

## Comment Report

**Project Name:** 2021-02 Modifications to VAR-002-4.1 | Draft 1  
**Comment Period Start Date:** 10/31/2022  
**Comment Period End Date:** 1/13/2023  
**Associated Ballots:** 2021-02 Modifications to VAR-002-4.1 Implementation Plan IN 1 OT

There were 67 sets of responses, including comments from approximately 180 different people from approximately 122 companies representing 10 of the Industry Segments as shown in the table on the following pages.

## Questions

- 1. Do you agree that dispersed power producing resource language and Facilities definition provides clarity to proposed VAR-002-5 applicability and better aligns to the BES definition terminology? If no, please explain and provide recommendations.**
- 2. Do you agree that the additional words, “mutually-agreeable format” in Requirements R3 and R4 will address ambiguities and provide a means to get the clarity needed for notification threshold and medium communication? If no, please explain and provide recommendations.**
- 3. Throughout proposed VAR-002-5, the Project 2021-02 SDT has replaced/changed the words “automatic voltage regulator (AVR)” with the more comprehensive “automatic voltage regulator (AVR) or volt/VAR controller(s)” to add clarity and to better align with expressions/wording used in other NERC Reliability Standards, such as MOD-026. Do you agree with this change? If no, please explain and provide recommendations.**
- 4. The Project 2021-02 SDT has made revisions to the requirements for VAR-002-5 based on the recommendations resulting in Attachment 5 from the efforts of the Project 2016-EPR-02 Enhanced Periodic Review Team. Do you agree with these changes? If no, please explain and provide recommendations.**
- 5. Do you believe that proposed Reliability Standard VAR-002-5 can be met in a cost-effective manner? If you do not agree, or if you agree but have suggestions for improvement to enable more cost effective approaches, please provide your recommendation and, if appropriate, technical or procedural justification. Please provide the reasoning or justification for your position in the comments.**
- 6. The Project 2021-02 SDT has proposed a one-year implementation period. Would this proposed timeframe provide for enough time to put into place process, procedures, or technology to meet the proposed language of the Implementation Plan? If you think an alternate timeframe is needed, please propose an alternate implementation time period and provide a detailed explanation of actions planned to meet the implementation deadline.**
- 7. The Project 2021-02 SDT believes that the language of proposed Reliability Standard VAR-002-5 addresses the issues outlined in the project SAR. Do you agree? If you agree but have suggestions for improvement to enable more cost effective approaches, please provide your recommendation and, if appropriate, technical or procedural justification.**
- 8. Provide any additional comments on proposed Reliability Standard VAR-002-5 and technical rationale document for the standard drafting team to consider, if desired.**

Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
BC Hydro and Power Authority	Adrian Andreoiu	1	WECC	BC Hydro	Hootan Jarollahi	BC Hydro and Power Authority	3	WECC
					Helen Hamilton Harding	BC Hydro and Power Authority	5	WECC
					Adrian Andreoiu	BC Hydro and Power Authority	1	WECC
DTE Energy - Detroit Edison Company	Adrian Raducea	5		DTE Energy - DTE Electric	Karie Barczak	DTE Energy - Detroit Edison Company	3	RF
					Adrian Raducea	DTE Energy - Detroit Edison	5	RF
					patricia ireland	DTE Energy	4	RF
WEC Energy Group, Inc.	Christine Kane	3		WEC Energy Group	Christine Kane	WEC Energy Group	3	RF
					Matthew Beilfuss	WEC Energy Group, Inc.	4	RF
					Clarice Zellmer	WEC Energy Group, Inc.	5	RF
					David Boeshaar	WEC Energy Group, Inc.	6	RF
Public Utility District No. 1 of Chelan County	Diane E Landry	1		CHPD	Meaghan Connell	Public Utility District No. 1 of Chelan County	5	WECC
					Joyce Gundry	Public Utility District No. 1 of Chelan County	3	WECC
					Glen Pruitt	Public Utility District No. 1 of Chelan County	6	WECC
New York Independent System Operator	Gregory Campoli	2		ISO/RTO Standards Review Committee	Gregory Campoli	New York Independent System Operator	2	NPCC
					Helen Lainis	IESO	2	NPCC

					Michael Del Viscio	PJM	2	RF
					Charles Yeung	Southwest Power Pool, Inc. (RTO)	2	MRO
					Bobbi Welch	Midcontinent ISO, Inc.	2	RF
					Kathleen Goodman	ISO-NE	2	NPCC
Jennie Wike	Jennie Wike		WECC	Tacoma Power	Jennie Wike	Tacoma Public Utilities	1,3,4,5,6	WECC
					John Merrell	Tacoma Public Utilities (Tacoma, WA)	1	WECC
					Marc Donaldson	Tacoma Public Utilities (Tacoma, WA)	3	WECC
					Hien Ho	Tacoma Public Utilities (Tacoma, WA)	4	WECC
					Terry Gifford	Tacoma Public Utilities (Tacoma, WA)	6	WECC
					Ozan Ferrin	Tacoma Public Utilities (Tacoma, WA)	5	WECC
ACES Power Marketing	Jodirah Green	1,3,4,5,6	MRO,RF,SERC,Texas RE,WECC	ACES Collaborators	Bob Soloman	Hoosier Energy Electric Cooperative	1	RF
					Kevin Lyons	Central Iowa Power Cooperative	1	MRO
					Amber Skillern	East Kentucky Power Cooperative	1	SERC
					Ryan Strom	Buckeye Power, Inc.	5	RF
					Dave Hartman	Arizona Electric Power Cooperative	1	WECC
					Scott Brame	NC Electric Membership Corporation	3,4,5	SERC

					Scott Berry	Wabash Valley Power Association	3	RF
Entergy	Julie Hall	6		Entergy	Oliver Burke	Entergy - Entergy Services, Inc.	1	SERC
					Jamie Prater	Entergy	5	SERC
MRO	Kendra Buesgens	1,2,3,4,5,6	MRO	MRO NSRF	Bobbi Welch	Midcontinent ISO, Inc.	2	MRO
					Christopher Bills	City of Independence Power & Light	3,5	MRO
					Fred Meyer	Algonquin Power Co.	3	MRO
					Jamie Monette	Allete - Minnesota Power, Inc.	1	MRO
					Larry Heckert	Alliant Energy Corporation Services, Inc.	4	MRO
					Marc Gomez	Southwestern Power Administration	1	MRO
					Matthew Harward	Southwest Power Pool, Inc.	2	MRO
					Bryan Sherrow	Kansas City Board Of Public Utilities	1	MRO
					Terry Harbour	MidAmerican Energy	1,3	MRO
					Jamison Cawley	Nebraska Public Power	1,3,5	MRO
					Seth Shoemaker	Muscatine Power & Water	1,3,5,6	MRO
					Michael Brytowski	Great River Energy	1,3,5,6	MRO
					Shonda McCain	Omaha Public Power District	6	MRO
George Brown	Acciona Energy North America	5	MRO					

					Jaimin Patel	Saskatchewan Power Corporation	1	MRO
					Kimberly Bentley	Western Area Power Administration	1,6	MRO
					Jay Sethi	Manitoba Hydro	1,3,5,6	MRO
					Michael Ayotte	ITC Holdings	1	MRO
FirstEnergy - FirstEnergy Corporation	Mark Garza	4		FE Voter	Julie Severino	FirstEnergy - FirstEnergy Corporation	1	RF
					Aaron Ghodooshim	FirstEnergy - FirstEnergy Corporation	3	RF
					Robert Loy	FirstEnergy - FirstEnergy Solutions	5	RF
					Mark Garza	FirstEnergy-FirstEnergy	1,3,4,5,6	RF
					Stacey Sheehan	FirstEnergy - FirstEnergy Corporation	6	RF
Santee Cooper	Marty Watson	1,3,5,6		Santee Cooper	Paul Camilletti	Santee Cooper	1,3,5,6	SERC
					Rene' Free	Santee Cooper	1,3,5,6	SERC
Michael Johnson	Michael Johnson		WECC	PG&E All Segments	Marco Rios	Pacific Gas and Electric Company	1	WECC
					Sandra Ellis	Pacific Gas and Electric Company	3	WECC
					Frank Lee	Pacific Gas and Electric Company	5	WECC
Southern Company - Southern Company Services, Inc.	Pamela Frazier	1,3,5,6	MRO,RF,SERC,Texas RE,WECC	Southern Company	Matt Carden	Southern Company - Southern Company Services, Inc.	1	SERC
					Joel Dembowski	Southern Company - Alabama Power Company	3	SERC

					Jim Howell, Jr.	Southern Company - Southern Company Generation	5	SERC
					Ron Carlsen	Southern Company - Southern Company Generation	6	SERC
Northeast Power Coordinating Council	Ruida Shu	1,2,3,4,5,6,7,8,9,10	NPCC	NPCC RSC	Gerry Dunbar	Northeast Power Coordinating Council	10	NPCC
					Sheraz Majid	Hydro One Networks, Inc.	1	NPCC
					Deidre Altobell	Con Edison	1	NPCC
					John Hastings	National Grid	1	NPCC
					Jeffrey Streifling	NB Power Corporation	1	NPCC
					Michele Tondalo	United Illuminating Co.	1	NPCC
					Chantal Mazza	Hydro Quebec	1	NPCC
					Stephanie Ullah-Mazzuca	Orange and Rockland	1	NPCC
					Quintin Lee	Eversource Energy	1	NPCC
					Michael Ridolfino	Central Hudson Gas & Electric Corp.	1	NPCC
					Dan Kopin	Vermont Electric Power Company	1	NPCC
					James Grant	NYISO	2	NPCC
					John Pearson	ISO New England, Inc.	2	NPCC
					Harishkumar Subramani Vijay Kumar	Independent Electricity System Operator	2	NPCC
					Nicolas Turcotte	Hydro-Quebec TransEnergie	1	NPCC

Randy MacDonald	New Brunswick Power Corporation	2	NPCC
Dermot Smyth	Con Ed - Consolidated Edison Co. of New York	1	NPCC
Michael Jones	National Grid	3	NPCC
David Burke	Orange and Rockland	3	NPCC
Peter Yost	Con Ed - Consolidated Edison Co. of New York	3	NPCC
Salvatore Spagnolo	New York Power Authority	1	NPCC
Sean Bodkin	Dominion - Dominion Resources, Inc.	6	NPCC
David Kwan	Ontario Power Generation	4	NPCC
Silvia Mitchell	NextEra Energy - Florida Power and Light Co.	1	NPCC
Glen Smith	Entergy Services	4	NPCC
Sean Cavote	PSEG	4	NPCC
Jason Chandler	Con Edison	5	NPCC
Tracy MacNicoll	Utility Services	5	NPCC
Shivaz Chopra	New York Power Authority	6	NPCC
Vijay Puran	New York State Department of Public Service	6	NPCC
ALAN ADAMSON	New York State Reliability Council	10	NPCC



					David Kiguel	Independent	7	NPCC
					Joel Charlebois	AESI	7	NPCC
Western Electricity Coordinating Council	Steven Rueckert	10		WECC Entity Monitoring	Steve Rueckert	WECC	10	WECC
					Phil O'Donnell	WECC	10	WECC
Associated Electric Cooperative, Inc.	Todd Bennett	3		AECI	Michael Bax	Central Electric Power Cooperative (Missouri)	1	SERC
					Adam Weber	Central Electric Power Cooperative (Missouri)	3	SERC
					Stephen Pogue	M and A Electric Power Cooperative	3	SERC
					William Price	M and A Electric Power Cooperative	1	SERC
					Peter Dawson	Sho-Me Power Electric Cooperative	1	SERC
					Mark Ramsey	N.W. Electric Power Cooperative, Inc.	1	NPCC
					John Stickley	NW Electric Power Cooperative, Inc.	3	SERC
					Tony Gott	KAMO Electric Cooperative	3	SERC
					Micah Breedlove	KAMO Electric Cooperative	1	SERC
					Kevin White	Northeast Missouri Electric Power Cooperative	1	SERC
					Skyler Wiegmann	Northeast Missouri Electric Power Cooperative	3	SERC
					Ryan Ziegler	Associated Electric	1	SERC

					Cooperative, Inc.			
					Brian Ackermann	Associated Electric Cooperative, Inc.	6	SERC
					Brad Haralson	Associated Electric Cooperative, Inc.	5	SERC

1. Do you agree that dispersed power producing resource language and Facilities definition provides clarity to proposed VAR-002-5 applicability and better aligns to the BES definition terminology? If no, please explain and provide recommendations.

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

Answer No

Document Name

Comment

Reactor and Capacitor Banks are capable of controlling voltage. By definition, would this capability invoke VAR-002 scope?

Additionally, dispersed power can be delivered onsite without the capability of controlling voltage. Does this equipment addition (inverters, battery) suggest it is within VAR-002 scope only if the capability is installed?

Likes 0

Dislikes 0

Response

Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF

Answer No

Document Name

Comment

In the applicability section 4.2

**Facilities:** "For the purpose of this standard, the term "generator" means a generator-owned facility capable of controlling voltage."

The MRO NSRF is unclear if SDT means any size generator or any voltage level of the generator. Also, does this Standard apply to dispersed power producing resources?

Suggest using the NERC defined BES generator definition.

4.2. Facilities:

4.2.1 For the purpose of this standard, the term "generator" subject to these requirements means:

4.2.1.1 A BES generator with a gross individual nameplate rating greater than 20 MVA connected at 100 kV and greater: or

4.2.1.2: BES generating "plant" at the common Point of Interconnection meaning the transmission (high voltage) side of the main generator step-up transformer where more than 75 MVA of aggregate generation has been collected connected at 100 kV and greater.

4.2.1.3: Individual generating units of dispersed power producing resources identified through Inclusion I4 of the Bulk Electric System definition are excluded from the Requirements of this Standard.

Likes	1	Wike Jennie On Behalf of: John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry
Dislikes	0	
<b>Response</b>		
Julie Hall - Entergy - 6, Group Name Entergy		
Answer		No
Document Name		
<b>Comment</b>		
This should align with the definitions as defined in the glossary of Terms and should refer to the various inclusions. Otherwise, there are no definitions in this standard regarding this.		
Likes	0	
Dislikes	0	
<b>Response</b>		
Lindsey Mannion - ReliabilityFirst - 10		
Answer		No
Document Name		
<b>Comment</b>		
<p>The addition of dispersed power producing resource language does provide clarity, but if the standard is to apply to all dispersed power producing resources, it should be noted under Facilities (4.2). Additionally, 4.2 should specify whether the applicability of the standard is limited to BES generators and BES dispersed power producing resources.</p> <p>Using the term “generator” within VAR-002 more broadly than “generator” is used in other standards such as VAR-001 reduces clarity as it relates to how generator should be interpreted in other standards. If a definition of generator is needed, the RF Standard Review Team for this project recommends considering a proposed addition to the NERC Glossary of Terms.</p>		
Likes	0	
Dislikes	0	
<b>Response</b>		
Marc Sedor - Seminole Electric Cooperative, Inc. - 3		
Answer		No
Document Name		
<b>Comment</b>		

No, it could be clearer, in the revision, where to get the specific definition in the glossary. VAR-002 should state specifically where in glossary and/or which part of the definition. ie I4 in glossary definition

Likes 0

Dislikes 0

### Response

Melanie Wong - Seminole Electric Cooperative, Inc. - 5

Answer

No

Document Name

### Comment

No, it could be clearer, in the revision, where to get the specific definition in the glossary. VAR-002 should state specifically where in glossary and/or which part of the definition. ie I4 in glossary definition

Likes 0

Dislikes 0

### Response

Jennifer Bray - Arizona Electric Power Cooperative, Inc. - 1

Answer

No

Document Name

### Comment

AEPC has signed on to ACES comments below:

The facilities definition in Section 4.2 redefines the term generator and uses the term facility within the definition of facilities. It is our opinion that this section should be rewritten similar to the following:

"For the purpose of this standard, the terms, "Facility" or "applicable Facility" shall mean any BES generator (or group of BES generators) capable of controlling voltage at the point of interconnection (POI)."

Likes 0

Dislikes 0

### Response

**Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECI****Answer** No**Document Name****Comment**

AECI supports comments submitted by the NAGF.

Likes 0

Dislikes 0

**Response****Ryan Strom - Buckeye Power, Inc. - 5 - RF****Answer** No**Document Name****Comment**

We support the comments made by ACES Power Marketing.

Likes 0

Dislikes 0

**Response****Jessica Lopez - APS - Arizona Public Service Co. - 3****Answer** No**Document Name****Comment**

AZPS supports the addition of “dispersed power producing resources” however recommends the Standard Drafting Team to consider expanding the Facilities definition to include individual traditional generation resources.

Likes 0

Dislikes 0

**Response****Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group****Answer** No

<b>Document Name</b>	
<b>Comment</b>	
WEC Energy Group supports the MRO NSRF comments.	
Likes	0
Dislikes	0
<b>Response</b>	
<b>Dennis Chastain - Tennessee Valley Authority - 1,3,5,6 - SERC</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
<p>The term 'dispersed power producing resource', although used in other NERC documents (but notably not defined in the NERC Glossary of Terms), can still be misunderstood. Entities subject to compliance with NERC Reliability Standards would benefit in having an industry vetted, NERC Board adopted, and appropriate regulatory body approved definition that is added to the NERC Glossary of Terms. If developing a definition is beyond the scope of Project 2021-02, we believe adding the term 'dispersed power producing resource' to the VAR-002-5 version adds limited clarity.</p> <p>If the intent is to better align with the BES definition terminology, we suggest the following:</p> <p>Revise the 'Purpose' (A.3) to:</p> <p><b><i>"Purpose:</i></b> <i>To ensure generating resources [a term used in Inclusion I2 of the BES definition] and dispersed power producing resources [a term used in Inclusion I4 of the BES definition] supply or absorb Reactive Power, within their capabilities, to support the control of BES voltage within a specified operating range."</i></p> <p>Revise the 'Applicability' (A.4), 'Facilities' (4.2) section to:</p> <p><b><i>"Facilities:</i></b> <i>Generating resources and dispersed power producing resources as described in Inclusion I2 and I4, respectively, of the Bulk Electric System (BES) definition that are capable of supporting voltage control."</i></p>	
Likes	1
Dislikes	0
Wike Jennie On Behalf of: John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry	
<b>Response</b>	
<b>Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC Entity Monitoring</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	

Defining a "generator" as a "facility capable of controlling voltage" is ambiguous. All generators from major BES generators down to small portable generators have some voltage control capability. Does the SDT mean individual generators that are capable of changing voltage on the transmission system? If so, at what point on the transmission system? Also, is actual voltage variation required or do control circuits that can change VAR output or maintaining a specific power factor apply? Overall, we do not believe this is a clear definition.

WECC questions whether it adds to or reduces clarity to "define" a generator on a standard by standard basis. While "generator" is not a NERC defined term, a standard by standard definition of the word deflates from the common understanding of the word "generator." WECC suggests that perhaps Section 4.2 (Applicability) should state what class, type, or capability of BES generators are applicable and if inverters, VAR controllers or other devices that are applicable be specified in Section 4.

If voltage control devices external to the generators are to be considered then a potential gap exists in any instances where those devices are owned by a TO.

Likes 0

Dislikes 0

### Response

**Michael Johnson - Michael Johnson On Behalf of: Frank Lee, Pacific Gas and Electric Company, 3, 1, 5; Marco Rios, Pacific Gas and Electric Company, 3, 1, 5; Sandra Ellis, Pacific Gas and Electric Company, 3, 1, 5; - Michael Johnson, Group Name PG&E All Segments**

**Answer**

No

**Document Name**

**Comment**

PG&E agrees with the input provided by EEI on the addition of the "term" "dispersed power producing resources" and the EEI concerns the modifications do not fully address the two (2) types of resources.

PG&E also agrees with the EEI proposed updates except for the use of the word "term". In listening to industry comments and internal PG&E comments, the use of the word "term" has confused many that the SDT is creating a NERC Glossary Term which we do not believe is the case. PG&E recommends the word "term" be changed to "wording".

Likes 0

Dislikes 0

### Response

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

**Answer**

No

**Document Name**

**Comment**



The NAGF does not agree with the Facilities definition as proposed. The NAGF recommends that the SDT consider using applicable BES Definition terminology and language for the Facilities definition.

Likes 1 JEA, 1, McClung Joseph

Dislikes 0

**Response**

**Kinte Whitehead - Exelon - 3**

**Answer** No

**Document Name**

**Comment**

Exelon supports the comments submitted by EEI

Likes 0

Dislikes 0

**Response**

**Daniel Gacek - Exelon - 1**

**Answer** No

**Document Name**

**Comment**

Exelon supports the comments submitted by EEI.

Likes 0

Dislikes 0

**Response**

**Larry Brusseau - Corn Belt Power Cooperative - 1 - MRO**

**Answer** No

**Document Name**

**Comment**

In the applicability section 4.2 “

**Facilities:** For the purpose of this standard, the term “generator” means a generator-owned facility capable of controlling voltage.” It is unclear if they means any size or voltage generator. Also, does this also apply to dispersed power producing resources.

Suggest using the NERC defined BES generator definition.

4.2. Facilities:

4.2.1 For the purpose of this standard, the term “generator” subject to these requirements means:

4.2.1.1 A BES generator with a gross individual nameplate rating greater than 20 MVA connected at 100 kV and greater; or

4.2.1.2: BES generating “plant” at the common Point of Interconnection meaning the transmission (high voltage) side of the main generator step-up transformer where more than 75 MVA of aggregate generation has been collected connected at 100 kV and greater. Individual generating resources below the common point of interconnection are excluded.

Likes 0

Dislikes 0

### Response

**Israel Perez - Israel Perez On Behalf of: Jennifer Bennett, Salt River Project, 3, 5, 1, 6; Mathew Weber, Salt River Project, 3, 5, 1, 6; Sarah Blankenship, Salt River Project, 3, 5, 1, 6; Timothy Singh, Salt River Project, 3, 5, 1, 6; - Israel Perez**

**Answer**

No

**Document Name**

**Comment**

Dispersed power producing resource is not defined and could not be found in the Glossary of Terms Used in NERC Reliability Standards. Agree with Reliability First comment as well.

Likes 0

Dislikes 0

### Response

**Russell Noble - Cowlitz County PUD - 3**

**Answer**

No

**Document Name**

**Comment**

Agree with comments submitted by Tennessee Valley Authority.

Likes 0

Dislikes 0

**Response**

**Deanna Carlson - Cowlitz County PUD - 5**

**Answer** No

**Document Name**

**Comment**

Agree with comments submitted by Tennessee Valley Authority.

Likes 0

Dislikes 0

**Response**

**Adrian Andreoiu - BC Hydro and Power Authority - 1, Group Name BC Hydro**

**Answer** No

**Document Name**

**Comment**

BC Hydro appreciates the opportunity to comment and thanks the drafting team for their efforts. While BC Hydro is in favor of the intended modifications, we are unable to support the proposed version as drafted.

- The use of the term “dispersed power producing resource” as currently drafted could be interpreted to expand the scope of VAR-002 applicability beyond BES generating resources. BC Hydro noted that the Facility section of the Technical Rationale indicates that a “resource will have met the definition of inclusion to the Bulk Electric System”.

BC Hydro recommends that the Standard specifies whether it is limited to BES facilities, instead of relying on the Technical Rationale for additional clarity.

- Also, the wording of Section 4.2 Applicability, i.e. “generator means generator-owned facility capable of controlling voltage” appears to expand beyond just active and reactive power generating units, and as drafted could be interpreted to expand the scope of VAR-002 applicability beyond BES generating units. Capacitor banks, shunt reactors, transformers, etc. are also capable of controlling voltage.

In addition, the term “generator-owned” could be open to interpretation as it is language inconsistent with the NERC Glossary of Terms, and it should be defined more clearly.

BC Hydro recommends that the wording be revised to better clarify which (BES if so clarified) equipment types VAR-002-5 would be applicable to.

Likes 0

Dislikes 0

**Response**

**Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name** Southern Company

**Answer** No

**Document Name**

**Comment**

The addition of “or dispersed power generating resource” in all of the locations that it was added is not necessary. First, the word generator is already there. Secondly, a power generating resource is a generator. Thirdly, whether or not the resource is in one spot or is dispersed doesn’t really matter, because the NERC BES definition and the NERC Statement of Registry criteria specifies which resources must register with NERC and follow the NERC standards. Those generating resource types (dispersed) are already subject to VAR-002 if the aggregated facility MVA is large enough. We suggest using the NERC defined BES generator 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 Collaborators

**Answer** No

**Document Name**

**Comment**

The facilities definition in Section 4.2 redefines the term generator and uses the term facility within the definition of facilities. It is our opinion that this section should be re- written similar to the following:

“For the purpose of this standard, the terms, “Facility” or “applicable Facility” shall mean any BES generator (or group of BES generators) capable of controlling voltage at the point of interconnection (POI).”

Likes 0

Dislikes 0

**Response**

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

**Answer** No

**Document Name**

**Comment**

EEI supports the addition of “dispersed power producing resources” within the Purpose statement and elsewhere in this Reliability Standard and agree it adds meaning and clarity. However, we do not agree with the modifications to the Facilities section because it does not fully address the two types of resources (i.e., generators (*individual and aggregated*) and dispersed power producing resources). To address this concern, we offer the following:

#### 4.2. Facilities:

4.2.1 For the purpose of this standard, the term “generator” subject to these requirements means:

4.2.1.1 A BES generator with a gross individual nameplate rating greater than 20 MVA connected at 100 kV and greater; or

4.2.1.2: BES generating “plant” at the common Point of Interconnection meaning the transmission (high voltage) side of the main generator step-up transformer where more than 75 MVA of aggregate generation has been connected at 100 kV and greater. Individual generating resources below the common point of interconnection are excluded.

4.2.2 For the purpose of this standard, the term “distributed power producing resources” subject to these requirements means:

4.2.2.1: Distributed power producing resources that are aggregated to a total gross nameplate value greater than 75 MVA designed primarily for delivering such capacity to a common point of connection at a voltage of 100 kV or above.

Likes 0

Dislikes 0

#### Response

**Alan Kloster - Alan Kloster On Behalf of: Jennifer Flandermeyer, Evergy, 3, 6, 5, 1; Jeremy Harris, Evergy, 3, 6, 5, 1; Kevin Frick, Evergy, 3, 6, 5, 1; Marcus Moor, Evergy, 3, 6, 5, 1; - Alan Kloster**

Answer

No

Document Name

#### Comment

Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) for question #1.

Likes 0

Dislikes 0

#### Response

**Natalie Johnson - Enel Green Power - 5**

Answer

No

Document Name

#### Comment

Enel North America Inc. supports the MRO NSRF comments and suggested revisions.

Likes 0

Dislikes 0

**Response**

**Chantal Mazza - Chantal Mazza On Behalf of: Carl Pineault, Hydro-Qu?bec Production, 1, 5; - Chantal Mazza**

**Answer**

No

**Document Name**

**Comment**

To provide a better alignment with the BES desfinition, “generators” shall be used as “generating resources” (as in the BES definition).

Likes 0

Dislikes 0

**Response**

**Cyntia Doré - Hydro-Qu?bec Production - 5 - NPCC**

**Answer**

No

**Document Name**

**Comment**

To provide a better alignment with the BES desfinition, “generators” shall be used as “generating resources” (as in the BES definition).

Likes 0

Dislikes 0

**Response**

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

**Answer**

No

**Document Name**

**Comment**

Applicability Section 4.2 Facilities does not appear to add clarity. Please consider removing Applicability Section 4.2 “Facilities: For the purpose of this standard, the term “generator” means a generator-owned facility capable of controlling voltage.”

Likes 0

Dislikes 0

**Response**

**Casey Perry - PNM Resources - 1,3 - WECC**

**Answer** No

**Document Name**

**Comment**

PNM agrees with EEI and supports EEI comments to distinguish between "generator" and "disturbance power producing resources" in section 4.2.

Likes 0

Dislikes 0

**Response**

**Constantin Chitescu - Ontario Power Generation Inc. - 5**

**Answer** No

**Document Name**

**Comment**

OPG supports NPCC Regional Standards Committee's comments.

Likes 0

Dislikes 0

**Response**

**Sing Tay - Sing Tay On Behalf of: Ruchi Shah, AES - AES Corporation, 5; - Sing Tay**

**Answer** No

**Document Name**

**Comment**

When it comes to the phrase "capable of controlling voltage" that is used in the revised Applicability section, we would request additional clarity. Renewable resource/dispersed generators are often capable of only providing a small amount of support to grid voltage. They aren't always capable of "controlling" the voltage at the POI.

AES Clean Energy also supports comments submitted by NAGF.

Likes 0

Dislikes 0

**Response**

**Thomas Foltz - AEP - 5**

**Answer**

Yes

**Document Name**

**Comment**

While AEP agrees overall with the Applicability section, we recommend capitalizing “facilities” wherever it is used (including within 4.2) as it is currently lower case.

Likes 0

Dislikes 0

**Response**

**Kristine Howie - Kristine Howie On Behalf of: Alison MacKellar, Constellation, 5, 6; - Kristine Howie**

**Answer**

Yes

**Document Name**

**Comment**

The addition of disbursed power producing resource language helps clarify the notification requirements for an entire facility vs individual units is acceptable under R3 and R4.

Kristine Howie on behalf of Constellation Segments 5 and 6

Likes 0

Dislikes 0

**Response**

**Kim Turco - Constellation - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF**

**Answer**

Yes

**Document Name**

**Comment**



The addition of disbursed power producing resource language helps clarify the notification requirements for an entire facility vs individual units is acceptable under R3 and R4.

Kimberly Turco on behalf of Constellation Energy Segments 5 and 6

Likes 0

Dislikes 0

**Response**

**Kimberly Turco - Constellation - 6**

**Answer**

Yes

**Document Name**

**Comment**

The addition of disbursed power producing resource language helps clarify the notification requirements for an entire facility vs individual units is acceptable under R3 and R4.

Kimberly Turco on behalf of Constellation Segments 5 and 6

Likes 0

Dislikes 0

**Response**

**David Jendras Sr - Ameren - Ameren Services - 3**

**Answer**

Yes

**Document Name**

**Comment**

Ameren supports the language in the requirement.

Likes 0

Dislikes 0

**Response**

**Diane E Landry - Public Utility District No. 1 of Chelan County - 1, Group Name CHPD**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Jennie Wike - Jennie Wike On Behalf of: John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Kristine Ward - Seminole Electric Cooperative, Inc. - 1**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Nazra Gladu - Manitoba Hydro - 1**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Donna Wood - Tri-State G and T Association, Inc. - 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 - WECC**

**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**

**Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Claudine Bates - Black Hills Corporation - 6**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Josh Combs - Black Hills Corporation - 3**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Micah Runner - Black Hills Corporation - 1**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Sheila Suurmeier - Black Hills Corporation - 5**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Teresa Krabe - Lower Colorado River Authority - 5**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Robert Follini - Avista - Avista Corporation - 3**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Mike Magruder - Avista - Avista Corporation - 1**

Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
<b>Response</b>	
Jessica Cordero - Unisource - Tucson Electric Power Co. - 1 - WECC	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
<b>Response</b>	
James Baldwin - Lower Colorado River Authority - 1	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
<b>Response</b>	
Harishkumar Subramani Vijay Kumar - Independent Electricity System Operator - 2	
Answer	Yes
Document Name	
Comment	
Likes	0

Dislikes 0

**Response**

**Adrian Raducea - DTE Energy - Detroit Edison Company - 5, Group Name DTE Energy - DTE Electric**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Anna Todd - Southern Indiana Gas and Electric Co. - 1,3,5,6 - RF**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Patricia Lynch - NRG - NRG Energy, Inc. - 5**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Dwanique Spiller - Berkshire Hathaway - NV Energy - 5**

**Answer**

Yes

<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Kathleen Goodman - Kathleen Goodman On Behalf of: John Pearson, ISO New England, Inc., 2; - Kathleen Goodman</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Andrew Gallo - Electric Reliability Council of Texas, Inc. - 2</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Gregory Campoli - New York Independent System Operator - 2, Group Name ISO/RTO Standards Review Committee</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	



**Response**

**Rachel Coyne - Texas Reliability Entity, Inc. - 10**

**Answer**

**Document Name**

**Comment**

Texas RE appreciates the SDT's efforts to address gaps in the Reliability Standards with regards to inverter-based resources. Texas RE noticed, however, that there is no official definition of dispersed power producing resources. Is the intent that the description in Inclusion I4 of the BES definition apply to the term in proposed standard VAR-002-4.1? If this is the case, Texas RE recommend specifying that in the standard. If the intent is not to use the description in the BES definition, Texas RE recommends creating a definition of dispersed power producing resources in order for the standard to be applied and studied consistently.

Texas RE also recommends including more details in the Facility section similar to Reliability Standard PRC-019-2. This would provide more information and clarity around the applicability of VAR-002-4.1.

Likes 0

Dislikes 0

**Response**

**Tim Kucey - PSEG - PSEG Fossil LLC - 5**

**Answer**

**Document Name**

**Comment**

Adopt responses of EEI RTC and NPCC RSC

Likes 0

Dislikes 0

**Response**

2. Do you agree that the additional words, “mutually-agreeable format” in Requirements R3 and R4 will address ambiguities and provide a means to get the clarity needed for notification threshold and medium communication? If no, please explain and provide recommendations.

**Andrew Gallo - Electric Reliability Council of Texas, Inc. - 2**

**Answer** No

**Document Name**

**Comment**

ERCOT has concerns about the "mutually agreeable format" language. If it intends to borrow a page from IRO-010 and TOP-003, it is already addressed there (assuming R3 and R4 is data and information for a TOP and RC, RTA/OPA/Real time monitoring). The main issue is that the mutually agreed "format" includes a "threshold" as connotated in the footnote for R3. A "threshold" goes beyond the original requirement to identify notification "requirements" or more to the point "when" a notification must be made. If those requirements or "thresholds" must be identified, including what is referred to in R4, the proper approach would be to require the TOP (and RC) to identify those requirements in a similar fashion to VAR-001 R5.2 and such a change should get a proper mixture of TOPs and RCs to represent and identify what those notification requirements should be.

The SDT did not add the "mutually agreeable" or "threshold" language to VAR-002 R1 and R2 because the clarity was adequately addressed in the subrequirements for R1 or in the notification requirements from the TOP(VAR-001 R5.2) for R2. If the clarity is insufficient for the GOP to know "when" or the "thresholds" are for those notifications, NERC should maintain the same constructs as VAR-001 R5.2 and have the TOP (and RC, actually) identify the notification requirement "thresholds" and let IRO-010 and TOP-003 establish the "format."

Either the SDT should open up VAR-001 and ensure there is sufficient representation of TOPs and RCs or it should defer those changes to a future SDT to address that issue in a more coordinated fashion. ERCOT is not fundamentally opposed to a construct of allowing a TOP and RC to identify individualized needs, but it does not agree with "how" it is proposed to be done within the auspices of VAR-002 and varying from the current construct of TOP's identifying notification requirements.

Likes 0

Dislikes 0

**Response**

**Patricia Lynch - NRG - NRG Energy, Inc. - 5**

**Answer** No

**Document Name**

**Comment**

NRG agrees that inclusion of mutually agreeable format will allow for flexibility in reporting R3 and R4 but seeks clarification into what will be considered accepted criteria. If units are equipped with telemetry as far as status of AVR/PSS, telemetry should be accepted criteria for notification of status change in a real time basis. NRG also seeks clarification as to what medium will be used for communication of the mutually agreeable format- will this be through data specifications through IRO-010 and TOP-003? If not, will communication of the format be required at some frequency? Finally, mutually agreeable format criteria should be similar between regions for consistency in execution.

Likes 0

Dislikes 0

<b>Response</b>	
<b>Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name</b> ACES Collaborators	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
<p>While the concept of a “mutually-agreeable” format is laudable, it is our opinion that it places the impetus on the GOP to determine such a format. Because VAR-002 is not applicable to the TOP, the TOP has no incentive to work with the GOP to determine a “mutually-agreeable format.” It is our recommendation to modify this section to either require the TOP to work with the GOP to determine the “mutually-agreeable format” or to modify VAR-001 to require the TOP to specify the required format for notifications.</p>	
Likes	0
Dislikes	0
<b>Response</b>	
<b>Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name</b> Southern Company	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
<p>The justification for why “mutually agreeable format” is needed in R3 and R4 is unclear. If this is being suggested so that the two parties acknowledge the TOP desired granularity for notifications, this can be covered in the TOP specified notification specification given within R2 of the existing standard version</p>	
Likes	0
Dislikes	0
<b>Response</b>	
<b>Marty Watson - Santee Cooper - 1,3,5,6, Group Name</b> Santee Cooper	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	

If you desire a requirement to have the GOP and the TOP mutually agree on a communication format you need to create a separate requirement to do so. It also seems to require the GOP and TOP to agree to a threshold for notification.

Please explain what can cause a non-dispersed application to have a degraded reactive capability change that does not also cause a degraded real power capability. Typically when a real power capability change occurs the GOP knows the extent of the limitation to real power, but not the extent that it corresponds to reactive. This would require an extensive amount of testing to determine the effect for all cases.

Likes 0

Dislikes 0

### Response

#### Deanna Carlson - Cowlitz County PUD - 5

Answer No

Document Name

#### Comment

Agree with comments submitted by Arizona Electric Power Cooperative.

Likes 0

Dislikes 0

### Response

#### Russell Noble - Cowlitz County PUD - 3

Answer No

Document Name

#### Comment

Agree with comments submitted by Arizona Electric Power Cooperative.

Likes 0

Dislikes 0

### Response

Israel Perez - Israel Perez On Behalf of: Jennifer Bennett, Salt River Project, 3, 5, 1, 6; Mathew Weber, Salt River Project, 3, 5, 1, 6; Sarah Blankenship, Salt River Project, 3, 5, 1, 6; Timothy Singh, Salt River Project, 3, 5, 1, 6; - Israel Perez

Answer No

Document Name

**Comment**

Agree with Reliability First comment.

Likes 0

Dislikes 0

**Response****Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF**

**Answer**

No

**Document Name**

**Comment**

The NAGF believes that the additional wording "mutually-agreeable format" in R3 and R4 is not necessary. Existing notification/communication methods currently in place for VAR-002 should be leveraged for dispersed energy resources.

Likes 1

JEA, 1, McClung Joseph

Dislikes 0

**Response****Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC Entity Monitoring**

**Answer**

No

**Document Name**

**Comment**

The words "mutually-agreeable" are used in other standards (IRO-010) and the use here is acceptable but does not address ambiguity. WECC questions whether the words "Mutually-agreeable format" defined uniquely for this standard via a footnote is appropriate. The words are used in other standards without definition. WECC suggests the if some definition is required, it should be address via a glossary changes to it can be applied consistently. As it is now it implies and "agreement" is required between two parties, yet the terminology does not apply to the functions either requesting or receiving the data. Thus only one party (GO) is responsible to comply. WECC does not believe terms should be uniquely defined or used on a standard by standard basis unless used only in that single standard. WECC suggests eliminating the words from standards completely, but at a minimum it should not be further promoted in new standards or revisions. The issue is the communication, not the format.

Likes 0

Dislikes 0

**Response****Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group**

<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
WEC Energy Group supports the MRO NSRF comments.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Ryan Strom - Buckeye Power, Inc. - 5 - RF</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
We support the comments made by ACES Power Marketing.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECI</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
AECI supports comments submitted by the NAGF.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Jennifer Bray - Arizona Electric Power Cooperative, Inc. - 1</b>	
<b>Answer</b>	No
<b>Document Name</b>	

**Comment**

AEPC has signed on to ACES comments below:

While the concept of a “mutually-agreeable” format is laudable, it is our opinion that it places the impetus on the GOP to determine such a format. Because VAR-002 is not applicable to the TOP, the TOP has no incentive to work with the GOP to determine a “mutually-agreeable format.” It is our recommendation to modify this section to either require the TOP to work with the GOP to determine the “mutually-agreeable format” or to modify VAR-001 to require the TOP to specify the required format for notifications.

Likes 0

Dislikes 0

**Response**

**Lindsey Mannion - ReliabilityFirst - 10**

**Answer**

No

**Document Name**

**Comment**

The general addition of “mutually-agreeable format” to R3 and R4 would require the GOP to obtain concurrence from the TOP that the communication medium used for notification is acceptable. This could help improve the usefulness of the notifications for the TOP.

VAR-001-5 R4 currently requires the TOP to specify criteria that will exempt generators 1) from following a voltage or Reactive Power schedule, 2) from having its automatic voltage regulator (AVR) in service or from being in voltage control mode, or 3) from having to make any associated notifications.

The “threshold for degradation” seems more appropriate for the TOP to address under the VAR-001-5 R4 criteria, rather than in the proposed “mutually-agreeable” format specified by footnote 5. As the TOP has broader-area visibility and responsibility we believe it is appropriate for the TOP to retain the right to specify this threshold itself, and negotiable thresholds introduce the potential for lack of clarity or disagreement.

Likes 0

Dislikes 0

**Response**

**Julie Hall - Entergy - 6, Group Name Entergy**

**Answer**

No

**Document Name**

**Comment**

The same wording should be used for R2, as well, however, replacing “Meet the conditions of notification for deviations” should be spelled out in the requirement or the Measure, not in a note. The proposed changes are silent on the expectations for proof of “mutually agreeable” format, or the process to document issues arising from disagreements on format. The format should be dictated by what technology is available to the GOP and how the GOP can make that communication. This should also be clarified that multiple methods can be used for communications.

Likes 0

Dislikes 0

**Response**

**Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF**

**Answer**

No

**Document Name****Comment**

The MRO NSRF does not see the value in adding the additional language of “mutually agreeable format”.

Likes 0

Dislikes 0

**Response**

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

**Answer**

No

**Document Name****Comment**

The previous language provided greater clarity. The expectations for threshold determination introduces additional uncertainty and risk for compliance monitoring.

Likes 0

Dislikes 0

**Response**

**Casey Perry - PNM Resources - 1,3 - WECC**

**Answer**

Yes

**Document Name**



**Comment**

PNM agrees.

Likes 0

Dislikes 0

**Response**

**Kimberly Turco - Constellation - 6**

**Answer**

Yes

**Document Name**

**Comment**

Constellation has no additional comments.

Kimberly Turco on behalf of Constellation Segments 5 and 6

Likes 0

Dislikes 0

**Response**

**Kim Turco - Constellation - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF**

**Answer**

Yes

**Document Name**

**Comment**

Constellation has no additional comments.

Kimberly Turco on behalf of Constellation Energy Segments 5 and 6

Likes 0

Dislikes 0

**Response**

**Kristine Howie - Kristine Howie On Behalf of: Alison MacKellar, Constellation, 5, 6; - Kristine Howie**

<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Constellation has no additional comments.	
Kristine Howie on behalf of Constellation Segments 5 and 6	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Natalie Johnson - Enel Green Power - 5</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Enel North America Inc. does not oppose the addition of "mutually-agreeable format".	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Alan Kloster - Alan Kloster On Behalf of: Jennifer Flandermeyer, Evergy, 3, 6, 5, 1; Jeremy Harris, Evergy, 3, 6, 5, 1; Kevin Frick, Evergy, 3, 6, 5, 1; Marcus Moor, Evergy, 3, 6, 5, 1; - Alan Kloster</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) for question #2.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable</b>	
<b>Answer</b>	Yes

<b>Document Name</b>	
<b>Comment</b>	
EEI agrees that “mutually-agreeable format” in Requirements R3 and R4 provide sufficient clarity needed for notifications regarding changes in generator/resource capability, as identified in these two Requirements.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Larry Brusseau - Corn Belt Power Cooperative - 1 - MRO</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
SC: It is not justified why “mutually agreeable format” is needed in R3 and R4. Have there been disputes?	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Daniel Gacek - Exelon - 1</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Exelon supports the comments submitted by EEI.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Kinte Whitehead - Exelon - 3</b>	
<b>Answer</b>	Yes

<b>Document Name</b>	
<b>Comment</b>	
Exelon supports the comments submitted by EEI	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Michael Johnson - Michael Johnson On Behalf of: Frank Lee, Pacific Gas and Electric Company, 3, 1, 5; Marco Rios, Pacific Gas and Electric Company, 3, 1, 5; Sandra Ellis, Pacific Gas and Electric Company, 3, 1, 5; - Michael Johnson, Group Name PG&amp;E All Segments</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
PG&E agrees that the “mutually-agreeable format” in the Requirements provide sufficient clarity.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Jessica Lopez - APS - Arizona Public Service Co. - 3</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
AZPS agrees with the additional words “mutually-agreeable format” in R3 and R4,however, the Standard Drafting Team should consider clarification within R4 to state “that exceeds the threshold for notification as defined in R1”.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Thomas Foltz - AEP - 5</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	

**Comment**

AEP recommends that the text in R3 “which degrades/restores its ability” be revised to instead state “which degrades \*or\* restores its ability.”

Likes 0

Dislikes 0

**Response****Kevin Conway - Public Utility District No. 1 of Pend Oreille County - 1,3,5,6 - WECC**

**Answer**

Yes

**Document Name**

**Comment**

Yes, as technology changes, we need the parties working together to get the best result.

Likes 0

Dislikes 0

**Response****Sing Tay - Sing Tay On Behalf of: Ruchi Shah, AES - AES Corporation, 5; - Sing Tay**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response****Constantin Chitescu - Ontario Power Generation Inc. - 5**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Gregory Campoli - New York Independent System Operator - 2, Group Name ISO/RTO Standards Review Committee**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**David Jendras Sr - Ameren - Ameren Services - 3**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Kathleen Goodman - Kathleen Goodman On Behalf of: John Pearson, ISO New England, Inc., 2; - Kathleen Goodman**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

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

**Answer** Yes

<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Cynthia Doré - Hydro-Québec Production - 5 - NPCC</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Dwanique Spiller - Berkshire Hathaway - NV Energy - 5</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Chantal Mazza - Chantal Mazza On Behalf of: Carl Pineault, Hydro-Québec Production, 1, 5; - Chantal Mazza</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	

**Response**

**Adrian Andreoiu - BC Hydro and Power Authority - 1, Group Name BC Hydro**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Anna Todd - Southern Indiana Gas and Electric Co. - 1,3,5,6 - RF**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Adrian Raducea - DTE Energy - Detroit Edison Company - 5, Group Name DTE Energy - DTE Electric**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

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

**Answer** Yes

**Document Name**



**Comment**

Likes 0

Dislikes 0

**Response****Harishkumar Subramani Vijay Kumar - Independent Electricity System Operator - 2****Answer**

Yes

**Document Name****Comment**

Likes 0

Dislikes 0

**Response****James Baldwin - Lower Colorado River Authority - 1****Answer**

Yes

**Document Name****Comment**

Likes 0

Dislikes 0

**Response****Jessica Cordero - Unisource - Tucson Electric Power Co. - 1 - WECC****Answer**

Yes

**Document Name****Comment**

Likes 0

Dislikes 0

**Response**

**Mike Magruder - Avista - Avista Corporation - 1**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Robert Follini - Avista - Avista Corporation - 3**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Teresa Krabe - Lower Colorado River Authority - 5**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Sheila Suurmeier - Black Hills Corporation - 5**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Micah Runner - Black Hills Corporation - 1**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Josh Combs - Black Hills Corporation - 3**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Claudine Bates - Black Hills Corporation - 6**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Melanie Wong - Seminole Electric Cooperative, Inc. - 5**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Marc Sedor - Seminole Electric Cooperative, Inc. - 3**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter**

**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**

**Donna Wood - Tri-State G and T Association, Inc. - 1**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Nazra Gladu - Manitoba Hydro - 1**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Kristine Ward - Seminole Electric Cooperative, Inc. - 1**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

Jennie Wike - Jennie Wike On Behalf of: John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Diane E Landry - Public Utility District No. 1 of Chelan County - 1, Group Name CHPD

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Tim Kucey - PSEG - PSEG Fossil LLC - 5

Answer

Document Name

Comment

Adopt responses of EEI RTC and NPCC RSC

Likes 0

Dislikes 0

Response

Rachel Coyne - Texas Reliability Entity, Inc. - 10

Answer

Document Name

Comment

Texas RE understands that adding the phrase “mutually agreeable format” to Requirement R3 was a recommendation from the Enhanced Periodic Review. Texas RE inquires, however, as to why the EPR team (and the SDT) felt this revision is necessary. Reliability Standard COM-001-3 addresses having Interpersonal Communications capability which should encompass the communication described in proposed VAR-002.

Likes 0

Dislikes 0

**Response**

3. Throughout proposed VAR-002-5, the Project 2021-02 SDT has replaced/changed the words “automatic voltage regulator (AVR)” with the more comprehensive “automatic voltage regulator (AVR) or volt/VAR controller(s)” to add clarity and to better align with expressions/wording used in other NERC Reliability Standards, such as MOD-026. Do you agree with this change? If no, please explain and provide recommendations.

**Kevin Conway - Public Utility District No. 1 of Pend Oreille County - 1,3,5,6 - WECC**

**Answer** No

**Document Name**

**Comment**

I would prefer the use of "generation voltage control devices" as a catch-all. However, I assume that this may have been discussed at the SDT level, and will support the best language that the SDT has gotten consensus on.

Likes 0

Dislikes 0

**Response**

**Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF**

**Answer** No

**Document Name**

**Comment**

The MRO NSRF disagrees. The addition of ‘volt/VAR controller(s)’ will not meet its intended purpose, as it is not a defined term. The addition of this term further narrows the scope of equipment in which this Standard’s requirements are applicable to and will ultimately lead to the same situation that is being addressed in this SAR. The MRO NSRF suggests removing both “automatic voltage regulator (AVR) or volt/VAR controller(s)” for the Standard’s language, replacing it with “Voltage Regulator” and then defining voltage regulator either within the Standard or the Glossary of Terms.

Voltage Regulator: the central or main piece of equipment at a generation Facility used to control the Reactive Power produced or consumed by Reactive Power supplying/consuming equipment, whether it be a generator, shunt equipment (capacitor/reactor), static/dynamic var compensators, synchronous condensers, and the like, that are used to control voltage or Reactive Power in the Steady State as specified by the Transmission Operator.

Likes 0

Dislikes 0

**Response**

**Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECI**

**Answer** No

**Document Name**



**Comment**

AECI supports comments submitted by the NAGF.

Likes 0

Dislikes 0

**Response**

**Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group**

**Answer**

No

**Document Name**

**Comment**

WEC Energy Group supports the MRO NSRF comments.

Likes 0

Dislikes 0

**Response**

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

**Answer**

No

**Document Name**

**Comment**

The NAGF believes that the addition of the “or volt/VAR controller(s)” language is not necessary. The automatic voltage regulator (AVR) for the renewable plants is the Power Plant Controller (PPC). Just because AVR has been used for synchronous machines, doesn’t mean that it is exclusively reserved for that type of unit.

Likes 0

Dislikes 0

**Response**

**Larry Brusseau - Corn Belt Power Cooperative - 1 - MRO**

**Answer**

No

**Document Name**

**Comment**

The MRO NSRF disagrees. The addition of 'volt/VAR controller(s)' will not meet its intended purpose, as it is not a defined term. The addition of this term further narrows the scope of equipment in which this Standard's requirements are applicable to and will ultimately lead to the same situation that is being addressed in this SAR. The MRO NSRF suggests removing both "automatic voltage regulator (AVR) or volt/VAR controller(s)" for the Standard's language, replacing it with "Voltage Regulator" and then defining voltage regulator either within the Standard or the Glossary of Terms.

Voltage Regulator: the central or main piece of equipment at a generation Facility used to control the Reactive Power produced or consumed by Reactive Power supplying/consuming equipment, whether it be a generator, shunt equipment (capacitor/reactor), static/dynamic var compensators, synchronous condensers, and the like, that are used to control voltage or Reactive Power in the Steady State as specified by the Transmission Operator.

Likes 0

Dislikes 0

### Response

**Israel Perez - Israel Perez On Behalf of: Jennifer Bennett, Salt River Project, 3, 5, 1, 6; Mathew Weber, Salt River Project, 3, 5, 1, 6; Sarah Blankenship, Salt River Project, 3, 5, 1, 6; Timothy Singh, Salt River Project, 3, 5, 1, 6; - Israel Perez**

**Answer**

No

**Document Name**

**Comment**

AVR is a common industry term, and volt/VAR controller is not. Additionally it seems that the intent is to control the voltage, not VARs.

Likes 0

Dislikes 0

### Response

**Russell Noble - Cowlitz County PUD - 3**

**Answer**

No

**Document Name**

**Comment**

As applied to "dispersed power producing resource" the widely understood "AVR" which is usually associated with synchronous generators may create confusion. Support comments supplied by the North American Generator Forum.

Likes 0

Dislikes 0

### Response

**Deanna Carlson - Cowlitz County PUD - 5**

**Answer** No

**Document Name**

**Comment**

As applied to "dispersed power producing resource" the widely understood "AVR" which is usually associated with synchronous generators may create confusion. Support comments supplied by the North American Generator Forum.

Likes 0

Dislikes 0

**Response**

**Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company**

**Answer** No

**Document Name**

**Comment**

The addition of "or volt/VAR controller" is not needed where it has been added. Reasons being that the automatic voltage regulator (AVR) for the renewable plants is the PPC. People with these types of plants already know that. Second, just because AVR has been used for synchronous machines, doesn't mean that it is exclusively reserved for that type of unit.

Likes 0

Dislikes 0

**Response**

**Natalie Johnson - Enel Green Power - 5**

**Answer** No

**Document Name**

**Comment**

Enel North America Inc. would like to recommend the SDT utilize the footnotes from MOD-026 for volt/VAR controllers (MOD-026, footnote 1.b: "For an aggregate generating plant, the volt/var control system includes the voltage regulator & reactive power control system controlling and coordinating plant voltage and associated reactive capable resources").

Likes 0

Dislikes 0

Response	
Kathleen Goodman - Kathleen Goodman On Behalf of: John Pearson, ISO New England, Inc., 2; - Kathleen Goodman	
Answer	No
Document Name	
Comment	
<p>ISO-NE supports the comments submitted by the IRC Standards Review Committee (SRC):</p> <p>"The IRC/SRC suggests removing both "automatic voltage regulator (AVR) or volt/VAR controller(s)" for the Standard's language, replacing it with "Voltage Regulator" and then defining voltage regulator either within the Standard or the Glossary of Terms.</p> <p>Voltage Regulator: the central or main piece of equipment at a generation Facility used to control the Reactive Power produced or consumed by Reactive Power supplying/consuming equipment, whether it be a generator, shunt equipment (capacitor/reactor), static/dynamic var compensators, synchronous condensers, and the like, that are used to control voltage or Reactive Power in the Steady State as specified by the Transmission Operator."</p>	
Likes	0
Dislikes	0
Response	
Gregory Campoli - New York Independent System Operator - 2, Group Name ISO/RTO Standards Review Committee	
Answer	No
Document Name	
Comment	
<p>The IRC/SRC suggests removing both "automatic voltage regulator (AVR) or volt/VAR controller(s)" for the Standard's language, replacing it with "Voltage Regulator" and then defining voltage regulator either within the Standard or the Glossary of Terms.</p> <p>Voltage Regulator: the central or main piece of equipment at a generation Facility used to control the Reactive Power produced or consumed by Reactive Power supplying/consuming equipment, whether it be a generator, shunt equipment (capacitor/reactor), static/dynamic var compensators, synchronous condensers, and the like, that are used to control voltage or Reactive Power in the Steady State as specified by the Transmission Operator.</p> <p><i>Please note: PJM is not a party to the response to this Question.</i></p>	
Likes	0
Dislikes	0

**Response**

**Sing Tay - Sing Tay On Behalf of: Ruchi Shah, AES - AES Corporation, 5; - Sing Tay**

**Answer** No

**Document Name**

**Comment**

AES Clean Energy also supports comments submitted by NAGF.

Likes 0

Dislikes 0

**Response**

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

**Answer** Yes

**Document Name**

**Comment**

None.

Likes 0

Dislikes 0

**Response**

**Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC Entity Monitoring**

**Answer** Yes

**Document Name**

**Comment**

WECC believes the wording a proposed is adequate, however, more clarity is required in the Facilities Section to clearly identify applicable equipment other than "generator."

Likes 0

Dislikes 0

**Response**

**Michael Johnson - Michael Johnson On Behalf of: Frank Lee, Pacific Gas and Electric Company, 3, 1, 5; Marco Rios, Pacific Gas and Electric Company, 3, 1, 5; Sandra Ellis, Pacific Gas and Electric Company, 3, 1, 5; - Michael Johnson, Group Name PG&E All Segments**

**Answer** Yes

**Document Name**

**Comment**

PG&E supports this modification.

Likes 0

Dislikes 0

**Response**

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

**Answer** Yes

**Document Name**

**Comment**

EI supports this change.

Likes 0

Dislikes 0

**Response**

**Alan Kloster - Alan Kloster On Behalf of: Jennifer Flandermeyer, Evergy, 3, 6, 5, 1; Jeremy Harris, Evergy, 3, 6, 5, 1; Kevin Frick, Evergy, 3, 6, 5, 1; Marcus Moor, Evergy, 3, 6, 5, 1; - Alan Kloster**

**Answer** Yes

**Document Name**

**Comment**

Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) for question #3.

Likes 0

Dislikes 0

**Response**

**Kristine Howie - Kristine Howie On Behalf of: Alison MacKellar, Constellation, 5, 6; - Kristine Howie**

<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Constellation agrees with the consistency of language across standards..	
Kristine Howie on behalf of Constellation Segments 5 and 6	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Kim Turco - Constellation - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Constellation agrees with the consistency of language across standards..	
Kimberly Turco on behalf of Constellation Energy Segments 5 and 6	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Kimberly Turco - Constellation - 6</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Constellation agrees with the consistency of language across standards..	
Kimberly Turco on behalf of Constellation Segments 5 and 6	
Likes 0	
Dislikes 0	
<b>Response</b>	

**Casey Perry - PNM Resources - 1,3 - WECC**

**Answer** Yes

**Document Name**

**Comment**

PNM agrees.

Likes 0

Dislikes 0

**Response**

**Diane E Landry - Public Utility District No. 1 of Chelan County - 1, Group Name CHPD**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Jennie Wike - Jennie Wike On Behalf of: John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Kristine Ward - Seminole Electric Cooperative, Inc. - 1**

**Answer** Yes

**Document Name**



**Comment**

Likes 0

Dislikes 0

**Response****Nazra Gladu - Manitoba Hydro - 1****Answer**

Yes

**Document Name****Comment**

Likes 0

Dislikes 0

**Response****Donna Wood - Tri-State G and T Association, Inc. - 1****Answer**

Yes

**Document Name****Comment**

Likes 0

Dislikes 0

**Response****Thomas Foltz - AEP - 5****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**

**Julie Hall - Entergy - 6, Group Name Entergy**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Lindsey Mannion - ReliabilityFirst - 10**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter**

**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**

**Marc Sedor - Seminole Electric Cooperative, Inc. - 3**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Melanie Wong - Seminole Electric Cooperative, Inc. - 5**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Claudine Bates - Black Hills Corporation - 6**

<b>Answer</b>	Yes
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<b>Document Name</b>	
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<b>Comment</b>
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Likes 0
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Dislikes 0
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<b>Response</b>
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**Josh Combs - Black Hills Corporation - 3**

<b>Answer</b>	Yes
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<b>Document Name</b>	
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<b>Comment</b>
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Likes 0
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Dislikes 0
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<b>Response</b>
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**Micah Runner - Black Hills Corporation - 1**

<b>Answer</b>	Yes
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<b>Document Name</b>	
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<b>Comment</b>
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Likes 0
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Dislikes 0
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<b>Response</b>
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**Sheila Suurmeier - Black Hills Corporation - 5**

<b>Answer</b>	Yes
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<b>Document Name</b>	
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<b>Comment</b>
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Likes 0

Dislikes 0

**Response**

**Jennifer Bray - Arizona Electric Power Cooperative, Inc. - 1**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Teresa Krabe - Lower Colorado River Authority - 5**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Ryan Strom - Buckeye Power, Inc. - 5 - RF**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Robert Follini - Avista - Avista Corporation - 3**

Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
<b>Response</b>	
<b>Jessica Lopez - APS - Arizona Public Service Co. - 3</b>	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
<b>Response</b>	
<b>Mike Magruder - Avista - Avista Corporation - 1</b>	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
<b>Response</b>	
<b>Jessica Cordero - Unisource - Tucson Electric Power Co. - 1 - WECC</b>	
Answer	Yes
Document Name	
Comment	
Likes	0

Dislikes 0

**Response**

**James Baldwin - Lower Colorado River Authority - 1**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Harishkumar Subramani Vijay Kumar - Independent Electricity System Operator - 2**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

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

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Adrian Raducea - DTE Energy - Detroit Edison Company - 5, Group Name DTE Energy - DTE Electric**

**Answer**

Yes

<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Anna Todd - Southern Indiana Gas and Electric Co. - 1,3,5,6 - RF</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Kinte Whitehead - Exelon - 3</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Daniel Gacek - Exelon - 1</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	



**Response**

**Marty Watson - Santee Cooper - 1,3,5,6, Group Name Santee Cooper**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Adrian Andreoiu - BC Hydro and Power Authority - 1, Group Name BC Hydro**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

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

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Chantal Mazza - Chantal Mazza On Behalf of: Carl Pineault, Hydro-Qu?bec Production, 1, 5; - Chantal Mazza**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response****Patricia Lynch - NRG - NRG Energy, Inc. - 5****Answer**

Yes

**Document Name****Comment**

Likes 0

Dislikes 0

**Response****Dwanique Spiller - Berkshire Hathaway - NV Energy - 5****Answer**

Yes

**Document Name****Comment**

Likes 0

Dislikes 0

**Response****Cynthia Doré - Hydro-Québec Production - 5 - NPCC****Answer**

Yes

**Document Name****Comment**

Likes 0

Dislikes 0

**Response**

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

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**David Jendras Sr - Ameren - Ameren Services - 3**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Andrew Gallo - Electric Reliability Council of Texas, Inc. - 2**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Constantin Chitescu - Ontario Power Generation Inc. - 5**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Tim Kucey - PSEG - PSEG Fossil LLC - 5**

**Answer**

**Document Name**

**Comment**

Adopt responses of EEI RTC and NPCC RSC

Likes 0

Dislikes 0

**Response**

4. The Project 2021-02 SDT has made revisions to the requirements for VAR-002-5 based on the recommendations resulting in Attachment 5 from the efforts of the Project 2016-EPR-02 Enhanced Periodic Review Team. Do you agree with these changes? If no, please explain and provide recommendations.

**Sing Tay - Sing Tay On Behalf of: Ruchi Shah, AES - AES Corporation, 5; - Sing Tay**

**Answer** No

**Document Name**

**Comment**

AES Clean Energy also supports comments submitted by NAGF.

Likes 0

Dislikes 0

**Response**

**Constantin Chitescu - Ontario Power Generation Inc. - 5**

**Answer** No

**Document Name**

**Comment**

OPG supports NPCC Regional Standards Committee's comments.

Likes 0

Dislikes 0

**Response**

**Casey Perry - PNM Resources - 1,3 - WECC**

**Answer** No

**Document Name**

**Comment**

PNM supports EEI comments for not including the Attachment 5 recommendations in VAR-002-5.

Likes 0

Dislikes 0

**Response**

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

**Answer** No

**Document Name**

**Comment**

Please see question 1 and 8 comments for suggested improvements.

Likes 0

Dislikes 0

**Response**

**Natalie Johnson - Enel Green Power - 5**

**Answer** No

**Document Name**

**Comment**

Enel North America Inc. supports the MRO NSRF comments on points 2.3 and 2.5.

Likes 0

Dislikes 0

**Response**

**Alan Kloster - Alan Kloster On Behalf of: Jennifer Flandermeyer, Evergy, 3, 6, 5, 1; Jeremy Harris, Evergy, 3, 6, 5, 1; Kevin Frick, Evergy, 3, 6, 5, 1; Marcus Moor, Evergy, 3, 6, 5, 1; - Alan Kloster**

**Answer** No

**Document Name**

**Comment**

Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) for question #4.

Likes 0

Dislikes 0

**Response**

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

<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
<p>As noted in EEI's comments on the 2nd Draft of the project SAR, EEI does not support the inclusion of the "Miscellaneous Corrections/Revisions" in Attachment 5 from the Enhanced Periodic Review for the Project 2016-EPR-02 Report because the recommendations were considered non-substantive or insignificant quality. We further note the report is stale at nearly 5 years old. Moreover, while EEI supports some aspects of the recommendations cited in the Enhanced Periodic Review for Project 2016-EPR-02 Report, we disagree with their direct application because they are not clear and add ambiguity to the Standard. (See our comments to Questions 1, 7, &amp; 8.)</p>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<p><b>Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators</b></p>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
<p>It is our opinion that Requirement R4 is too vague. Who defines the "threshold for notification"? Is this specified by the TOP? VAR-001-5 R5.2 requires the TOP to provide the GOP with notification requirements for deviations from the voltage or Reactive Power schedule, but not both. Under the new verbiage, if the TOP only specifies a voltage schedule and does not also specify a Reactive Power schedule, then VAR- 002-5 R4 is rendered moot. Our recommendation is to either:</p> <ol style="list-style-type: none"> <li>1. Specify the "threshold for notification" as a fixed percentage of reactive capability (e.g. <math>\geq 10\%</math> as in MOD-025 R2).</li> <li>2. Modify R4 to include the TOP under VAR-002 and require the TOP to specify the "threshold for notification".</li> <li>3. Modify VAR-001 to require the TOP to specify the "threshold for notification".</li> </ol> <p>It is our opinion that recommendation #1 is the best solution.</p>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<p><b>Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company</b></p>	
<b>Answer</b>	No
<b>Document Name</b>	

**Comment**

Southern Company does not support the inclusion of the “Miscellaneous Corrections/Revisions” in Attachment 5 from the Enhanced Periodic Review for the Project 2016-EPR-02 Report because the recommendations were considered non-substantive or insignificant quality and because the report is stale at nearly 5 years old.

Likes 0

Dislikes 0

**Response**

**Marty Watson - Santee Cooper - 1,3,5,6, Group Name** Santee Cooper

**Answer**

No

**Document Name**

**Comment**

The proposed change to R6 does not address the Tap Settings recommendation in Attachment 5. Attachment 5 recommends that the requirement address both TOP and GOP owned Step Up Transformers. The requirement refers to “generator owned.” This almost creates a new term that would need to be defined in the Glossary. The phrase generator owned creates confusion. This requirement should address two separate Step Up Transformers, GOP owned and TOP owned. The requirements should not differ based on the functional model.

Likes 0

Dislikes 0

**Response**

**Deanna Carlson - Cowlitz County PUD - 5**

**Answer**

No

**Document Name**

**Comment**

Although in agreement with the intent, please see comment to previous questions.

Likes 0

Dislikes 0

**Response**

**Russell Noble - Cowlitz County PUD - 3**

**Answer**

No



<b>Document Name</b>	
<b>Comment</b>	
Although in agreement with the intent, please see comment to previous questions.	
Likes 0	
Dislikes 0	
<b>Response</b>	
Israel Perez - Israel Perez On Behalf of: Jennifer Bennett, Salt River Project, 3, 5, 1, 6; Mathew Weber, Salt River Project, 3, 5, 1, 6; Sarah Blankenship, Salt River Project, 3, 5, 1, 6; Timothy Singh, Salt River Project, 3, 5, 1, 6; - Israel Perez	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
Agree with Reliability First comment.	
Likes 0	
Dislikes 0	
<b>Response</b>	
Larry Brusseau - Corn Belt Power Cooperative - 1 - MRO	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
The MRO NSRF does not agree with certain changes meet the intent of Project 2016-EPR-02.	
Likes 0	
Dislikes 0	
<b>Response</b>	
Daniel Gacek - Exelon - 1	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	

Exelon supports the comments submitted by EEI.

Likes 0

Dislikes 0

**Response**

**Kinte Whitehead - Exelon - 3**

**Answer**

No

**Document Name**

**Comment**

Exelon supports the comments submitted by EEI

Likes 0

Dislikes 0

**Response**

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

**Answer**

No

**Document Name**

**Comment**

See the NAGF comments/responses to Questions 1,2,3,7, and 8.

Likes 1

JEA, 1, McClung Joseph

Dislikes 0

**Response**

**Michael Johnson - Michael Johnson On Behalf of: Frank Lee, Pacific Gas and Electric Company, 3, 1, 5; Marco Rios, Pacific Gas and Electric Company, 3, 1, 5; Sandra Ellis, Pacific Gas and Electric Company, 3, 1, 5; - Michael Johnson, Group Name PG&E All Segments**

**Answer**

No

**Document Name**

**Comment**

PG&E agrees with the input from EEI on not supporting the inclusion of "Miscellaneous Corrections/Revisions" in Attachment 5 because the recommendations were considered non-substantive or of insignificant quality, and the report is almost 5 years old making the information potentially no longer valid.

Likes 0

Dislikes 0

**Response**

**Adrian Raducea - DTE Energy - Detroit Edison Company - 5, Group Name DTE Energy - DTE Electric**

**Answer**

No

**Document Name**

**Comment**

"Shall" should be used instead of "Will"

Likes 0

Dislikes 0

**Response**

**Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group**

**Answer**

No

**Document Name**

**Comment**

WEC Energy Group supports the MRO NSRF comments.

Likes 0

Dislikes 0

**Response**

**Ryan Strom - Buckeye Power, Inc. - 5 - RF**

**Answer**

No

**Document Name**

**Comment**

We support the comments made by ACES Power Marketing.

Likes 0

Dislikes 0

### Response

**Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECl**

**Answer**

No

**Document Name**

**Comment**

AECl supports comments submitted by the NAGF.

Likes 0

Dislikes 0

### Response

**Jennifer Bray - Arizona Electric Power Cooperative, Inc. - 1**

**Answer**

No

**Document Name**

**Comment**

AEPC has signed on to ACES comments below:

It is our opinion that Requirement R4 is too vague. Who defines the "threshold for notification"? Is this specified by the TOP?

VAR-001-5 R5.2 requires the TOP to provide the GOP with notification requirements for deviations from the voltage or Reactive Power schedule, but not both. Under the new verbiage, if the TOP only specifies a voltage schedule and does not also specify a Reactive Power schedule, then VAR-002-5 R4 is rendered moot. Our recommendation is to either:

1. Specify the "threshold for notification" as a fixed percentage of reactive capability (e.g.  $\geq 10\%$  as in MOD-025 R2).
2. Modify R4 to include the TOP under VAR-002 and require the TOP to specify the "threshold for notification".
3. Modify VAR-001 to require the TOP to specify the "threshold for notification".

It is our opinion that recommendation #1 is the best solution.

Likes 0

Dislikes 0

**Response**

**Melanie Wong - Seminole Electric Cooperative, Inc. - 5**

**Answer** No

**Document Name**

**Comment**

No, R4 (as mentioned in 2016-EPR-02 Attachment 5, 2.3) still does not have a threshold metric.

Likes 0

Dislikes 0

**Response**

**Marc Sedor - Seminole Electric Cooperative, Inc. - 3**

**Answer** No

**Document Name**

**Comment**

No, R4 (as mentioned in 2016-EPR-02 Attachment 5, 2.3) still does not have a threshold metric.

Likes 0

Dislikes 0

**Response**

**Lindsey Mannion - ReliabilityFirst - 10**

**Answer** No

**Document Name**

**Comment**

For 2.1, the addition of “or provide an explanation if control capability is limited” seems broad and may encourage reduced efforts from the GOP to implement alternative methods of controlling reactive output. It is also not specified which entity the GOP needs to provide the explanation to.

However, temporary technical limitations due to an abnormal AVR or volt/VAR controller equipment configuration should not automatically result in a violation, as discussed by the Enhanced Periodic Review Team.

The RF Standard Review Team for this project recommends the SDT consider requiring the GOP to “use an alternative method, to the extent technically and operationally possible, to control reactive output to meet the voltage or Reactive Power schedule provided by the Transmission Operator.” A documentation/explanation requirement could be imposed when an effective alternative method is not possible, resulting in a failure to

meet the voltage schedule. Any such requirement should specify whether the explanation must be provided to the TOP or merely maintained for evidence of compliance.

A documentation/explanation exemption should not be needed for generators that are not equipped with an AVR or volt/VAR controller, since the ability or inability of generators to meet the voltage schedule under normal equipment configurations should be addressed through the interconnection process and accounted for in the Transmission Operator's exemption criteria and/or criteria for notification for deviations from the voltage schedule.

For 2.3, the RF Standard Review Team for this project suggests the following reword (adapted from PRC-024-3 Attachment 2) to address the recommendation of the Enhanced Periodic Review Team:

"2.3 Generator Operators that do not monitor the voltage at the location specified in the generator voltage schedule provided by the Transmission Operator shall have a methodology to account for the voltage differences between where the voltage is monitored and the voltage at the location specified in the voltage schedule."

Likes 0

Dislikes 0

**Response**

**Julie Hall - Entergy - 6, Group Name Entergy**

**Answer** No

**Document Name**

**Comment**

2.3 should not be simply addressed in a note, nor is it fully addressed by that note  
2.5 is not addressed.  
2.6 is not addressed.  
10.1 is not addressed. There is no clarity on DER individual AVR's vs whole site AVR.  
10.2 is not addressed. There is no clarity on DER individual AVR's vs whole site AVR.  
14.1 is not addressed.

Likes 0

Dislikes 0

**Response**

**Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF**

**Answer** No

**Document Name**

**Comment**

The MRO NSRF does not agree that certain changes made meet the intent of the Periodic Review Recommendations, Attachment 5 for Project 2016-EPR-02 as follows:

Attachment 5: Other Miscellaneous Corrections/ Revisions

**2 - Clarity**

**2.3.** The MRO NSRF appreciates the additional language of “that exceeds the threshold for notification” however, without a requirement for the TOP to specify the Reactive Power magnitude required for coordination this additional language will not add to reliability or meet the intended purpose. Further, removing “Reporting of status or capability changes as stated in Requirement R4 is not applicable to the individual generating units of dispersed power producing resources identified through Inclusion I4 of the Bulk Electric System definition.”, does not meet the intent of Project 2016-EPR-02 “establishing the level of change that trigger “change in reactive capability”.

**2.4.** The drafting team did add the “mutually-agreeable format” language to R.4 but added clarification in a footnote. There is no other mention of the TOP or GOP actually defining a format for notification. There should be a requirement that they define a mutually agreeable format prior to notifications being sent.

**2.5.** The MRO NSRF does not believe that this has been addressed. The SDT Technical Rationale document comments on this recommendation point to Requirement R3, which does not contain language about “Reactive Power capability”. Requirement R3 refers to the equipment that controls Reactive Power supplying equipment. Reactive Power is derived from equipment: generators, shunts, dynamic/static VAR compensators, synchronous condensers, et cetera, id est, Reactive Power supplying equipment. The MRO NSRF recommends the SDT reevaluate Recommendation 2.5.

**2.6.** The MRO NSRF does not believe that this has been addressed, please MRO NSRF’s comments on 2.3 & 2.5.

**2.7.** Please see the MRO NSRF’s comments 2.3 & 2.9.

**2.8.** Entire exception struck, please see the MRO NSRF’s comments 2.3 & 2.9.

**2.9.** Entire exception struck & not addressed in applicability section. This still needs to be addressed in the Standard either by leaving the bullet or addressing in applicability section. Also, exception needs to be applied to Requirement R3, as it is aggregate/plant level controller that is considered a ‘Voltage Regulator’.

**10 - Technical Accuracy**

**10.1.** Not accomplished, please see the MRO NSRF’s response to question 3.

**10.2.** Not accomplished

**14 - Technical Quality**

**14.1.** Not accomplished

**14.2.** Not accomplished

**16 - Related Regional Reliability Standards**

**16.1.** Not accomplished or addressed.

Likes	0
Dislikes	0

**Response**

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

**Answer** No

**Document Name**

**Comment**

See comments above.

Likes 0

Dislikes 0

**Response**

**David Jendras Sr - Ameren - Ameren Services - 3**

**Answer** Yes

**Document Name**

**Comment**

Ameren supports the language "mutually agreeable format." Ameren believes it is better to change the language as little as possible.

Likes 0

Dislikes 0

**Response**

**Kimberly Turco - Constellation - 6**

**Answer** Yes

**Document Name**

**Comment**

Constellation agrees with the changes, however, does note that the addition of the language "degrades its ability to automatically control voltage voltage" could cause potential ambiguity.

Kimberly Turco on behalf of Constellation Segments 5 and 6

Likes 0

Dislikes 0

**Response**



**Kim Turco - Constellation - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF**

**Answer** Yes

**Document Name**

**Comment**

Constellation agrees with the changes, however, does note that the addition of the language "degrades its ability to automatically control voltage voltage" could cause potential ambiguity.

Kimberly Turco on behalf of Constellation Energy Segments 5 and 6

Likes 0

Dislikes 0

**Response**

**Kristine Howie - Kristine Howie On Behalf of: Alison MacKellar, Constellation, 5, 6; - Kristine Howie**

**Answer** Yes

**Document Name**

**Comment**

Constellation agrees with the changes, however, does note that the addition of the language "degrades its ability to automatically control voltage voltage" could cause potential ambiguity.

Kristine Howie on behalf of Constellation Segments 5 and 6

Likes 0

Dislikes 0

**Response**

**Andrew Gallo - Electric Reliability Council of Texas, Inc. - 2**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Cynthia Doré - Hydro-Québec Production - 5 - NPCC**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Dwanique Spiller - Berkshire Hathaway - NV Energy - 5**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Patricia Lynch - NRG - NRG Energy, Inc. - 5**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Chantal Mazza - Chantal Mazza On Behalf of: Carl Pineault, Hydro-Québec Production, 1, 5; - Chantal Mazza**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Adrian Andreoiu - BC Hydro and Power Authority - 1, Group Name BC Hydro**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Anna Todd - Southern Indiana Gas and Electric Co. - 1,3,5,6 - RF**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

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

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Harishkumar Subramani Vijay Kumar - Independent Electricity System Operator - 2**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**James Baldwin - Lower Colorado River Authority - 1**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Jessica Cordero - Unisource - Tucson Electric Power Co. - 1 - WECC**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Mike Magruder - Avista - Avista Corporation - 1**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Jessica Lopez - APS - Arizona Public Service Co. - 3**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Robert Follini - Avista - Avista Corporation - 3**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Teresa Krabe - Lower Colorado River Authority - 5**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Sheila Suurmeier - Black Hills Corporation - 5**

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>Micah Runner - Black Hills Corporation - 1</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>Josh Combs - Black Hills Corporation - 3</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>Claudine Bates - Black Hills Corporation - 6</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes 0

**Response**

**Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter**

**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**

**Thomas Foltz - AEP - 5**

**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 - WECC**

**Answer** Yes

<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Donna Wood - Tri-State G and T Association, Inc. - 1</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Nazra Gladu - Manitoba Hydro - 1</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Kristine Ward - Seminole Electric Cooperative, Inc. - 1</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	



<b>Response</b>	
<b>Jennie Wike - Jennie Wike On Behalf of: John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes	0
Dislikes	0
<b>Response</b>	
<b>Diane E Landry - Public Utility District No. 1 of Chelan County - 1, Group Name CHPD</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes	0
Dislikes	0
<b>Response</b>	
<b>Tim Kucey - PSEG - PSEG Fossil LLC - 5</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
Adopt responses of EEI RTC and NPCC RSC	
Likes	0
Dislikes	0
<b>Response</b>	
<b>Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC Entity Monitoring</b>	
<b>Answer</b>	

<b>Document Name</b>	
<b>Comment</b>	
No comment	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Rachel Coyne - Texas Reliability Entity, Inc. - 10</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
Please see Texas RE's comment on #2.	
Likes 0	
Dislikes 0	
<b>Response</b>	

5. Do you believe that proposed Reliability Standard VAR-002-5 can be met in a cost-effective manner? If you do not agree, or if you agree but have suggestions for improvement to enable more cost effective approaches, please provide your recommendation and, if appropriate, technical or procedural justification. Please provide the reasoning or justification for your position in the comments.

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

**Answer** No

**Document Name**

**Comment**

DCS may not have inverter alarming and number count capability that may require hardwiring, etc.

Likes 0

Dislikes 0

**Response**

**Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECI**

**Answer** No

**Document Name**

**Comment**

AECI supports comments submitted by the NAGF.

Likes 0

Dislikes 0

**Response**

**Michael Johnson - Michael Johnson On Behalf of: Frank Lee, Pacific Gas and Electric Company, 3, 1, 5; Marco Rios, Pacific Gas and Electric Company, 3, 1, 5; Sandra Ellis, Pacific Gas and Electric Company, 3, 1, 5; - Michael Johnson, Group Name PG&E All Segments**

**Answer** No

**Document Name**

**Comment**

Until the modifications are completed, PG&E cannot make a determination on the cost-effectiveness.

Likes 0

Dislikes 0

**Response**

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

**Answer** No

**Document Name**

**Comment**

GO/GOPs will need more information to adequately assess the cost effectiveness of the proposed approach.

Likes 1 JEA, 1, McClung Joseph

Dislikes 0

**Response**

**Kevin Conway - Public Utility District No. 1 of Pend Oreille County - 1,3,5,6 - WECC**

**Answer** Yes

**Document Name**

**Comment**

This is primarily a coordination issue with certain generation types. Though there is a "process cost," it is minimal and better coordinates the operation of the interconnected BES. It also prevents bad players from leaning on the system and having others burdened with the cost of voltage support.

Likes 0

Dislikes 0

**Response**

**Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF**

**Answer** Yes

**Document Name**

**Comment**

No comments.

Likes 0

Dislikes 0

**Response**

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

<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Costs associated with these changes are minimal, and would mainly be the initial effort to determine the amount of reactive capability that impacts the BES and what thresholds the TOP would need reported.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Chantal Mazza - Chantal Mazza On Behalf of: Carl Pineault, Hydro-Qu?bec Production, 1, 5; - Chantal Mazza</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
The proposed revisions seems to clarify elements of the standard but doesn't seem to engage great costs. However, there could be technological issues that would involve costs if the implementation time is short. We propose an implementation period of 24 months.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Cyntia Doré - Hydro-Qu?bec Production - 5 - NPCC</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
The proposed revisions seems to clarify elements of the standard but doesn't seem to engage great costs. However, there could be technological issues that would involve costs if the implementation time is short.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Casey Perry - PNM Resources - 1,3 - WECC</b>	

<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
PNM agrees.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Diane E Landry - Public Utility District No. 1 of Chelan County - 1, Group Name CHPD</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Jennie Wike - Jennie Wike On Behalf of: John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Kristine Ward - Seminole Electric Cooperative, Inc. - 1</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	

Likes 0

Dislikes 0

**Response**

**Nazra Gladu - Manitoba Hydro - 1**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Donna Wood - Tri-State G and T Association, Inc. - 1**

**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**

**Julie Hall - Entergy - 6, Group Name Entergy**

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

<b>Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

<b>Marc Sedor - Seminole Electric Cooperative, Inc. - 3</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

<b>Melanie Wong - Seminole Electric Cooperative, Inc. - 5</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	



Dislikes 0

**Response**

**Jennifer Bray - Arizona Electric Power Cooperative, Inc. - 1**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Teresa Krabe - Lower Colorado River Authority - 5**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Ryan Strom - Buckeye Power, Inc. - 5 - RF**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Robert Follini - Avista - Avista Corporation - 3**

**Answer**

Yes

<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Mike Magruder - Avista - Avista Corporation - 1</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Jessica Cordero - Unisource - Tucson Electric Power Co. - 1 - WECC</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>James Baldwin - Lower Colorado River Authority - 1</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	

**Response**

**Harishkumar Subramani Vijay Kumar - Independent Electricity System Operator - 2**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Adrian Raducea - DTE Energy - Detroit Edison Company - 5, Group Name DTE Energy - DTE Electric**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Anna Todd - Southern Indiana Gas and Electric Co. - 1,3,5,6 - RF**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response****Kinte Whitehead - Exelon - 3****Answer**

Yes

**Document Name****Comment**

Likes 0

Dislikes 0

**Response****Daniel Gacek - Exelon - 1****Answer**

Yes

**Document Name****Comment**

Likes 0

Dislikes 0

**Response****Larry Brusseau - Corn Belt Power Cooperative - 1 - MRO****Answer**

Yes

**Document Name****Comment**

Likes 0

Dislikes 0

**Response**

**Israel Perez - Israel Perez On Behalf of: Jennifer Bennett, Salt River Project, 3, 5, 1, 6; Mathew Weber, Salt River Project, 3, 5, 1, 6; Sarah Blankenship, Salt River Project, 3, 5, 1, 6; Timothy Singh, Salt River Project, 3, 5, 1, 6; - Israel Perez**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Marty Watson - Santee Cooper - 1,3,5,6, Group Name Santee Cooper**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Adrian Andreoiu - BC Hydro and Power Authority - 1, Group Name BC Hydro**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

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

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response****Natalie Johnson - Enel Green Power - 5****Answer**

Yes

**Document Name****Comment**

Likes 0

Dislikes 0

**Response****Patricia Lynch - NRG - NRG Energy, Inc. - 5****Answer**

Yes

**Document Name****Comment**

Likes 0

Dislikes 0

**Response****Dwanique Spiller - Berkshire Hathaway - NV Energy - 5****Answer**

Yes

**Document Name****Comment**

Likes 0

Dislikes 0

**Response**

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

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Kathleen Goodman - Kathleen Goodman On Behalf of: John Pearson, ISO New England, Inc., 2; - Kathleen Goodman**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Andrew Gallo - Electric Reliability Council of Texas, Inc. - 2**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Constantin Chitescu - Ontario Power Generation Inc. - 5**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Gregory Campoli - New York Independent System Operator - 2, Group Name ISO/RTO Standards Review Committee**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Sing Tay - Sing Tay On Behalf of: Ruchi Shah, AES - AES Corporation, 5; - Sing Tay**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Rachel Coyne - Texas Reliability Entity, Inc. - 10**

**Answer**

**Document Name**

**Comment**

Texas RE does not have comments on this question.

Likes 0

Dislikes 0

**Response**



**Claudine Bates - Black Hills Corporation - 6**

**Answer**

**Document Name**

**Comment**

BHC will not respond to cost effectiveness.

Likes 0

Dislikes 0

**Response**

**Josh Combs - Black Hills Corporation - 3**

**Answer**

**Document Name**

**Comment**

BHC will not respond to cost effectiveness.

Likes 0

Dislikes 0

**Response**

**Micah Runner - Black Hills Corporation - 1**

**Answer**

**Document Name**

**Comment**

BHC will not respond to cost effectiveness.

Likes 0

Dislikes 0

**Response**

**Sheila Suurmeier - Black Hills Corporation - 5**

<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
BHC will not respond to cost effectiveness.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC Entity Monitoring</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
WECC has no comment on this. We leave it to the applicable entities to comment.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Tim Kucey - PSEG - PSEG Fossil LLC - 5</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
Adopt responses of EEI RTC and NPCC RSC	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Russell Noble - Cowlitz County PUD - 3</b>	
<b>Answer</b>	
<b>Document Name</b>	

**Comment**

See answers to previous questions. It is difficult to assess in view of terms not adequately being defined.

Likes 0

Dislikes 0

**Response**

**Deanna Carlson - Cowlitz County PUD - 5**

**Answer****Document Name****Comment**

See answers to previous questions. It is difficult to assess in view of terms not adequately being defined.

Likes 0

Dislikes 0

**Response**

**Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company**

**Answer****Document Name****Comment**

Until the changes to the standard are solidified, this cannot be answered.

Likes 0

Dislikes 0

**Response**

**Kristine Howie - Kristine Howie On Behalf of: Alison MacKellar, Constellation, 5, 6; - Kristine Howie**

**Answer****Document Name****Comment**

Constellation has no additional comments.

Kristine Howie on behalf of Constellation Segments 5 and 6

Likes 0

Dislikes 0

**Response**

**Kim Turco - Constellation - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF**

**Answer**

**Document Name**

**Comment**

Constellation has no additional comments.

Kimberly Turco on behalf of Constellation Energy Segments 5 and 6

Likes 0

Dislikes 0

**Response**

**Kimberly Turco - Constellation - 6**

**Answer**

**Document Name**

**Comment**

Constellation has no additional comments.

Kimberly Turco on behalf of Constellation Segments 5 and 6

Likes 0

Dislikes 0

**Response**

6. The Project 2021-02 SDT has proposed a one-year implementation period. Would this proposed timeframe provide for enough time to put into place process, procedures, or technology to meet the proposed language of the Implementation Plan? If you think an alternate timeframe is needed, please propose an alternate implementation time period and provide a detailed explanation of actions planned to meet the implementation deadline.

**David Jendras Sr - Ameren - Ameren Services - 3**

**Answer** No

**Document Name**

**Comment**

Ameren suggests extending the implementation period to 18 months.

Likes 0

Dislikes 0

**Response**

**Adrian Andreoiu - BC Hydro and Power Authority - 1, Group Name BC Hydro**

**Answer** No

**Document Name**

**Comment**

BC Hydro's assessment as a TOP is that the implementation will require more than 12 months. This is due to the need to engage all GO/GOP entities to review current agreements, complete gap analysis and implement (including all necessary approvals) any required changes. BC Hydro's current estimate is that this would require up to 36 months.

Likes 0

Dislikes 0

**Response**

**Thomas Foltz - AEP - 5**

**Answer** No

**Document Name**

**Comment**

AEP recommends changing from a 12 month implementation period to an 18 month implementation period to allow entities to address the needed communication channels and to verify the data points required for monitoring.

Likes 0

Dislikes 0

**Response**

**Kevin Conway - Public Utility District No. 1 of Pend Oreille County - 1,3,5,6 - WECC**

**Answer**

No

**Document Name**

**Comment**

This standard should only allow a 6 month time period. This is not a standard that should take much effort to meet. Controls would take a little longer to implement, but coordination can be done immediatly.

Likes 0

Dislikes 0

**Response**

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

**Answer**

No

**Document Name**

**Comment**

Limited controls personnel are available to implement programming changes – a more reasonable period is two-years.

Likes 0

Dislikes 0

**Response**

**Casey Perry - PNM Resources - 1,3 - WECC**

**Answer**

Yes

**Document Name**

**Comment**

PNM agrees with the one year implementation period.

Likes 0

Dislikes 0

**Response**

**Kimberly Turco - Constellation - 6**

**Answer** Yes

**Document Name**

**Comment**

Constellation has no additional comments.

Kimberly Turco on behalf of Constellation Segments 5 and 6

Likes 0

Dislikes 0

**Response**

**Kim Turco - Constellation - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF**

**Answer** Yes

**Document Name**

**Comment**

Constellation has no additional comments.

Kimberly Turco on behalf of Constellation Energy Segments 5 and 6

Likes 0

Dislikes 0

**Response**

**Kristine Howie - Kristine Howie On Behalf of: Alison MacKellar, Constellation, 5, 6; - Kristine Howie**

**Answer** Yes

**Document Name**

**Comment**

Constellation has no additional comments.

Kristine Howie on behalf of Constellation Segments 5 and 6

Likes 0

Dislikes 0

**Response**

**Cynthia Doré - Hydro-Québec Production - 5 - NPCC**

**Answer**

Yes

**Document Name**

**Comment**

We propose an implementation period of 24 months.

Likes 0

Dislikes 0

**Response**

**Chantal Mazza - Chantal Mazza On Behalf of: Carl Pineault, Hydro-Québec Production, 1, 5; - Chantal Mazza**

**Answer**

Yes

**Document Name**

**Comment**

No. We propose an implementation period of 24 months.

Likes 0

Dislikes 0

**Response**

**Alan Kloster - Alan Kloster On Behalf of: Jennifer Flandermeyer, Evergy, 3, 6, 5, 1; Jeremy Harris, Evergy, 3, 6, 5, 1; Kevin Frick, Evergy, 3, 6, 5, 1; Marcus Moor, Evergy, 3, 6, 5, 1; - Alan Kloster**

**Answer**

Yes

**Document Name**

**Comment**

Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) for question #6.

Likes 0

Dislikes 0

**Response**



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

Answer Yes

Document Name

Comment

EEl supports the 1 year implementation period.

Likes 0

Dislikes 0

Response

Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company

Answer Yes

Document Name

Comment

Until the changes to the standard are solidified, this cannot be answered with certainty.

Likes 0

Dislikes 0

Response

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

Answer Yes

Document Name

Comment

The NAGF supports the proposed one-year implementation period.

Likes 0

Dislikes 0

Response

**Michael Johnson - Michael Johnson On Behalf of: Frank Lee, Pacific Gas and Electric Company, 3, 1, 5; Marco Rios, Pacific Gas and Electric Company, 3, 1, 5; Sandra Ellis, Pacific Gas and Electric Company, 3, 1, 5; - Michael Johnson, Group Name PG&E All Segments**

**Answer** Yes

**Document Name**

**Comment**

PG&E supports the one (1) year implementation period.

Likes 0

Dislikes 0

**Response**

**Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECI**

**Answer** Yes

**Document Name**

**Comment**

AECI supports comments submitted by the NAGF.

Likes 0

Dislikes 0

**Response**

**Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF**

**Answer** Yes

**Document Name**

**Comment**

No comments.

Likes 0

Dislikes 0

**Response**

**Sing Tay - Sing Tay On Behalf of: Ruchi Shah, AES - AES Corporation, 5; - Sing Tay**

**Answer** Yes

<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Gregory Campoli - New York Independent System Operator - 2, Group Name ISO/RTO Standards Review Committee</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Constantin Chitescu - Ontario Power Generation Inc. - 5</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Andrew Gallo - Electric Reliability Council of Texas, Inc. - 2</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	

**Response**

**Kathleen Goodman - Kathleen Goodman On Behalf of: John Pearson, ISO New England, Inc., 2; - Kathleen Goodman**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

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

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Dwanique Spiller - Berkshire Hathaway - NV Energy - 5**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Patricia Lynch - NRG - NRG Energy, Inc. - 5**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Natalie Johnson - Enel Green Power - 5**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

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

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Marty Watson - Santee Cooper - 1,3,5,6, Group Name Santee Cooper**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Israel Perez - Israel Perez On Behalf of: Jennifer Bennett, Salt River Project, 3, 5, 1, 6; Mathew Weber, Salt River Project, 3, 5, 1, 6; Sarah Blankenship, Salt River Project, 3, 5, 1, 6; Timothy Singh, Salt River Project, 3, 5, 1, 6; - Israel Perez**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Larry Brusseau - Corn Belt Power Cooperative - 1 - MRO**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Daniel Gacek - Exelon - 1**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Kinte Whitehead - Exelon - 3**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Anna Todd - Southern Indiana Gas and Electric Co. - 1,3,5,6 - RF**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Adrian Raducea - DTE Energy - Detroit Edison Company - 5, Group Name DTE Energy - DTE Electric**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

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

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Harishkumar Subramani Vijay Kumar - Independent Electricity System Operator - 2**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**James Baldwin - Lower Colorado River Authority - 1**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Jessica Cordero - Unisource - Tucson Electric Power Co. - 1 - WECC**

**Answer** Yes

**Document Name**

**Comment**



Likes 0

Dislikes 0

**Response**

**Mike Magruder - Avista - Avista Corporation - 1**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Robert Follini - Avista - Avista Corporation - 3**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Jessica Lopez - APS - Arizona Public Service Co. - 3**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Ryan Strom - Buckeye Power, Inc. - 5 - RF**

<b>Answer</b>	Yes
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<b>Document Name</b>	
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<b>Comment</b>	
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Likes	0
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Dislikes	0
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<b>Response</b>	
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**Teresa Krabe - Lower Colorado River Authority - 5**

<b>Answer</b>	Yes
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<b>Document Name</b>	
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<b>Comment</b>	
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Likes	0
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Dislikes	0
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<b>Response</b>	
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**Jennifer Bray - Arizona Electric Power Cooperative, Inc. - 1**

<b>Answer</b>	Yes
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<b>Document Name</b>	
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<b>Comment</b>	
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Likes	0
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Dislikes	0
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<b>Response</b>	
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**Sheila Suurmeier - Black Hills Corporation - 5**

<b>Answer</b>	Yes
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<b>Document Name</b>	
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<b>Comment</b>	
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Likes 0

Dislikes 0

**Response**

**Micah Runner - Black Hills Corporation - 1**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Josh Combs - Black Hills Corporation - 3**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Claudine Bates - Black Hills Corporation - 6**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Melanie Wong - Seminole Electric Cooperative, Inc. - 5**

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>Marc Sedor - Seminole Electric Cooperative, Inc. - 3</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>Rachel Coyne - Texas Reliability Entity, Inc. - 10</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes 0

**Response**

**Julie Hall - Entergy - 6, Group Name** Entergy

**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**

**Donna Wood - Tri-State G and T Association, Inc. - 1**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Nazra Gladu - Manitoba Hydro - 1**

**Answer**

Yes

<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Kristine Ward - Seminole Electric Cooperative, Inc. - 1</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Jennie Wike - Jennie Wike On Behalf of: John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Diane E Landry - Public Utility District No. 1 of Chelan County - 1, Group Name CHPD</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	

Dislikes 0

**Response**

**Deanna Carlson - Cowlitz County PUD - 5**

**Answer**

**Document Name**

**Comment**

Not able to answer since current draft could introduce uncertainty.

Likes 0

Dislikes 0

**Response**

**Russell Noble - Cowlitz County PUD - 3**

**Answer**

**Document Name**

**Comment**

Not able to answer since current draft could introduce uncertainty.

Likes 0

Dislikes 0

**Response**

**Tim Kucey - PSEG - PSEG Fossil LLC - 5**

**Answer**

**Document Name**

**Comment**

Adopt responses of EEI RTC and NPCC RSC

Likes 0

Dislikes 0

**Response**

Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC Entity Monitoring

Answer

Document Name

Comment

WECC has no comment on this. We leave it to the applicable entities to comment.

Likes 0

Dislikes 0

Response



7. The Project 2021-02 SDT believes that the language of proposed Reliability Standard VAR-002-5 addresses the issues outlined in the project SAR. Do you agree? If you agree but have suggestions for improvement to enable more cost effective approaches, please provide your recommendation and, if appropriate, technical or procedural justification.

**Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF**

**Answer** No

**Document Name**

**Comment**

The SAR charged the drafting with this task:

*NERC Project 2014-01 revised VAR-002 Requirement R4 to clarify that it is not applicable to individual generating units of dispersed power producing resources. The IRPTF did not identify any reason why Requirement R3 should be treated differently than Requirement R4 in this respect and recommended VAR-002-4.1 be modified to make this same clarification to Requirement R3.*

Note the bulleted item in R4 of VAR-002-4 that addresses the individual generating unit (the inverter).

To meet this SAR directive for version -5, all the drafting team needed to do was add a similar bullet under R3.

*The edits that have been made to R4 in the current redline actually remove this clarification that was made with a previous revision. The R4 bullet needs to be retained.*

Further, the addition of all of the text in R3 and R4 make, is no clearer that R3 is not applicable to the individual generating units of the dispersed power producing resources. It appears that if the TOP says they want to know about individual inverters, then they can specify it and the GOP would then have to report them. The existing requirements of R2 are adequate to notify the TOP in cases where the GOP is unable to maintain the voltage schedule, se R2.2 of the existing VAR-002.

Likes 0

Dislikes 0

**Response**

**Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECl**

**Answer** No

**Document Name**

**Comment**

AECl supports comments submitted by the NAGF.

Likes 0

Dislikes 0

Response	
Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group	
Answer	No
Document Name	
Comment	
WEC Energy Group supports the MRO NSRF comments.	
Likes	0
Dislikes	0
Response	
Michael Johnson - Michael Johnson On Behalf of: Frank Lee, Pacific Gas and Electric Company, 3, 1, 5; Marco Rios, Pacific Gas and Electric Company, 3, 1, 5; Sandra Ellis, Pacific Gas and Electric Company, 3, 1, 5; - Michael Johnson, Group Name PG&E All Segments	
Answer	No
Document Name	
Comment	
PG&E agrees with the input provided by EEI that the modifications align with the SAR, but additional modifications are still required per the EEI input to Question 1 and our additional input for Question 1.	
Likes	0
Dislikes	0
Response	
Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF	
Answer	No
Document Name	
Comment	
The NAGF does not believe that the proposed language for VAR-002-5 address the issues outlined in the project SAR. Specifically, the proposed changes to Requirement 3 and Requirement 4 do not clearly state that individual generating units of dispersed power producing resources are exempt from R3 and R4 reporting.	
Likes	1
Dislikes	0
JEA, 1, McClung Joseph	

**Response**

**Kinte Whitehead - Exelon - 3**

**Answer** No

**Document Name**

**Comment**

Exelon supports the comments submitted by EEI

Likes 0

Dislikes 0

**Response**

**Daniel Gacek - Exelon - 1**

**Answer** No

**Document Name**

**Comment**

Exelon supports the comments submitted by EEI.

Likes 0

Dislikes 0

**Response**

**Larry Brusseau - Corn Belt Power Cooperative - 1 - MRO**

**Answer** No

**Document Name**

**Comment**

SC: The SAR charged the drafting with this task:  
*NERC Project 2014-01 revised VAR-002 Requirement R4 to clarify that it is not applicable to individual generating units of dispersed power producing resources. The IRPTF did not identify any reason why Requirement R3 should be treated differently than Requirement R4 in this respect and recommended VAR-002-4.1 be modified to make this same clarification to Requirement R3.*

Note the bulleted item in R4 of VAR-002-4 that addresses the individual generating unit (the inverter).

To meet this SAR directive for version -5, all the drafting team needed to do was add a similar bullet under R3.

*The edits that have been made to R4 in the current redline actually remove this clarification that was made with a previous revision. The R4 bullet needs to be retained.*

Further, the addition of all of the text in R3 and R4 make, is no more clear that R3 is not applicable to the individual generating units of the dispersed power producing resources. It appears that if the TOP says he wants to know about individual inverters, that he can specify it and the GOP would then have to report them. The existing requirements of R2 are adequate to notify the TOP in cases where the GOP is unable to maintain the voltage schedule, se R2.2 of the existing VAR-002.

Likes 0

Dislikes 0

### Response

**Marty Watson - Santee Cooper - 1,3,5,6, Group Name** Santee Cooper

**Answer**

No

**Document Name**

**Comment**

Changing the word "shall" to "will" does not add or enhance reliability. Actually it seems to add confusion Potentially that change will have a cascading effect on the other Standards to make the same change unless there is some explanation not covered in the Guidelines and Technical Basis that justifies this change.

Likes 0

Dislikes 0

### Response

**Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name** Southern Company

**Answer**

No

**Document Name**

**Comment**

The SAR charged the drafting with this task: NERC Project 2014-01 revised VAR-002 Requirement R4 to clarify that it is not applicable to individual generating units of dispersed power producing resources. The IRPTF did not identify any reason why Requirement R3 should be treated differently than Requirement R4 in this respect and recommended VAR-002-4.1 be modified to make this same clarification to Requirement R3.

Note the bulleted item in R4 of VAR-002-4 that addresses the individual generating unit (the inverter).

To meet this SAR directive for version -5, all the drafting team needs to do is add a similar bullet under R3.

The edits that have been made to R4 in the current redline actually remove this clarification that was made with a previous revision. The R4 bullet needs to be retained.

Furthermore, the additional language proposed in R3 and R4 make it no more clear that R3 is not applicable to the individual generating units of the dispersed power producing resources. It appears that the existing standard permits the TOP the flexibility to request information on individual inverters: that may be specified and the GOP would then have to report in that detail. The existing requirements of R2 are adequate to notify the TOP in cases where the GOP is unable to maintain the voltage schedule (see R2.2 of the VAR-002-4.1).

Likes 0

Dislikes 0

### Response

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

**Answer**

No

**Document Name**

**Comment**

While EEI agrees that the changes made to VAR-002 align with the SAR, there are still revisions that are needed. (See our comments in question 1.)

Likes 0

Dislikes 0

### Response

**Alan Kloster - Alan Kloster On Behalf of: Jennifer Flandermeyer, Evergy, 3, 6, 5, 1; Jeremy Harris, Evergy, 3, 6, 5, 1; Kevin Frick, Evergy, 3, 6, 5, 1; Marcus Moor, Evergy, 3, 6, 5, 1; - Alan Kloster**

**Answer**

No

**Document Name**

**Comment**

Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) for question #7.

Likes 0

Dislikes 0

### Response

**Natalie Johnson - Enel Green Power - 5**

**Answer** No

**Document Name**

**Comment**

Enel North America Inc. believes the requirement R3 SAR item is not addressed fully and comments provided in Question 1 would provide the required result.

Likes 0

Dislikes 0

**Response**

**Kathleen Goodman - Kathleen Goodman On Behalf of: John Pearson, ISO New England, Inc., 2; - Kathleen Goodman**

**Answer** No

**Document Name**

**Comment**

ISO-NE supports the comments submitted by the IRC Standards Review Committee (SRC):

The purpose of the SAR is to revise VAR-002-4.1 to **address ambiguities ...** [and] to add clarity...particularly with respect to operation of Inverter-Based Resources. The proposed draft does not achieve the goal; however, by using the word “or” (versus “and”) it fails to address ambiguities as it leaves it open as to which one (generators) or the other (dispersed power producing resources) must comply; not both. Its use should be limited to only those circumstances where it is appropriate to limit to one generator or another, as in measure M1.

**Recommendation: The SRC requests the SDT review the entire standard for use of the word “or,” including the VSL tables, and replace the word “or” with the word “and” where necessary to ensure all generators and dispersed power producing resources are subject to the standard.**

Sections where the SRC observed an incorrect use of the word “or” include: the Purpose statement, requirement R1, requirement R2 and measure M2 as illustrated below.

**3. Purpose:** To ensure generators and or dispersed power producing resources provide reactive support and voltage control, within generating Facility capabilities, in order to protect equipment and maintain reliable operation of the Interconnection.

**R1.** The Generator Operator shall operate each generator and or dispersed power producing resource connected to the interconnected transmission system in the automatic voltage control mode (with its automatic voltage regulator (AVR) or volt/VAR controller(s) in service and controlling voltage) or in a different control mode as instructed by the Transmission Operator...

**R2.** Unless exempted by the Transmission Operator, each Generator Operator shall maintain each the generator and or dispersed power producing resource voltage or Reactive Power schedule (within each generating Facility’s capabilities) provided by the Transmission Operator...

**M2.** ...The Generator Operator shall will have evidence to show that each the generator and or dispersed power producing resource maintained the voltage or Reactive Power schedule provided by the Transmission Operator...

Likes 0

Dislikes 0

**Response**

**Andrew Gallo - Electric Reliability Council of Texas, Inc. - 2**

**Answer**

No

**Document Name**

**Comment**

See comments, above.

Likes 0

Dislikes 0

**Response**

**Casey Perry - PNM Resources - 1,3 - WECC**

**Answer**

No

**Document Name**

**Comment**

PNM supports EEI comments and recommends the changes to R1 described above.

Likes 0

Dislikes 0

**Response**

**Sing Tay - Sing Tay On Behalf of: Ruchi Shah, AES - AES Corporation, 5; - Sing Tay**

**Answer**

No

**Document Name**

**Comment**

AES Clean Energy also supports comments submitted by NAGF.

Likes 0

Dislikes 0

**Response**

**Adrian Raducea - DTE Energy - Detroit Edison Company - 5, Group Name DTE Energy - DTE Electric**

**Answer** No

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

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

**Answer** Yes

**Document Name**

**Comment**

None.

Likes 0

Dislikes 0

**Response**

**Thomas Foltz - AEP - 5**

**Answer** Yes

**Document Name**

**Comment**

AEP believes that the language of proposed Reliability Standard VAR-002-5 adequately addresses the issues outlined in the project SAR.

Likes 0

Dislikes 0

**Response**

**Kristine Howie - Kristine Howie On Behalf of: Alison MacKellar, Constellation, 5, 6; - Kristine Howie**



<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
<p>Constellation agrees the scope of the SAR is addressed but makes the suggestion to look into R5 and R6 removal from VAR-002 as these requirements are now addressed through other NERC Standards such as MOD-026, MOD-032, PRC-019 and therefore duplicative to have in VAR-002.</p> <p>Kristine Howie on behalf of Constellation Segments 5 and 6</p>	
Likes	0
Dislikes	0
<b>Response</b>	
<b>Kim Turco - Constellation - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
<p>Constellation agrees the scope of the SAR is addressed but makes the suggestion to look into R5 and R6 removal from VAR-002 as these requirements are now addressed through other NERC Standards such as MOD-026, MOD-032, PRC-019 and therefore duplicative to have in VAR-002.</p> <p>Kimberly Turco on behalf of Constellation Energy Segments 5 and 6</p>	
Likes	0
Dislikes	0
<b>Response</b>	
<b>Kimberly Turco - Constellation - 6</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
<p>Constellation agrees the scope of the SAR is addressed but makes the suggestion to look into R5 and R6 removal from VAR-002 as these requirements are now addressed through other NERC Standards such as MOD-026, MOD-032, PRC-019 and therefore duplicative to have in VAR-002.</p> <p>Kimberly Turco on behalf of Constellation Segments 5 and 6</p>	
Likes	0

Dislikes 0

**Response**

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

**Answer** Yes

**Document Name**

**Comment**

Please see questions 1 and 8 comments for suggested improvements.

Likes 0

Dislikes 0

**Response**

**David Jendras Sr - Ameren - Ameren Services - 3**

**Answer** Yes

**Document Name**

**Comment**

Ameren agrees with the language in the SAR, but there needs to be clarification on the responsibility the GOP has to report to the TOP when there has been a failure of an inverter based resource

Likes 0

Dislikes 0

**Response**

**Constantin Chitescu - Ontario Power Generation Inc. - 5**

**Answer** Yes

**Document Name**

**Comment**

OPG supports NPCC Regional Standards Committee's comments.

Likes 0

Dislikes 0

**Response**

**Diane E Landry - Public Utility District No. 1 of Chelan County - 1, Group Name CHPD**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Jennie Wike - Jennie Wike On Behalf of: John Merrell, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; Terry Gifford, Tacoma Public Utilities (Tacoma, WA), 1, 4, 5, 6, 3; - Jennie Wike, Group Name Tacoma Power**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Kristine Ward - Seminole Electric Cooperative, Inc. - 1**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Nazra Gladu - Manitoba Hydro - 1**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response****Donna Wood - Tri-State G and T Association, Inc. - 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 - WECC****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**

**Julie Hall - Entergy - 6, Group Name Entergy**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter**

**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**

**Marc Sedor - Seminole Electric Cooperative, Inc. - 3**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Melanie Wong - Seminole Electric Cooperative, Inc. - 5**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Jennifer Bray - Arizona Electric Power Cooperative, Inc. - 1**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Teresa Krabe - Lower Colorado River Authority - 5**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Ryan Strom - Buckeye Power, Inc. - 5 - RF**

<b>Answer</b>	Yes
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<b>Document Name</b>	
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<b>Comment</b>
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Likes 0
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Dislikes 0
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<b>Response</b>
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**Robert Follini - Avista - Avista Corporation - 3**

<b>Answer</b>	Yes
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<b>Document Name</b>	
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<b>Comment</b>
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Likes 0
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Dislikes 0
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<b>Response</b>
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**Mike Magruder - Avista - Avista Corporation - 1**

<b>Answer</b>	Yes
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<b>Document Name</b>	
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<b>Comment</b>
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Likes 0
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Dislikes 0
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<b>Response</b>
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**Jessica Cordero - Unisource - Tucson Electric Power Co. - 1 - WECC**

<b>Answer</b>	Yes
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<b>Document Name</b>	
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<b>Comment</b>
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Likes 0

Dislikes 0

**Response**

**James Baldwin - Lower Colorado River Authority - 1**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Harishkumar Subramani Vijay Kumar - Independent Electricity System Operator - 2**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

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

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Anna Todd - Southern Indiana Gas and Electric Co. - 1,3,5,6 - RF**



<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Israel Perez - Israel Perez On Behalf of: Jennifer Bennett, Salt River Project, 3, 5, 1, 6; Mathew Weber, Salt River Project, 3, 5, 1, 6; Sarah Blankenship, Salt River Project, 3, 5, 1, 6; Timothy Singh, Salt River Project, 3, 5, 1, 6; - Israel Perez</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Adrian Andreoiu - BC Hydro and Power Authority - 1, Group Name BC Hydro</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Collaborators</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	

Likes 0

Dislikes 0

**Response**

**Chantal Mazza - Chantal Mazza On Behalf of: Carl Pineault, Hydro-Qu?bec Production, 1, 5; - Chantal Mazza**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Patricia Lynch - NRG - NRG Energy, Inc. - 5**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Dwanique Spiller - Berkshire Hathaway - NV Energy - 5**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Cyntia Doré - Hydro-Qu?bec Production - 5 - NPCC**

<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Claudine Bates - Black Hills Corporation - 6</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
BHC will not respond to cost effectiveness.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Josh Combs - Black Hills Corporation - 3</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
BHC will not respond to cost effectiveness.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Micah Runner - Black Hills Corporation - 1</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	

BHC will not respond to cost effectiveness.

Likes 0

Dislikes 0

**Response**

**Sheila Suurmeier - Black Hills Corporation - 5**

**Answer**

**Document Name**

**Comment**

BHC will not respond to cost effectiveness.

Likes 0

Dislikes 0

**Response**

**Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC Entity Monitoring**

**Answer**

**Document Name**

**Comment**

Based on comments above, WECC does not believe the ambiguity has been eliminated.

Likes 0

Dislikes 0

**Response**

**Tim Kucey - PSEG - PSEG Fossil LLC - 5**

**Answer**

**Document Name**

**Comment**

Adopt responses of EEI RTC and NPCC RSC

Likes 0

Dislikes 0

**Response**

**Russell Noble - Cowlitz County PUD - 3**

**Answer**

**Document Name**

**Comment**

See answers pertaining to terms not being clearly defined.

Likes 0

Dislikes 0

**Response**

**Deanna Carlson - Cowlitz County PUD - 5**

**Answer**

**Document Name**

**Comment**

See answers pertaining to terms not being clearly defined.

Likes 0

Dislikes 0

**Response**

**Gregory Campoli - New York Independent System Operator - 2, Group Name ISO/RTO Standards Review Committee**

**Answer**

**Document Name**

**Comment**

The purpose of the SAR is to revise VAR-002-4.1 to **address ambiguities ...** [and] to add clarity...particularly with respect to operation of Inverter-Based Resources. The proposed draft does not achieve the goal; however, by using the word “or” (versus “and”) it fails to address ambiguities as it leaves it open as to which one (generators) or the other (dispersed power producing resources) must comply; not both. Its use should be limited to only those circumstances where it is appropriate to limit to one generator or another, as in measure M1.

**Recommendation: The SRC requests the SDT review the entire standard for use of the word “or,” including the VSL tables, and replace the word “or” with the word “and” where necessary to ensure *all* generators and dispersed power producing resources are subject to the standard.**

Sections where the SRC observed an incorrect use of the word “or” include: the Purpose statement, requirement R1, requirement R2 and measure M2 as illustrated below.

**3. Purpose:** To ensure generators **and** dispersed power producing resources provide reactive support and voltage control, within generating Facility capabilities, in order to protect equipment and maintain reliable operation of the Interconnection.

**R1.** The Generator Operator shall operate each generator **and** dispersed power producing resource connected to the interconnected transmission system in the automatic voltage control mode (with its automatic voltage regulator (AVR) or volt/VAR controller(s) in service and controlling voltage) or in a different control mode as instructed by the Transmission Operator...

**R2.** Unless exempted by the Transmission Operator, each Generator Operator shall maintain **each** generator **and** dispersed power producing resource voltage or Reactive Power schedule (within each generating Facility’s capabilities) provided by the Transmission Operator...

**M2.** ...The Generator Operator **shall** have evidence to show that **each** generator **and** dispersed power producing resource maintained the voltage or Reactive Power schedule provided by the Transmission Operator...

*Please note: IESO is not a party to the response to this Question.*

Likes	0
Dislikes	0
<b>Response</b>	

8. Provide any additional comments on proposed Reliability Standard VAR-002-5 and technical rationale document for the standard drafting team to consider, if desired.

**Gregory Campoli - New York Independent System Operator - 2, Group Name ISO/RTO Standards Review Committee**

**Answer**

**Document Name**

**Comment**

**Recommendation: Reduce the time allowed for notification from 30 to 15 minutes to allow TOPs time to address any potential voltage collapse issues (including those that may contribute to an IROL).** In addition, the SRC believes the 30-minute window for notification of status or functionality changes as described in requirement R3 should be reduced to 15 minutes due to the growing change in resource mix and the obligation of operators to respond to system conditions within 30 minutes to avoid voltage collapse.

Likes 0

Dislikes 0

**Response**

**Romel Aquino - Edison International - Southern California Edison Company - 3**

**Answer**

**Document Name**

**Comment**

See comments submitted by the Edison Electric Institute.

Likes 0

Dislikes 0

**Response**

**Constantin Chitescu - Ontario Power Generation Inc. - 5**

**Answer**

**Document Name**

**Comment**

OPG supports NPCC Regional Standards Committee's comments and has the following additional comments:

**Please provide clarification regarding the difference between Status and Functionality.**

In the Summary of "Technical Rationale for Reliability Standard VAR-002-5 - Generator Operation for Maintaining Network Voltage Schedule" it is stated that:

Requirement R3 – Added “functionality” for computing functions or range of functions in a Technical Rationale for Reliability Standard VAR-002-5 NERC Project 2021-02 Modifications to VAR-002-4.1 October 2022 3 control system, such as the Power System Stabilizers or aggregated volt/VAR controller (**EPR Attachment 5 Recommendation 14.1**).

However the Periodic Review Recommendations: VAR-002-4 – Generator Operation for Maintaining Network Voltage Schedules, Attachment 5 has the following **unrelated** recommendation: "Recommendation 14.1 - 14.1. Requirement R5, does not identify the Transmission Owner (TO) for cases where the TO owns the generator step-up transformer. Revise Requirement R6 to require the TO to communicate settings to the Transmission Operator"

On the other hand Recommendation 14.2 talks about: "14.2. Requirement R3 require the Generator Operator to notify the Transmission Operator of power system stabilizer (PSS) unavailability. The operational requirements for initial state of PSS (on/off) clarity need to be assessed for inclusion within the VAR suite of standards (including expectations for startup, shutdown, or testing mode). Consider whether new requirements or alternative guidance is needed to identify the expected initial state for a PSS."

The Project 2021-02 SDT agreed that the operational requirements for initial state of PSS (on/off) clarity was needed for expectations on startup, shutdown, or testing mode. To clarify notification for PSS status change, the Project 2021-02 SDT proposes to add language of functionality changes that degrade or restore its ability to automatically control voltage.

**Degraded PSS Functionality is not defined such that not to create noncompliance controversy, since there is no associated degradation threshold.**

If the intent of this requirement is the notification related to status change for Volt/VAR controlling equipment then the status change is clear (ON or OFF). The potential misunderstanding is associated with the implied threshold (not specified) for the **functionality** change. Suggestion is made to remove word "functionality " which is related to the specific design intent and application (i.e. Grid condition at that specific moment) and stick to "status change" for Requirement R3.

**Functionality** change appears to be more suited to be covered by the capability change.

Likes 0

Dislikes 0

### Response

**Casey Perry - PNM Resources - 1,3 - WECC**

**Answer**

**Document Name**

**Comment**

PNM agrees with EEI comments regarding the phrase "degrades/restores".

Likes 0

Dislikes 0

### Response



**Andrew Gallo - Electric Reliability Council of Texas, Inc. - 2**

**Answer**

**Document Name**

**Comment**

Footnote 1 on page 4 appears to have left off “or dispersed power producing resource” in the second half of the sentence.

Likes 0

Dislikes 0

**Response**

**Kathleen Goodman - Kathleen Goodman On Behalf of: John Pearson, ISO New England, Inc., 2; - Kathleen Goodman**

**Answer**

**Document Name**

**Comment**

ISO-NE supports the comments submitted by the IRC Standards Review Committee (SRC):

**Recommendation #1: Reduce the time allowed for notification from 30 to 15 minutes to allow TOPs time to address any potential voltage collapse issues (including those that may contribute to an IROL).** In addition, the SRC believes the 30-minute window for notification of status or functionality changes as described in requirement R3 should be reduced to 15 minutes due to the growing change in resource mix and the obligation of operators to respond to system conditions within 30 minutes to avoid voltage collapse.

Likes 0

Dislikes 0

**Response**

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

**Answer**

**Document Name**

**Comment**

Please consider clarifying Requirement R3 regarding “degrades/restore.” Should there be a threshold for Generator Operator notifications to the Transmission Operator? Please consider if R3, as written, may result in compliance disputes.

RE: Compliance Section C. Please consider removing “The Compliance Monitor shall retain any audit data for three years.” The requirement for the “Compliance Monitor” does not appear to be necessary for section 1.2 Evidence Retention. In addition, in Compliance section 1.1, please consider adding (CEA) as the abbreviation for Compliance Enforcement Authority. In section 1.2, please consider using the CEA abbreviation.

Likes 0

Dislikes 0

**Response**

**Kimberly Turco - Constellation - 6**

**Answer**

**Document Name**

**Comment**

Constellation has no additional comments.

Kimberly Turco on behalf of Constellation Segments 5 and 6

Likes 0

Dislikes 0

**Response**

**Kim Turco - Constellation - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF**

**Answer**

**Document Name**

**Comment**

Constellation has no additional comments.

Kimberly Turco on behalf of Constellation Energy Segments 5 and 6

Likes 0

Dislikes 0

**Response**

**Kristine Howie - Kristine Howie On Behalf of: Alison MacKellar, Constellation, 5, 6; - Kristine Howie**

**Answer**

**Document Name**

**Comment**

Constellation has no additional comments.

Kristine Howie on behalf of Constellation Segments 5 and 6

Likes 0

Dislikes 0

### Response

**Cynthia Doré - Hydro-Québec Production - 5 - NPCC**

**Answer**

**Document Name**

**Comment**

1. **“Responsible Entity” is capitalized in the R2 VSL, however this may lead to confusion as it is not defined anywhere in the standard. Consider adding a phrase similar to “For the purpose of the requirements contained herein, the following list of functional entities will be collectively referred to as “Responsible Entities.” to section 4.1 in order to define “Responsible Entities” in the standard.**
2. **“Purpose” section: Reliable Operation shall be capitalized since its in the Glossary.**
3. **R1 : “Transmission” and “System” shall be capitalized since those terms are in the Glossary.**
4. **Footnote 1 and 2: Load shall be capitalized.**
5. **Footnote 4: System shall be capitalized.**
6. **Footnote 6: This footnote is probably not necessary. Interpretation of Inclusion I4 b) of the BES definition includes the DPPR step-up transformers. Including precisions on the BES definition in a Standard could lead to misinterpretation.**
7. **VSL table: All “Transmission” and “System” terms shall be capitalized**

Likes 0

Dislikes 0

### Response

**Chantal Mazza - Chantal Mazza On Behalf of: Carl Pineault, Hydro-Québec Production, 1, 5; - Chantal Mazza**

**Answer**

**Document Name**

**Comment**

1. “Responsible Entity” is capitalized in the R2 VSL, however this may lead to confusion as it is not defined anywhere in the standard. Consider adding a phrase similar to “For the purpose of the requirements contained herein, the following list of functional entities will be collectively referred to as “Responsible Entities.” to section 4.1 in order to define “Responsible Entities” in the standard.
2. “Purpose” section: Reliable Operation shall be capitalized since its in the Glossary.
3. R1 : “Transmission” and “System” shall be capitalized since those terms are in the Glossary.
4. Footnote 1 and 2: Load shall be capitalized.
5. Footnote 4: System shall be capitalized.
6. Footnote 6: This footnote is probably not necessary. Interpretation of Inclusion I4 b) of the BES definition includes the DPPR step-up transformers. Including precisions on the BES definition in a Standard could lead to misinterpretation.
7. VSL table: All “Transmission” and “System” terms shall be capitalized

Likes 0

Dislikes 0

**Response**

Alan Kloster - Alan Kloster On Behalf of: Jennifer Flandermeyer, Evergy, 3, 6, 5, 1; Jeremy Harris, Evergy, 3, 6, 5, 1; Kevin Frick, Evergy, 3, 6, 5, 1; Marcus Moor, Evergy, 3, 6, 5, 1; - Alan Kloster

**Answer**

**Document Name**

**Comment**

Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) for question #8.

Likes 0

Dislikes 0

**Response**

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

**Answer**

**Document Name**

**Comment**

EEI does not agree with the use of the phrase “degrades/restores” within Requirement R3. This dual use phrase adds ambiguity to this requirement. While the industry understands what it means for a control system/application to be in service or out of service, the use of the term

degrades is subjective and undefined. For this reason, this language should not be used. We also ask that the use of the term “restore” also not be used and replaced with the phrase “returned to service”, or something similar that is broadly understood.

Likes 0

Dislikes 0

**Response**

**Natalie Johnson - Enel Green Power - 5**

**Answer**

**Document Name**

[2021-02 Modifications to VAR 002 Unofficial\\_Comment\\_Form 102022\\_Enel Final Comments\\_01-11-2023.docx](#)

**Comment**

A copy of our comment form is attached.

Likes 0

Dislikes 0

**Response**

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

**Answer**

**Document Name**

**Comment**

Thank you for the opportunity to comment.

Likes 0

Dislikes 0

**Response**

**Pamela Frazier - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name Southern Company**

**Answer**

**Document Name**

**Comment**

Changing “shall” to “will” in each measure is not necessary. Many other standards use shall.

Changes proposed to R2.1 are not needed. R2 already says to maintain the voltage schedule and tell the TOP if you are having trouble by following his (the TOPs) notification instructions.

We recommend that the proposed Requirement 5 be removed from the proposed VAR-002-5 in its entirety as TOP-003 and MOD-032 already provides the opportunity for the TOP and TP to obtain this information.

The VSL Tables in the red-line version of -5 are illegible.

Likes 0

Dislikes 0

### Response

**Deanna Carlson - Cowlitz County PUD - 5**

**Answer**

**Document Name**

**Comment**

No further comment

Likes 0

Dislikes 0

### Response

**Russell Noble - Cowlitz County PUD - 3**

**Answer**

**Document Name**

**Comment**

No further comment.

Likes 0

Dislikes 0

### Response

**Israel Perez - Israel Perez On Behalf of: Jennifer Bennett, Salt River Project, 3, 5, 1, 6; Mathew Weber, Salt River Project, 3, 5, 1, 6; Sarah Blankenship, Salt River Project, 3, 5, 1, 6; Timothy Singh, Salt River Project, 3, 5, 1, 6; - Israel Perez**

<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
<p>Agree with Reliability First comment: "Shall" has been replaced by "will" in the proposed language of the measures. While the measures of NERC Reliability Standards are not part of the FERC-approved enforceable language, the RF Standards Review Team for this project recommends against a one-off deviation from established conventions. If "shall" is inappropriate for measure language, this should be addressed in the Standard Process Manual and be uniformly applied in Standards projects.</p>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Larry Brusseau - Corn Belt Power Cooperative - 1 - MRO</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
<p>SC: Changing "shall" to "will" in each measure is not necessary. Many other standards use shall. Why is it thought that this needs to change?</p> <p>The addition of "or volt/VAR controller" is not needed where it has been added.</p> <p>Here are reasons:</p> <ol style="list-style-type: none"> <li>1. The automatic voltage regulator (AVR) for the renewable plants is the PPC. People with these types of plants already know that.</li> <li>2. Just because AVR has been used for synchronous machines, it doesn't mean that it is exclusively reserved for that type of unit.</li> </ol> <p>Changes proposed to R2.1 are not needed. R2 already says to maintain the voltage schedule and tell the TOP if you are having trouble by following his (the TOPs) notification instructions.</p>	
Likes 0	
Dislikes 0	
<b>Response</b>	

**Tim Kucey - PSEG - PSEG Fossil LLC - 5**

**Answer**

**Document Name**

**Comment**

Adopt responses of EEI RTC and NPCC RSC

Likes 0

Dislikes 0

**Response**

**Daniel Gacek - Exelon - 1**

**Answer**

**Document Name**

**Comment**

Exelon supports the comments submitted by EEI.

Likes 0

Dislikes 0

**Response**

**Kinte Whitehead - Exelon - 3**

**Answer**

**Document Name**

**Comment**

Exelon supports the comments submitted by EEI

Likes 0

Dislikes 0

**Response**

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



<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
<p>The NAGF provides the following additional comments for consideration:</p> <ul style="list-style-type: none"> <li>- The NAGF believes that Requirement 2 should be a Transmission Operator responsibility.</li> <li>- Changes proposed to R2.1 are not needed. R2 currently requires maintaining the voltage schedule and communicating with the TOP if you are having trouble by following his (the TOPs) notification instructions.</li> <li>- Recommend that the Requirement 5 and Requirement 6 be removed from the proposed VAR-002-5 as MOD-026 provides the opportunity for sharing such information with the TO/TOP.</li> </ul>	
Likes 1	JEA, 1, McClung Joseph
Dislikes 0	
<b>Response</b>	
<p><b>Michael Johnson - Michael Johnson On Behalf of: Frank Lee, Pacific Gas and Electric Company, 3, 1, 5; Marco Rios, Pacific Gas and Electric Company, 3, 1, 5; Sandra Ellis, Pacific Gas and Electric Company, 3, 1, 5; - Michael Johnson, Group Name PG&amp;E All Segments</b></p>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
<p>PG&amp;E agrees with the input provided by EEI related to the phrase “degrades/restores” and the use of the word “restore”, and the recommendation to replace “restore” with the phrase “returned to service”, or something similar.</p> <p>As noted in Question 1, PG&amp;E would like to reinforce our comment on the use of the word “term”. In listening to industry comments and internal PG&amp;E comments, the use of the word “term” has confused many that the SDT is creating a NERC Glossary Term which we do not believe is the case. PG&amp;E recommends the word “term” be changed to “wording”</p>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<p><b>Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC Entity Monitoring</b></p>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	

No comment

Likes 0

Dislikes 0

**Response**

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

**Answer**

**Document Name**

**Comment**

The Draft 1 edits lack consistency with respect to incorporating the phrase “generator or dispersed power producing resource” (not clear if this was intentional). For instance, Requirement R2 (Part 2.1) and Measurement M2, (third paragraph) contain “a generator’s AVR or volt/VAR controller(s)”. Should this be “a generator or dispersed power producing resource’s AVR or volt/VAR controller(s)”? Similarly, footnote 1 uses “generator or dispersed power producing resource” in the first instance and just “generator” later in the footnote. By contrast, footnote 2 uses “generator or dispersed power producing resource” twice.

Likes 0

Dislikes 0

**Response**

**Christine Kane - WEC Energy Group, Inc. - 3, Group Name WEC Energy Group**

**Answer**

**Document Name**

**Comment**

WEC Energy Group supports the MRO NSRF comments.

Likes 0

Dislikes 0

**Response**

**Jessica Lopez - APS - Arizona Public Service Co. - 3**

**Answer**

**Document Name**

**Comment**

- Throughout the proposed revisions in the VAR-002 standard, requirements that previously used the term “shall” were replaced with “will”. What is the rationale for the replacement of “shall” with “will”? For uniformity with multiple standards, the Standard Drafting Team should consider using/retaining the term “shall” throughout the VAR-002 standard and requirements.
- In R3, what is the extent of “degrades”?
- In R6, the use of “generator owned” and “Generator Owner” should be replaced with “Generator Operator”, as Generator Owners do not perform plant alterations whereas the Generator Operator does in relation to tap changes.
- Specific to the dispersed power producing resources, is the NERC Standard VAR-002, meant to be applied at an inverter level or Facility level to report status and/or functionality changes to the Transmission Operator?

Likes 0

Dislikes 0

**Response**

**Ryan Strom - Buckeye Power, Inc. - 5 - RF**

**Answer**

**Document Name**

**Comment**

No additional comments.

Likes 0

Dislikes 0

**Response**

**Teresa Krabe - Lower Colorado River Authority - 5**

**Answer**

**Document Name**

**Comment**

None at this time.

Likes 0

Dislikes 0

**Response**

**Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECI**

**Answer**

**Document Name**

**Comment**

AECI supports comments submitted by the NAGF.

Likes 0

Dislikes 0

**Response****Jennifer Bray - Arizona Electric Power Cooperative, Inc. - 1****Answer****Document Name****Comment**

Thank you for the opportunity to comment.

Likes 0

Dislikes 0

**Response****Rachel Coyne - Texas Reliability Entity, Inc. - 10****Answer****Document Name****Comment**

Texas RE recommends removing the newly added “becoming aware of” in Requirement R3. The intent of the requirement is to notify the TOP of a status or functionality change within 30 minutes of a change, not necessarily when the operator in question identified the functionality change. In Texas RE’s experience, operators may receive status change alarms or other indications of a functionality change, but not recognize these alarms. The reliability issue is tied directly to when the status change occurred, not when a particular operator noticed the change. As such, Texas RE believes introducing an explicit scieneter requirement into the standard is inappropriate. Alternatively, the SDT may wish to consider verbiage such as when the operator “was aware of or reasonably should have been aware of” the status change.

Texas RE noticed in the VSL for Requirement R2, the term “Responsible Entity” is used but not defined anywhere else in the standard.

Likes 0

Dislikes 0

**Response**

**Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter**

**Answer**

**Document Name**

**Comment**

N/A

Likes 0

Dislikes 0

**Response**

**Lindsey Mannion - ReliabilityFirst - 10**

**Answer**

**Document Name**

**Comment**

“Shall” has been replaced by “will” in the proposed language of the measures. While the measures of NERC Reliability Standards are not part of the FERC-approved enforceable language, the RF Standards Review Team for this project recommends against a one-off deviation from established conventions. If “shall” is inappropriate for measure language, this should be addressed in the Standard Process Manual and be uniformly applied in Standards projects.

Likes 0

Dislikes 0

**Response**

**Kendra Buesgens - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF**

**Answer**

**Document Name**

**Comment**

The addition of “or volt/VAR controller” is not needed where it has been added.

Here are reasons:

1. The automatic voltage regulator (AVR) for the renewable plants is the Power Plant Controller (PPC). Responsible entities with these types of plants already know this.
2. Just because AVR has been used for synchronous machines, it does not mean that it is exclusively reserved for that type of unit.

Changes proposed to R2.1 are not needed. R2 already says to maintain the voltage schedule and tell the TOP if you are having trouble by following the TOP's notification instructions.

Likes 0

Dislikes 0

**Response**

**Thomas Foltz - AEP - 5**

**Answer**

**Document Name**

**Comment**

While admittedly outside the scope of the current SAR, AEP recommends that some of the terms and phrases proposed for VAR-002 be referenced in other standards as well, most notably within VAR-001. These terms would include "volt/VAR controller(s)" and "dispersed power producing resource."

Likes 0

Dislikes 0

**Response**

**Kevin Conway - Public Utility District No. 1 of Pend Oreille County - 1,3,5,6 - WECC**

**Answer**

**Document Name**

**Comment**

This change has been long in coming. Though good players have coordinated voltage control and their obligation, there have been an number of entities that have only lived by the letter of the law. These companies have taken a minimum compliance threshold approach and have leaned on the interconnections long enough. This has burdened their neighbors and host utilities to burden the higher costs of voltage control.

Likes 0

Dislikes 0

**Response**

**Donna Wood - Tri-State G and T Association, Inc. - 1**

**Answer**

**Document Name**

**Comment**

NA

Likes 0

Dislikes 0

**Response**

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

**Answer**

**Document Name**

**Comment**

Shall was replaced with Will throughout the Standard. Recommend reverting language back to Shall.

Likes 0

Dislikes 0

**Response**