webb	Westar	1,3,5,6	MRO
					Doug Webb	KCP&L	1,3,5,6	MRO
IRC	Helen Lainis	2	MRO,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
ACES Power Marketing	Jodirah Green	1,3,4,5,6	MRO,NA - Not Applicable,RF,SERC,Texas RE,WECC	ACES Standard Collaborations	Bob Solomon	Hoosier Energy Rural Electric Cooperative, Inc.	1	SERC
					Kevin Lyons	Central Iowa Power Cooperative	1	MRO
					Bill Hutchison	Southern Illinois Power Cooperative	1	SERC
					Amber Skillern	East Kentucky Power Cooperative	1	SERC
					David Hartman	Arizona Electric	1	WECC

						Power Cooperative		
					Nick Fogleman	Prairie Power, Inc.	1,3	SERC
					Steven Myers	North Carolina EMC	3,4,5	SERC
					Meredith Dempsey	Brazos Electric Cooperative	1,5	Texas RE
					Ryan Strom	Buckeye Power, Inc.	5	RF
					Michael Brytowski	Great River Energy	1,3,5,6	MRO
					Calvin Wheatley	Wabash Valley Power Association	1	RF
Duke Energy	Kim Thomas	1,3,5,6	FRCC,RF,SERC	Duke Energy	Laura Lee	Duke Energy	1	SERC
					Dale Goodwine	Duke Energy	5	SERC
					Greg Cecil	Duke Energy	6	RF
FirstEnergy - FirstEnergy Corporation	Mark Garza	1,3,4		FE Voter	Julie Severino	FirstEnergy - FirstEnergy Corporation	1	RF
					Aaron Ghodooshim	FirstEnergy - FirstEnergy Corporation	3	RF
					Robert Loy	FirstEnergy - FirstEnergy Solutions	5	RF
					Ann Carey	FirstEnergy - FirstEnergy Solutions	6	RF
					Mark Garza	FirstEnergy-FirstEnergy	4	RF
Northern California Power Agency	Marty Hostler	3,4,5,6		NCPA	Michael Whitney	Northern California Power Agency	3	WECC
					Scott Tomashefsky	Northern California Power Agency	4	WECC
					Dennis Sismaet	Northern California Power Agency	6	WECC

					Marty	Northern California Power Agen	5	WECC
Northern California Power Agency	Michael Whitney	3,4,5,6		NCPA	Scott Tomashefsky	Northern California Power Agency	4	WECC
					Marty Hostler	Northern California Power Agency	5,6	WECC
					Marty Hostler	Northern California Power Agency	5,6	WECC
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
					William D. Shultz	Southern Company Generation	5	SERC
					Ron Carlsen	Southern Company - Southern Company Generation	6	SERC
Eversource Energy	Quintin Lee	1,3		Eversource Group	Sharon Flannery	Eversource Energy	3	NPCC
					Quintin Lee	Eversource Energy	1	NPCC
Northeast Power Coordinating Council	Ruida Shu	1,2,3,4,5,6,7,8,9,10	NPCC	NPCC Regional Standards Committee	Guy V. Zito	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
Michele Tondalo	UI	1	NPCC
Helen Lainis	IESO	2	NPCC
John Pearson	ISO-NE	2	NPCC
David Kiguel	Independent	7	NPCC
Paul Malozewski	Hydro One Networks, Inc.	3	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

					Nicolas Turcotte	Hydro-Qu?bec TransEnergie	1	NPCC
					Chantal Mazza	Hydro Quebec	2	NPCC
					Sean Bodkin	Dominion - Dominion Resources, Inc.	6	NPCC
					Nurul Abser	NB Power Corporation	1	NPCC
					Randy MacDonald	NB Power Corporation	2	NPCC
					Jim Grant	NY-ISO	2	NPCC
					Quintin Lee	Eversource Energy	1	NPCC
					Silvia Parada Mitchell	NextEra Energy, LLC	4	NPCC
					Michael Ridolfino	Central Hudson Gas and Electric	1	NPCC
					Vijay Puran	NYSPS	6	NPCC
					ALAN ADAMSON	New York State Reliability Council	10	NPCC
Dominion - Dominion Resources, Inc.	Sean Bodkin	3,5,6		Dominion	Connie Lowe	Dominion - Dominion Resources, Inc.	3	NA - Not Applicable
					Lou Oberski	Dominion - Dominion Resources, Inc.	5	NA - Not Applicable
					Larry Nash	Dominion - Dominion Virginia Power	1	NA - Not Applicable
					Rachel Snead	Dominion - Dominion Resources, Inc.	5	NA - Not Applicable
OGE Energy - Oklahoma	Sing Tay	1,3,5,6	SPP RE	OKGE	Sing Tay	OGE Energy - Oklahoma	6	MRO

Gas and Electric Co.					Terri Pyle	OGE Energy - Oklahoma Gas and Electric Co.	1	MRO
					Donald Hargrove	OGE Energy - Oklahoma Gas and Electric Co.	3	MRO
					Patrick Wells	OGE Energy - Oklahoma Gas and Electric Co.	5	MRO

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

Mark Holman - PJM Interconnection, L.L.C. - 2

Answer	No
Document Name	

Comment

The focus to obtain information from non-FERC jurisdictional entities needs to shift from efforts to establish federal requirements within NERC documents; instead working to convince states to make requirements for their local entities to share this information with transmission planners. The argument should focus on the technical issues and costs that can be incurred due to incorrect assumptions from not being provided DER data.

These concerns should fall under the principles of "Good Engineering" and "Good Utility" practice and should be adopted with both in mind. Since the grid is an interconnected combination of wholesale and retail entities, both must work cooperatively to ensure reliability and cost efficient operations throughout the transition to large DER penetration. The problem cannot be solved by federal level mandates alone.

Likes 0	
Dislikes 0	

Response

John Allen - City Utilities of Springfield, Missouri - 1,3,4

Answer	No
Document Name	

Comment

City Utilities agrees that Distribution Provider needs to replace Load Serving Entity in the applicability section of MOD-032-1, but believe that change could be processed more efficiently via Project 2017-07 Standards Alignment with Registration.

We don't believe that the table in Attachment 1 of MOD-032-1 needs to be updated, since item 9 already allows for *"[o]ther information requested by the Planning Coordinator or Transmission Planner necessary for modeling purposes. [BA, GO, LSE, TO, TSP]."* This item allows flexibility for additional items to be requested to account for changing technology, regional variances, etc., including any information about DERs that is needed for modeling purposes. This option was recognized in the draft DER Data Collection for Modeling in Transmission Planning Studies Reliability Guideline currently posted for comment. We note that without an obligation in TPL-001-4 for the Planning Coordinator and/or Transmission Planner to specifically consider DER information in the models, *requesting* such information could become just an administrative exercise; but the obligation already exists as well, since TPL-001-4 R1.1.6 already requires the models to include *"[r]esources (supply or demand side) required for Load."*

This SAR is thus not needed and should be retired.

Likes 0	
Dislikes 0	

Response

Thomas Foltz - AEP - 3,5	
Answer	No
Document Name	
Comment	

While AEP has no objections to the current draft SAR in terms of what it seeks to achieve, we do not believe pursuing it is necessary, or even advisable, given the existing content of MOD-032. In short, we see no reason to revise MOD-032 as suggested, as we believe it is already appropriately written to include DER data. The existing requirements for Transmission bus delivery points already include obligations for the Distribution Service Provider at that Transmission bus to separate out in its report to the RTO, the Distribution-connected generation capacity from the demand capacity appearing at that Transmission bus.

In addition, were the SAR to be pursued in revising MOD-032, there are certain aspects of potential concern related to the collection of the DER data by the Transmission Planner. Many of the entities that the TP would rely on for this DER data are not themselves NERC Functional Entities, nor are they obligated by NERC requirement(s) to provide such data. Many generators that have historically been considered load-augmenting in most cases, would now qualify as DER driven by the increased reliance on even smaller generators which connect to the BES. As a result, these entities which have had no previous obligations to provide information to NERC Registered Entities would now be relied on to do so. However even after MOD-032's potential revision, since they are not NERC registered entities, these generators would still have no NERC obligations to provide such data. This being the case, if this SAR is pursued as currently drafted, the Transmission Planner presumably bears all risk associated with whether or not that data is provided to them. If this SAR is indeed pursued, the SDT must ensure the Transmission Planner does not assume any risk associated with "non-obligated entities" not providing that data to the TP.

Likes 0	
Dislikes 0	
Response	

Patti Metro - National Rural Electric Cooperative Association - 3,4	
Answer	No
Document Name	
Comment	

Cooperatives generally support the language in the draft Reliability Guideline: DER Data Collection for Modeling in Transmission Planning Studies but disagree that there is a need make modifications to Reliability Standard MOD-32 to collect the needed DER information from Distribution Providers (DPs) to complete the necessary Transmission Planning Studies. The language in the DER Reliability Guideline allows flexibility for the DPs to work with their Transmission Planners (TPs) and Planning Coordinators (PCs) to develop the best process and data details that work best for each area. At minimum, cooperatives could support the concept of allowing some aggregate minimum penetration thresholds to be developed and added to the draft DER Reliability Guideline, such as a percentage of load by each substation or even the overall DP service territory given how small many rural systems are.

Likes 0	
Dislikes 0	

Response	
Greg Davis - Georgia Transmission Corporation - 1	
Answer	No
Document Name	
Comment	
Cooperatives generally support the language in the draft Reliability Guideline: DER Data Collection for Modeling in Transmission Planning Studies but disagree that there is a need make modifications to Reliability Standard MOD-32 to collect the needed DER information from Distribution Providers (DPs) to complete the necessary Transmission Planning Studies. The language in the DER Reliability Guideline allows flexibility for the DPs to work with their Transmission Planners (TPs) and Planning Coordinators (PCs) to develop the best process and data details that work best for each area. At minimum, cooperatives could support the concept of allowing some aggregate minimum penetration thresholds to be developed and added to the draft DER Reliability Guideline, such as a percentage of load by each substation or even the overall DP service territory given how small many rural systems are.	
Likes 0	
Dislikes 0	
Response	
Marty Hostler - Northern California Power Agency - 3,4,5,6, Group Name NCPA	
Answer	No
Document Name	
Comment	
NCPA agrees with TAPS' comments. This SAR is not needed and should be retired. Replacing Load Serving Entity with Distribution Provider can be done during the five-year review or as part of the NERC Project 2017-07 "Standards Alignment with Registration." This SAR is too prescriptive, over burdening, and MOD-032-1 Attachment 1's table does not need updating. Item 9 in the table already specifies "other information".	
Likes 0	
Dislikes 0	
Response	
Brian Evans-Mongeon - Utility Services, Inc. - 4	
Answer	No
Document Name	

Comment
The SAR should provide Planning Coordinators (PCs) and Transmission Planners (TPs) with flexibility to develop any and ongoing data specifications for “Aggregate DER” jointly with Distribution Providers (DPs). The SAR is unnecessarily prescriptive. In the SAR, all specifications for Aggregate DER, e.g. “Location (correlated to BPS bus location)”, should allow registered entities to jointly and collaboratively develop Steady State (or any) data specifications according to regional modeling and planning requirements. Further, “Aggregate DER” should not be added to the Dynamics column. No evidence has been presented at SPIDER Working Group or to the Planning Committee that DPs have Dynamics data for Aggregate DER. The Reliability Guideline on Parameterization of the DER_A model (September 2019) states: “Specific data related to DERs tripping is often not available, and engineering judgment must be used to determine reasonable tripping values.” Further, ISO-NE’s presentation to the SPIDER Working Group with Electranix Corporation in January 2020 highlighted the “significant effort” made to obtain “high quality DER models” from DER developers (not to mention the DP, which did not even have the Dynamics data). Finally, there is no guarantee that DPs are even allowed to collect Dynamics data from DER developers during the interconnection process, which is subject to state-level requirements. Requiring DPs to provide data that they do not have, or data they are not allowed to request, is not consistent with other NERC Reliability Standards and should not be included here.

Likes 0	
Dislikes 0	

Response

Michael Whitney - Northern California Power Agency - 3,4,5,6, Group Name NCPA	
Answer	No
Document Name	

Comment
NCPA agrees with TAPS’ comments. This SAR is not needed and should be retired. Replacing Load Serving Entity with Distribution Provider can be done during the five-year review or as part of the NERC Project 2017-07 “Standards Alignment with Registration.” This SAR is too prescriptive, over burdening, and MOD-032-1 Attachment 1’s table does not need updating. Item 9 in the table already specifies “other information”.

Likes 0	
Dislikes 0	

Response

Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Standard Collaborations	
Answer	No

Document Name	

Comment

While ACES agrees that it is necessary to account for Distributed Energy Resources ("DER") in the planning, operation, and design of the BES, ACES does not believe that a Reliability Standard is the best vehicle to achieve all of the proposed goals of the SAR. Some of these goals could be achieved by the proposed Reliability Guideline on Data Collection for DER Modeling ("DER Guideline"), which would offer more flexibility to Distributions Providers ("DPs") in the type and format of data that is requested. An alternate approach to using the DER Guideline as the primary mechanism for gathering this type of data would be for the Transmission Planners ("TPs") or Planning Coordinators ("PCs") to enhance their existing interconnection processes to also collect DER information from interconnecting entities. The responsibility of modeling the BES should not be placed on DPs, who operate what typically are not BES components.

ACES has several specific concerns with the scope of the SAR as drafted. 1) DER owners or DPs with DER's within their system(s) may not have access to modeling software or personnel trained in the modeling methods many TPs and PCs use to create models. 2) it is presumptive to assume that DP's are the natural replacement of Load Serving Entities ("LSEs") for purposes of the standard. The drafting team must conduct a thorough analysis regarding all implications of that substitution, prior to assigning it. 3.) While not specifically referenced in the SAR, forecasted data, as referenced in the DER Guideline, should not be included in the scope of the Standard. Forecasting requires daily interactions with the TP/TOP/PC beyond modeling.

If DP's are assigned any responsibility for DER modeling data, that responsibility should only be to provide the real power capability and type of DER. Requiring full BES modeling data to account for non-BES DER is contrary to NERC's risk-based compliance approach. For the aforementioned reasons, ACES does not support the scope of the SAR as currently drafted.

Likes 0	
Dislikes 0	

Response

Thomas Breene - WEC Energy Group, Inc. - 3,4,5,6

Answer	No
Document Name	

Comment

WEC Energy Group does not support the proposed SAR as currently written however, we do believe that adding the DP function to MOD-032 is necessary to address a potential reliability gap related to data that can only be effectively provided by the DP. For this reason, we would support a limited SAR that specifically addresses this issue. Once this is done, we believe the existing MOD-032 Reliability Standard should provide adequate protections to ensure that the Planning Coordinators (PC) and Transmission Planners (TP) are able to collect data necessary to account for distributed energy resources (DER) to develop planning models in a manner sufficient to support the reliable operation of the interconnected transmission system under their purview. Additionally, the SAR as currently written, lacks supporting technical justifications, such as accompanying white papers, necessary to demonstrate that a reliability gap exists. For these reasons, we ask that the proposed SAR not be approved as currently written.

The draft SAR states that the working group "has identified the need for improved modeling of aggregate DER for planning studies (including both utility-scale and retail-scale DER)." However, there is no explanation or support for this need or for the corresponding gaps. In addition, the term "retail-scale DER" raises potential jurisdictional implications with collecting this type of data. The definition of the Bulk Electric System determines what generating resources are deemed to be under NERC's purview. Many distributed energy resources would not meet that criteria. And retail generation of this type would seem to fall outside the definition of the Bulk Electric System. In addition, it does not appear that any consideration has been given to whether

DER would be “local distribution”, which is expressly excluded from the BES definition and from the FPA section 215 statutory term of “Bulk-Power System.”

Likes 0	
Dislikes 0	

Response

Dana Klem - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF

Answer	No
Document Name	

Comment

These comments represent the MRO NSRF membership as a whole but would not preclude members from submitting individual comments”.

The NSRF does not support this SAR. DER data can be collected as outlined in the newly published Draft Reliability Guideline: DER Data Collection for Modeling in Transmission Planning Studies.

We agree with the replacement of LSE with DP. However, we think that should be handled through Project 2017-07 (Standards Alignment with Registration).

MOD-032-1 as currently written, provides Planning Coordinators (PCs) and Transmission Planners (TPs) the flexibility to assess and determine at what level aggregated Distributed Energy Resources (DERs), under their purview, should be included in their planning analysis. Each table section in Attachment 1 ends with the statement: “Other information requested by the Planning Coordinator or Transmission Planner necessary for modeling purposes. [BA, GO, LSE, TO, TSP]”. This statement allows the PC or TP to request any type of information necessary for them to complete their studies, including requesting DER information.

This is also supported by the Draft Reliability Guideline: DER Data Collection for Modeling in Transmission Planning Studies, line 411 – 417, which states*; Currently, the table in Attachment 1 of MOD-032-1 does not provide a line item for aggregate DER data. Rather, the table includes a statement in each of the columns that states “other information requested by the [PC] or [TP] necessary for modeling purposes” should be collected. This item can be used by the TP and the PC as technical justification for collecting aggregate DER data necessary for modeling purposes.*

Likes 0	
Dislikes 0	

Response

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

Answer	No
Document Name	

Comment

Reclamation recommends the scope of the SAR also include clarification of the trigger for submitting data required by MOD-032 R1.2.4. The clarification is needed for MOD-032 R2 for submissions according to the data requirements and reporting procedures developed by the Planning Coordinator and Transmission Planner, or if data that has not changed since the last submission. Reclamation recommends MOD-032 R2 state a specific number of days within which the data must be submitted.

Likes 0	
Dislikes 0	

Response

Dennis Sismaet - Northern California Power Agency - 3,4,5,6

Answer	No
Document Name	

Comment

NCPA agrees with TAPS' comments. This SAR is not needed and should be retired.

Replacing Load Serving Entity with Distribution Provider can be done during the five-year review or as part of the NERC Project 2017-07 "Standards Alignment with Registration."

This SAR is too prescriptive, over burdening, and MOD-032-1 Attachment 1's table does not need updating. Item 9 in the table already specifies "other information".

Likes 0	
Dislikes 0	

Response

James Manning - North Carolina Electric Membership Corporation - 3,4,5 - SERC

Answer	No
Document Name	

Comment

NCEMC would like to express support for the comments submitted by ACES representing other electric cooperatives across the country with the exception of one area: As a transmission-dependent utility (TDU) representing 20 member electric cooperatives performing the NERC reliability role of Distribution Provider, NCEMC would insist that the SAR (and not the draft Reliability Guideline for DER Data Collection or any Reliability Guideline) is the best mechanism to make clear what additional compliance obligations/requirements are needed to account for aggregate DER information in planning models. However, there are many aspects of the SAR with which we do not agree as noted below (and as noted in the comments submitted by ACES).

The Transmission Planners ("TPs") or Planning Coordinators ("PCs") as well as the Distribution Providers may have to enhance their existing interconnection processes to also collect DER information from interconnecting entities which are not subject to NERC Reliability Standards. The responsibility of modeling the BES should not be placed on Distribution Providers, who operate what typically are non-BES components. There does however need to be a mechanism between the TPs, PC and the Distibution Providers that conveys what aggregate DER facilitites are modeled and how they are modeled should these have to be consolidated rather than modeled individually and explicitly as a means to improve transparency and tracking of what is existing or "as built" DERs and what is "future" while at the same time avoiding duplicate reporting and subsequently modeling of the same DER sites that may be reported by another Distribution Provider.

NCEMC has several specific concerns with the scope of the SAR as drafted. 1) DER owners, or DPs with DER's within their system(s) may not have access to modeling software or personnel trained in the modeling methods many TPs and PCs use to create models. **2) it is presumptive to assume that DP's are the natural replacement of Load Serving Entities ("LSEs") for purposes of the standard. The drafting team must conduct thorough analysis regarding all implication of that substitution, prior to assigning it. Collection of aggregate DER information is as much of a challenge for DPs as it is for TPs and PCs or even Transmission Owners (TOs).** 3) NCEMC is also quite concerned about the forecast aspect of this NERC project, referenced more in the DER Reliability Guideline than the SAR itself. Forecasting of aggregate DERs (including both utility-scale or U-DER and retail-scale DER or R-DER) for planning studies in future years require frequent interactions with the TP/TOP/PC and all DPs beyond modeling. Today, there doesn't seem to be any industry consensus of how to take into account aggregatge DER in utility forecast, either for U-DERs or R-DERs. Some PCs only factor into the forecast U-DER that has executed an Interconnection Agreement while others only include R-DER as load or energy profile offsets. Also, there is no consensus of the MW "capacity value" to credit aggregate DERs at the various system peaks that planning models are developed. In our opinion, there much room for improvement in this area for transition towards an consistent and uniform approach for modeling and forecasting of aggregate DERs. We respectfully disagree with the NERC Planning Committee that unlike aggregatge end-use load and energy projections, aggregate DER projections including behind-the-meter DER projections for future years may be considered sensitive and confidential in nature in the same manner as future year(s) "preliminary" traditional generation additions and retirements are considered to be sensitive and confidential in nature.

If DP's are assigned any responsibility for DER modeling data, that responsibility should only be to provide the real power capability and type of DER. Requiring full BES modeling data to account for non-BES DER is contrary to NERC's risk-based compliance approach. For the aforementioned reasons, NCEMC does not fully support the scope of the SAR as currently drafted.

Likes 0	
Dislikes 0	

Response

Kelsi Rigby - APS - Arizona Public Service Co. - 1,3,5,6

Answer	No
Document Name	

Comment

AZPS does not support the proposed SAR at this time. AZPS agrees with EEI's comments that "the existing MOD-032-1 Reliability Standard provides adequate protections to ensure that the Planning Coordinators (PC) and Transmission Planners (TP) are able to collect data necessary to account for distributed energy resources (DER) to develop planning models in a manner sufficient to support the reliable operation of the interconnected transmission system under their purview. Additionally, the SAR lacks supporting technical justifications, such as accompanying white papers, necessary to demonstrate that a reliability gap exists. For these reasons, we ask that the proposed SAR not be approved."

The SAR states that SPIDERWG has identified the need for improved modeling for the purposes of planning studies, but did not explain how this cannot be accomplished within the existing MOD-032 and did not provide reference to any technical justifications, such as white papers, to support this claim. AZPS believes that each PC and each of its TPs should jointly develop the level of detail that is necessary to adequately perform planning

studies for their respective areas. AZPS agrees with EEI that a “Reliability Guideline is more appropriate because MOD-032-1 allows for the collection of additional information necessary for modeling purposes.”

Although the cost impacts may not be fully known, AZPS disagrees with the cost impact assessment that expected costs would be minimal. Although DPs may collect maximum capacity and location of installed DERs, this does not correlate to ease of transforming this information to models suitable for inclusion in the format required by MOD-032-1. Additionally, although many DPs may have installed capacity and location information, DPs may not currently have methods for forecasting DER growth. Existing DER forecasts may not have the granularity needed to provide specific locational growth, but rather expected growth over the entire load serving area. AZPS believes that if a Reliability Guideline is created, DPs can then start to determine their ability to collect the required data and transform that into data required in MOD-032-1. This will allow the industry to understand the full impacts that DPs may experience.

Likes 0	
Dislikes 0	

Response

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

Answer	No
Document Name	

Comment

SAR Sections

Industry Need:

- The SAR implies that DER needs to be defined and added to Attachment 1 of MOD-032-1 to address gaps in data collection for the purposes of modeling and interconnection-wide case creation regarding DER. However, MOD-032-1, R1 already requires each Planning Coordinator and each of its Transmission Planners to jointly develop steady-state, dynamics, and short circuit modeling data requirements and reporting procedures. Hence, the PCs and TPs can request DER data under the existing MOD-032-1, R1 requirement. Further, NERC’s PETITION OF THE NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION FOR APPROVAL OF PROPOSED RELIABILITY STANDARDS MOD-032-1 AND MOD-033-1 (2/25/2014) to the Federal Energy Regulatory Commission states the following:
    - Because not all essential data items can be explicitly listed, particularly in light of ongoing technological developments, Attachment 1 specifically allows the Planning Coordinator or Transmission Planner to request any additional information not explicitly listed in Attachment 1 but that is necessary for modeling purposes. ***As industry modeling needs may change over time due to, among other things, newly developed technology, this provision allows Planning Coordinators and Transmission Planners to request the appropriate data to match their modeling needs without having to modify Attachment 1 through NERC’s standards development process***. For the same reason, the modeling data requirements in Attachment 1 reflect basic equipment characteristics that are independent of the specific technology used in a particular installation.

Cost Impact Assessment:

- This statement “costs should be minimal’ is not supported for the reasons cited in the SAR. The author is being presumptuous by stating that additional data collection efforts will be minimal without defining the additional data that is being sought. Interconnection processes vary from utility to utility and there is a significant amount of variation regarding the types of data that is collected. The details are extremely important for DER data; i.e. is just nameplate needed or is capacity online during peak (or other times) needed; is gross load or net load required; what assumptions should be made on the % of smart-inverters? Typically, a Reliability Guideline would address these issues as we gain knowledge

of the technology and prior to initiating a SAR. Until this time, it would be preposterous to assume that "costs should be minimal". Additionally, there should be some parameters put on the data collection requirements, so that it would not over-step and over-burden the DP beyond what is necessary to maintain *transmission* system reliability and an interconnected transmission network.

Alternatives:

The SAR states that the "SPIDERWG is in the process of developing recommended practices and NERC Reliability Guidelines related to data collection for DER modeling. These materials will provide detailed guidance for TPs and PCs to develop their data requirements and reporting procedures, per MOD-032-1." Updates to MOD-032 should follow, not precede the Reliability Guideline effort, so that Industry is better informed as well as eliminate this duplication of effort. Additionally, there is no certainty of benefit to do the Reliability Guideline and SAR in parallel versus staggering the effort as is the typical process.

Likes 0	
Dislikes 0	

Response

Sean Bodkin - Dominion - Dominion Resources, Inc. - 3,5,6, Group Name Dominion

Answer	No
Document Name	

Comment

Dominion Energy suppports the EEI comments with the following additional comments:

Dominion Energy agrees that the only item within the scope of the proposed SAR that should be addressed is the update of LSE to DP. This should be addressed not in a new SAR but in the existing project that it was originally intended to be adressed as part of, project 2017-07.

Dominion Energy is of the opinion that the remaining issues discussed in the scope of the SAR are alreay addressed within the current language of MOD-032 and that the currently proposed Reliability Guideline is the more approporiate vehicle to address specific data reporting reequirements. Adding additional administrative requirements to MOD-032 is not appropriate for a nationwide, risk based standard.

Finally, a number of the assertions regarding gaps have not been fully suported with evidence. Before a modification to a standard is made, clear and convincing evidence of a reliability gap, not merely an attempt to clarify an administrative task such as gathering data, should be gathered.

Likes 0	
Dislikes 0	

Response

Scott McGough - Georgia System Operations Corporation - 3,4

Answer	No
Document Name	GTC comments to Project 2020-01_MOD-032-1 SAR request.docx

Comment

Georgia System Operations supports Georgia Transmission Operations' attached comments.

Likes 0	
Dislikes 0	

Response

Andy Fuhrman - Minnkota Power Cooperative Inc. - 1 - MRO

Answer	No
Document Name	

Comment

MPC supports comments from the MRO NERC Standards Review Forum (NSRF).

Likes 0	
Dislikes 0	

Response

Rebecca Baldwin - Transmission Access Policy Study Group - NA - Not Applicable - NA - Not Applicable

Answer	No
Document Name	

Comment

We agree that Distribution Provider needs to replace Load Serving Entity in the applicability section of MOD-032-1, but believe that change could be processed more efficiently via Project 2017-07 Standards Alignment with Registration.

We don't believe that the table in Attachment 1 of MOD-032-1 needs to be updated, since the table already allows for *"[o]ther information requested by the Planning Coordinator or Transmission Planner necessary for modeling purposes. [BA, GO, LSE, TO, TSP]."* This language allows flexibility for additional items to be requested to account for changing technology, regional variances, etc., including, as recognized in the DER Data Collection for Modeling in Transmission Planning Studies Reliability Guideline currently posted for comment ("DER Guideline"), "aggregate DER data necessary for modeling purposes." We note that adding DER information to the data requirements in MOD-032-1 could become a mere administrative exercise, in the absence of a corresponding obligation in TPL-001-4 for the Planning Coordinator and/or Transmission Planner to use the data. However, the latter obligation already exists as well, since TPL-001-4 R1.1.6 already requires the models to include *"[r]esources (supply or demand side) required for Load."*

This SAR is thus not needed and should be retired.

Likes 0	
Dislikes 0	

Response

Kevin Salsbury - Berkshire Hathaway - NV Energy - 5	
Answer	No
Document Name	
Comment	

NV Energy does not support the proposed SAR as currently written, however, we do believe that adding the DP function to MOD-032 is necessary to address a potential reliability gap related to data that can only be effectively provided by the DP. For this reason, we would support either a limited SAR that only addresses this issue or addressing this issue in the current 2017-07 project that addresses the LSE issue. Once this is done, we believe the existing MOD-032 Reliability Standard should provide adequate protections to ensure that the Planning Coordinators (PC) and Transmission Planners (TP) are able to collect data necessary to account for distributed energy resources (DER) to develop planning models in a manner sufficient to support the reliable operation of the interconnected transmission system under their purview. Additionally, the SAR as currently written lacks supporting technical justifications, such as accompanying white papers, necessary to demonstrate that a reliability gap exists. For these reasons, we ask that the proposed SAR not be approved as currently written.

We support the good work being done by the NERC SPIDER Working Group (SPIDERWG), including the development of a draft Reliability Guideline that was recently issued for industry review and comment for the collection of DER data for modeling transmission planning studies. We recommend the SPIDERWG develop Implementation Guidance to support the existing MOD-032-1 Reliability Standard and associated Reliability Guideline. Additionally, we would support a NERC initiative to reevaluate this issue after the referenced Reliability Guideline has been approved and Implementation Guidance has been developed to support MOD-032-1 and the DER data collection to determine if there are reliability gaps or issues with the PCs and TPs obtaining the necessary modeling data needed for grid reliability.

As noted above, NV Energy encourages the SPIDERWG to develop Implementation Guidance to provide clear examples and approaches to better inform planners on possible methods to ensure MOD-032-1, as currently written and approved, more effectively addresses the collection of specific DER data as well as provides guidance on how to ensure consistency in DER modeling data requirements and reporting procedures, particularly among adjoining PCs.

Likes 0	
Dislikes 0	
Response	

Scott Tomashefsky - Northern California Power Agency - 3,4,5,6	
Answer	No
Document Name	
Comment	

NCPA agrees with TAPS comments. This SAR is not needed and should be retired. Replacing LSE with DP can be done during the five-year review or as part of NERC Project 2017-07 "Standards Alignment and Registration."

This SAR is too prescriptive, over-burdening, and MOD-032-1 Attachment 1 table does not need updating. Item 9 in the tabl already specifies "other information."

Likes 0	
Dislikes 0	

Response

David Jendras - Ameren - Ameren Services - 1,3,6

Answer	No
Document Name	

Comment

Ameren agrees with and supports EEI comments.

Likes 0	
Dislikes 0	

Response

Douglas Webb - Westar Energy - 1,3,5,6 - MRO, Group Name Westar-KCPL

Answer	No
Document Name	

Comment

Evergy (Westar Energy and Kansas City Power & Light) supports Edison Electric Institutes' (EEI) response, in principle, to Question 1, with minor variation. We offer the following:

We do not support the proposed SAR as currently written, however, we do believe that adding the DP function to MOD-032 is necessary to address a potential reliability gap related to data that can only be effectively provided by the DP.

For this reason, we would support either a limited SAR that only addresses this issue or addressing this issue in the current 2017-07 project that addresses the LSE issue.

Once this is done, we believe the existing MOD-032 Reliability Standard should provide adequate protections to ensure that the Planning Coordinators (PC) and Transmission Planners (TP) are able to collect data necessary to account for distributed energy resources (DER) to develop planning models in a manner sufficient to support the reliable operation of the interconnected transmission system under their purview.

Additionally, the SAR as currently written lacks supporting technical justifications, such as accompanying white papers, necessary to demonstrate that a reliability gap exists. For these reasons, we ask that the proposed SAR not be approved as currently written.

We support the good work being done by the NERC SPIDER Working Group (SPIDERWG), including the development of a draft Reliability Guideline that was recently issued for industry review and comment for the collection of DER data for modeling transmission planning studies. We recommend the SPIDERWG develop Implementation Guidance to support the existing MOD-032-1 Reliability Standard and associated Reliability Guideline.

Additionally, if there are technically justified reliability gaps or issues with the PCs and TPs obtaining the necessary modeling data needed for grid reliability, we would support a NERC initiative to reevaluate this issue after the referenced Reliability Guideline has been approved and Implementation Guidance has been developed to support MOD-032-1 and DER data collection.

As noted above, we encourage the SPIDERWG to develop Implementation Guidance to provide clear examples and approaches to better inform planners on possible methods to ensure MOD-032-1, as currently written and approved, more effectively addresses the collection of specific DER data as well as provides guidance on how to ensure consistency in DER modeling data requirements and reporting procedures, particularly among adjoining PCs.

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

The modifications to be addressed in this project are too prescriptive, unnecessary, and open ended. The only suggested modification agreed with in the list of proposed work is adding the Distribution Provider (DP) to the scope of applicability so that modeling information can be obtained by the planners for retail connected distributed energy resources (DER).

We believe that everything else in the proposed work is not needed.

The specification of DER equipment and details related to it are not needed in the standard.

Requirement R1 of the existing version specifies that the PC/TP develop modeling data requirements and reporting procedures including the data in Attachment 1. The steady state and dynamic sections of Attachment 1 both include this line item:

"Other information requested by the Planning Coordinator or

Transmission Planner necessary for modeling purposes. [BA, GO, LSE,

TO, TSP]"

This items gives the PC/TP a “blank check” to ask for whatever modeling information they deem necessary to perform their modeling studies. Because of this, no modification to the standard is needed to itemize the DER modeling information. To summarize, including the distribution provider in the applicability section of MOD-032, in Requirements R2 & R3 of MOD-032, in item 9 of the steady-state data column of Attachment 1 of MOD-032, and in item 10 of the dynamic data column of Attachment 1 of MOD-032 will sufficiently permit the PC/TP to request what modeling data it needs for DER from the DP and from the GO.

We, further, support the comments developed and submitted by EEI:

EEI does not support the proposed SAR as currently written, however, we do believe that adding the DP function to MOD-032 is necessary to address a potential reliability gap related to data that can only be effectively provided by the DP. For this reason, we would support either a limited SAR that only addresses this issue or addressing this issue in the current 2017-07 project that addresses the LSE issue. Once this is done, we believe the existing MOD-032 Reliability Standard should provide adequate protections to ensure that the Planning Coordinators (PC) and Transmission Planners (TP) are able to collect data necessary to account for distributed energy resources (DER) to develop planning models in a manner sufficient to support the

reliable operation of the interconnected transmission system under their purview. Additionally, the SAR as currently written lacks supporting technical justifications, such as accompanying white papers, necessary to demonstrate that a reliability gap exists. For these reasons, we ask that the proposed SAR not be approved as currently written.

We support the good work being done by the NERC SPIDER Working Group (SPIDERWG), including the development of a draft Reliability Guideline that was recently issued for industry review and comment for the collection of DER data for modeling transmission planning studies. We recommend the SPIDERWG develop Implementation Guidance to support the existing MOD-032-1 Reliability Standard and associated Reliability Guideline. Additionally, we would support a NERC initiative to reevaluate this issue after the referenced Reliability Guideline has been approved and Implementation Guidance has been developed to support MOD-032-1 and the DER data collection to determine if there are reliability gaps or issues with the PCs and TPs obtaining the necessary modeling data needed for grid reliability.

As noted above, EEI encourages the SPIDERWG to develop Implementation Guidance to provide clear examples and approaches to better inform planners on possible methods to ensure MOD-032-1, as currently written and approved, more effectively addresses the collection of specific DER data as well as provides guidance on how to ensure consistency in DER modeling data requirements and reporting procedures, particularly among adjoining PCs.

Likes 0	
Dislikes 0	

Response

Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable

Answer	No
Document Name	

Comment

EEI does not support the proposed SAR as currently written, however, we do believe that adding the DP function to MOD-032 is necessary to address a potential reliability gap related to data that can only be effectively provided by the DP. For this reason, we would support either a limited SAR that only addresses this issue or addressing this issue in the current 2017-07 project that addresses the LSE issue. Once this is done, we believe the existing MOD-032 Reliability Standard should provide adequate protections to ensure that the Planning Coordinators (PC) and Transmission Planners (TP) are able to collect data necessary to account for distributed energy resources (DER) to develop planning models in a manner sufficient to support the reliable operation of the interconnected transmission system under their purview. Additionally, the SAR as currently written lacks supporting technical justifications, such as accompanying white papers, necessary to demonstrate that a reliability gap exists. For these reasons, we ask that the proposed SAR not be approved as currently written.

We support the good work being done by the NERC SPIDER Working Group (SPIDERWG), including the development of a draft Reliability Guideline that was recently issued for industry review and comment for the collection of DER data for modeling transmission planning studies. We recommend the SPIDERWG develop Implementation Guidance to support the existing MOD-032-1 Reliability Standard and associated Reliability Guideline. Additionally, we would support a NERC initiative to reevaluate this issue after the referenced Reliability Guideline has been approved and Implementation Guidance has been developed to support MOD-032-1 and the DER data collection to determine if there are reliability gaps or issues with the PCs and TPs obtaining the necessary modeling data needed for grid reliability.

As noted above, EEI encourages the SPIDERWG to develop Implementation Guidance to provide clear examples and approaches to better inform planners on possible methods to ensure MOD-032-1, as currently written and approved, more effectively addresses the collection of specific DER data as well as provides guidance on how to ensure consistency in DER modeling data requirements and reporting procedures, particularly among adjoining PCs.

Likes 0	

Dislikes 0	

Response

Devon Tremont - Taunton Municipal Lighting Plant - 1,3,5 - NPCC	
Answer	No
Document Name	

Comment
The Taunton Municipal Lighting Plant ("TMLP") agrees that Distribution Provider needs to replace Load Serving Entity in the applicability section of MOD-032-1. TMLP does not believe that the table in Attachment 1 of MOD-032-1 needs to be updated, since the language within already allows for *"[o]ther information requested by the Planning Coordinator or Transmission Planner necessary for modeling purposes. [BA, GO, LSE, TO, TSP]."* This item allows flexibility for additional items to be requested to account for changing technology, regional variances, etc., including, as recognized in the DER Data Collection for Modeling in Transmission Planning Studies Reliability Guideline currently posted for comment ("DER Guideline"), "aggregate DER data necessary for modeling purposes." We note that adding DER information to the data requirements in MOD-032-1 could become a mere administrative exercise, in the absence of a corresponding obligation in TPL-001-4 for the Planning Coordinator and/or Transmission Planner to use the data. However, the latter obligation already exists as well, since TPL-001-4 R1.1.6 already requires the models to include *"[r]esources (supply or demand side) required for Load."* This SAR is thus not needed and should be retired.

Likes 0	
Dislikes 0	

Response

Liz Wiles - Municipal Energy Agency of Nebraska - 4 - MRO,WECC	
Answer	No
Document Name	

Comment
MEAN does not support this SAR. DER data can be collected as outlined in the newly published Draft Reliability Guideline: DER Data Collection for Modeling in Transmission Planning Studies. We agree with the replacement of LSE with DP. However, we think that should be handled through Project 2017-07 (Standards Alignment with Registration).

Likes 0	
Dislikes 0	

Response	
Sing Tay - OGE Energy - Oklahoma Gas and Electric Co. - 1,3,5,6, Group Name OKGE	
Answer	No
Document Name	
Comment	
Oklahoma Gas & Electric supports Edison Electric Institute's responses to Question 1 and 2.	
Likes 0	
Dislikes 0	

Response	
Mark Garza - FirstEnergy - FirstEnergy Corporation - 1,3,4, Group Name FE Voter	
Answer	No
Document Name	
Comment	
FirstEnergy (FE) supports the position of EEI and is also acutely aware of the need this draft SAR addresses. FE is concerned about the ability of the SAR to achieve the stated objective as written to require DPs to provide aggregate DER (including both utility-scale and retail-scale DER) information. FirstEnergy and other Distribution Providers (DP) likely track utility scale DER, large retail scale DER installations in which net-metering is required, and those small installations in which the end-user has notified the DP of the installation. However, there may be many instances of DER as load-reducing (rather than load replacing) in which the DP has no record of the installation. The SAR should include implementation guidance and any revisions to the standard for which the DP would be required to provide DER information should be accompanied by a NERC implementation plan that provides sufficient timeframe for DPs to develop a strategy to obtain the necessary information.	
Likes 0	
Dislikes 0	

Response	
Leonard Kula - Independent Electricity System Operator - 2	
Answer	Yes
Document Name	
Comment	
No Comments.	
Likes 0	

Dislikes 0	
Response	
Jamie Johnson - California ISO - 2	
Answer	Yes
Document Name	
Comment	
The CAISO agrees with comments submitted by the ISO/RTO Counsel (IRS) Standards Review Committee.	
Likes 0	
Dislikes 0	
Response	
John Pearson - ISO New England, Inc. - 2 - NPCC	
Answer	Yes
Document Name	
Comment	
The scope of the SAR should ensure that the standard gives the latitude to the Planning Coordinator and Transmission Planners to devise the mechanisms for collecting the information needed for the area. The information needed and process for obtaining it will vary in different parts of the continent. Additionally, ISO New England is concerned that there are entities that are not registered with NERC and those entities won't need to provide necessary information under the standard. ISO New England recognizes that this may be a necessary limitation and having a standard to obtain the data will be helpful but that additional constructs outside of NERC's authority may be required to complete the process of obtaining DER information.	
Likes 0	
Dislikes 0	
Response	
Helen Lainis - IRC - 2 - MRO,WECC,NPCC,SERC, Group Name IRC	
Answer	Yes
Document Name	
Comment	

The scope of the SAR should ensure that the standard gives the latitude to the Planning Coordinator and Transmission Planners for the area to get the information needed. The information will vary in different parts of the continent.

Likes 0	
Dislikes 0	

Response

Quintin Lee - Eversource Energy - 1,3, Group Name Eversource Group

Answer	Yes
Document Name	

Comment

We suggest that Scope element ‘c’ be given priority and that the remaining Scope elements to be done in a separate project phase as part of this SAR. It is necessary to include distributed energy resources (DER) data (includes data for resource capability, short circuit, and dynamic performance) and reporting requirements within the MOD-032-2 standard. We support replacement of the Load Serving Entity (LSE) function with the Distribution Provider (DP) function and adding a general line item for DER in the steady state, dynamics and short circuit sections of the table. This would provide Planning Coordinators (PC) and Transmission Planners (TP) flexibility in the collection of DER data. We recommend that the SPIDER WG continue developing recommended practices and reliability guidelines related to data collection for DER modeling to support the PCs and TPs in the development of their data requirements and reporting procedures, per MOD-032. It is noteworthy that the NERC Reliability Guideline, ‘DER Data Collection for Modeling in Transmission Planning Studies’ is dependent on the change of LSE to DP in MOD-032-1. By delaying the change LSE to DP, this NERC Guidline document would be negatively impacted.

Prioritization of the element in the proposed scope to define DER should be a lower priority action. This should not delay the change in functional applicability.

Likes 0	
Dislikes 0	

Response

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

Answer	Yes
Document Name	

Comment

None.

Likes 0	
Dislikes 0	

Response	
LaTroy Brumfield - American Transmission Company, LLC - 1	
Answer	Yes
Document Name	
Comment	

ATC supports the scope of the proposed SAR for the following reasons:

· The replacement of Load Serving Entities (LSE) with Distribution Providers within MOD-032-1 is being delayed by referrals from Project 2017-07 (Standards Alignment with Registration) to the proposed MOD-032 SAR. If not done in a MOD-032 SAR, when will it be done? Delays have created unnecessary communications hurdles and delays for ATC trying to get agreements from our customers to provide load forecast model information. ATC would support Item 3 contained within the Industry Need statement, to "review any additional gaps in DER data collection with the de-registration of LSE. It is not clear that DER was a specific factor considered in retiring the LSE function or that PCs and TPs impact input was solicited for the LSE retirement discussion. Project 2017-07 is not addressing the DER gaps.

· MOD-032-1, Requirement R2 language is too broad to ensure that responsible entities (i.e., Balancing Authorities (BAs), Generator Owners (GOs), Distribution Providers (DPs), Resource Planners, Transmission Owners (TOs), and Transmission Service Providers(TSPs)) provide all of the necessary data to ensure that Planning Coordinators and Transmission Planners can model and analyze the reliability impacts of DER. While the PC can create detailed data request processes, there is no incentive for resource owners to help the TO without long, iterative discussions. ATC has experienced such iterative discussions while acquiring resource and load data.

· Just because some regions of NERC are not being affected by DER modeling issues, doesn't mean that specific MOD-032 direction for DER modeling should not be developed. If the need isn't there now, it will be.

· The proposed Reliability Guideline: DER Data Collection for Modeling in Transmission Planning Studies, may guide PCs and TPs to what data needs to be collected, but does not mandate resource owners provide the data at the level appropriate to correctly identify impacts.

· The industry need statement in the draft SAR needs to provide examples and explanations about the gaps in the ability to collect DER data.

· Retail-scale DER data collection will be necessary under some conditions to appropriately identify impacts of R-DER on the transmission system. If the PCs and TPs need to request this data, then the MOD-032 SAR process should address the legal support to do so. It is not clear that R-DER would be ruled out of MOD-032 data collection. This needs to be discussed in the SAR context.

· While all issues or concerns may not need to be addressed through a NERC Reliability Standard, the discussion needs to happen and be resolved in the SAR process.

Likes 0	
Dislikes 0	
Response	
Joe McClung - JEA - 1,3,5	
Answer	Yes
Document Name	

Comment
The scope can be expanded to include all DER revisions.

Likes 0	
Dislikes 0	

Response

Bobbi Welch - Midcontinent ISO, Inc. - 2	
Answer	Yes
Document Name	

Comment

Overall, MISO supports the need for Project 2020-01: Modifications to MOD-032-1.

Addition of Distribution Provider Function - MISO supports the replacement of the Load Serving Entity (LSE) function with the Distribution Provider (DP) function as the NERC website states that MOD-032-1 will not be revised as part of Project 2017-07: Standards Alignment with Registriation at this time in deference to this SAR.

Acquisition of DER Data - The scope of the SAR should ensure that the standard gives the latitude to the Planning Coordinator and Transmission Planners for the area to get the information needed. The information will vary in different parts of the continent. Some entities may point to the Data Reporting Requirements table in MOD-032-1, Attachment 1 which allows a Planning Coordinator to specify "Other information requested by the Planning Coordinator or Transmission Planner necessary for modeling purposes. [BA, GO, LSE, TO, TSP]." However, in practice the lack of specificity in the standard requires Planning Coordinators (PCs) and Transmisison Planners (TPs) to negotiate with individual entites to obtain the DER data required, resulting in modeling delays and inadequate data to sufficiently analyze the system impacts of DER. This is particularly true for entities that are not vertically integrated; i.e. where the PC and/or TP is not also the DP, as there is no incentive for the data owner to do this promptly. Regarding DP concerns over the confidentiality of end user information with respect to retail-scale DER, MISO supports the SAR's approach to collection of DER data on an aggregated basis.

Moreover, the proposed **Reliability Guideline: DER Data Collection for Modeling in Transmission Planning Studies**, may guide PCs and TPs to what data needs to be collected, but does not mandate resource owners provide the data at the level appropriate to correctly identify impacts.

Finally, MISO supports the SAR as a proactive effort to improve the quality of system modeling and data exchange practices which has been and continues to be a theme contributing to major events over time:

- **U.S. Canada Power System Outage Task Force August 14th Blackout Causes and Recommendations**: "Recommendation 24: Improve quality of system modeling data and data exchange practices"

- **FERC-NERC Staff Report on the September 8, 2011 Blackout** – "APS has indicated that it has had difficulty obtaining generator outage information from other BAs due to market and/or tariff concerns"

- **South Central U.S. Cold Weather Event of January 17, 2018** – "accurate ambient temperature design specifications and expected generating unit performance for peak winter conditions should be shared with Reliability Coordinators and Balancing Authorities… However, despite the guidance above, cold-weather events continue to occur involving extensive unplanned generation outages, which imperil reliable BES operations."

To underscore this point, MISO recommends that the second sentence under the "Industry Need" section of the SAR (*see* pages 1-2) be reworded as follows:

"The goal is to provide clarity and consistency for data collection across Planning Coordinators (PCs) and Transmission Planners (TPs) and reporting procedures when coordinating with the applicable Functional Entities DP to gather aggregate load and DER data."

This would also support the collection of data envisioned under the recommendations made in the **April and May 2018 Fault Induced Solar Photovoltaic Resource Interruption Disturbances Report**; i.e. for Transmission Planners (TPs) and Planning Coordinators (PCs) to ensure that changes to inverter settings and performance are …modeled to accurately reflect the dynamic behavior of solar PV resources connected to the BPS.

Clarity and Consistency of DER Data - MISO supports the stated purpose of the SAR (page 2) to provide clarity and consistency for DER data collection across Planning Coordinators (PCs) and Transmission Planners (TPs) as this will enhance the quality of the Interconnection-wide models.

Related Standards or SARs (TPL-001) - With respect to related standards or SARs that should be assessed for impact as a result of this SAR (*see* page 4), MISO recommends the scope of the SAR be expanded to include potential changes to TPL-001 related to DER.

MISO also supports the comments submitted by the ISO/RTO Council (IRC) Standards Review Committee (IRC SRC).

Likes 0	
Dislikes 0	

Response

Bruce Reimer - Manitoba Hydro - 1,3,5,6

Answer	Yes
Document Name	

Comment

MH agrees with the proposed scope, however we would suggest an addition:

The Functional Entities should be expanded to include Resource Planner. The Distribution Provider may know where DER is located today but may not be able provide a forecast of future DER amounts and locations over the 10-year planning horizon. The Resource Planner may be in a better position to provide this forecast and data for MOD-032.

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 suggest that Scope element 'c' be given priority and that the remaining Scope elements to be done in a separate project phase as part of this SAR. It is necessary to include distributed energy resources (DER) data (includes data for resource capability, short circuit, and dynamic performance) and reporting requirements within the MOD-032-2 standard. We support the replacement of the Load Serving Entity (LSE) function with the Distribution

Provider (DP) function and adding a general line item for DER in the steady-state, dynamics, and short circuit sections of the table. This would provide Planning Coordinators (PC) and Transmission Planners (TP) flexibility in the collection of DER data. We recommend that the SPIDER WG continue developing recommended practices and reliability guidelines related to data collection for DER modeling to support the PCs and TPs in the development of their data requirements and reporting procedures, per MOD-032. It is noteworthy that the NERC Reliability Guideline, 'DER Data Collection for Modeling in Transmission Planning Studies' is dependent on the change of LSE to DP in MOD-032-1. By delaying the change LSE to DP, this NERC Guideline document would be negatively impacted.

Prioritization of the element in the proposed scope to define DER should be a lower priority action. This should not delay the change in functional applicability.

Likes 0	
Dislikes 0	

Response

Robert Blackney - Edison International - Southern California Edison Company - 1,3,5,6 - WECC

Answer	Yes
Document Name	

Comment

SCE supports the proposed SAR, however, notes that the SAR does not provide sufficient technical justification. The SAR is necessary to address FERC's retiring of the Load Serving Entity (LSE) function, and the implementation of the new registration category Underfrequency Load Shedding (UFLS)-only Distribution Provider (DP). The currently effective MOD-032-1 still uses the retired LSE function in the applicability of the Reliability Standard, and it is critical to close this reliability gap by modifying the applicability section of the Reliability Standard to include DPs.

Although, MOD-032-1 provides flexibility to TPs and PCs to develop their own data collection requirements, it does not ensure that all entities (i.e., TPs, PCs or DPs) will follow industry best practices and include DER modeling data in planning studies. Consequently, if industry best practices are ignored, e.g., the SPIDERWG DER Modeling Draft Guideline, an ever-expanding pool of DER resources could be unaccounted for on an interconnection-wide basis, masking potential performance violations and impacting overall BES reliability. SCE agrees that the proposed scope within the SAR would allow industry to address these issues and require DPs to provide their DER modeling data to their associated TPs and PCs.

However, as noted in EEI's comments, additional technical justification is necessary to support the proposed SAR. Specifically, the draft SAR states that the working group "has identified the need for improved modeling of aggregate DER for planning studies (including both utility-scale and retail-scale DER)," however, the SAR does not reference technical studies or reports that highlight any reliability gaps.

Likes 0	
Dislikes 0	

Response

Daniel Gacek - Exelon - 1,3,5,6

Answer	Yes

Document Name	
Comment	
Exelon is supportive of the SAR, the most urgent issue is the need to remove and replace LSE with DP. However, Exelon is open to potential improvements to the SAR with additional technical justification supporting the issues outlined in the SAR.	
Likes 0	
Dislikes 0	
Response	
Wayne Guttormson - SaskPower - 1	
Answer	Yes
Document Name	
Comment	
Replacement of LSE with DP could be handled through Project 2017-07 (Standards Alignment with Registration).	
Likes 0	
Dislikes 0	
Response	
Carl Pineault - Hydro-Qu?bec Production - 1,5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Laura Nelson - IDACORP - Idaho Power Company - 1	
Answer	Yes

Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Kevin Conway - Public Utility District No. 1 of Pend Oreille County - 1,3,5,6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Scott Langston - Tallahassee Electric (City of Tallahassee, FL) - 1,3,5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Matthew Nutsch - Seattle City Light - 1,3,4,5,6 - WECC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	

Response	
Anthony Jablonski - ReliabilityFirst - 10	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Tony Skourtas - Los Angeles Department of Water and Power - 1,3,5,6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Colleen Campbell - AES - Indianapolis Power and Light Co. - 3	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Rachel Coyne - Texas Reliability Entity, Inc. - 10	
Answer	Yes
Document Name	

Comment	
Likes 0	
Dislikes 0	
Response	
Cain Braveheart - Bonneville Power Administration - 1,3,5,6 - WECC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Devin Shines - PPL - Louisville Gas and Electric Co. - 3,5,6 - SERC, Group Name Louisville Gas and Electric Company and Kentucky Utilities Company	
Answer	
Document Name	
Comment	

Louisville Gas and Electric Company and Kentucky Utilities Company (LG&E and KU) do not support the proposed Project Scope of the SAR for the following reasons:

- As written, the “Project Scope” of the draft SAR is overly prescriptive in some aspects and overbroad without substantiation in others. We have the following feedback for specific items listed in the “Project Scope”:
- Item (a) references specific details (included in the “Detailed Descriptions” section) to be considered and addressed in the Attachment 1 table of MOD-032-1. These additional details are unnecessary since PCs and TPs already have sufficient and ample abilty to request all necessary information: “A Planning Coordinator may specify additional information that includes specific information required for each item in the table below.” Moreover, the steady-state (item 9) and dynamics (item 10) columns of Attachment 1 already include a requirement for “Other information requested by the Planning Coordinator or Transmission Planner necessary for modeling purposes. [BA, GO, LSE, TO, TSP].” This language further emphasizes that PCs are already able to request any other information that is needed through their Transmission Service Providers or other registered entities. TSPs are able to obtain the information through mechanisms in their FERC jurisdictional OATTs.
- Item (b) encourages the Drafting Team to consider including a definition for “Distributed Energy Resource (DER)” in the NERC Glossary of Terms. We do not find that the justification for an to the NERC Glossary of Terms has been developed at this time, and therefore it should not be included in the Scope of the SAR at this time.
- Item (c) states that “LSE should be removed and replaced by DP as the applicable entity in Section 4.1.3 and all instances in the standard requirements and attachments.” Removal of the LSE is appropriate for the project scope, but the proposed wholesale replacement of the LSE with the DP is not only unnecessary but is also inconsistent with the FERC Order approving the removal of LSEs from the functional registration (153 FERC 61,024). FERC approved the deregistration of LSE because its role in BES reliability and reliability functions was very low risk. In

the Order, FERC acknowledged that Transmission entities could obtain load related data through other means such as their tariffs. Moreover, RCs, BAs, REs, and other affected entities that need the information from LSEs did not have concerns with the deregistration of LSEs. We recommend the Working Group consider FERC's conclusions and findings to be a specific affirmation that data could be acquired through other avenues ("tariffs, market rules, market protocols, and other market agreements" at page 22), rather than adding this responsibility to DPs, unsupported by any FERC directive or other rationale. A wholesale replacement of LSE with DP would shift inappropriate and unnecessary administrative requirements to DPs.

- Item (d) suggesting the SDT review any potential gaps regarding data collection for aggregate DER data with deregistration of LSE is unnecessary for the same reasons as Item (c). LSE was deregistered due to the very low risk nature of the reliability functions and the existence of other methods for acquiring data so that a reliability gap is not created.

Likes 0	
Dislikes 0	

Response

Brandon Gleason - Electric Reliability Council of Texas, Inc. - 2

Answer	
Document Name	

Comment

No response.

Likes 0	
Dislikes 0	

Response

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

Wayne Guttormson - SaskPower - 1

Answer	
Document Name	

Comment

In general, standards drafting process should be as robust as possible to avoid developing standards that need to be updated whenever newer technology (e.g., DER) comes to the forefront.

Likes 0	
Dislikes 0	

Response

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

Answer	
Document Name	

Comment

N/A

Likes 0	
Dislikes 0	

Response

Daniel Gacek - Exelon - 1,3,5,6

Answer	
Document Name	

Comment

Should the SAR be approved, Exelon agrees with the Requested Information section of the SAR, but does encourage the SDT to also consider the impacts on Distribution Providers (DPs) and ensure data requirements are not overly burdensome on the DPs. Exelon suggests editing the Attachment 1 table to include the specific data required to meet the objective of the SAR. Reference Table 2.1 of the Reliability Guideline DER Data Collection for Modeling in Transmission Planning Studies that the SPIDERWG drafted for guidance on limiting the DER data requirements.

Likes 0	
Dislikes 0	

Response

Robert Blackney - Edison International - Southern California Edison Company - 1,3,5,6 - WECC

Answer	
Document Name	

Comment

SCE provides the following additional comments:

- The SPIDERWG Reliability Guideline for DER Data Collection for Modeling in Transmission Planning Studies should be finalized and issued. Furthermore, the Guideline should specifically address the DPs role in collecting DER data for transmission planning.

- Inconsistencies and gaps in aggregated DER modeling data requirements and reporting procedures will most likely occur among PCs in the absence of specifications for collecting aggregate DER data in MOD-032-1. These inconsistencies and gaps can negatively impact Planning Reliability tasks such as coordinating with adjoining Planning Coordinators to develop interconnection-wide models with appropriate loads, resources, and System topology; evaluating and reporting on the performance of the consolidated transmission assessments; and evaluating interconnection reliability concerns among affected Planning Coordinators.

Likes 0	
Dislikes 0	

Response

Brandon Gleason - Electric Reliability Council of Texas, Inc. - 2

Answer	
Document Name	

Comment

Electric Reliability Council of Texas, Inc. (ERCOT) sees value in ensuring that Planning Coordinators (PC) and Transmission Planners (TPs) have the distributed energy resource (DER) data contemplated by the Standard Authorization Request (SAR). ERCOT notes that the SAR does not address a potential issue related to the scope of the NERC Compliance Registration Criteria for Distribution Providers (DPs). Specifically, not all entities that serve a distribution function are required to register as DPs with NERC under NERC's Compliance Registry Criteria. Accordingly, while the information contemplated in the SAR would no doubt benefit PCs like ERCOT, that information may be incomplete because of gaps in the data collection process.

ERCOT concurs with the ISO/RTO Council Standards Review Committee that any revisions to Reliability Standard MOD-032-1 should ensure that PCs have discretion to determine the DER information they need in order to perform their PC function.

Likes 0	
Dislikes 0	

Response

Devin Shines - PPL - Louisville Gas and Electric Co. - 3,5,6 - SERC, Group Name Louisville Gas and Electric Company and Kentucky Utilities Company

Answer	
Document Name	

Comment

In addition to our comments on the SAR Project Scope we provide the following feedback:

- We do not support the "Industry Need" section of the SAR as written. The lack of "specific reference to DER data" does not mean that the data does not exist or is not already attainable by PCs and TPs under the existing standard. As mentioned in Question 1, in response to Item (a), there are already specific provisions in the Standard allowing for the collection of such data.

  Additionally, the Industry Need statement of the SAR states that the working group "has identified the need for improved modeling of aggregate DER for planning studies (including both utility-scale and retail-scale DER)." However, there is no further explanation or justification to support the existence of this perceived need or the corresponding gaps.

  Also, the use of the phrase "retail-scale DER" raises jurisdictional questions around the collection of this type of data. The definition of Bulk Electric System determines what generating resources fall under NERC's purview, and many DERs would not meet the criteria. Retail generation of this kind would be excluded from that purview. Additionally, it does not appear that the issue of whether DER would be "local distribution", which is excluded from the BES definition and from the FPA section 215 statutory term of "Bulk-Power System", was considered.

- We do not support the "Purpose or Goal" section of the draft SAR as it is currently written. The section proposes revisions to MOD-032-1 in order to "address gaps in data collection for the purpose of modeling…. [and to] provide clarity and consistency when coordinating with the DP to gather aggregate load and DER data." Unless there is a known gap or lack of clarity that affects reliability, this goal could unnecessarily increase administrative burdens. In fact, we do not believe there are gaps or lack of clarity within the currently approved MOD-032-1. Similar to our feedback regarding the "Industry Need" section, we recommend a further explanation of perceived gaps so that stakeholders can (a) better understand what is driving proposed revisions, and (b) provide more effective feedback to assist with the drafting of those revisions.

- We do not support the following aspects of the "Detailed Description" section of the draft SAR; the reasoning for our inability to support is explained above :
- Replacement of LSE with DP
- Modifications to Attachment 1
- Potential addition of DER to NERC Glossary of Terms

- We are supportive of, and offer some feedback on, the following points in the "Detailed Description" section:

- The last paragraph discusses the currently proposed Reliability Guideline: DER Data Collection for Modeling in Transmission Planning Studies. We want to compliment the Working Group on the development of this guideline, as it will provide timely guidance to help support PCs and TPs collect necessary aggregated DER data to ensure their planning models and analysis support the continued reliability of the Bulk Electric System once it is completed and approved.

  While the draft SAR states that the guideline is not meant to "dilute the criticality" of the SAR, we recommend that the guideline is given an

	opportunity to provide PCs and TPs with clarity before revisions to MOD-032-1 commence. This guideline may be able to address any perceived issues without creating additional administrative requirements as part of the Reliability Standard.
Likes 0	
Dislikes 0	
Response	
Bruce Reimer - Manitoba Hydro - 1,3,5,6	
Answer	
Document Name	
Comment	
The NERC SPIDERWG is currently preparing a Reliability Guideline on data collection for DER modeling. However it looks like the proposed SAR only addresses the minimum requirements and not all of the recommendations in the Reliability Guideline. It's not clear what the minimum is defined to be. *Ideally the Reliability Guideline would be completed first followed by the SAR. Putting both out in parallel is a bit problematic if the SAR gets approved but significant changes are needed as a result of changes to the Reliability Guideline.*	
Likes 0	
Dislikes 0	
Response	
Devon Tremont - Taunton Municipal Lighting Plant - 1,3,5 - NPCC	
Answer	
Document Name	
Comment	
The Taunton Municipal Lighting Plant believes that a more effective and efficient method to address the emerging risk of DER penetration is through Implementation Guidance such as the DER Guideline that the SPIDERWG has proposed, which can inform the industry how significant levels of DER penetration can be integrated into their existing compliance efforts for MOD-032-1 and TPL-001-4.	
Likes 0	
Dislikes 0	
Response	
Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable	
Answer	
Document Name	

Comment
1. EEI disagrees with Item 3 contained within the Industry Need statement. There is no need to "review any additional gaps in DER data collection with the de-registration of LSE." Such a review is inconsistent with the FERC order (153 FERC ¶ 61,024) approving the removal of LSEs from the functional registration. Notably, RCs, BAs and REs and other affected entities that need the information from LSEs had no concerns if LSEs were no longer registered. The working group should take notice of the FERC conclusions and findings in this order. 2. EEI disagrees with the Purpose and Goal statement. Specifically, it is not clear what gaps within the currently approved MOD-032-1 exist, beyond the need to add the DP function. 3. EEI does not support the Project Scope as defined in the SAR. a. Attachment 1 – Data Reporting Requirements within MOD-032-1 do not need to be updated. Steady-State (Item 2 and Item 9), and Dynamics (Item 10) provide sufficient flexibility for PCs and TPs to ensure that DER data is collected. We further note that these items provide sufficient latitude in what is collected. "Other information requested by the Planning Coordinator or Transmission Planner necessary for modeling purposes. [BA, GO, LSE, TO, TSP]". b. EEI does not see a need to define the term Distributed Energy Resource (DER) but does not oppose a drafting team evaluating it and offering the industry a proposed definition.

Likes 0	
Dislikes 0	

Response

Bobbi Welch - Midcontinent ISO, Inc. - 2	
Answer	
Document Name	

Comment
When modifying the standard, the drafting team should ensure that the standard provides Planning Coordinators and Transmission Planners with the ability to get DER information which may be unique for their area. Necessary DER information will likely vary by area. Should NERC and the Standards Committee decide not to pursue this SAR, MISO offers the following additional items for the SAR Drafting Team's consideration: 1. There needs to be a quick resolution for replacing LSE with DP in MOD-032. 2. MISO sees increasing problems in the data collection process as DER is added based on our experience. If this SAR is not pursued, there needs to be enforceable direction to compel data submittals. The need to acquire modeling data for DER will aggravate this problem. There is no mechanism compelling submittal of distribution system data in sufficient detail to aggregate retail scale DER appropriately. 3. Attachment 1 within MOD-032-1 needs to be updated. Item 9 is too general and leaves room for argument about which resources need to be modeled.

4. Seek to define the term Distributed Energy Resource (DER) within the NERC Glossary of Terms as it currently does not have a standardized definition.

5. Consider how to incorporate flexibility for the future representation of DER as it evolves.

MISO also supports the comments submitted by the ISO/RTO Council (IRC) Standards Review Committee (IRC SRC).

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

We offer the following additional (a-e) comments for consideration by the SAR drafting team:

a) We do not support a SAR that dictates overly prescriptive data requirements that the TP/PC must request from the DP, as the existing MOD-032 standard already allows PCs/TPs to request the type of information contemplated in the SAR;

b) Any modifications to the standard should be focused on obtaining modeling data and should not dictate what must be included in the model and how assessments are performed;

c) Any modifications to the standard related to DER should recognize that a small quantity of DERs could have no impact on BES studies, especially for low penetration regions, and thus could be netted out with load with no impact to reliability. That determination should be left up to the individual TP/PC;

d) Cost impact may not be minimal depending on the scope of data being requested;

e) We endorse the comments developed by EEI: Should NERC and the Standards Committee decide to pursue this SAR, we offer the following additional (3) concerns.

1) EEI disagrees with Item 3 contained within the Industry Need statement. There is no need to "review any additional gaps in DER data collection with the de-registration of LSE." Such a review is inconsistent with the FERC order (153 FERC ¶ 61,024) approving the removal of LSEs from the functional registration. Notably, RCs, BAs and REs and other affected entities that need the information from LSEs had no concerns if LSEs were no longer registered. The working group should take notice of the FERC conclusions and findings in this order.

2) EEI disagrees with the Purpose and Goal statement. Specifically, it is not clear what gaps within the currently approved MOD-032-1 beyond the need to add the DP function, exist.

3) EEI does not support the Project Scope as defined in the SAR:

a) Attachment 1 – Data Reporting Requirements within MOD-032-1 do not need to be updated. Steady-State (Item 2 and Item 9), and Dynamics (Item 10) provide sufficient flexibility for PCs and TPs to ensure that DER data is collected. We further note that these items provide sufficient latitude in what is collected. "Other information requested by the Planning Coordinator or Transmission Planner necessary for modeling purposes. [BA, GO, LSE, TO, TSP]";

b) EEI does not see a need to define the term Distributed Energy Resource (DER) but does not oppose a drafting team evaluating it and offering the industry a proposed definition.

Likes 0	
Dislikes 0	

Response

Douglas Webb - Westar Energy - 1,3,5,6 - MRO, Group Name Westar-KCPL

Answer	
Document Name	

Comment

Evergy (Westar Energy and Kansas City Power & Light) supports Edison Electric Institutes' (EEI) response, in principle, to Question 2, with minor variation. We offer the following:.

Should NERC and the Standards Committee decide to pursue this SAR, we offer the following additional concerns:

1. We disagree with Item 3 contained within the Industry Need statement. There is no need to "review any additional gaps in DER data collection with the de-registration of LSE." Such a review is inconsistent with the FERC order (153 FERC ¶ 61,024) approving the removal of LSEs from the functional registration. Notably, RCs, BAs and REs and other affected entities that need the information from LSEs had no concerns if LSEs were no longer registered. The working group should take notice of the FERC conclusions and findings in this order.
2. We disagree with the Purpose and Goal statement. Specifically, it is not clear what gaps within the currently approved MOD-032-1 beyond the need to add the DP function, exist.
3. We do not support the Project Scope as defined in the SAR.

- Attachment 1 – Data Reporting Requirements within MOD-032-1 do not need to be updated. Steady-State (Item 2 and Item 9), and Dynamics (Item 10) provide sufficient flexibility for PCs and TPs to ensure that DER data is collected. We further note that these items provide sufficient latitude in what is collected. "Other information requested by the Planning Coordinator or Transmission Planner necessary for modeling purposes. [BA, GO, LSE, TO, TSP]".
- We do not see a need to define the term Distributed Energy Resource (DER).

Likes 0	
Dislikes 0	

Response

David Jendras - Ameren - Ameren Services - 1,3,6

Answer	
Document Name	

Comment

Ameren agrees with and supports EEI comments.

Likes 0	

Dislikes 0	

Response

Scott Tomashefsky - Northern California Power Agency - 3,4,5,6

Answer	
Document Name	

Comment

If the emerging risk of DER penetration is deemed necessary by NERC/FERCm it should done via Implementation Guidance, not through more prescriptive NERC reliability standards.

Adding a definition for Distributed Energy Resources (DER) is not needed. The DER Report that was approved in 2017 established a reasonable working definition.

Likes 0	
Dislikes 0	

Response

Kevin Salsbury - Berkshire Hathaway - NV Energy - 5

Answer	
Document Name	

Comment

1. NV Energy disagrees with Item 3 contained within the Industry Need statement. There is no need to "review any additional gaps in DER data collection with the de-registration of LSE." Such a review is inconsistent with the FERC order (153 FERC ¶ 61,024) approving the removal of LSEs from the functional registration. Notably, RCs, BAs and REs and other affected entities that need the information from LSEs had no concerns if LSEs were no longer registered. The working group should take notice of the FERC conclusions and findings in this order.
2. NV Energy disagrees with the Purpose and Goal statement. Specifically, it is not clear what gaps within the currently approved MOD-032-1 beyond the need to add the DP function, exist.
3. NV Energy does not support the Project Scope as defined in the SAR.
    i. Attachment 1 – Data Reporting Requirements within MOD-032-1 do not need to be updated. Steady-State (Item 2 and Item 9), and Dynamics (Item 10) provide sufficient flexibility for PCs and TPs to ensure that DER data is collected. We further note that these items provide sufficient latitude in what is collected. "Other information requested by the Planning Coordinator or Transmission Planner necessary for modeling purposes. [BA, GO, LSE, TO, TSP]".
    ii. NV Energy does not see a need to define the term Distributed Energy Resource (DER) but does not oppose a drafting team evaluating it and offering the industry a proposed definition.

Likes 0	

Dislikes 0	
Response	
Rebecca Baldwin - Transmission Access Policy Study Group - NA - Not Applicable - NA - Not Applicable	
Answer	
Document Name	
Comment	
We believe a more effective and efficient method to address the emerging risk of DER penetration is through Implementation Guidance such as the DER Guideline that the SPIDERWG has proposed, which can inform the industry how significant levels of DER penetration can be integrated into their existing compliance efforts for MOD-032-1 and TPL-001-4. Such an approach would allow for this emerging technology and risk to be addressed without imposing mandates on areas of the grid that may not see significant DER penetration for many years. We don't believe that a new working definition for DER is required at this time. The DER Report written and approved in 2017 establishes a reasonable working definition. Given that we do not believe DERs need to be specifically mentioned in MOD-032, and that the term does not appear to be used in any existing reliability standards, we don't see any need for including that definition in the NERC Glossary.	
Likes 0	
Dislikes 0	
Response	
Andy Fuhrman - Minnkota Power Cooperative Inc. - 1 - MRO	
Answer	
Document Name	
Comment	
MPC supports comments from the MRO NERC Standards Review Forum (NSRF).	
Likes 0	
Dislikes 0	
Response	
Joe McClung - JEA - 1,3,5	
Answer	
Document Name	
Comment	

JEA recommends that a single SAR (and a single SDT) should handle all DER revisions. Instead of forming multiple teams, a single team should be able to modify all of the relevant standards to address DER penetration.

Likes 0	
Dislikes 0	

Response

LaTroy Brumfield - American Transmission Company, LLC - 1

Answer	
Document Name	

Comment

Should NERC and the Standards Committee decide not to pursue this SAR, we offer the following additional concerns:

1. There needs to be a quick resolution for replacing LSE with DP in MOD-032.

2. ATC sees increasing problems in the data collection process as DER is added based on our experience. If this SAR is not pursued, there needs to be enforceable direction to compel data submittals. In ATC's experience, not all resource providers are willing to supply the level of detail needed for models. The need to acquire modeling data for DER will aggravate this problem. There is no mechanism compelling submittal of distribution system data in the detail sufficient to aggregate R-DER appropriately.

3. Attachment 1 within MOD-032-1 needs to be updated. Item 9 is too general and leaves room for argument about which resources need to be modeled.

4. The term Distributed Energy Resource (DER) is not well understood within the Industry, just look at the debate about what is U-DER and what is R-DER and what data needs to be collected. DER and appropriate levels of detail need to be defined somewhere in NERC documents.

5. Some direction is needed about levels of DER to be represented. 0 MW is too low of a minimum.

Likes 0	
Dislikes 0	

Response

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

Answer	
Document Name	

Comment

None.

Likes 0	
Dislikes 0	
Response	
Kelsi Rigby - APS - Arizona Public Service Co. - 1,3,5,6	
Answer	
Document Name	
Comment	
If the SAR is approved AZPS suggests that the SAR drafting team consider how to address what happens if a DP does not have the ability to collect the information or have control of the information. If the DP does not have the requested data there should be a recommended methodology for providing estimates. Further, if Attachment 1 is updated to specifically include DER, AZPS highly encourages the SDT to include a definition of "Distributed Energy Resource (DER)" in the NERC Glossary of terms. Without this definition, there is no reference for applicable facilities for this standard.	
Likes 0	
Dislikes 0	
Response	
James Manning - North Carolina Electric Membership Corporation - 3,4,5 - SERC	
Answer	
Document Name	
Comment	
NCEMC appreciates the opportunity to comment on this SAR and participate in the Standards Development process.	
Likes 0	
Dislikes 0	
Response	
Dennis Sismaet - Northern California Power Agency - 3,4,5,6	
Answer	
Document Name	
Comment	

If the emerging risk of DER penetration is deemed necessary by NERC/FERC it should be done via Implementation Guidance, not more prescriptive NERC Reliability Standards.

Adding a definition for a Distributed Energy Resource (DER) is not needed. The DER Report written and approved in 2017 establishes a reasonable working definition.

Likes 0	
Dislikes 0	

Response

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

Answer	
Document Name	

Comment

To minimize churn among standard versions, Reclamation also recommends the SAR drafting team coordinate changes with other existing drafting teams for related standards; specifically, MOD-025, MOD-026, MOD-027, PRC-019, PRC-024, Project 2017-07, and the Standards Efficiency Review Phase 2.

Likes 0	
Dislikes 0	

Response

Dana Klem - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF

Answer	
Document Name	

Comment

These comments represent the MRO NSRF membership as a whole but would not preclude members from submitting individual comments".

All Standards do not need to be updated when there is a new or emerging technology (i.e., DER), MOD-032-1 covers that by the catch-all statement at the end of each section within Attachment 1.

Likes 0	
Dislikes 0	

Response

Helen Lainis - IRC - 2 - MRO,WECC,NPCC,SERC, Group Name IRC	
Answer	
Document Name	
Comment	
When modifying the standard, the drafting team should ensure that the standard provides the Planning Coordinator and Transmission Planners in the area the ability to get the DER information which may be unique for the area. Necessary DER information will likely vary by area.	
Likes 0	
Dislikes 0	
Response	
John Pearson - ISO New England, Inc. - 2 - NPCC	
Answer	
Document Name	
Comment	
At the top of pg 3, the SAR describes references to aggregate steady state information to be included in the table in Attachment 1. It discusses aggregate information, but then the subcategories might not line up with aggregation and it is unclear how entities would provide an aggregate fuel type. We suggest that the information that is needed for each bus is: aggregate capacity by fuel type A, aggregate capacity by fuel type B, etc.	
Likes 0	
Dislikes 0	
Response	
Thomas Breene - WEC Energy Group, Inc. - 3,4,5,6	
Answer	
Document Name	
Comment	
Should NERC and the Standards Committee decide to pursue this SAR, we offer the following additional concerns: 1. WEC Energy Group disagrees with Item 3 contained within the Industry Need statement. There is no need to “review any additional gaps in DER data collection with the de-registration of LSE.” Such a review is inconsistent with the FERC order (153 FERC ¶ 61,024) approving the removal of LSEs from the functional registration. Notably, RCs, BAs and REs and other affected entities that need the information from LSEs had no concerns if LSEs were no longer registered. The working group should take notice of the FERC conclusions and findings in this order.	

2. WEC Energy Group disagrees with the Purpose and Goal statement. We do not see gaps within the currently approved MOD-032-1 beyond the replacement of the need to add the DP function. Before this SAR is approved, technical justification should be strengthened to demonstrate that a reliability gap exists and that MOD-032-1 has a gap affecting BES reliability. In addition, it is unclear what "interconnection-wide case creation regarding DER" means. That phrase should be clarified.

3. WEC Energy Group does not support the Project Scope as defined in the SAR.

    i. Attachment 1 – Data Reporting Requirements within MOD-032-1 does not need to be updated. Steady State (Item 2 and Item 9), and Dynamics (Item 10) provide sufficient flexibility for PCs and TPs to ensure that DER data is collected. We further note that these items provide sufficient latitude in what is collected. "Other information requested by the Planning Coordinator or Transmission Planner necessary for modeling purposes. [BA, GO, LSE, TO, TSP]"

    ii. WEC Energy Group does not see a need to define the term Distributed Energy Resource (DER) but does not oppose a drafting team evaluating it and offering the industry a proposed definition.

Likes 0	
Dislikes 0	

Response

Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Standard Collaborations

Answer	
Document Name	

Comment

ACES appreciates the opportunity to comment on this SAR and participate in the Standards Development Process.

Likes 0	
Dislikes 0	

Response

Jamie Johnson - California ISO - 2

Answer	
Document Name	

Comment

The CAISO agrees with comments submitted by the ISO/RTO Counsel (IRS) Standards Review Committee.

Likes 0	
Dislikes 0	

Response

Michael Whitney - Northern California Power Agency - 3,4,5,6, Group Name NCPA	
Answer	
Document Name	
Comment	
If the emerging risk of DER penetration is deemed necessary by NERC/FERC it should be done via Implementation Guidance, not more prescriptive NERC Reliability Standards. Adding a definition for a Distributed Energy Resource (DER) is not needed. The DER Report written and approved in 2017 establishes a reasonable working definition.	
Likes 0	
Dislikes 0	
Response	
Brian Evans-Mongeon - Utility Services, Inc. - 4	
Answer	
Document Name	
Comment	
The DERTF wisely made the determination not to define “Distributed Energy Resource (DER)” in the Glossary of terms. Defining DER may be polarizing given that certain industry members and groups have rightfully identified DER (and associated impacts) as heterogeneous across the ERO. Planning Coordinators and Transmission Planners should jointly develop Steady State data specifications and in doing so provide DPs with an opportunity to specify what data is actually available for what resources.	
Likes 0	
Dislikes 0	
Response	
Marty Hostler - Northern California Power Agency - 3,4,5,6, Group Name NCPA	
Answer	
Document Name	
Comment	
If the emerging risk of DER penetration is deemed necessary by NERC/FERC it should be done via Implementation Guidance, not more prescriptive NERC Reliability Standards.	

Adding a definition for a Distributed Energy Resource (DER) is not needed. The DER Report written and approved in 2017 establishes a reasonable working definition.	
Likes 0	
Dislikes 0	
Response	
Matthew Nutsch - Seattle City Light - 1,3,4,5,6 - WECC	
Answer	
Document Name	
Comment	
None	
Likes 0	
Dislikes 0	
Response	
John Allen - City Utilities of Springfield, Missouri - 1,3,4	
Answer	
Document Name	
Comment	
We believe a more effective and efficient method to address the emerging risk of DER penetration is through Implementation Guidance such as the DER Guideline that the SPIDERWG has proposed which can inform the industry how significant levels of DER penetration can be integrated into their existing compliance efforts for MOD-032-1 and TPL-001-4. Such an approach would allow for this emerging technology and risk to be addressed without imposing mandates on areas of the grid that may not see significant DER penetration for many years.	
Likes 0	
Dislikes 0	
Response	
Kevin Conway - Public Utility District No. 1 of Pend Oreille County - 1,3,5,6	
Answer	
Document Name	
Comment	

None	
Likes 0	
Dislikes 0	
Response	
Leonard Kula - Independent Electricity System Operator - 2	
Answer	
Document Name	
Comment	
The SAR drafting team should consider the frequency of DER data reporting to the PC.	
Likes 0	
Dislikes 0	
Response	
Carl Pineault - Hydro-Qu?bec Production - 1,5	
Answer	
Document Name	
Comment	
N/A	
Likes 0	
Dislikes 0	
Response	