Comment Report

Project Name:	2021-02 Modifications to VAR-002-4.1 | Draft 3
Comment Period Start Date:	9/22/2023
Comment Period End Date:	11/6/2023
Associated Ballots:	2021-02 Modifications to VAR-002-4.1 Implementation Plan AB 3 OT 2021-02 Modifications to VAR-002-4.1 VAR-002-5 AB 3 ST

There were 55 sets of responses, including comments from approximately 146 different people from approximately 105 companies representing 10 of the Industry Segments as shown in the table on the following pages.

Questions

1. Do you agree with the language in proposed VAR-002-5 Purpose section? If you do not agree, please provide your recommendation and, if appropriate, technical or procedural justification.

2. Do you agree with the language in proposed VAR-002-5, Requirement R3? If you do not agree, please provide your recommendation and, if appropriate, technical or procedural justification.

3. Do you agree with the language in proposed VAR-002-5, Requirement R4? If you do not agree, please provide your recommendation and, if appropriate, technical or procedural justification.

4. Do you agree with the language in proposed VAR-002-5, of "generating resource(s)" for Requirements R1, R2, R5 and R6? If you do not agree, please provide your recommendation and, if appropriate, technical or procedural justification.

5. Provide any additional comments on the standard and technical rationale for the SDT 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
MRO	Anna Martinson	1,2,3,4,5,6	MRO	MRO Group	Shonda McCain	Omaha Public Power District (OPPD)	1,3,5,6	MRO
					Michael Brytowski	Great River Energy	1,3,5,6	MRO
					Jamison Cawley	Nebraska Public Power District	1,3,5	MRO
					Jay Sethi	Manitoba Hydro (MH)	1,3,5,6	MRO
					Jaimin Patal	Saskatchewan Power Corporation (SPC)	1	MRO
					Kimberly Bentley	Western Area Power Adminstration	1,6	MRO
					Marc Gomez	Southwestern Power Administration (SWPA)	1	MRO
					Fred Meyer	Algonquin Power Co.	3	MRO
					George Brown	Pattern Operators LP	5	MRO

					Larry Heckert	Alliant Energy (ALTE)	4	MRO
					Terry Harbour	MidAmerican Energy Company (MEC)	1,3	MRO
					Bryan Sherrow	Board Of Public Utilities (BPU)	1	MRO
					Seth Shoemaker	Muscatine Power & Water	1,3,5,6	MRO
					Bobbi Welch	Midcontinent ISO, Inc.	2	MRO
					Michael Ayotte	ITC Holdings	1	MRO
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
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
					Kris Carper	Arizona Electric Power Cooperative, Inc.	1	WECC
					Bill Pezalla	Old Dominion Electric Cooperative	3,4	SERC
					Nick Fogleman	Prairie Power, Inc.	1,3	SERC
					Jason Procuniar	Buckeye Power, Inc.	4	RF
					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

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
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
					Leslie Burke	Southern Company - Southern	5	SERC

						Company Generation		
Northeast Power Coordinating Council	Ruida Shu	1,2,3,4,5,6,7,8,9,10	NPCC	NPCC RSC	Gerry Dunbar	Northeast Power Coordinating Council	10	NPCC
					Alain Mukama	Hydro One Networks, Inc.	1	NPCC
					Deidre Altobell	Con Edison	1	NPCC
					Jeffrey Streifling	NB Power Corporation	1	NPCC
					Michele Tondalo	United Illuminating Co.	1	NPCC
					Stephanie Ullah-Mazzuca	Orange and Rockland	1	NPCC
					Michael Ridolfino	Central Hudson Gas & Electric Corp.	1	NPCC
					Randy Buswell	Vermont Electric Power Company	1	NPCC
					James Grant	NYISO	2	NPCC
					John Pearson	ISO New England, Inc.	2	NPCC
					Harishkumar Subramani Vijay Kumar	Independent Electricity System Operator	2	NPCC
					Randy MacDonald	New Brunswick Power Corporation	2	NPCC
					Dermot Smyth	Con Ed - Consolidated Edison Co. of New York	1	NPCC
					David Burke	Orange and Rockland	3	NPCC
					Peter Yost	Con Ed - Consolidated Edison Co. of New York	3	NPCC

					Salvatore Spagnolo	New York Power Authority	1	NPCC
					Sean Bodkin	Dominion - Dominion Resources, Inc.	6	NPCC
					David Kwan	Ontario Power Generation	4	NPCC
					Silvia Mitchell	NextEra Energy - Florida Power and Light Co.	1	NPCC
					Glen Smith	Entergy Services	4	NPCC
					Sean Cavote	PSEG	4	NPCC
					Jason Chandler	Con Edison	5	NPCC
					Tracy MacNicoll	Utility Services	5	NPCC
					Shivaz Chopra	New York Power Authority	6	NPCC
					Vijay Puran	New York State Department of Public Service	6	NPCC
					ALAN ADAMSON	New York State Reliability Council	10	NPCC
					David Kiguel	Independent	7	NPCC
					Joel Charlebois	AESI	7	NPCC
					Joshua London	Eversource Energy	1	NPCC
Western Electricity Coordinating Council	Steven Rueckert	10		WECC	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	3	SERC

						Cooperative (Missouri)		
					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 Cooperative, Inc.	1	SERC
					Brian Ackermann	Associated Electric Cooperative, Inc.	6	SERC
					Brad Haralson	Associated Electric Cooperative, Inc.	5	SERC

1. Do you agree with the language in proposed VAR-002-5 Purpose section? If you do not agree, please provide your recommendation and, if appropriate, technical or procedural justification.

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

Answer	No
Document Name	

Comment

To ensure Bulk Electric System generating resource(s) provide reactive support and voltage control, within ***their*** resource capabilities, in order to protect equipment, and maintain Reliable Operation of the Interconnection.

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 comments submitted by the MRO NSRF.

WEC Energy Group appreciated that opportunity to comment and also suggests that a "generating resource" could be defined with a certain MW, MVA, MVAR, or % of local distribution system. This would be more useful to differentiate smaller distributed generators from larger one.

Likes 0	
Dislikes 0	

Response

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

Answer	No
Document Name	

Comment

FirstEnergy supports EEI’s comments which state:

While EEI supports the inclusion of BES into the purpose statement, we do not support replacing the defined term “Facility” with the undefined term “resource”. This change does not add any improved clarity and the term Facility should be restored in the Purpose statement.

Likes 0	
Dislikes 0	

Response

Robert Follini - Avista - Avista Corporation - 3

Answer	No
Document Name	

Comment

While EEI supports the inclusion of BES into the purpose statement, we do not support replacing the defined term “Facility” with the undefined term “resource”. This change does not add any improved clarity and the term Facility should be restored in the Purpose statement.

Likes 0	
Dislikes 0	

Response

Ben Hammer - Western Area Power Administration - 1

Answer	No
Document Name	

Comment

There is not a clarity benefits of changing the defined term “Facilities” to the undefined “resource(s)” and recommends that “Facility” be left in place..

“Facility” should be left in place versus resource(s) throughout the standard. Consider that:

- Facility from the NERC Glossary of Terms: A set of electrical equipment that operates as a single Bulk Electric System Element (e.g., a line, a generator, a shunt compensator, transformer, etc.)
- resource(s) is undefined and suggests the individual generator unit level which is not appropriate for VAR-002, VAR-002 R2 and VAR-002 R4.

Likes 0	
Dislikes 0	

Response

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

Answer	No

Document Name	

Comment

The MRO NSRF does not see the clarity benefits of changing the defined term “Facilities” to the undefined “resource(s)” and recommends that “Facility” be left in place. While the MRO NSRF appreciates SDT efforts to improve clarity, since NERC standards are inherently legal when audited, the defined term “Facility” remains superior.

The MRO NSRF recommends that “Facility” be left in place versus resource(s) throughout the standard. Consider that:

- Facility from the NERC Glossary of Terms: A set of electrical equipment that operates as a single Bulk Electric System Element (e.g., a line, a generator, a shunt compensator, transformer, etc.)
- resource(s) is undefined and suggests the individual generator unit level which is not appropriate for VAR-002, VAR-002 R2 and VAR-002 R4.

Likes 0	
Dislikes 0	

Response

Casey Perry - PNM Resources - 1,3 - WECC,Texas RE

Answer	No
Document Name	

Comment

PNM & TNMP agrees with EEI to maintain the defined term “Facility” in the purpose statement.

Likes 0	
Dislikes 0	

Response

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

Answer	No
Document Name	

Comment

SRP does not support the addition of this term to the standard. This new term defines IBR’s being introduced directly into a standard which previously did not have IBR applicability. SRP strongly feels Inverter Based Resources should have separate standards.

Likes 0	

Dislikes 0	
Response	
Donna Wood - Tri-State G and T Association, Inc. - 1	
Answer	No
Document Name	
Comment	
Tri-State Generation and Transmission supports the comments submitted by the MRO NSRF.	
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	
It is unclear what is the objective in changing from generating Facility to “generating resource” and how this could impact applicability. It is also noted that the term Facility is still used in multiple places in this draft. Can the SDT review uses of the terms “generator”, “generating resource,” and Facility for consistency?	
Likes 0	
Dislikes 0	
Response	
Jennifer Bray - Arizona Electric Power Cooperative, Inc. - 1	
Answer	No
Document Name	
Comment	
AEPC signed on to ACES comments below: While we applaud the efforts of the SDT to enhance the VAR-002 standard, we do not believe that it is appropriate to use the term “generating resource” in lieu of “generating Facility”. The NERC defined term “Facility” is widely understood and used whereas the term “generating resource” is	

currently undefined.

Likes 0	
Dislikes 0	

Response

Nikki Carson-Marquis - Nikki Carson-Marquis On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Nikki Carson-Marquis

Answer	No
Document Name	

Comment

Minnkota Power Cooperative supports the MRO New Standards Review Forum (NSRF) and ACES comments.

Likes 0	
Dislikes 0	

Response

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

Answer	No
Document Name	

Comment

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

Likes 0	
Dislikes 0	

Response

Ruchi Shah - AES - AES Corporation - 5

Answer	No
Document Name	

Comment

AESCE recommends that the term Facility remain in the Purpose section and in the rest of the body of Standard as well. Facility is a NERC defined term while “resource” isn’t and undefined terms can lead to confusion and be subjective.

Likes 0	
Dislikes 0	

Response

Dwanique Spiller - Berkshire Hathaway - NV Energy - 5

Answer	No
Document Name	

Comment

NV Energy does not see the clarity benefits of changing the defined term “Facilities” to the undefined “resource(s)” and recommends that “Facility” be left in place. While NV Energy appreciates SDT efforts to improve clarity, since NERC standards are inherently legal when audited, the defined term “Facility” remains superior.

NV Energy recommends that “Facility” be left in place versus resource(s) throughout the standard. Consider that:

- Facility from the NERC Glossary of Terms: A set of electrical equipment that operates as a single Bulk Electric System Element (e.g., a line, a generator, a shunt compensator, transformer, etc.)
- resource(s) is undefined and suggests the individual generator unit level which is not appropriate for VAR-002, VAR-002 R2 and VAR-002 R4.

Likes 0	
Dislikes 0	

Response

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

Answer	No
Document Name	

Comment

Minnesota Power supports MRO’s NERC Standards Review Forum’s (NSRF) comments.

Likes 0	
Dislikes 0	

Response

David Campbell - Enel Green Power - 5 - MRO,Texas RE,SERC,RF

Answer	No
Document Name	
Comment	
Enel North America Inc. (Enel) does not agree that the modification to “generating resource(s)” was necessary. Since the Functional Entities are defined as ‘Generator Operator’ and ‘Generator Owner’ with no exclusions, the term “generators” is sufficient in the Purpose statement. Enel recommends keeping the purpose statement as it is currently written in VAR-002-4.1.	
Likes 0	
Dislikes 0	
Response	
Daniel Gacek - Exelon - 1	
Answer	No
Document Name	
Comment	
Exelon supports the comments submitted by the EEI.	
Likes 0	
Dislikes 0	
Response	
Kinte Whitehead - Exelon - 3	
Answer	No
Document Name	
Comment	
Exelon is in support of the comments submitted by EEI.	
Likes 0	
Dislikes 0	
Response	
Mike Magruder - Avista - Avista Corporation - 1	
Answer	No

Document Name	
Comment	
We concur with the following EEI comment: While EEI supports the inclusion of BES into the purpose statement, we do not support replacing the defined term “Facility” with the undefined term “resource”. This change does not add any improved clarity and the term Facility should be restored in the Purpose statement.	
Likes 0	
Dislikes 0	
Response	
Sheila Suurmeier - Black Hills Corporation - 5	
Answer	No
Document Name	
Comment	
Black Hills Corporation supports the comments from both NAGF and EEI.	
Likes 0	
Dislikes 0	
Response	
Rachel Schuldt - Rachel Schuldt On Behalf of: Josh Combs, Black Hills Corporation, 5, 6, 1, 3; - Rachel Schuldt	
Answer	No
Document Name	
Comment	
Black Hills Corporation supports the comments from both NAGF and EEI.	
Likes 0	
Dislikes 0	
Response	
Claudine Bates - Black Hills Corporation - 6	
Answer	No
Document Name	

Comment	
Black Hills Corporation supports the comments from both NAGF and EEI.	
Likes 0	
Dislikes 0	
Response	
Micah Runner - Black Hills Corporation - 1	
Answer	No
Document Name	
Comment	
Black Hills Corporation supports the comments from both NAGF and EEI.	
Likes 0	
Dislikes 0	
Response	
Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable	
Answer	No
Document Name	
Comment	
While EEI supports the inclusion of BES into the purpose statement, we do not support replacing the defined term “Facility” with the undefined term “resource”. This change does not add any improved clarity and the term Facility should be restored in the Purpose statement.	
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 support replacing "Facility" with "resource" and recommends that "Facility" should be left in place. The use of generator resource is undefined and suggests that an individual IBR generating unit may be the indicated element, which is not appropriate for the requirements of VAR-002. In addition, *"Facility" is a clearly defined term in the NERC Glossary of Terms, and keeping this in the revised Standard would help to alleviate confusion.*

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

Southern Company believes that the use of Facility and Facilities are appropriate to use for inverter based resource sites, and that generator(s) is appropriate for traditional (synchronous) generating Facility sites. The use of generator resource is undefined and suggests that an individual IBR generating unit may be the indicated element, which is not appropriate for the requirements of VAR-002.

Likes 0	
Dislikes 0	

Response

Constantin Chitescu - Ontario Power Generation Inc. - 5

Answer	No
Document Name	

Comment

OPG does not agree with changing the defined term "Facilities" to the undefined "resource(s)".

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
While we applaud the efforts of the SDT to enhance the VAR-002 standard, we do not believe that it is appropriate to use the term “generating resource” in lieu of “generating Facility”. The NERC defined term “Facility” is widely understood and used whereas the term “generating resource” is currently undefined.

Likes 0	
Dislikes 0	

Response

Duane Franke - Manitoba Hydro - 1,3,5,6 - MRO	
Answer	No
Document Name	

Comment
Including dispersed power producers in the term “generating resource” can be confusing. The BES definition Inclusion 2(I2) is generating resources and then I4 is dispersed power producing. It appears in this standard they are trying to add clarity by using the term generating resources to encompass multiple types, but they also use that exact term in the NERC BES facility definition (I2) as a specific definition.

Likes 0	
Dislikes 0	

Response

Daniela Atanasovski - APS - Arizona Public Service Co. - 1	
Answer	Yes
Document Name	

Comment
AZPS agrees and supports the proposed revisions.

Likes 0	
Dislikes 0	

Response

Lauren Giordano - Lauren Giordano On Behalf of: Dennis Sismaet, Northern California Power Agency, 4, 6, 3, 5; Jeremy Lawson, Northern California Power Agency, 4, 6, 3, 5; Marty Hostler, Northern California Power Agency, 4, 6, 3, 5; - Lauren Giordano	
Answer	Yes

Document Name	
Comment	
YES.	
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	
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	
Alison MacKellar - Constellation - 5	
Answer	Yes

Document Name	
Comment	
Constellation has no additional comments. Alison Mackellar on behalf of Constellation Segments 5 and 6	
Likes 0	
Dislikes 0	
Response	
Jessica Cordero - Unisource - Tucson Electric Power Co. - 1 - WECC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name 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	
Martin Sidor - NRG - NRG Energy, Inc. - 6	
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	
Wendy Kalidass - U.S. Bureau of Reclamation - 1,5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECI	

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	
Adrian Andreoiu - BC Hydro and Power Authority - 1, Group Name BC Hydro	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Helen Lainis - Independent Electricity System Operator - 2	
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	
Kennedy Meier - Electric Reliability Council of Texas, Inc. - 2	
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	
Nicolas Turcotte - Hydro-Quebec (HQ) - 1	
Answer	Yes

Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Mark Flanary - Midwest Reliability Organization - 10	
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	
Joanne Anderson - Public Utility District No. 2 of Grant County, Washington - 1,4,5,6 - WECC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	

Response	
Gregory Campoli - New York Independent System Operator - 2	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

2. Do you agree with the language in proposed VAR-002-5, Requirement R3? If you do not agree, please provide your recommendation and, if appropriate, technical or procedural justification.

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

We at ACES do not believe the proposed language in Requirement R3 meets the stated intent of the SAR to address ambiguities surrounding the notification threshold for dispersed power producing resources (see the 1st bullet point in the Project Scope section of the SAR).

Furthermore, we do not believe that the proposed language provides additional clarity as to what constitutes a “status change”. For example, if the AVR rejects to “Manual” for > 30 minutes and then is subsequently restored to “Auto” for > 30 minutes, is a 2nd notification required to inform the TOP of a “status change” back to “Auto”?

Additionally, we have concerns with the inclusion of the phrase “in a mutually-agreed communication method”. In our opinion, this adds an administrative burden to the VAR-002 standard that does not decrease risk nor increase reliability. We believe that if the TOP needs to receive this information in a specific manner or format that a more suitable place to address this item would be in the TOP-003 data specification.

Lastly, it is our opinion that the currently proposed language for Requirement R3 introduces additional ambiguity rather than removing it. Specifically, the proposed language uses the terms “status change” and “unexpected functionality change” without providing any clarity within the standard as to what constitutes either.

We recommend using the following language for Requirement R3:

R3. Each Generator Operator shall notify its associated Transmission Operator within 30 minutes of becoming aware of a change that deviates from the normal operating mode of its AVR1, power system stabilizer, or alternative voltage controlling device. If the operating mode has been restored to normal within 30 minutes, then the Generator Operator is not required to notify the Transmission Operator of the change.

Likes 0	
Dislikes 0	

Response

Constantin Chitescu - Ontario Power Generation Inc. - 5

Answer	No
Document Name	

Comment

OPG does not agree with the applicability of "functionality change" in respect to the power system stabilizer, and considder previous comments provided to be less than adequate dispositioned.

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 recommendation made by the IRPTF in the white paper and the SAR for this revision states that the (not applicable) clarification found in VAR-002-4.1, R4 for individual generating units of dispersed power producing resources should be added to R3. The current draft of the revision does not include this addition. The addition of the requirement to have a mutually-agreeable communication method should be removed. This provides zero reliability benefit. The important part of R2, R3 and R4 of VAR-002 is that the notification occur, not that the GOP and TOP may have mutually agreed upon a method.	
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 recommends reinstating the following VAR-002-4.1 R4 bullet language in VAR-002-5 Draft 3 R4 and adding it to R3: "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." *The NAGF recommends that R3 focus on the status/functional change of reactive/voltage generator devices and move the language "or within 30 minutes of becoming aware…" to R4.* *The addition of the requirement to have a mutually-agreeable communication method should be removed. This provides zero reliability benefit. The important part of R2, R3 and R4 of VAR-002 is that the notification occur, not that the GOP and TOP may have mutually agreed upon a method.*	
Likes 0	
Dislikes 0	
Response	
Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable	
Answer	No
Document Name	

Comment

In the project SAR, bullet 1 under the Project Scope section, the SDT was asked to "[c]larify VAR-002-4.1 Requirement R3 in regards to whether the GOP of a dispersed power resource must notify its associated TOP of a status change of a voltage controlling device on an individual generating unit, for example if a single inverter goes offline in a solar PV resource." This change was recommended to provide uniformity between wind turbine plants with other dispersed power producing resources. We support this change and recommend the SDT include a similar reporting exception for Requirement R3 to what exists in VAR-002-4.1, Requirement R4 as proposed in both the supporting white paper for this project and the Project SAR.

EEI also asked the SDT to remove proposed Requirement R3 language that states "in a mutually-agreed communications method", because this language serves no reliability benefits but adds unnecessary compliance obligations; i.e., the need to document that an agreement was developed, mutually agreed to and was followed.

Likes 0	
Dislikes 0	

Response

David Jendras Sr - Ameren - Ameren Services - 3

Answer	No
Document Name	

Comment

How are IBRs that use a control system taken into account for this requirement?

Ameren would like clarity on whether batteries are considered a generating resource while charging.

Ameren supports the removal of volt/VAR controllers from R3. If the voltage schedule is satisfactory, it is a waste of resources to monitor it for every unit.

Likes 0	
Dislikes 0	

Response

Micah Runner - Black Hills Corporation - 1

Answer	No
Document Name	

Comment

Black Hills Corporation supports the comments from both NAGF and EEI.

Likes 0	
Dislikes 0	

Response

Claudine Bates - Black Hills Corporation - 6	
Answer	No
Document Name	
Comment	
Black Hills Corporation supports the comments from both NAGF and EEI.	
Likes 0	
Dislikes 0	
Response	
Rachel Schuldt - Rachel Schuldt On Behalf of: Josh Combs, Black Hills Corporation, 5, 6, 1, 3; - Rachel Schuldt	
Answer	No
Document Name	
Comment	
Black Hills Corporation supports the comments from both NAGF and EEI.	
Likes 0	
Dislikes 0	
Response	
Sheila Suurmeier - Black Hills Corporation - 5	
Answer	No
Document Name	
Comment	
Black Hills Corporation supports the comments from both NAGF and EEI.	
Likes 0	
Dislikes 0	
Response	
Mike Magruder - Avista - Avista Corporation - 1	

Answer	No
Document Name	

Comment

We concur with the following EEI comment: In the project SAR, bullet 1 under the Project Scope section, the SDT was asked to “[c]larify VAR-002-4.1 Requirement R3 in regards to whether the GOP of a dispersed power resource must notify its associated TOP of a status change of a voltage controlling device on an individual generating unit, for example if a single inverter goes offline in a solar PV resource.” This change was recommended to provide uniformity between wind turbine plants with other dispersed power producing resources. We support this change and ask the SDT to include a similar reporting exception for Requirement R3 to what exists in VAR-002-4.1, Requirement R4 as proposed in both the supporting white paper for this project and the Project SAR.

Likes 0	
Dislikes 0	

Response

Mark Flanary - Midwest Reliability Organization - 10

Answer	No
Document Name	

Comment

We suggest adding a note to this effect: "*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.*"

Likes 0	
Dislikes 0	

Response

Kinte Whitehead - Exelon - 3

Answer	No
Document Name	

Comment

Exelon is in support of the comments submitted by EEI.

Likes 0	
Dislikes 0	

Response

Alison MacKellar - Constellation - 5	
Answer	No
Document Name	
Comment	

Constellation suggests removing the mutually agreed upon communication method. While understanding the drafting team's intent of allowing variability in notification based on transmission planner needs of verbal or RTU communication. Constellation suggests this could inadvertently limit the ways to comply in emergent situations and thus should remove the "mutually agreeable format" wording to preclude restrictions that could be imposed by TOPs.

Alison Mackellar on behalf of Constellation Segments 5 and 6

Likes 0	
Dislikes 0	
Response	

Daniel Gacek - Exelon - 1	
Answer	No
Document Name	
Comment	

Exelon supports the comments submitted by the EEI.

Likes 0	
Dislikes 0	
Response	

David Campbell - Enel Green Power - 5 - MRO,Texas RE,SERC,RF	
Answer	No
Document Name	
Comment	

Enel North America Inc. (Enel) believes the changes to Requirement R3 does not meet the SAR project scope. The SDT has not addressed if R3 applies to the individual generating unit for dispersed power resources. Enel would recommend the SDT include an exclusion, as presented in VAR-002-4.1 Requirement R4, to meet the SAR project scope. In addition, “within 30 minutes of status change of its AVR or within 30 minutes of becoming aware” introduces a possibility of interpretation to when notification is required. Leaving this up for interpretation could result in the reduction of reliability of the BES.

Likes 0	
Dislikes 0	

Response	
Hillary Creurer - Allete - Minnesota Power, Inc. - 1	
Answer	No
Document Name	
Comment	
Minnesota Power supports MRO's NERC Standards Review Forum's (NSRF) comments.	
Likes 0	
Dislikes 0	
Response	
Dwanique Spiller - Berkshire Hathaway - NV Energy - 5	
Answer	No
Document Name	
Comment	

While NV Energy appreciates SDT efforts, looking at both the IRPTF white paper and SAR in sequence, the SDT did not implement the intended recommendation to add the individual wind turbine exclusion from R4 to R3 and therefore did not follow the SAR.

VAR-002-4.1 had determined originally, that certain requirements would be unduly burdensome when applied to individual generating resources and this remains true today. NV Energy recommends the SDT implement the IRPTF and the SAR as orgininally intended, to add the individual generating resource exclusions to both R3 and R4 for clarity.

Consider that:

From the VAR-002-5 SAR:

- NERC Project 2014-01 revised VAR-002 Requirement R4 to clarify that it is not appli cable 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.
- www.nerc.com/pa/Stand/Project%20202102%20Modifications%20to%20VAR00241%20DL/2021_02_Mod_to_VAR_002_SAR_04142021.pdf

From the IRPTF White Paper:

- VAR-002-4.1 should be revised to clarify that the reporting of a status change of a voltage controlling device per Requirement R3 is not applicable for an individual generating unit of a dispersed power producing resource, similar to the exemption for Requirement R4.

- 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.
- www.nerc.com/pa/Stand/Project%20202102%20Modifications%20to%20VAR00241%20DL/Review_of_NERC_Reliability_Standards_White_Paper_04142021.pdf

Other Requirement R3 Recommendations:

Additionally, NV Energy recommends that the phrase “in a mutually-agree communication method” be removed from the R3. Inclusion of the language does not address any known or foreseen reliability issue, nor does it improve reliability, however it does add potential addiministrative burden.

NV Energy has concerns with “within 30 minutes of becoming aware”. Maintaining voltage in accordance with the voltage or Reactive Power schedule is essential to ensuring a reliable transmission system. As such, using a specific notification time-period, such as 30 minutes, ensures that Generator Operators are actively monitoring relevant and important system conditions to ensure reliability. Further, changing timing requirements related to notifications was not a part of the SAR’s scope or identified in the recommendations of the 2016-EPR-02 Enhanced Periodic Review of Voltage and Reactive Standards (Attachment 5).

NV Energy suggests using footnote 1 again for the instances of “AVR”.

Pursuant to the SAR, “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.”

Suggested language:

R3. Each Generator Operator shall notify its associated Transmission Operator within 30 minutes of an unexpected status or functionality change outlined in 3.1, 3.2 or 3.3. If the unexpected status or functionality has been restored within 30 minutes, then the Generator Operator is not required to notify the Transmission Operator.

3.1 the generating Facilities AVR, including the AVR being out of service,

3.2 power system stabilizer, or

3.3 alternative voltage controlling device.

- Reporting of status or functionality changes as stated in Requirement R3 et al. is not applicable to the individual generating units of dispersed power producing resources identified through Inclusion I4 of the Bulk Electric System definition.

Likes 0	
Dislikes 0	
Response	
Ruchi Shah - AES - AES Corporation - 5	
Answer	No
Document Name	
Comment	

One of the major purposes of the SAR was to revise R3 to clarify that it is not applicable to individual generating units of dispersed power producing resources similar to R4. The IRPTF had not identified any reason why Requirement R3 should be treated differently than Requirement R4.

AESCE recommends that the SDT reinstate the following language under R4 and also add it to R3.

“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.”

Likes 0	
Dislikes 0	
Response	
Alan Kloster - Alan Kloster On Behalf of: Jeremy Harris, Evergy, 3, 5, 1, 6; Kevin Frick, Evergy, 3, 5, 1, 6; Marcus Moor, Evergy, 3, 5, 1, 6; Tiffany Lake, Evergy, 3, 5, 1, 6; - Alan Kloster	
Answer	No
Document Name	
Comment	

Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) and MRO NSRF for question #2.

Likes 0	
Dislikes 0	
Response	
Nikki Carson-Marquis - Nikki Carson-Marquis On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Nikki Carson-Marquis	
Answer	No
Document Name	
Comment	

Minnkota Power Cooperative supports the MRO New Standards Review Forum (NSRF) and ACES comments.

Likes 0	
Dislikes 0	

Response

Kimberly Turco - Constellation - 6

Answer	No
Document Name	

Comment

Constellation suggests removing the mutually agreed upon communication method. While understanding the drafting team's intent of allowing variability in notification based on transmission planner needs of verbal or RTU communication. Constellation suggests this could inadvertently limit the ways to comply in emergent situations and thus should remove the "mutually agreeable format" wording to preclude restrictions that could be imposed by TOPs.

Kimberly Turco on behalf of Constellation Segments 5 and 6

Likes 0	
Dislikes 0	

Response

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

Answer	No
Document Name	

Comment

-Provide additional Requirement R3 language to clarify or remove of the term “functionality” for AVR, power system stabilizer, or alternative voltage controlling devices. For example, (a) what type of functionality changes are reportable, given that notification to the Transmision Operator is required when these devices change status. A firm description of threshold of functionality change notification is needed.

Likes 0	
Dislikes 0	

Response

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

Answer	No
Document Name	

Comment

AEPC signed on to ACES comments below:

We at ACES do not believe the proposed language in Requirement R3 meets the stated intent of the SAR to address ambiguities surrounding the notification threshold for dispersed power producing resources (see the 1st bullet point in the Project Scope section of the SAR).

Furthermore, we do not believe that the proposed language provides additional clarity as to what constitutes a “status change”. For example, if the AVR rejects to “Manual” for > 30 minutes and then is subsequently restored to “Auto” for > 30 minutes, is a 2nd notification required to inform the TOP of a “status change” back to “Auto”?

Additionally, we have concerns with the inclusion of the phrase “in a mutually-agreed communication method”. In our opinion, this adds an administrative burden to the VAR-002 standard that does not decrease risk nor increase reliability. We believe that if the TOP needs to receive this information in a specific manner or format that a more suitable place to address this item would be in the TOP-003 data specification.

Lastly, it is our opinion that the currently proposed language for Requirement R3 introduces additional ambiguity rather than removing it. Specifically, the proposed language uses the terms “status change” and “unexpected functionality change” without providing any clarity within the standard as to what constitutes either.

We recommend using the following language for Requirement R3:

R3. Each Generator Operator shall notify its associated Transmission Operator within 30 minutes of becoming aware of a change that deviates from the normal operating mode of its AVR1, power system stabilizer, or alternative voltage controlling device. If the operating mode has been restored to normal within 30 minutes, then the Generator Operator is not required to notify the Transmission Operator of the change.

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 does not agree with the proposed Requirement R3 language.

The SAR and IRPTF White Paper proposed the project scope was to determine if the language added to R4 in Project 2014-01 should also be added to R3 which stated:

"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…".

The SAR also went on to state "recommended VAR-002-4.1 be modified to make this same clarification to R3". In this draft 3 of VAR-002-5, the language was stricken from R4 with the explanation in the Webinar that there is no reason R3 should treat Dispersed Generation Resources differently, implying that the language from R4 is added to R3, not stricken from R4. Is this correct?

Likes 0	
Dislikes 0	

Response

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

Answer	No
Document Name	

Comment

Tri-State Generation and Transmission supports the comments submitted by the MRO NSRF.

Likes 0	
Dislikes 0	

Response

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

Answer	No
Document Name	

Comment

SRP does not support the addition of this term to the standard. This new term defines IBR's being introduced directly into a standard which previously did not have IBR applicability. SRP strongly feels Inverter Based Resources should have separate standards.

Likes 0	
Dislikes 0	

Response

Lauren Giordano - Lauren Giordano On Behalf of: Dennis Sismaet, Northern California Power Agency, 4, 6, 3, 5; Jeremy Lawson, Northern California Power Agency, 4, 6, 3, 5; Marty Hostler, Northern California Power Agency, 4, 6, 3, 5; - Lauren Giordano

Answer	No
Document Name	

Comment

No, the new language added “in a mutually-agreed communication method”. Makes it sound like a formal agreement, as to the format of communications, is needed prior to said communication, i.e. prior to an entity notifying the TOP. The existing standard language is acceptable and doesn’t need to be changed.

Likes 0	
Dislikes 0	

Response

Casey Perry - PNM Resources - 1,3 - WECC,Texas RE

Answer	No
Document Name	

Comment

PNM & TNMP agrees with EEI’s comments related to VAR-002-5 R3. In addition, the criteria for communicating a change in status are not consistent between the AVR, PSS, or alternate voltage controlling device in R3. PNM and TNMP recommends removal of “within 30 minutes of status change on the of its AVR or“ in R3. This would align R3 with R4 with the same reporting criteria.

Likes 0	
Dislikes 0	

Response

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

Answer	No
Document Name	

Comment

While the MRO NSRF appreciates SDT efforts, looking at both the IRPTF white paper and SAR in sequence, the SDT did not implement the intended recommendation to add the individual wind turbine exclusion from R4 to R3 and therefore did not follow the SAR.

VAR-002-4.1 had determined originally, that certain requirements would be unduly burdensome when applied to individual generating resources and this remains true today. The MRO NSRF recommends the SDT implement the IRPTF and the SAR as orgininally intended, to add the individual generating resource exclusions to both R3 and R4 for clarity.

Consider that:

- **From the VAR-002-5 SAR:**

o NERC Project 2014-01 revised VAR-002 Requirement R4 to clarify that it is not appli cable to individual generating units of dispersed power producing resources.

o 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.

o www.nerc.com/pa/Stand/Project%20202102%20Modifications%20to%20VAR00241%20DL/2021_02_Mod_to_VAR_002_SAR_04142021.pdf

- **From the IRPTF White Paper:**

  o VAR-002-4.1 should be revised to clarify that the reporting of a status change of a voltage controlling device per Requirement R3 is not applicable for an individual

o generating unit of a dispersed power producing resource, similar to the exemption for Requirement R4.

o 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.

o www.nerc.com/pa/Stand/Project%20202102%20Modifications%20to%20VAR00241%20DL/Review_of_NERC_Reliability_Standards_White_Paper_04142021.pdf

Other Requirement R3 Recommendations:

Additionally, the MRO NSRF recommends that the phrase “in a mutually-agree communication method” be removed from the R3. Inclusion of the language does not address any known or foreseen reliability issue, nor does it improve reliability, however it does add potential addiministrative burden.

The MRO NSRF has concerns with “within 30 minutes of becoming aware”. Maintaining voltage in accordance with the voltage or Reactive Power schedule is essential to ensuring a reliable transmission system. As such, using a specific notification time-period, such as 30 minutes, ensures that Generator Operators are actively monitoring relevant and important system conditions to ensure reliability. Further, changing timing requirements related to notifications was not a part of the SAR’s scope or identified in the recommendations of the 2016-EPR-02 Enhanced Periodic Review of Voltage and Reactive Standards (Attachment 5).

The MRO NSRF suggests using footnote 1 again for the instances of “AVR”.

Pursuant to the SAR, “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.”

Suggested language:

R3. Each Generator Operator shall notify its associated Transmission Operator within 30 minutes of an unexpected status or functionality change outlined in 3.1, 3.2 or 3.3. If the unexpected status or functionality has been restored within 30 minutes, then the Generator Operator is not required to notify the Transmission Operator.

3.1 the generating Facilities AVR, including the AVR being out of service,

3.2 power system stabilizer, or

3.3 alternative voltage controlling device.

- Reporting of status or functionality changes as stated in Requirement R3 et al. is not applicable to the individual generating units of dispersed power producing resources identified through Inclusion I4 of the Bulk Electric System definition.

Likes 0	
Dislikes 0	

Response

Ben Hammer - Western Area Power Administration - 1

Answer	No

Document Name	

Comment

The SDT did not implement the intended recommendation to add the individual wind turbine exclusion from R4 to R3 and therefore did not follow the SAR.

VAR-002-4.1 had determined originally, that certain requirements would be unduly burdensome when applied to individual generating resources and this remains true today. The SDT should implement the IRPTF and the SAR as orgininally intended, to add the individual generating resource exclusions to both R3 and R4 for clarity.

Consider that:

- **From the VAR-002-5 SAR:**
  - NERC Project 2014-01 revised VAR-002 Requirement R4 to clarify that it is not appli 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.cable to individual generating units of dispersed power producing resources.
  - www.nerc.com/pa/Stand/Project%20202102%20Modifications%20to%20VAR00241%20DL/2021_02_Mod_to_VAR_002_SAR_04142021.pdf
- **From the IRPTF White Paper:**
  - VAR-002-4.1 should be revised to clarify that the reporting of a status change of a voltage controlling device per Requirement R3 is not applicable for an individual generating unit of a dispersed power producing resource, similar to the exemption for Requirement R4.
  - 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.
  - www.nerc.com/pa/Stand/Project%20202102%20Modifications%20to%20VAR00241%20DL/Review_of_NERC_Reliability_Standards_White_Paper_04142021.pdf

Likes 0	
Dislikes 0	

Response

Robert Follini - Avista - Avista Corporation - 3

Answer	No
Document Name	

Comment

In the project SAR, bullet 1 under the Project Scope section, the SDT was asked to "[c]larify VAR-002-4.1 Requirement R3 in regards to whether the GOP of a dispersed power resource must notify its associated TOP of a status change of a voltage controlling device on an individual generating unit, for example if a single inverter goes offline in a solar PV resource." This change was recommended to provide uniformity between wind turbine plants with other dispersed power producing resources. We support this change and ask the SDT to include a similar reporting exception for Requirement R3 to what exists in VAR-002-4.1, Requirement R4 as proposed in both the supporting white paper for this project and the Project SAR.

Likes 0	
Dislikes 0	

Response

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

Answer	No

Document Name	

Comment

FirstEnergy supports EEI's comments which state:

In the project SAR, bullet 1 under the Project Scope section, the SDT was asked to "[c]larify VAR-002-4.1 Requirement R3 in regards to whether the GOP of a dispersed power resource must notify its associated TOP of a status change of a voltage controlling device on an individual generating unit, for example if a single inverter goes offline in a solar PV resource." This change was recommended to provide uniformity between wind turbine plants with other dispersed power producing resources. We support this change and recommend the SDT include a similar reporting exception for Requirement R3 to what exists in VAR-002-4.1, Requirement R4 as proposed in both the supporting white paper for this project and the Project SAR.

EEI also asked the SDT to remove proposed Requirement R3 language that states "in a mutually-agreed communications method", because this language serves no reliability benefits but adds unnecessary compliance obligations; i.e., the need to document that an agreement was developed, mutually agreed to and was followed.

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 comments submitted by the MRO NSRF.

Likes 0	
Dislikes 0	

Response

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

Answer	No
Document Name	

Comment

Each Generator Operator shall notify its associated Transmission Operator, as mutually agreed, within 30 minutes of becoming aware of a change in its ability to provide reactive support and voltage control due to loss or reduction of its AVR, power system stabilizer, or alternative voltage controlling device. If the status or functionality is restored within 30 minutes, then the Generator Operator is not required to notify the Transmission Operator of the status change. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]

Likes 0	
Dislikes 0	
Response	
Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECI	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Daniela Atanasovski - APS - Arizona Public Service Co. - 1	
Answer	Yes
Document Name	
Comment	
AZPS agrees and supports the proposed revisions.	
Likes 0	
Dislikes 0	
Response	
Gregory Campoli - New York Independent System Operator - 2	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Joanne Anderson - Public Utility District No. 2 of Grant County, Washington - 1,4,5,6 - WECC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Nicolas Turcotte - Hydro-Quebec (HQ) - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Kennedy Meier - Electric Reliability Council of Texas, Inc. - 2	
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	
Helen Lainis - Independent Electricity System Operator - 2	
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	
Adrian Raducea - DTE Energy - Detroit Edison Company - 5, Group Name DTE Energy - DTE Electric	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Wendy Kalidass - U.S. Bureau of Reclamation - 1,5	

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	
Martin Sidor - NRG - NRG Energy, Inc. - 6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thomas Foltz - AEP - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes 0	
Response	
Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC	
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	
Rachel Coyne - Texas Reliability Entity, Inc. - 10	
Answer	
Document Name	
Comment	

Texas RE is concerned the language introduces a substantial time gap for notification requirements. 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. It appears the SDT made this change between the first and second drafts, and then added “becoming aware of” back into the language between for this third draft. Texas RE recommends the following language:

R3. Each Generator Operator shall notify its associated Transmission Operator, in a mutually-agreed communication method, of a status change of its AVR, an unexpected functionality change of its AVR, power system stabilizer, or alternative voltage controlling device within 30 minutes of the change. If the status or functionality has been restored within 30 minutes, then the Generator Operator is not required to notify the Transmission Operator of the change.

Likes 0	

Dislikes 0	

Response

3. Do you agree with the language in proposed VAR-002-5, Requirement R4? If you do not agree, please provide your recommendation and, if appropriate, technical or procedural justification.

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

Answer	No
Document Name	

Comment

See the R3 recommendation. R4 is not necessary to distinguish separately. IT is not clearly what "factors were specified in R3. Entities either produce the support they are rated for, or they must report any change, regardless of the reason.

R3: Each Generator Operator shall notify its associated Transmission Operator, as mutually agreed, within 30 minutes of becoming aware of a change in its ability to provide reactive support and voltage control due to loss or reduction of its AVR, power system stabilizer, or alternative voltage controlling device. If the status or functionality is restored within 30 minutes, then the Generator Operator is not required to notify the Transmission Operator of the status change. [Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]

Likes 0	
Dislikes 0	

Response

Wendy Kalidass - U.S. Bureau of Reclamation - 1,5

Answer	No
Document Name	

Comment

Original requirement wording should remain as is. Modification to R4 does not provide any technical value added for notifications.

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 comments submitted by the MRO NSRF.

Likes 0	
Dislikes 0	

Response

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

Answer	No
Document Name	

Comment

FirstEnergy supports EEI's comments which state:

EEI does not support the deletion of the bulleted reporting exception for individual generating units of dispersed power producing resources made to Requirement R4. The SAR scope asked the SDT to clarify whether a similar exception should be added to Requirement R3, not delete the reporting exception already contained in Requirement R4. Moreover, there is no justification provided for removing this reporting exception. The SDT should restore the bulleted reporting exception for individual generating units of dispersed power producing resources as currently contained in VAR-002-4.1.

EEI also asked the SDT to remove proposed Requirement R4 language that states "in a mutually-agreeable communications method", because this language serves no reliability benefits but adds unnecessary compliance obligations; i.e., the need to document that an agreement was developed, mutually agreed to and was followed.

Likes 0	
Dislikes 0	

Response

Robert Follini - Avista - Avista Corporation - 3

Answer	No
Document Name	

Comment

EEI does not support the deletion of the bulleted reporting exception for individual generating units of dispersed power producing resources made to Requirement R4. The SAR scope asked the SDT to clarify whether a similar exception should be added to Requirement R3, not delete the reporting exception already contained in Requirement R4. Moreover, there is no justification provided for removing this reporting exception. the SDT should restore the bulleted reporting exception for individual generating units of dispersed power producing resources as currently contained in VAR-002-4.1.

Likes 0	
Dislikes 0	

Response	
Ben Hammer - Western Area Power Administration - 1	
Answer	No
Document Name	
Comment	
The SDT did not implement the intended recommendation to add the individual wind turbine exclusion from R4 to R3. It is recommended that the SDT leave the existing R4 individual generating unit exclusion in R4 and duplicate the individual generating unit exclusion in R3.	
Likes 0	
Dislikes 0	
Response	
Anna Martinson - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO Group	
Answer	No
Document Name	
Comment	

While the MRO NSRF appreciates SDT efforts, looking at both the IRPTF white paper and SAR in sequence, the SDT did not implement the intended recommendation to add the individual wind turbine exclusion from R4 to R3. The MRO NSRF recommends the SDT leave the existing R4 individual generating unit exclusion in R4 and duplicate the individual generating unit exclusion in R3.

Other Requirement R4 Comments:

Additionally, the MRO NSRF recommends that the phrase “in a mutually-agree communication method” be removed from the R4. Inclusion of the language does not address any known or foreseen reliability issue, nor does it improve reliability, however it does add potential addiministrative burden.

The MRO NSRF suggests using the term “Facility” instead of “resource(s)”. The use of Facility clearly identifies that Requirement R4 is applicable to Bulk Electrical System generating resources identified through inclusion I2 and I4 need to provide reactive support and voltage control.

According to the recommendations of the 2016-EPR-02 Enhanced Periodic Review of Voltage and Reactive Standards (Attachment 5), 2.8, “In Requirement R4, the term "status" in the bulleted exception concerning dispersed generating resources (DGR) should be struck given the use of "status" is associated with Requirement R3 and not R4.” Removal of the following language in Requirement R4. Is not within the SAR’s scope, “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.”

Suggested language:

R4. Each Generator Operator shall notify its associated Transmission Operator within 30 minutes of becoming aware of a change that degrades or restores from degradation reactive capability due to factors other than a status change described in Requirement R3 at the generation Facility. Where the Transmission Operator has specified a reactive capability change notification threshold, the Generator Operator shall report reactive capability

changes in accordance with the specified threshold. If the reactive capability has been restored within 30 minutes of the Generator Operator becoming aware of such change, then the Generator Operator is not required to notify the Transmission Operator of the change in reactive capability.

- Reporting of reactive 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.

Likes 0	
Dislikes 0	

Response

Casey Perry - PNM Resources - 1,3 - WECC,Texas RE

Answer	No
Document Name	

Comment

PNM and TNMP agrees with EEI comments related to VAR-002-5 R4.

Likes 0	
Dislikes 0	

Response

Lauren Giordano - Lauren Giordano On Behalf of: Dennis Sismaet, Northern California Power Agency, 4, 6, 3, 5; Jeremy Lawson, Northern California Power Agency, 4, 6, 3, 5; Marty Hostler, Northern California Power Agency, 4, 6, 3, 5; - Lauren Giordano

Answer	No
Document Name	

Comment

No, the new language added “in a mutually-agreed communication method”. Makes it sound like a formal agreement, as to the format of communications, is needed prior to said communication, i.e. prior to an entity notifying the TOP. The existing standard language is acceptable and doesn’t need to be changed.

Likes 0	
Dislikes 0	

Response

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

Answer	No
Document Name	

Comment
SRP does not support the addition of this term to the standard. This new term defines IBR's being introduced directly into a standard which previously did not have IBR applicability. SRP strongly feels Inverter Based Resources should have separate standards.

Likes 0	
Dislikes 0	

Response

Donna Wood - Tri-State G and T Association, Inc. - 1	
Answer	No
Document Name	

Comment
Tri-State Generation and Transmission supports the comments submitted by the MRO NSRF.

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
See the above comments to question #2, specifically pertaining to the removal of the bullet in R4. Additionally, it is unclear the applicability of R4 if the Transmission Operator (TO) has not "specified a reactive capability threshold" as this indicates that they "should" provide a threshold in the Webinar and Technical Rationale. If this has not been specified by the TO, when is this Requirement to be applicable? While the Technical Rationale states "… if Transmission Operator remains neutral… a 10% change... is used for modelling purposes... It is recommended that the Generator Operator may consider this threshold if applicable…" PG&E appreciates the SDT addressing this comment and provide clarifications.

Likes 0	
Dislikes 0	

Response

Jennifer Bray - Arizona Electric Power Cooperative, Inc. - 1	
Answer	No
Document Name	
Comment	

AEPC signed on to ACES comments below:

It is our opinion that the proposed language of Requirement R4 could benefit from a few minor enhancements to make the stated intent of the Technical Rationale clearer. Specifically, we recommend incorporating the 10% threshold addressed in the Technical Rationale directly into the language of Requirement R4. As written, if a reactive capability notification threshold is not specified by the TOP, notification is at the discretion of the GOP. It is our belief that this level of latitude will likely result in a lack of notification consistency across the industry.

Additionally, we have concerns with the inclusion of the phrase “in a mutually-agreed communication method”. In our opinion, this adds an administrative burden to the VAR-002 standard that does not decrease risk nor increase reliability. We believe that if the TOP needs to receive this information in a specific manner or format that a more suitable place to address this item would be in the TOP-003 data specification.

Lastly, we believe that removing the specific exemption for dispersed power producing resources in favor of the term “generating resource(s)” brings a certain vagueness to this requirement that was not previously present. It is our opinion that the term “Facility” as defined in the “Glossary of Terms Used in NERC Reliability Standards” is a better fit for the language of this Requirement. The defined term “Facility” already incorporates both traditional generating resources and dispersed power producing resources.

We recommend using the following language for Requirement R4.

R4. Each Generator Operator shall notify its associated Transmission Operator within 30 minutes of becoming aware of a reactive capability change due to factors other than those specified in Requirement R3 at the generating Facility. Unless otherwise specified by the Transmission Operator, the Generator Operator shall report reactive capability changes greater than 10% that create degradation or restores from degradation. If the capability has been restored within 30 minutes of the Generator Operator becoming aware of such change, then the Generator Operator is not required to notify the Transmission Operator of the change in reactive capability.

Likes 0	
Dislikes 0	
Response	

Andy Thomas - Duke Energy - 1,3,5,6 - SERC,RF	
Answer	No
Document Name	
Comment	

-The proposed language removes “the unavailability of an individual generating unit of dispersed power producing resources”; recommend clarification for how single/multiple inverter availability are considered under reactive capability degradation. Require an understanding of the availability and degradation of individual generating unit(s) or dispersed power producing resources.

-Insert the following language extracted from the Rationale Document:

R4. Each Generator Operator shall notify its associated Transmission Operator, in a mutually-agreeable communication method, within 30 minutes of becoming aware of a reactive capability change due to factors other than those specified in Requirement R3 at the generating resource(s). Where the Transmission Operator has specified a reactive capability threshold, the Generator Operator shall report reactive capability changes that create degradation or restores from degradation. “However, if Transmission Operator remains neutral and does not provide needed clarity on reporting requirements to the Generator Operator, a 10% change in generating resource(s) reactive capability output is used for making notifications of reactive capability changes.” If the capability has been restored within 30 minutes of the Generator Operator becoming aware of such change, then the Generator Operator is not required to notify the Transmission Operator of the change in reactive capability.

-Comment: Threshold capacity needs to be defined to bound the reactive capability and must not prevent or conflict with the generator operators ability to maintain its assigned voltage schedule (i.e., the generator operator should have a voltage or reactive power schedule assigned).

Likes 0	
Dislikes 0	

Response

Kimberly Turco - Constellation - 6

Answer	No
Document Name	

Comment

Constellation suggests removing the mutually agreed upon communication method. While understanding the drafting team's intent of allowing variability in notification based on transmission planner needs of verbal or RTU communication. Constellation suggests this could inadvertently limit the ways to comply in emergent situations and thus should remove the "mutually agreeable format" wording to preclude restrictions that could be imposed by TOPs.

Kimberly Turco on behalf of Constellation Segments 5 and 6

Likes 0	
Dislikes 0	

Response

Nikki Carson-Marquis - Nikki Carson-Marquis On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Nikki Carson-Marquis

Answer	No
Document Name	

Comment

Minnkota Power Cooperative supports the MRO New Standards Review Forum (NSRF) and ACES comments.

Likes 0	
Dislikes 0	

Response

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

Answer	No
Document Name	

Comment

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

Likes 0	
Dislikes 0	

Response

Ruchi Shah - AES - AES Corporation - 5

Answer	No
Document Name	

Comment

AESCE recommends that the SDT reinstante the following language under R4.

“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.”

Additionally, the non-defined term generating resource(s) should be replaced with Facility.

Likes 0	
Dislikes 0	

Response

Dwanique Spiller - Berkshire Hathaway - NV Energy - 5

Answer	No
Document Name	

Comment
While NV Energy appreciates SDT efforts, looking at both the IRPTF white paper and SAR in sequence, the SDT did not implement the intended recommendation to add the individual wind turbine exclusion from R4 to R3. NV Energy recommends the SDT leave the existing R4 individual generating unit exclusion in R4 and duplicate the individual generating unit exclusion in R3. **Other Requirement R4 Comments:** Additionally, NV Energy recommends that the phrase “in a mutually-agree communication method” be removed from the R4. Inclusion of the language does not address any known or foreseen reliability issue, nor does it improve reliability, however it does add potential addiministrative burden. NV Energy suggests using the term “Facility” instead of “resource(s)”. The use of Facility clearly identifies that Requirement R4 is applicable to Bulk Electrical System generating resources identified through inclusion I2 and I4 need to provide reactive support and voltage control. According to the recommendations of the 2016-EPR-02 Enhanced Periodic Review of Voltage and Reactive Standards (Attachment 5), 2.8, “In Requirement R4, the term "status" in the bulleted exception concerning dispersed generating resources (DGR) should be struck given the use of "status" is associated with Requirement R3 and not R4.” Removal of the following language in Requirement R4. Is not within the SAR’s scope, “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.” **Suggested language:** R4. Each Generator Operator shall notify its associated Transmission Operator within 30 minutes of becoming aware of a change that degrades or restores from degradation reactive capability due to factors other than a status change described in Requirement R3 at the generation Facility. Where the Transmission Operator has specified a reactive capability change notification threshold, the Generator Operator shall report reactive capability changes in accordance with the specified threshold. If the reactive capability has been restored within 30 minutes of the Generator Operator becoming aware of such change, then the Generator Operator is not required to notify the Transmission Operator of the change in reactive capability. Reporting of reactive 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.

Likes 0	
Dislikes 0	

Response

Hillary Creurer - Allete - Minnesota Power, Inc. - 1	
Answer	No

Document Name	
Comment	
Minnesota Power supports MRO's NERC Standards Review Forum's (NSRF) comments.	
Likes 0	
Dislikes 0	
Response	
David Campbell - Enel Green Power - 5 - MRO,Texas RE,SERC,RF	
Answer	No
Document Name	
Comment	
Enel North America Inc. (Enel) does not support the removal of the exclusion that states "[R]eporting 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".	
Likes 0	
Dislikes 0	
Response	
Daniel Gacek - Exelon - 1	
Answer	No
Document Name	
Comment	
Exelon supports the comments submitted by the EEI.	
Likes 0	
Dislikes 0	
Response	
Alison MacKellar - Constellation - 5	
Answer	No
Document Name	

Comment
Constellation suggests removing the mutually agreed upon communication method. While understanding the drafting team's intent of allowing variability in notification based on transmission planner needs of verbal or RTU communication. Constellation suggests this could inadvertently limit the ways to comply in emergent situations and thus should remove the "mutually agreeable format" wording to preclude restrictions that could be imposed by TOPs. Alison Mackellar on behalf of Constellation Segments 5 and 6

Likes 0	
Dislikes 0	

Response

Kinte Whitehead - Exelon - 3	
Answer	No
Document Name	

Comment
Exelon is in support of the comments submitted by EEI.

Likes 0	
Dislikes 0	

Response

Mark Flanary - Midwest Reliability Organization - 10	
Answer	No
Document Name	

Comment
The current draft removes a section on R4 that clarifies that it is not applicable to individual generating units of dispersed power producing resources. Which is directly opposite of what the SAR was intending to accomplish. We suggest adding a note to this effect: "*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.*"

Likes 0	
Dislikes 0	

Response

Mike Magruder - Avista - Avista Corporation - 1

Answer	No
Document Name	
Comment	
We concur with the following EEI comment: EEI does not support the deletion of the bulleted reporting exception for individual generating units of dispersed power producing resources made to Requirement R4. The SAR scope asked the SDT to clarify whether a similar exception should be added to Requirement R3, not delete the reporting exception already contained in Requirement R4. Moreover, there is no justification provided for removing this reporting exception. the SDT should restore the bulleted reporting exception for individual generating units of dispersed power producing resources as currently contained in VAR-002-4.1.	
Likes 0	
Dislikes 0	
Response	
Sheila Suurmeier - Black Hills Corporation - 5	
Answer	No
Document Name	
Comment	
Black Hills Corporation supports the comments from both NAGF and EEI.	
Likes 0	
Dislikes 0	
Response	
Rachel Schuldt - Rachel Schuldt On Behalf of: Josh Combs, Black Hills Corporation, 5, 6, 1, 3; - Rachel Schuldt	
Answer	No
Document Name	
Comment	
Black Hills Corporation supports the comments from both NAGF and EEI.	
Likes 0	
Dislikes 0	
Response	
Claudine Bates - Black Hills Corporation - 6	

Answer	No
Document Name	
Comment	
Black Hills Corporation supports the comments from both NAGF and EEI.	
Likes 0	
Dislikes 0	
Response	
Micah Runner - Black Hills Corporation - 1	
Answer	No
Document Name	
Comment	
Black Hills Corporation supports the comments from both NAGF and EEI.	
Likes 0	
Dislikes 0	
Response	
Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable	
Answer	No
Document Name	
Comment	
EEI does not support the deletion of the bulleted reporting exception for individual generating units of dispersed power producing resources made to Requirement R4. The SAR scope asked the SDT to clarify whether a similar exception should be added to Requirement R3, not delete the reporting exception already contained in Requirement R4. Moreover, there is no justification provided for removing this reporting exception. The SDT should restore the bulleted reporting exception for individual generating units of dispersed power producing resources as currently contained in VAR-002-4.1. EEI also asked the SDT to remove proposed Requirement R4 language that states “in a mutually-agreeable communications method”, because this language serves no reliability benefits but adds unnecessary compliance obligations; i.e., the need to document that an agreement was developed, mutually agreed to and was followed.	
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 response to Question 3 above for additional comments.	
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 clarification to R4 made in a previous revision of VAR-002 resulted in the bullet found in R4 of VAR-002-4.1 which clarifies that R4 is not applicable to the individual generating units of dispersed power producing resources. This clarification continues to be needed and should not be removed. The addition of the requirement to have a mutually-agreeable communication method should be removed. This provides zero reliability benefit. The important part of R3 and R4 is that the notification occur, not that the GOP and TOP may have mutually agreed upon the method.	
Likes 0	
Dislikes 0	
Response	
Constantin Chitescu - Ontario Power Generation Inc. - 5	
Answer	No
Document Name	
Comment	
OPG supports EEI's comments.	
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	

It is our opinion that the proposed language of Requirement R4 could benefit from a few minor enhancements to make the stated intent of the Technical Rationale clearer. Specifically, we recommend incorporating the 10% threshold addressed in the Technical Rationale directly into the language of Requirement R4. As written, if a reactive capability notification threshold is not specified by the TOP, notification is at the discretion of the GOP. It is our belief that this level of latitude will likely result in a lack of notification consistency across the industry.

Additionally, we have concerns with the inclusion of the phrase “in a mutually-agreed communication method”. In our opinion, this adds an administrative burden to the VAR-002 standard that does not decrease risk nor increase reliability. We believe that if the TOP needs to receive this information in a specific manner or format that a more suitable place to address this item would be in the TOP-003 data specification.

Lastly, we believe that removing the specific exemption for dispersed power producing resources in favor of the term “generating resource(s)” brings a certain vagueness to this requirement that was not previously present. It is our opinion that the term “Facility” as defined in the “Glossary of Terms Used in NERC Reliability Standards” is a better fit for the language of this Requirement. The defined term “Facility” already incorporates both traditional generating resources and dispersed power producing resources.

We recommend using the following language for Requirement R4.

R4. Each Generator Operator shall notify its associated Transmission Operator within 30 minutes of becoming aware of a reactive capability change due to factors other than those specified in Requirement R3 at the generating Facility. Unless otherwise specified by the Transmission Operator, the Generator Operator shall report reactive capability changes greater than 10% that create degradation or restores from degradation. If the capability has been restored within 30 minutes of the Generator Operator becoming aware of such change, then the Generator Operator is not required to notify the Transmission Operator of the change in reactive capability.

Likes 0	
Dislikes 0	
Response	
Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECI	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Daniela Atanasovski - APS - Arizona Public Service Co. - 1	
Answer	Yes
Document Name	
Comment	
AZPS agrees and supports the proposed revisions.	
Likes 0	
Dislikes 0	
Response	
Jessica Cordero - Unisource - Tucson Electric Power Co. - 1 - WECC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name 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	
Martin Sidor - NRG - NRG Energy, Inc. - 6	
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	
Adrian Raducea - DTE Energy - Detroit Edison Company - 5, Group Name DTE Energy - DTE Electric	
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	
Helen Lainis - Independent Electricity System Operator - 2	
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	
Kennedy Meier - Electric Reliability Council of Texas, Inc. - 2	
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	
Nicolas Turcotte - Hydro-Quebec (HQ) - 1	
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	

Joanne Anderson - Public Utility District No. 2 of Grant County, Washington - 1,4,5,6 - WECC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Gregory Campoli - New York Independent System Operator - 2	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

4. Do you agree with the language in proposed VAR-002-5, of "generating resource(s)" for Requirements R1, R2, R5 and R6? If you do not agree, please provide your recommendation and, if appropriate, technical or procedural justification.

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

It is our opinion that the defined term "Facility" already includes both traditional generating resources as well as dispersed power producing resources.

Likes 0	
Dislikes 0	

Response

Constantin Chitescu - Ontario Power Generation Inc. - 5

Answer	No
Document Name	

Comment

OPG supports NAGF's comments.

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

Southern Company suggests that Facility be used instead of resource(s). Noting the Glossery of Terms definition for Facility, it use clearly identifies that R5 and R6 are applicable to BES generating resources identified through BES definition Inclusion parts I2 and I4.

Likes 0	
Dislikes 0	

Response

Duane Franke - Manitoba Hydro - 1,3,5,6 - MRO	
Answer	No
Document Name	
Comment	
Including dispersed power producers in the term “generating resource” can be confusing. The BES definition Inclusion 2(I2) is generating resources and then I4 is dispersed power producing. It appears in this standard they are trying to add clarity by using the term generating resources to encompass multiple types, but they also use that exact term in the NERC BES facility definition (I2) as a specific definition.	
Likes 0	
Dislikes 0	
Response	
Wayne Sipperly - North American Generator Forum - 5 - MRO,WECC,Texas RE,NPCC,SERC,RF	
Answer	No
Document Name	
Comment	
After much discussion with membership, the NAGF does not support replacing “applicable Facilities” with “generating resource(s)” and recommends keeping the “applicable Facilities” language. “Facility” is a clearly defined term in the NERC Glossary of Terms, and keeping this in the revised Standard would help to alleviate confusion.	
Likes 0	
Dislikes 0	
Response	
Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable	
Answer	No
Document Name	
Comment	
While EEI does not oppose the use of the term “generator resource(s)” in place of generator, it does not add any enhanced clarity to the language of the VAR-002, noting that the term generator is well understood in the industry.	
Likes 0	
Dislikes 0	

Response
Micah Runner - Black Hills Corporation - 1
Answer	No
Document Name	
Comment
Black Hills Corporation supports the comments from both NAGF and EEI.
Likes 0	
Dislikes 0	
Response
Claudine Bates - Black Hills Corporation - 6
Answer	No
Document Name	
Comment
Black Hills Corporation supports the comments from both NAGF and EEI.
Likes 0	
Dislikes 0	
Response
Rachel Schuldt - Rachel Schuldt On Behalf of: Josh Combs, Black Hills Corporation, 5, 6, 1, 3; - Rachel Schuldt
Answer	No
Document Name	
Comment
Black Hills Corporation supports the comments from both NAGF and EEI.
Likes 0	
Dislikes 0	
Response

Sheila Suurmeier - Black Hills Corporation - 5	
Answer	No
Document Name	
Comment	
Black Hills Corporation supports the comments from both NAGF and EEI.	
Likes 0	
Dislikes 0	
Response	

Mike Magruder - Avista - Avista Corporation - 1	
Answer	No
Document Name	
Comment	
We concur with the following EEI comment: While EEI does not oppose the use of the term “generator resource(s)” in place of generator, it does not add any enhanced clarity to the language of the VAR-002, noting that the term generator is well understood in the industry.	
Likes 0	
Dislikes 0	
Response	

Mark Flanary - Midwest Reliability Organization - 10	
Answer	No
Document Name	
Comment	
We suggest that language be added to clarify what is meant by "generating resource(s)".	
Likes 0	
Dislikes 0	
Response	

Kinte Whitehead - Exelon - 3	
Answer	No

Document Name	
Comment	
Exelon is in support of 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 the EEI.	
Likes 0	
Dislikes 0	
Response	
David Campbell - Enel Green Power - 5 - MRO,Texas RE,SERC,RF	
Answer	No
Document Name	
Comment	
Enel North America Inc. (Enel) agrees with the MRO NSRF's comments and recommends the SDT utilize definitions found in NERC's Glossary of Terms.	
Likes 0	
Dislikes 0	
Response	
Hillary Creurer - Allete - Minnesota Power, Inc. - 1	
Answer	No
Document Name	
Comment	

Minnesota Power supports MRO's NERC Standards Review Forum's (NSRF) comments.

Likes 0	
Dislikes 0	

Response

Dwanique Spiller - Berkshire Hathaway - NV Energy - 5

Answer	No
Document Name	

Comment

NV Energy does not see the clarity benefits of changing the defined term "Facilities" to the undefined "resource(s)" and recommends that "Facility" be left in place. While NV Energy appreciates SDT efforts to improve clarity, since NERC standards are inherently legal when audited, the defined term "Facility" remains superior.

R1 and Footnote 1:

If the SDT elects to keep and use R1, footnote 1, NV Energy suggests using the term "generating Facility" instead of "plant". The use of Facility clearly identifies that footnote 1 is applicable to Bulk Electrical System generating resources identified through inclusion I2 and I4 need to provide reactive support and voltage control.

R1, footnote 2 & 3:

NV Energy suggests using the term "Facility" instead of "resource(s)". The use of Facility clearly identifies that footnote 2 & 3 is applicable to Bulk Electrical System generating resources identified through inclusion I2 and I4 need to provide reactive support and voltage control.

R2, footnote 4 and 5

NV Energy suggests using the term "Facility" instead of "resource(s)". The use of Facility clearly identifies that Requirement R2, footnote 4 & 5 is applicable to Bulk Electrical System generating resources identified through inclusion I2 and I4 need to provide reactive support and voltage control.

Requirement 2.1:

NV Energy suggests using the term “Facility” instead of “resource(s)”. The use of Facility clearly identifies that Requirement R2.1 is applicable to Bulk Electrical System generating resources identified through inclusion I2 and I4 need to provide reactive support and voltage control.

NV Energy suggests using the term “generating Facility” instead of “applicable Facility”. The use of Facility clearly identifies that Requirement R2.1 is applicable to Bulk Electrical System generating resources identified through inclusion I2 and I4 need to provide reactive support and voltage control. This will also maintain consistency throughout the standard.

NV Energy suggests using footnote 1 again for this instance of “AVR”.

NV Energy does not agree with the addition of the following requirement language “notify the Transmission Operator as soon as becoming aware of the condition.” This introduces a ‘double jeopardy’ situation with Requirement R3 as written. Pursuant to the recommendations of the 2016-EPR-02 Enhanced Periodic Review of Voltage and Reactive Standards (Attachment 5) “If the site AVR fails the Generator Owner *[SIC]* should report a change per Requirement R3. Augment the requirement to accommodate these circumstances without a violation.” Please see NV Energy’s suggested language for Requirement R3.

Requirement R5 & R6:

NV Energy suggests using the term “Facility” instead of “resource(s)”. The use of Facility clearly identifies that Requirement R5 and R6 is applicable to Bulk Electrical System generating resources identified through inclusion I2 and I4.

Likes 0	
Dislikes 0	
Response	
Ruchi Shah - AES - AES Corporation - 5	
Answer	No
Document Name	
Comment	

AESCE does not see the benefit of updating the term to generating resources(s). This is an undefined term and can lead to subjective interpretation and confusion. AESCE recommends reinstating the NERC defined term “Facility” to the Standard.

Likes 0	
Dislikes 0	
Response	

Nikki Carson-Marquis - Nikki Carson-Marquis On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Nikki Carson-Marquis	
Answer	No
Document Name	
Comment	
Minnkota Power Cooperative supports the MRO New Standards Review Forum (NSRF) and ACES comments.	
Likes 0	
Dislikes 0	
Response	
Jennifer Bray - Arizona Electric Power Cooperative, Inc. - 1	
Answer	No
Document Name	
Comment	
AEPC signed on to ACES comments below: It is our opinion that the defined term “Facility” already includes both traditional generating resources as well as dispersed power producing resources.	
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	
See comments under question #1.	
Likes 0	
Dislikes 0	
Response	

Donna Wood - Tri-State G and T Association, Inc. - 1	
Answer	No
Document Name	
Comment	
Tri-State Generation and Transmission supports the comments submitted by the MRO NSRF.	
Likes 0	
Dislikes 0	
Response	
Israel Perez - Israel Perez On Behalf of: Mathew Weber, Salt River Project, 3, 1, 6, 5; Sarah Blankenship, Salt River Project, 3, 1, 6, 5; Thomas Johnson, Salt River Project, 3, 1, 6, 5; Timothy Singh, Salt River Project, 3, 1, 6, 5; - Israel Perez	
Answer	No
Document Name	
Comment	
SRP does not support the addition of this term to the standard. This new term defines IBR's being introduced directly into a standard which previously did not have IBR applicability. SRP strongly feels Inverter Based Resources should have separate standards.	
Likes 0	
Dislikes 0	
Response	
Casey Perry - PNM Resources - 1,3 - WECC,Texas RE	
Answer	No
Document Name	
Comment	
PNM and TNMP support EEI comments regarding "generating resource(s)".	
Likes 0	
Dislikes 0	
Response	

Anna Martinson - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO Group	
Answer	No
Document Name	
Comment	

The MRO NSRF does not see the clarity benefits of changing the defined term “Facilities” to the undefined “resource(s)” and recommends that “Facility” be left in place. While the MRO NSRF appreciates SDT efforts to improve clarity, since NERC standards are inherently legal when audited, the defined term “Facility” remains superior.

R1 and Footnote 1:

If the SDT elects to keep and use R1, footnote 1, the MRO NSRF suggests using the term “generating Facility” instead of “plant”. The use of Facility clearly identifies that footnote 1 is applicable to Bulk Electrical System generating resources identified through inclusion I2 and I4 need to provide reactive support and voltage control.

R1, footnote 2 & 3:

The MRO NSRF suggests using the term “Facility” instead of “resource(s)”. The use of Facility clearly identifies that footnote 2 & 3 is applicable to Bulk Electrical System generating resources identified through inclusion I2 and I4 need to provide reactive support and voltage control.

R2, footnote 4 and 5

The MRO NSRF suggests using the term “Facility” instead of “resource(s)”. The use of Facility clearly identifies that Requirement R2, footnote 4 & 5 is applicable to Bulk Electrical System generating resources identified through inclusion I2 and I4 need to provide reactive support and voltage control.

Requirement 2.1:

The MRO NSRF suggests using the term “Facility” instead of “resource(s)”. The use of Facility clearly identifies that Requirement R2.1 is applicable to Bulk Electrical System generating resources identified through inclusion I2 and I4 need to provide reactive support and voltage control.

The MRO NSRF suggests using the term “generating Facility” instead of “applicable Facility”. The use of Facility clearly identifies that Requirement R2.1 is applicable to Bulk Electrical System generating resources identified through inclusion I2 and I4 need to provide reactive support and voltage control. This will also maintain consistency throughout the standard.

The MRO NSRF suggests using footnote 1 again for this instance of “AVR”.

The MRO NSRF does not agree with the addition of the following requirement language “notify the Transmission Operator as soon as becoming aware of the condition.” This introduces a ‘double jeopardy’ situation with Requirement R3 as written. Pursuant to the recommendations of the 2016-EPR-02 Enhanced Periodic Review of Voltage and Reactive Standards (Attachment 5) “If the site AVR fails the Generator Owner *[SIC]* should report a change per Requirement R3. Augment the requirement to accommodate these circumstances without a violation.” Please see the MRO NSRF’s suggested language for Requirement R3.

Requirement R5 & R6:

The MRO NSRF suggests using the term “Facility” instead of “resource(s)”. The use of Facility clearly identifies that Requirement R5 and R6 is applicable to Bulk Electrical System generating resources identified through inclusion I2 and I4.

Likes 0	
Dislikes 0	
Response	

Ben Hammer - Western Area Power Administration - 1	
Answer	No
Document Name	
Comment	
There is not a clarity benefits of changing the defined term “Facilities” to the undefined “resource(s)” and recommends that “Facility” be left in place	
Likes 0	
Dislikes 0	
Response	
Robert Follini - Avista - Avista Corporation - 3	
Answer	No
Document Name	
Comment	
While EEI does not oppose the use of the term “generator resource(s)” in place of generator, it does not add any enhanced clarity to the language of the VAR-002, noting that the term generator is well understood in the industry.	
Likes 0	
Dislikes 0	
Response	
Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter	
Answer	No
Document Name	
Comment	
FirstEnergy supports EEI’s comments which state: While EEI does not oppose the use of the term “generator resource(s)” in place of generator, it does not add any enhanced clarity to the language of the VAR-002, noting that the term generator is well understood in the industry.	
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 comments submitted by the MRO NSRF. WEC Energy Group also suggests that a "generating resource" could be defined with a certain MW, MVA, MVAR, or % of local distribution system. This would be more useful to differentiate smaller distributed generators from larger one.

Likes 0	
Dislikes 0	

Response

Kevin Conway - Public Utility District No. 1 of Pend Oreille County - 1,3,5,6	
Answer	No
Document Name	

Comment
This should be information related to the facility ratings, not each generation resource. In many cases the GO/GOP will provide this data as part of the facility ratings process. The TOP should be only concerned with the performance at the point of interconnection or collection of each resource.

Likes 0	
Dislikes 0	

Response

David Jendras Sr - Ameren - Ameren Services - 3	
Answer	Yes
Document Name	

Comment
Ameren would like clarity around the definition of generation resource, especially for battery energy storage systems.

Likes 0	

Dislikes 0	

Response

Alison MacKellar - Constellation - 5	
Answer	Yes
Document Name	

Comment
Constellation has no additional comments. Alison Mackellar on behalf of Constellation Segments 5 and 6

Likes 0	
Dislikes 0	

Response

Rachel Coyne - Texas Reliability Entity, Inc. - 10	
Answer	Yes
Document Name	

Comment
Yes Texas RE supports the use of the phrase generating resource. Texas RE recommends revising Requirement R2 to use that term, generating resource, instead of the term generating Facility. Texas RE proposes the following language for R2 and 2.1 (changes in bold font): R2. Unless exempted by the Transmission Operator, each Generator Operator shall maintain the generating resource(s) voltage or Reactive Power schedule4 (within each generating resource(s)'s Facility's capabilities5) provided by the Transmission Operator, or otherwise shall meet the conditions of notification for deviations from the voltage or….. 2.1. When a generating resource(s)'s AVR is out of service or the generating resource applicable Facility does not have an AVR, the Generator Operator shall use an alternative method to control the generating resource's applicable Facility reactive output to meet the voltage or Reactive Power schedule provided by the Transmission Operator or if no other method of control is available, notify the Transmission Operator within 30 minutes of change in status or unavailability as soon as becoming aware of the condition.

Texas RE recommends modifying footnote 5 to simply state the means for establishing the generating resource(s) capability. It is not necessary to state in the footnote the established capability may not be sufficient at times to maintain the voltage. The conditions for deviations are further included in the requirement.

Suggested language for footnote 5 (changes in bold font):

5Generating resource(s) capability may be established by test or other **documented methods.**

Texas RE is concerned with the accuracy of Footnote 6. Generator step-up and auxiliary transformers may not necessarily be owned and maintained by the Generator Owner.

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

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

Answer	Yes
Document Name	

Comment

None.

Likes 0	

Dislikes 0	
Response	
Daniela Atanasovski - APS - Arizona Public Service Co. - 1	
Answer	Yes
Document Name	
Comment	
AZPS agrees and supports the proposed revisions.	
Likes 0	
Dislikes 0	
Response	
Gregory Campoli - New York Independent System Operator - 2	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Joanne Anderson - Public Utility District No. 2 of Grant County, Washington - 1,4,5,6 - WECC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Nicolas Turcotte - Hydro-Quebec (HQ) - 1	

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Kennedy Meier - Electric Reliability Council of Texas, Inc. - 2	
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	
Helen Lainis - 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	
Lauren Giordano - Lauren Giordano On Behalf of: Dennis Sismaet, Northern California Power Agency, 4, 6, 3, 5; Jeremy Lawson, Northern California Power Agency, 4, 6, 3, 5; Marty Hostler, Northern California Power Agency, 4, 6, 3, 5; - Lauren Giordano	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECI	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Wendy Kalidass - U.S. Bureau of Reclamation - 1,5	

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	
Martin Sidor - NRG - NRG Energy, Inc. - 6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thomas Foltz - AEP - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes 0	
Response	
Steven Rueckert - Western Electricity Coordinating Council - 10, Group Name WECC	
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	
Alan Kloster - Alan Kloster On Behalf of: Jeremy Harris, Evergy, 3, 5, 1, 6; Kevin Frick, Evergy, 3, 5, 1, 6; Marcus Moor, Evergy, 3, 5, 1, 6; Tiffany Lake, Evergy, 3, 5, 1, 6; - Alan Kloster	
Answer	
Document Name	
Comment	
Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) and MRO NSRF for question #4.	
Likes 0	
Dislikes 0	
Response	
Adrian Andreoiu - BC Hydro and Power Authority - 1, Group Name BC Hydro	

Answer	
Document Name	
Comment	
BC Hydro notes that the Purpose section of the draft Standard specifies the scope is on BES generating resources. For additional clarity, BC Hydro suggests that “BES generating resource” or “generating Facility” terminology be used instead of only generating resources. BC Hydro suggests that Requirement R1 can be revised to state: “The Generator Operator shall operate each BES generating Facility in the automatic voltage control mode (with its automatic voltage regulator (AVR in service and controlling voltage) or in a different control mode as instructed by the Transmission Operator unless: … .”	
Likes 0	
Dislikes 0	
Response	

5. Provide any additional comments on the standard and technical rationale for the SDT to consider, if desired.

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

Answer	
Document Name	

Comment

This is not a complicated concept to grasp, but the legacy wording and the level of explanation that is being suggested is overcomplicating the standard. The Generator Operator needs to report all changes of capabilities regarding reactive power and voltage control to the TOP, regardless of the type of generation is being used.

Likes 0	
Dislikes 0	

Response

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

Answer	
Document Name	

Comment

None

Likes 0	
Dislikes 0	

Response

Thomas Foltz - AEP - 5

Answer	
Document Name	

Comment

A paragraph heading is used throughout the technical rationale document indicating a deletion of a requirement rather than revision of a requirement (for example, “Rationale for Deletion of Requirement R4”). Please revise paragraph headings to reflect revisions rather than deletions.

The technical rationale document may benefit from additional text to make it clear that the “10% change in generating resource(s) reactive capability output” is simply an example to consider and is not a determinant in whether the obligation has been met or not.

Likes 0	

Dislikes 0	

Response

Daniela Atanasovski - APS - Arizona Public Service Co. - 1	
Answer	
Document Name	

Comment
None

Likes 0	
Dislikes 0	

Response

Wendy Kalidass - U.S. Bureau of Reclamation - 1,5	
Answer	
Document Name	

Comment
Reclamation recommends a minimum 18 month implementation timeframe.

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 comments submitted by the MRO NSRF. WEC Energy Group appreciates the opportunity to provide the following general comment: Neither the SAR nor the draft address the most problematic flaw of the standard, which is the timing requirements. A lot of unnecessary VAR-002 reports are made because of the poor structure of the timing requirements (report an event longer than 30 minutes within 30 minutes).

A way to revise this would be to follow wording similar to COM-001-3 Requirement R10: “Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall notify entities as identified in Requirements R1, R3, and R5, respectively within 60 minutes of the detection of a failure of its Interpersonal Communication capability that lasts 30 minutes or longer.”	
Likes 1	Associated Electric Cooperative, Inc., 3, Bennett Todd
Dislikes 0	
Response	
Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECI	
Answer	
Document Name	
Comment	
AECI supports the comment provided by WEC	
Likes 0	
Dislikes 0	
Response	
Mark Garza - FirstEnergy - FirstEnergy Corporation - 4, Group Name FE Voter	
Answer	
Document Name	
Comment	
FirstEnergy supports EEI’s comments which state: EEI does not support the capitalization of the undefined term “Transmission System” as contained in Requirement R1. Capitalizing this term implies the term is defined in the NERC Glossary of Terms, which it is not, and implies that the applicability of this Reliability Standard goes beyond the applicability section as proposed. To address this concern, this term should not be capitalized, consistent with VAR-002-4.1. EEI does not support the extensive use of footnotes contained in the proposed modifications to VAR-002-5 and recommends that all compliance obligations, exceptions, etc., be incorporated into the Reliability Standard Requirement language, not footnotes.	
Likes 0	
Dislikes 0	
Response	
Robert Follini - Avista - Avista Corporation - 3	

Answer	
Document Name	

Comment

EEI does not support the capitalization of the undefined term “Transmission System” as contained in Requirement R1. Capitalizing this term implies the term is defined in the NERC Glossary of Terms, which it is not. This term should not be capitalized, consistent with VAR-002-4.1.

Likes 0	
Dislikes 0	

Response

Ben Hammer - Western Area Power Administration - 1

Answer	
Document Name	

Comment

The removal 4.2 in the applicability section is appropriate.

The replacement of the NERC defined term “Facility” with the undefined term “resource” is inappropriate. The use of Facility clearly identifies that this Reliability Standard is for the purpose of ensuring Bulk Electrical System generating resources identified through inclusion I2 and I4 need to provide reactive support and voltage control.

The capitalization of Transmission System and creates concerns and could cause an unintended scope creep by auditors. Transmission doesn’t specify a voltage floor.

R1 and Footnote 1: If the SDT elects to keep and use R1, footnote 1, it is suggested to use the term “generating Facility” instead of “plant”. The use of Facility clearly identifies that footnote 1 is applicable to Bulk Electrical System generating resources identified through inclusion I2 and I4 need to provide reactive support and voltage control.

R1, footnote 2 & 3: Consider using the term “Facility” instead of “resource(s)”. The use of Facility clearly identifies that footnote 2 & 3 is applicable to Bulk Electrical System generating resources identified through inclusion I2 and I4 need to provide reactive support and voltage control.

R2, footnote 4 and 5: Consider using the term “Facility” instead of “resource(s)”. The use of Facility clearly identifies that Requirement R2, footnote 4 & 5 is applicable to Bulk Electrical System generating resources identified through inclusion I2 and I4 need to provide reactive support and voltage control.

Requirement 2.1: Consider using the term “Facility” instead of “resource(s)”. The use of Facility clearly identifies that Requirement R2.1 is applicable to Bulk Electrical System generating resources identified through inclusion I2 and I4 need to provide reactive support and voltage control.

Consider suggests using the term “generating Facility” instead of “applicable Facility”. The use of Facility clearly identifies that Requirement R2.1 is applicable to Bulk Electrical System generating resources identified through inclusion I2 and I4 need to provide reactive support and voltage control. This will also maintain consistency throughout the standard.

Consider using footnote 1 again for this instance of “AVR”.

The addition of language to “notify the Transmission Operator as soon as becoming aware of the condition.” is concerning. This introduces a ‘double jeopardy’ situation with Requirement R3 as written. Pursuant to the recommendations of the 2016-EPR-02 Enhanced Periodic Review of Voltage and Reactive Standards (Attachment 5) “If the site AVR fails the Generator Owner *[SIC]* should report a change per Requirement R3. Augment the requirement to accommodate these circumstances without a violation.” See the suggested language for Requirement R3.

Requirement R3: The language “within 30 minutes of becoming aware”is concerning. Maintaining voltage in accordance with the voltage or Reactive Power schedule is essential to ensuring a reliable transmission system. As such, using a specific notification time-period, such as 30 minutes, ensures that Generator Operators are actively monitoring relevant and important system conditions to ensure reliability. Further, changing timing requirements related to notifications was not a part of the SAR’s scope or identified in the recommendations of the 2016-EPR-02 Enhanced Periodic Review of Voltage and Reactive Standards (Attachment 5).

Consider using footnote 1 again for the instances of “AVR”.

Pursuant to the SAR, “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.”

Suggested language:

R3. Each Generator Operator shall notify its associated Transmission Operator within 30 minutes, in a mutually agreed communication method, of an unexpected status or functionality change outlined in 3.1, 3.2 or 3.3. If the unexpected status or functionality has been restored within 30 minutes, then the Generator Operator is not required to notify the Transmission Operator.

3.1 the generating Facilities AVR, including the AVR being out of service,

3.3 power system stabilizer, or

3.3 alternative voltage controlling device.

- Reporting of status or functionality changes as stated in Requirement R3 et al. is not applicable to the individual generating units of dispersed power producing resources identified through Inclusion I4 of the Bulk Electric System definition.

Requirement R4: Consider using the term “Facility” instead of “resource(s)”. The use of Facility clearly identifies that Requirement R4 is applicable to Bulk Electrical System generating resources identified through inclusion I2 and I4 need to provide reactive support and voltage control.

According to the recommendations of the 2016-EPR-02 Enhanced Periodic Review of Voltage and Reactive Standards (Attachment 5), 2.8, “In Requirement R4, the term "status" in the bulleted exception concerning dispersed generating resources (DGR) should be struck given the use of "status" is associated with Requirement R3 and not R4.” Removal of the following language in Requirement R4. Is not within the SAR’s scope, “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.”

Suggested language:

Each Generator Operator shall notify its associated Transmission Operator, in a mutually agreed communication method, within 30 minutes of becoming aware of a change that degrades or restores from degradation reactive capability due to factors other than a status change described in Requirement R3 at the generation Facility. Where the Transmission Operator has specified a reactive capability change notification threshold, the Generator Operator shall report reactive capability changes in accordance with the specified threshold. If the reactive capability has been restored within 30 minutes of the Generator Operator becoming aware of such change, then the Generator Operator is not required to notify the Transmission Operator of the change in reactive capability.

- Reporting of reactive 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.

Requirement R5 & R6: Consider using the term “Facility” instead of “resource(s)”. The use of Facility clearly identifies that Requirement R5 and R6 is applicable to Bulk Electrical System generating resources identified through inclusion I2 and I4.

Likes 0	
Dislikes 0	

Response

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

Answer	
Document Name	

Comment

The MRO NSRF agrees with the removal 4.2 in the applicability section.

The MRO NSRF does not agree with the replacement of the NERC defined term “Facility” with the undefined term “resource”. The use of Facility clearly identifies that this Reliability Standard is for the purpose of ensuring Bulk Electrical System generating resources identified through inclusion I2 and I4 need to provide reactive support and voltage control.

The MRO NSRF is puzzled by the capitalization of Transmission System and is concerned that this could cause an unintended scope creep by auditors. The use of “System” includes “distribution” in the NERC glossary of terms. Transmission doesn’t specify a voltage floor.

The MRO NSRF recommends using either “transmission system” or “Transmission system”.

Likes 0	
Dislikes 0	

Response

Casey Perry - PNM Resources - 1,3 - WECC,Texas RE

Answer	
Document Name	

Comment

PNM and TNMP agree with EEI related to capitalization of Transmission System, unless and new proposed definition is added to the “New or Modified Term(s) Used in NERC Reliability Standards” section of VAR-002-5 and NERC Glossary of Terms.

Alternately, PNM and TNMP proposes for following language in R1 to address the capitalization term issue: “The Generator Operator shall operate each generating resource(s) connected to the transmission Interconnection in the automatic voltage control mode (with its automatic voltage regulator.”	
Likes 0	
Dislikes 0	
Response	
Israel Perez - Israel Perez On Behalf of: Mathew Weber, Salt River Project, 3, 1, 6, 5; Sarah Blankenship, Salt River Project, 3, 1, 6, 5; Thomas Johnson, Salt River Project, 3, 1, 6, 5; Timothy Singh, Salt River Project, 3, 1, 6, 5; - Israel Perez	
Answer	
Document Name	
Comment	
SRP does not support the addition of these new terms to the standard. These new terms are specific to IBR’s. SRP strongly feels Inverter Based Resources should have separate standards.	
Likes 0	
Dislikes 0	
Response	
Donna Wood - Tri-State G and T Association, Inc. - 1	
Answer	
Document Name	
Comment	
Tri-State Generation and Transmission supports the comments submitted by the MRO NSRF.	
Likes 0	
Dislikes 0	
Response	
Adrian Andreoiu - BC Hydro and Power Authority - 1, Group Name BC Hydro	
Answer	
Document Name	
Comment	

Requirement R2 Part 2.1 references “applicable Facility”. For consistency with the revisions in this draft, BC Hydro recommends that “applicable Facility” be replaced with “BES generating resource” or “generating Facility”.

In the VSL Table, for Requirement R1 “generator and dispersed power producing resource” terminology is used. Given the proposed revisions, BC Hydro recommends that “BES generating resource” or “generating Facility” be used instead.

Per the VSL Table, for Requirement R3 the Severe VSL is based on “30 minutes of the status or functionality change.” The Requirement R3 is revised to mandate a GOP notification to their TOP “within 30 minutes of becoming aware of an unexpected functionality change”. BC Hydro recommends revising the VSL Tables to conform with the associated Requirement.

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	
Document Name	

Comment

PG&E provides the following:

1 - Under R1, “Transmission System” has been added but is not currently in the Glossary of terms. Please clarify if this is to be added to the glossary or should not be capitalized.

2 - Under the VSL Table, for R2 the High section states:

“The Generator Operator did maintain voltage or Reactive Power as instructed by the Transmission Operator.

AND

The Generator Operator did make the necessary notifications required by the Transmission Operator.”

Should this be “did **not**” as noted in the Severe VSL section?

Likes 0	
Dislikes 0	

Response

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

Answer	
Document Name	

Comment
AEPC signed on to ACES comments below: We have the following additional comments. Requirement 2: We recommend adding language to Requirement R2 to clearly indicate whether the GOP is required to notify the TOP in situations where maintaining the voltage or Reactive Power schedule is no longer within the generating Facility's capabilities. Requirement 2.1: We do not agree with the decision of the SDT to include the phrase ". . .or if no other method of control is available, notify the Transmission Operator as soon as becoming aware of the condition" in Requirement 2.1. It is our opinion that this overlaps with the language of Requirements R3 and R4. We recommend removing this language from Requirement 2.1. Additionally, we recommend including footnote 1 in this Requirement. Lastly, we recommend inserting a new Requirement 2.1 and modifying the language for the existing Requirement 2 and 2.1 as follows: R2. "Unless exempted by the Transmission Operator, each Generator Operator shall maintain the generating Facility's voltage or Reactive Power schedule4 (within each generating Facility's capabilities5) provided by the Transmission Operator. 2.1 (new). In the event that the generating Facility meets or exceeds the conditions of notification for deviations from the voltage or Reactive Power schedule provided by the Transmission Operator, the Generator Operator shall notify the Transmission Operator within 30 minutes of becoming aware of the deviation unless one of the following exemptions is applicable. • If the deviation has been restored within 30 minutes of the Generator Operator becoming aware of the deviation. or • If maintaining the voltage or Reactive Power schedule would exceed the capabilities of the generating Facility.

2.2 (previously 2.1). When a generating Facility's AVR1 is out of service or the applicable Facility does not have an AVR1, the Generator Operator shall use an alternative method to control the applicable Facility reactive output to meet the voltage or Reactive Power schedule provided by the Transmission Operator.

Requirement R5:

We believe that instead of providing a footnote exemption for dispersed power producing resources the language of this requirement (specifically Part 5.1) should be modified to be equally applicable for all generating Facilities. It is our opinion that accurate tap settings should be maintained for all transformers that could affect the VARs available from a given Facility. For example, the collector bus at a dispersed power producing facility is analogous to the generator bus at a thermal facility. While we recognize the difficulty the SDT faced with respect to clearly delineating which transformers are in scope, we do not believe that it is appropriate to exclude transformers that could potentially have a large impact on the available VARs at a dispersed power producing resource. Furthermore, we believe that Footnote 6 is not necessary and can be incorporated in the Requirement language.

We recommend modifying the language of this requirement as follows:

R5.1. For generator step-up and auxiliary transformers (with primary voltages equal to or greater than the low side voltage of the GSU) owned and maintained by the Generator Owner:

Thank you for the opportunity to comment.

Likes 0	
Dislikes 0	

Response

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

Answer	
Document Name	

Comment

-Change "generating resource(s)" to "Generator Owner" as noted below:

M6. The "Generator Owner" generating resource(s) shall have evidence that its step-up transformer taps were modified per the Transmission Operator's documentation in accordance with Requirement R6. The "Generator Owner" generating resource(s) shall have evidence that it notified its associated Transmission Operator when it could not comply with the Transmission Operator's step-up transformer tap specifications in accordance with Requirement R6, Part 6.1.

-Implementation Plan - No comments.

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

Rachel Coyne - Texas Reliability Entity, Inc. - 10

Answer	
Document Name	

Comment

Texas RE noticed that Requirement R1 contains the phrase Transmission System. The phrase Transmission System is not defined in the NERC glossary, though Transmission and System are. Is it the intention of the SDT to use compounded version of these two defined terms for R1? If is not, Texas RE recommends removing the capitalization of this term.

Texas RE recommends clarifying Measure M1 to include that the dated evidence for R1 should show that the GOP should have evidence of the exemption being granted by the Transmission Operator. Texas RE proposes the following language for M1 (changes are in bold font):

“The Generator Operator shall have evidence to show that it notified its associated Transmission Operator any time it failed to operate a generating resource(s) in the automatic voltage control mode or in a different control mode as specified in Requirement R1. If a generating resource(s) is being started up or shut down with the automatic voltage control off, or is being tested, and no notification of the AVR status is made to the Transmission Operator, the Generator Operator will have evidence that it notified the Transmission Operator of its procedure for placing the unit into automatic voltage control mode as required in Requirement R1. Such evidence may include, but is not limited to, dated evidence of transmittal of the procedure such as an electronic message or a transmittal letter with the procedure included or attached. If a generating resource(s) is exempted from automatic voltage control mode (with its AVR in service and controlling voltage), the Generator Operator will maintain **dated** evidence of an exception **granted by the Transmission Operator**.

The current 2.2 language does not give guidance on how the Generator Operator can provide the explanation on why the schedule cannot be met. Texas RE proposes the following language for Requirement Part 2.2 (changes in bold font):

2.2. When instructed to modify voltage, the Generator Operator shall comply or provide an explanation of why the schedule cannot be met by **the desired communication method established by the Transmission Operator.**

To maintain the desired voltage stability in the system, it is important for Generator Operators to monitor the voltage at the location specified by the Transmission Operator. Therefore, Texas RE suggests reinstating the original language in 2.3:

2.3.Generator Operators that do not monitor the **scheduled** voltage at the location specified in their voltage schedule shall have a methodology for converting the scheduled voltage specified by the Transmission Operator **specified by the Transmission Operator** to the voltage point being monitored by the Generator Operator.

Regarding Requirement R5 - Transmission Operators and Transmission Planners may not be always aware of the data changes of the generation resources. It is important to maintain accurate transformer tap settings in the system models used to assess the system conditions. Generator Owner shall provide associated data to Transmission Operator and Transmission Planner when any changes are made or based on established periodic data submission requirements or within 30 calendar days of a request. Texas RE proposes the following language (changes in bold font):

R5.The Generator Owner for each generating resource(s) shall provide the following to its associated Transmission Operator and Transmission Planner **when there's any changes are made or based on established periodic data submission requirements or** within 30 calendar days of a request.

[Violation Risk Factor: Lower] [Time Horizon: Real-time Operations Planning]

Texas RE noticed the numbers on the Requirement Parts to Requirement R5 change 1.1 to 5.1; 1.1.1 to 5.1.1, 1.1.2 to 5.1.2 and 1.1.3 to 5.1.3.

Texas RE recommends revising Requirement Part 5.1.2 to include fixed and load tap ranges:

5.1.2 Available **fixed and load tap change** ranges.

Likes 0	
Dislikes 0	

Response

Nicolas Turcotte - Hydro-Quebec (HQ) - 1	
Answer	
Document Name	
Comment	

Corresponidng changes should be made to the R1 and R2 Severe VSLs to remove “and dispersed power producing resources” to reflect the language that was removed from R1 and R2 In draft 2.

We suggest the following text for the R1 VSL :“Unless exempted, the Generator Operator did not operate each generator resource connected to the interconnected Transmission System …”

The text after the second “OR” in the Severe R2 VSL seems to be a copy and paste of the text directly above it. Suggest modifications to reflect R2.1, R2.2 and R2.3 in the corresponding VSL

Likes 0	
Dislikes 0	

Response

Nikki Carson-Marquis - Nikki Carson-Marquis On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Nikki Carson-Marquis

Answer	
Document Name	

Comment

Minnkota Power Cooperative supports the MRO New Standards Review Forum (NSRF) and ACES comments.

Likes 0	
Dislikes 0	

Response

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

Answer	
Document Name	

Comment

Evergy supports and incorporates by reference the comments of the Edison Electric Institute (EEI) and MRO NSRF for question #5.

Likes 0	
Dislikes 0	

Response

Ruchi Shah - AES - AES Corporation - 5	
Answer	
Document Name	
Comment	

Requirement R4 refers to reactive capability threshold as specified by the TOP. AESCE suggests providing more clarity on this as we have never received a threshold from a TOP. Is this referring to Reactive Power schedule?

Additionally, footnotes 2 and 3 refer to mimumim sustainable Load but in AESCE experience solar Facilities do not have any minimum sustainable Load. Consider revising the footnotes to better fit IBRs.

The term “Transmission System” has been capitalized but this can lead to more confusion as Transmission and System are individually defined but not defined as a common term. AESCE recommends revising it to “transmission system.”

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	

Corresponidng changes should be made to the R1 and R2 Severe VSLs to remove “and dispersed power producing resources” to reflect the language that was removed from R1 and R2 In draft 2.

We suggest the following text for the R1 VSL :“Unless exempted, the Generator Operator did not operate each generator resource connected to the interconnected Transmission System …”

The text after the second “OR” in the Severe R2 VSL seems to be a copy and paste of the text directly above it. Suggest modifications to reflect R2.1, R2.2 and R2.3 in the corresponding VSL.

Likes 0	
Dislikes 0	
Response	

Dwanique Spiller - Berkshire Hathaway - NV Energy - 5

Answer	
Document Name	
Comment	

NV Energy agrees with the removal 4.2 in the applicability section.

NV Energy does not agree with the replacement of the NERC defined term “Facility” with the undefined term “resource”. The use of Facility clearly identifies that this Reliability Standard is for the purpose of ensuring Bulk Electrical System generating resources identified through inclusion I2 and I4 need to provide reactive support and voltage control.

NV Energy is puzzled by the capitalization of Transmission System and is concerned that this could cause an unintended scope creep by auditors. The use of “System” includes “distribution” in the NERC glossary of terms. Transmission doesn’t specify a voltage floor.

NV Energy recommends using either “transmission system” or “Transmission system”.

Likes 0	
Dislikes 0	
Response	
Hillary Creurer - Allete - Minnesota Power, Inc. - 1	
Answer	
Document Name	
Comment	

Minnesota Power supports MRO’s NERC Standards Review Forum’s (NSRF) comments.

Likes 0	
Dislikes 0	
Response	
Daniel Gacek - Exelon - 1	
Answer	
Document Name	
Comment	

Exelon supports the comments submitted by the EEI.

Likes 0	
Dislikes 0	

Response

Alison MacKellar - Constellation - 5	
Answer	
Document Name	

Comment
Constellation has no additional comments. Alison Mackellar on behalf of Constellation Segments 5 and 6

Likes 0	
Dislikes 0	

Response

Kinte Whitehead - Exelon - 3	
Answer	
Document Name	

Comment
Exelon is in support of the comments submitted by EEI.

Likes 0	
Dislikes 0	

Response

Mike Magruder - Avista - Avista Corporation - 1	
Answer	
Document Name	

Comment

We concur with the following EEI comment: : EEI does not support the capitalization of the undefined term “Transmission System” as contained in Requirement R1. Capitalizing this term implies the term is defined in the NERC Glossary of Terms, which it is not. This term should not be capitalized, consistent with VAR-002-4.1.

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

David Jendras Sr - Ameren - Ameren Services - 3

Answer	
Document Name	

Comment

R2: There should be an additional R2.4 that says if a generator is outside of the voltage schedule, then the Generator Operator has to inform the Transmission Operator that the unit has reached maximum design resource capability.

Likes 0	
Dislikes 0	

Response

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

Answer	
Document Name	

Comment

EEI does not support the capitalization of the undefined term “Transmission System” as contained in Requirement R1. Capitalizing this term implies the term is defined in the NERC Glossary of Terms, which it is not, and implies that the applicability of this Reliability Standard goes beyond the applicability section as proposed. To address this concern, this term should not be capitalized, consistent with VAR-002-4.1.

EEI does not support the extensive use of footnotes contained in the proposed modifications to VAR-002-5 and recommends that all compliance obligations, exceptions, etc., be incorporated into the Reliability Standard Requirement language, not footnotes.

Likes 0	
Dislikes 0	

Response

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

Answer	
Document Name	

Comment

General – The NAGF does not support replacing “applicable Facilities” with “generating resource(s)” and recommends keeping the “applicable Facilities” language. The use of generator resource is undefined and suggests that an individual IBR generating unit may be the indicated element, which is not appropriate for the requirements of VAR-002. In addition, *“Facility” is a clearly defined term in the NERC Glossary of Terms, and keeping this in the revised Standard would help to alleviate confusion.*

R1 – The NAGF recommends that “Transmission System” should be lower case.

R2.1 – The addition of “…or if no other method of control is available, notify the Transmission Operator as soon as becoming aware of the condition.” is unnecessary and should be removed. Notification of the inability to meet the voltage schedule or reactive power schedule is already required by the wording of R2.

R3/R4 - Consider eliminating R3 and R4 altogether based on the notification requirements of R2, which require the TOP be notified when the generating Facility is unable to meet the voltage schedule or the reactive power schedule for whatever may the reason.

R5 - Consider eliminating R5 altogether based on the ability of the TP to request this information under MOD-032. In each of the three types of data listed in MOD-032, the TP is given a blank check to ask for whatever information they desire through these words: “Other information requested by the Planning Coordinator or Transmission Planner necessary for modeling purposes. [BA, GO, LSE, TO, TSP] “. It is not clear why the TOP may ever ask for the tap settings, available tap ranges, and impedance data for GSU and Aux transformers at Generating Facilities through VAR-00 R5.

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
In R2.1, the addition of "…or if no other method of control is available, notifify the Transmission Operator as soon as becoming aware of the condition." is unnecessary and should be removed. Notification of the inability to meet the voltage schedule or reactive power schedule is already required by the wording of R2. Consider eliminating R3 and R4 altogether based on the notification requirements of R2, which require the TOP be notified when the generating Facility is unable to meet the voltage schedule or the reactive power schedule for whatever may the reason. Consider eliminating R5 altogether based on the ability of the TP to request this information under MOD-032. In each of the three types of data listed in MOD-032, the TP is given a blank check to ask for whatever information they desire through these words: "Other information requested by the Planning Coordinator or Transmission Planner necessary for modeling purposes. [BA, GO, LSE, TO, TSP]". It is not clear why the TOP may ever ask for the tap settings, available tap ranges, and impedance data for GSU and Aux transformers at Generating Facilities through VAR-00 R5.

Likes 0	
Dislikes 0	

Response

Constantin Chitescu - Ontario Power Generation Inc. - 5	
Answer	
Document Name	

Comment
OPG supports NPCC/RSC's comments.

Likes 0	
Dislikes 0	

Response

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

Comment
We have the following additional comments. Requirement 2: We recommend adding language to Requirement R2 to clearly indicate whether the GOP is required to notify the TOP in situations where maintaining the voltage or Reactive Power schedule is no longer within the generating Facility's capabilities. Requirement 2.1: We do not agree with the decision of the SDT to include the phrase ". . .or if no other method of control is available, notify the Transmission Operator as

soon as becoming aware of the condition" in Requirement 2.1. It is our opinion that this overlaps with the language of Requirements R3 and R4. We recommend removing this language from Requirement 2.1. Additionally, we recommend including footnote 1 in this Requirement.

Lastly, we recommend inserting a new Requirement 2.1 and modifying the language for the existing Requirement 2 and 2.1 as follows:

R2. "Unless exempted by the Transmission Operator, each Generator Operator shall maintain the generating Facility's voltage or Reactive Power schedule4 (within each generating Facility's capabilities5) provided by the Transmission Operator.

2.1 (new). In the event that the generating Facility meets or exceeds the conditions of notification for deviations from the voltage or Reactive Power schedule provided by the Transmission Operator, the Generator Operator shall notify the Transmission Operator within 30 minutes of becoming aware of the deviation unless one of the following exemptions is applicable.

- If the deviation has been restored within 30 minutes of the Generator Operator becoming aware of the deviation.

or

- If maintaining the voltage or Reactive Power schedule would exceed the capabilities of the generating Facility.

2.2 (previously 2.1). When a generating Facility's AVR1 is out of service or the applicable Facility does not have an AVR1, the Generator Operator shall use an alternative method to control the applicable Facility reactive output to meet the voltage or Reactive Power schedule provided by the Transmission Operator.

Requirement R5:
We believe that instead of providing a footnote exemption for dispersed power producing resources the language of this requirement (specifically Part 5.1) should be modified to be equally applicable for all generating Facilities. It is our opinion that accurate tap settings should be maintained for all transformers that could affect the VARs available from a given Facility. For example, the collector bus at a dispersed power producing facility is analogous to the generator bus at a thermal facility. While we recognize the difficulty the SDT faced with respect to clearly delineating which transformers are in scope, we do not believe that it is appropriate to exclude transformers that could potentially have a large impact on the available VARs at a dispersed power producing resource. Furthermore, we believe that Footnote 6 is not necessary and can be incorporated in the Requirement language.

We recommend modifying the language of this requirement as follows:

R5.1. For generator step-up and auxiliary transformers (with primary voltages equal to or greater than the low side voltage of the GSU) owned and maintained by the Generator Owner:

Thank you for the opportunity to comment.

Likes 0	
Dislikes 0	
Response	