

Consideration of Comments

Project Name: 2016-04 Modifications to PRC-025-1 | Standards Authorization Request

Comment Period Start Date: 3/20/2017

Comment Period End Date: 4/3/2017

There were 16 sets of responses, including comments from approximately 69 different people from approximately 55 companies representing the 10 Industry Segments as shown in the table on the following pages.

All comments submitted can be reviewed in their original format on the project page.

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process. If you feel there has been an error or omission, you can contact the Director of Standards Development, <u>Steve Noess</u> (via email) or at (404) 446-9691.



Questions

- 1. Do you agree with the revisions to Items 1-4 in response to comments from industry stakeholders on draft 1 of the SAR? If not, please explain why you do not agree and provide specific detail referencing the applicable SAR item that would make it acceptable to you.
- 2. Do you agree with the additions of Items 5 and 6 in response to comments and discussions by the SAR drafting team? If not, please explain why you do not agree and provide specific detail referencing the applicable SAR item that would make it acceptable to you.
- 3. If you have any other comments on this SAR that you haven't already mentioned above, please provide them here.

The Industry Segments are:

- 1 Transmission Owners
- 2 RTOs, ISOs
- 3 Load-serving Entities
- 4 Transmission-dependent Utilities
- 5 Electric Generators
- 6 Electricity Brokers, Aggregators, and Marketers
- 7 Large Electricity End Users
- 8 Small Electricity End Users
- 9 Federal, State, Provincial Regulatory or other Government Entities
- 10 Regional Reliability Organizations, Regional Entities



Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
ACES Power Marketing Brian Van Gheem 6		6	NA - Not Applicable	ACES Standards Collaborators	Shari Heino	Brazos Electric Power Cooperative, Inc.	1,5	Texas RE
				Tara Lightner	Sunflower Electric Power Corporation	1	SPP RE	
					Greg Froehling	Rayburn Country Electric Cooperative, Inc.	3	SPP RE
					Bob Solomon	Hoosier Energy Rural Electric Cooperative, Inc.	1	RF
					Mark Ringhausen	Mark Ringhausen	3,4	SERC
Duke Energy	Colby Bellville	1,3,5,6	FRCC,RF,SERC	Duke Energy	Doug Hils	Duke Energy	1	RF



Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
					Lee Schuster	Duke Energy	3	FRCC
					Dale Goodwine	Duke Energy	5	SERC
					Greg Cecil	Duke Energy	6	RF
Northeast		NPCC	RSC no Dominion	Paul Malozewski	Hydro One.	1	NPCC	
Power Coordinating Council				Dominion	Guy Zito	Northeast Power Coordinating Council	NA - Not Applicable	NPCC
					Randy MacDonald	New Brunswick Power	2	NPCC
					Wayne Sipperly	New York Power Authority	4	NPCC
					Glen Smith	Entergy Services	4	NPCC
				Brian Robinson	Utility Services	5	NPCC	



Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Membe Region
					Bruce Metruck	New York Power Authority	6	NPCC
					Alan Adamson	New York State Reliability Council	7	NPCC
					Edward Bedder	Orange & Rockland Utilities	1	NPCC
					David Burke	Orange & Rockland Utilities	3	NPCC
					Michele Tondalo	UI	1	NPCC
					Sylvain Clermont	Hydro Quebec	1	NPCC
					Si Truc Phan	Hydro Quebec	2	NPCC
					Helen Lainis	IESO	2	NPCC



Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Membe Region
					Laura Mcleod	NB Power	1	NPCC
					Michael Forte	Con Edison	1	NPCC
					Kelly Silver	Con Edison	3	NPCC
					Peter Yost	Con Edison	4	NPCC
					Brian O'Boyle	Con Edison	5	NPCC
					Greg Campoli	NY-ISO	2	NPCC
					Kathleen Goodman	ISO-NE	2	NPCC
					Michael Schiavone	National Grid	1	NPCC
					Michael Jones	National Grid	3	NPCC
					David Ramkalawan	Ontario Power Generation Inc.	5	NPCC



Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Membe Region
					Quintin Lee	Eversource Energy	1	NPCC
					Silvia Mitchell	NextEra Energy - Florida Power and Light Co.	6	NPCC
	Russel Mountjoy	10		MRO NSRF	Joseph DePoorter	Madison Gas & Electric	3,4,5,6	MRO
O Garrizacion					Larry Heckert	Alliant Energy	4	MRO
					Amy Casucelli	Xcel Energy	1,3,5,6	MRO
					Chuck Lawrence	American Transmission Company	1	MRO
					Michael Brytowski	Great River Energy	1,3,5,6	MRO
					Jodi Jensen	Western Area Power Administratino		MRO



Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Membe Region
					Kayleigh Wilkerson	Lincoln Electric System	1,3,5,6	MRO
					Mahmood Safi	Omaha Public Power District	1,3,5,6	MRO
					Brad Parret	Minnesota Power	1,5	MRO
					Terry Harbour	MidAmerican Energy Company	1,3	MRO
					Tom Breene	Wisconsin Public Service	3,5,6	MRO
					Jeremy Volls	Basin Electric Power Coop	1	MRO
					Kevin Lyons	Central Iowa Power Cooperative	1	MRO
					Mike Morrow	Midcontinent Independent	2	MRO



Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
						System Operator		
Southwest Shannon Power Pool, Inc. (RTO)		SPP RE	Standards Review	Shannon Mickens	Southwest Power Pool Inc.	2	SPP RE	
				Group F	Kevin Giles	Westar Energy	1	SPP RE
					Mike Kidwell	Empire District Electric Company	1,3,5	SPP RE
					Tara Lightner	Sunflower Electric Power Corporation	1	SPP RE



	tems 1-4 in response to comments from industry stakeholders on draft 1 of the SAR? If not, please vide specific detail referencing the applicable SAR item that would make it acceptable to you.
	Pool, Inc. (RTO) - 2 - SPP RE, Group Name SPP Standards Review Group
Answer	No
Document Name	
Comment	
"Transmission system," while the same language pertaining to item 4 (page 2) of	at the drafting team provides clarity to why the term "Transmission" is capitalized in the phrase term is not capitalized in the phrase "transmission network" which is associated with proposed of the Standard Authorization Request (SAR). The review group has a concern that there are some capitalization of particular NERC defined terms and phrases.
Likes 0	
Dislikes 0	
Response	
used within the standard and requirem intended and the general understandin	ransmission system" is used in the SAR, an emphasis is placed on the NERC defined term on how it is ents. When it is lowercase as in "transmission network," no association with the NERC defined term is g of the term or phrase would be applied. For example, note the consistency with PRC-023-4 smission system" is used in the Applicability section and "transmission system" is used in Requirement
Sandra Shaffer - Berkshire Hathaway -	PacifiCorp - 6
Answer	No
Document Name	
Comment	
Please see response to #3.	



Likes 0	
Dislikes 0	
Response	
Russel Mountjoy - Midwest R	eliability Organization - 10, Group Name MRO NSRF
Answer	Yes
Document Name	
Comment	
dispersed power producing re of aggregate generation at a s	
	R clarify that the basis of inclusion for individual BES generators (individual wind turbines or solar panels) or nmon mode loss of 75 MVA or more of generation.
in the loss of 75 MVA or more	at its not individual BES generators (Elements) that are of concern, that it is common mode outage that results of generating Elements at a BES generating Facility, the NSRF suggests that the NERC definitions of Element and ements should refer to individual BES generators and NERC Facilities should refer to aggregating more that 75 nts at a single Facility.
	Any electrical device with terminals that may be connected to other electrical devices such as an individual resource, transformer, circuit breaker, bus section, or transmission line. An Element may be comprised of one
-	A set of electrical equipment that operates as a single Bulk Electric System Element (e.g., a line, a a single shaft r aggregate individual dispersed power producing resources of more than 75 MVA, a shunt compensator,

Response

Dislikes 0

Likes 0

transformer, etc.)



- 1. Thank you for your comment. Regarding inclusion of collector circuits in dispersed power producing resources, the SAR team notes the following:
 - a. While 75 MVA aggregate capacity is utilized when determining whether a site meets the inclusion I4 criteria from the Bulk Electric System definition, this measurement is not intended to be utilized as a performance criteria or threshold within a standard. The goal of PRC-025-1 is to ensure that generating resources which are classified as Bulk Electric System generators (through whichever inclusions, bright-line criteria, etc.) have protection applied which allows those generators to provide the full amount of any dynamic (short term) and steady state real and reactive support to the transmission system for which these generators are capable (whatever that amount may be), not to ensure that a loss of 75 MVA or more of generation is avoided.
 - b. Inclusion of collector system feeders within the applicability of PRC-025-1 was always intended, but was not clear. Clarifying this is one of the goals of the SAR.
 - c. Based on the above factors, the SAR team believes changes to the BES Element and BES Facility definitions are not necessary, and believes the Applicability criteria within the standard are correct. No change was made to the SAR.

Thomas Foltz - AEP - 3,5				
Answer	Yes			
Document Name				
Comment				
AEP has no objections to the revisions of	of Items 1 through 4 in the draft SAR.			
Likes 0				
Dislikes 0				
Response				
Thank you for your comment.				
Laura Nelson - IDACORP - Idaho Power	Company - 1			
Answer	Yes			
Document Name				
Comment				
We agree with the proposal to provide clarification and align better with the intent of the standard for relays to "not trip" under load.				



Likes 0	
Dislikes 0	
Response	
Thank you for your comment.	
Aubrey Short - FirstEnergy - FirstEnergy	Corporation - 1,3,4
Answer	Yes
Document Name	
Comment	
When applicable, would definite time e	lements (50DT) be addressed similar to instantaneous 50 elements?
Likes 0	
Dislikes 0	
Response	
ANSI device numbers, devices with sufficiarify that the instantaneous overcurre	dard does not contemplate consideration of setting time delays, time dials, etc. Within the context of ixes are considered sub-functions of the parent device number. It is the current intent of the SAR to ent elements of all types should be included and considered (also including devices that do not use rly), regardless of the time element applied. Consequently, a 50DT would be treated similar to a 50 AR.
Aaron Cavanaugh - Bonneville Power A	Administration - 1,3,5,6 - WECC
Answer	Yes
Document Name	
Comment	
None	
Likes 0	
Dislikes 0	



Response					
Sean Bodkin - Dominion - Dominion Resources, Inc 3,5,6					
Answer	Yes				
Document Name					
Comment					
Likes 0					
Dislikes 0					
Response					
Connie Lowe - Dominion - Dominion R	esources, Inc 3,5,6				
Answer	Yes				
Document Name					
Comment					
Likes 0					
Dislikes 0					
Response					
Colby Bellville - Duke Energy - 1,3,5,6 -	FRCC,SERC,RF, Group Name Duke Energy				
Answer	Yes				
Document Name					
Comment					



Likes 0	
Dislikes 0	
Response	
Lauren Price - American Transmission	Company, LLC - 1
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Hien Ho - Tacoma Public Utilities (Taco	ma, WA) - 1,3,4,5,6
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Ruida Shu - Northeast Power Coordina	ting Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name RSC no Dominion



	,
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	
Brian Van Gheem - ACES Power Marke	ting - 6 - NA - Not Applicable, Group Name ACES Standards Collaborators
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	



Response		
Michelle Amarantos - APS - Arizona Public Service Co 1,3,5,6		
Answer	Yes	
Document Name		
Comment		
Likes 0		
Dislikes 0		
Response		



2. Do you agree with the additions of Items 5 and 6 in response to comments and discussions by the SAR drafting team? If not, please explain why you do not agree and provide specific detail referencing the applicable SAR item that would make it acceptable to you.		
Sandra Shaffer - Berkshire Hathaway -	Sandra Shaffer - Berkshire Hathaway - PacifiCorp - 6	
Answer	No	
Document Name		
Comment		
Please see response to #3.		
Likes 0		
Dislikes 0		
Response		
Thank you for your comment, response	is found in #3.	
Aaron Cavanaugh - Bonneville Power Administration - 1,3,5,6 - WECC		
Answer	Yes	
Document Name		
Comment		
None		
Likes 0		
Dislikes 0		
Response		
Laura Nelson - IDACORP - Idaho Power Company - 1		



Answer	Yes
Document Name	
Comment	
We agree with the proposal to provide	clarification and align better with the intent of the standard for relays to "not trip" under load.
Likes 0	
Dislikes 0	
Response	
Thank you for your comment.	
Colby Bellville - Duke Energy - 1,3,5,6 -	FRCC,SERC,RF, Group Name Duke Energy
Answer	Yes
Document Name	
Comment	
	age be added to item c. of the Miscellaneous Items. As written, not entirely clear what the issue is, erion" in relation to the standard. More information about what the issue/concern is with this the necessity of the revision.
Likes 0	
Dislikes 0	
Response	

Thank you for your comment. The capability reported to the Transmission Planner is the minimum capability on which protection settings should be based. It should be acceptable to base protection settings on a higher capability. It is not required that protection settings be modified when the capability reported to the Transmission Planner may be lower to reflect seasonal variations or other deratings. In real-time operations, ambient conditions and other factors may drive greater maximum capability than what is "reported to the Transmission Planner" for generators with certain types of prime movers. No change was made to the SAR.

Connie Lowe - Dominion - Dominion Resources, Inc. - 3,5,6



Answer	Yes
Document Name	
Comment	
On item #6, the language c	urrently reads: "Clarify that a high unit capability may be used".
	nal language in the detailed description under item 6(b) stating that "the generator nameplate rating can also output." in the final recommendation.
Likes 0	
Dislikes 0	
Response	
for the real power output" which protection settings s	nt. The SAR team believes adding additional detail, such as, "the generator nameplate rating can also be used may increase confusion. The capability reported to the Transmission Planner is the minimum capability on hould be based. It should be acceptable to base protection settings on a higher capability, which could be any
for the real power output" which protection settings shigher value including the reapability reported to the Tambient conditions and other and other to the Tambient conditions and t	may increase confusion. The capability reported to the Transmission Planner is the minimum capability on hould be based. It should be acceptable to base protection settings on a higher capability, which could be any nameplate value of the generator unit. It is not required that protection settings be modified when the transmission Planner may be lower to reflect seasonal variations or other deratings. In real-time operations, her factors may drive greater maximum capability than what is "reported to the Transmission Planner" for es of prime movers. No change was made to the SAR.
for the real power output" which protection settings shigher value including the reapability reported to the Tambient conditions and other and other to the Tambient conditions and t	may increase confusion. The capability reported to the Transmission Planner is the minimum capability on hould be based. It should be acceptable to base protection settings on a higher capability, which could be any nameplate value of the generator unit. It is not required that protection settings be modified when the transmission Planner may be lower to reflect seasonal variations or other deratings. In real-time operations, her factors may drive greater maximum capability than what is "reported to the Transmission Planner" for
for the real power output" which protection settings shigher value including the reapability reported to the Tambient conditions and other and other to the Tambient conditions and t	may increase confusion. The capability reported to the Transmission Planner is the minimum capability on hould be based. It should be acceptable to base protection settings on a higher capability, which could be any nameplate value of the generator unit. It is not required that protection settings be modified when the transmission Planner may be lower to reflect seasonal variations or other deratings. In real-time operations, her factors may drive greater maximum capability than what is "reported to the Transmission Planner" for es of prime movers. No change was made to the SAR.
for the real power output" which protection settings shigher value including the reapability reported to the Tambient conditions and oth generators with certain typ	may increase confusion. The capability reported to the Transmission Planner is the minimum capability on hould be based. It should be acceptable to base protection settings on a higher capability, which could be any nameplate value of the generator unit. It is not required that protection settings be modified when the transmission Planner may be lower to reflect seasonal variations or other deratings. In real-time operations, her factors may drive greater maximum capability than what is "reported to the Transmission Planner" for es of prime movers. No change was made to the SAR. Dominion Resources, Inc 3,5,6
for the real power output" which protection settings shigher value including the reapability reported to the Tambient conditions and oth generators with certain typ Sean Bodkin - Dominion - I Answer	may increase confusion. The capability reported to the Transmission Planner is the minimum capability on hould be based. It should be acceptable to base protection settings on a higher capability, which could be any nameplate value of the generator unit. It is not required that protection settings be modified when the transmission Planner may be lower to reflect seasonal variations or other deratings. In real-time operations, her factors may drive greater maximum capability than what is "reported to the Transmission Planner" for es of prime movers. No change was made to the SAR. Dominion Resources, Inc 3,5,6
for the real power output" which protection settings s higher value including the r capability reported to the T ambient conditions and oth generators with certain typ Sean Bodkin - Dominion - I Answer Document Name Comment	may increase confusion. The capability reported to the Transmission Planner is the minimum capability on hould be based. It should be acceptable to base protection settings on a higher capability, which could be any nameplate value of the generator unit. It is not required that protection settings be modified when the transmission Planner may be lower to reflect seasonal variations or other deratings. In real-time operations, her factors may drive greater maximum capability than what is "reported to the Transmission Planner" for es of prime movers. No change was made to the SAR. Dominion Resources, Inc 3,5,6
for the real power output" which protection settings s higher value including the r capability reported to the T ambient conditions and oth generators with certain typ Sean Bodkin - Dominion - I Answer Document Name Comment On item #6 , the language of Dominion suggests addition	may increase confusion. The capability reported to the Transmission Planner is the minimum capability on hould be based. It should be acceptable to base protection settings on a higher capability, which could be any nameplate value of the generator unit. It is not required that protection settings be modified when the transmission Planner may be lower to reflect seasonal variations or other deratings. In real-time operations, her factors may drive greater maximum capability than what is "reported to the Transmission Planner" for es of prime movers. No change was made to the SAR. Dominion Resources, Inc 3,5,6 Yes
for the real power output" which protection settings s higher value including the r capability reported to the T ambient conditions and oth generators with certain typ Sean Bodkin - Dominion - I Answer Document Name Comment On item #6 , the language of Dominion suggests addition	may increase confusion. The capability reported to the Transmission Planner is the minimum capability on hould be based. It should be acceptable to base protection settings on a higher capability, which could be any nameplate value of the generator unit. It is not required that protection settings be modified when the transmission Planner may be lower to reflect seasonal variations or other deratings. In real-time operations, her factors may drive greater maximum capability than what is "reported to the Transmission Planner" for es of prime movers. No change was made to the SAR. Dominion Resources, Inc 3,5,6 Yes Ves urrently reads: "Clarify that a high unit capability may be used". all language in the detailed description under item 6(b)stating that "the generator nameplate rating can also



Response

Thank you for your comment. The SAR team believes adding additional detail, such as, "the generator nameplate rating can also be used for the real power output" may increase confusion. The capability reported to the Transmission Planner is the minimum capability on which protection settings should be based. It should be acceptable to base protection settings on a higher capability, which could be any higher value including the nameplate value of the generator unit. It is not required that protection settings be modified when the capability reported to the Transmission Planner may be lower to reflect seasonal variations or other deratings. In real-time operations, ambient conditions and other factors may drive greater maximum capability than what is "reported to the Transmission Planner" for generators with certain types of prime movers. No change was made to the SAR.

Michelle Amarantos - APS - Arizona Public Service Co 1,3,5,6		
Answer	Yes	
Document Name		
Comment		
Likes 0		
Dislikes 0		
Response		
Brian Van Gheem - ACES Power Mar	keting - 6 - NA - Not Applicable, Group Name ACES Standards Collaborators	
Answer	Yes	
Document Name		
Comment		
Likes 0		
Dislikes 0		
Response		



Aubrey Short - FirstEnergy - FirstEnergy Corporation - 1,3,4		
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		
Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name RSC no Dominion		
Answer	Yes	
Document Name		
Comment		
Likes 0		



Dislikes 0	
Response	
Hien Ho - Tacoma Public Utilities (Taco	ma, WA) - 1,3,4,5,6
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Shannon Mickens - Southwest Power I	Pool, Inc. (RTO) - 2 - SPP RE, Group Name SPP Standards Review Group
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Lauren Price - American Transmission	Company, LLC - 1
Answer	Yes
Document Name	



Comment	
Likes 0	
Dislikes 0	
Response	
Russel Mountjoy - Midwest Reliability	Organization - 10, Group Name MRO NSRF
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thomas Foltz - AEP - 3,5	
Answer	
Document Name	
Comment	
cause a communication barrier betwee	usion of Items 5 and 6 into the draft SAR, we seek clarity on 6c as the proposed language could n the TP and GO fuctions regarding "reported to the Transmission Planner". For example, what ng to address, and exactly what is driving its proposed inclusion in the SAR?
Likes 0	
Dislikes 0	



Response

Thank you for your comment. The capability reported to the Transmission Planner is the minimum capability on which protection settings should be based. It should be acceptable to base protection settings on a higher capability. It is not required that protection settings be modified when the capability reported to the Transmission Planner may be lower to reflect seasonal variations or other deratings. In real-time operations, ambient conditions and other factors may drive greater maximum capability than what is "reported to the Transmission Planner" for generators with certain types of prime movers. No change was made to the SAR.



3. If you have any other comments on	this SAR that you haven't already mentioned above, please provide them here.
Russel Mountjoy - Midwest Reliability	Organization - 10, Group Name MRO NSRF
Answer	
Document Name	
Comment	
N/A	
Likes 0	
Dislikes 0	
Response	
Lauren Price - American Transmission	Company, LLC - 1
Answer	
Document Name	
Comment	
We have no additional comments at thi	is time.
Likes 0	
Dislikes 0	
Response	
Thank you for your comment.	
Shannon Mickens - Southwest Power F	Pool, Inc. (RTO) - 2 - SPP RE, Group Name SPP Standards Review Group
Answer	
Document Name	



Comment

The review group recommends capitalizing the term "system" in the phrase "Transmission system" that's associated with the proposed language (on page 2, 4, and 7) of the SAR. The group's perspective is that both terms are defined in the NERC Glossary of Terms. Also, we recommend the drafting team consider collaborative efforts with The Alignment of Terms Drafting Team. The Alignment of Terms Drafting Team can provide some useful insight on how to address the inconsistencies of the combination and capitalization of particular NERC defined terms and phrases like "Transmission system." Additionally, we recommend that the drafting team provides clarity on the meaning of the two phrases "Transmission system" and "transmission network."

Likes 0	
Dislikes 0	

Response

Thank you for your comment. The defined term "System" was not used in the PRC-025-1 standard because it would unintentionally include distribution. The SAR drafting team does not agree that the term "System" should be capitalized to reference the NERC Glossary as it would change the intent and applicable facilities. The SAR team additionally notes that use of the phrase "Transmission system" is consistent with PRC-023-4. No change was made to the SAR.

Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name RSC no Dominion

Answer		
Document Name		
Comment		
We support the SAR for Project 2016-04 Modifications to PRC-025-1.		
Likes 0		
Dislikes 0		

Response

¹ Glossary of Terms Used in NERC Reliability Standards (http://www.nerc.com/pa/Stand/Glossary%20of%20Terms/Glossary of Terms.pdf)



Thank you for your comment.		
Rachel Coyne - Texas Reliability Entity, Inc 10		
Answer		
Document Name		
Comment		
Texas RE does not have additional comments.		
Likes 0		
Dislikes 0		
Response		
Thank you for your comment.		
Aaron Cavanaugh - Bonneville Power Administration - 1,3,5,6 - WECC		
Answer		
Document Name		
Comment		
None		
Likes 0		
Dislikes 0		
Response		
Sandra Shaffer - Berkshire Hathaway - PacifiCorp - 6		
Answer		
Document Name		
Comment		



The BES definition states that the individual resource should be included, however, many things within the way the standard is written can be argued otherwise. The first example is the wording taken directly from the standard:

"Asynchronous generating unit(s) (including inverter-based installations), or Elements utilized in the aggregation of dispersed power producing resources."

The OR referenced in Attachment 1, Table, (leading to Elements utilized in the aggregation of dispersed power producing re-sources) offer a choice which could eliminate the obligation to analyze down to the turbine level.

Another point is that the device within the wind turbine isn't a standard relay element 51 or 51V-R. The device in the turbine is a low voltage molded case circuit breaker. Even more specifically, the device ANSI representation is a 52 – AC Circuit Breaker. What makes this even more frustrating is that generator owners and engineers within have no control of how these wind turbines were designed and commissioned by the OEM. We did not provide the settings nor do we ever intend to change them from what the OEM originally placed.

The final point to make, if entities are required to comply down to the turbine level main circuit breaker then there will be many cases that the breakers cannot be adjusted to a current that is over 130% nameplate MVA rating. The Long time pickup is typically set slightly above nameplate with a "long" time delay (example 10 seconds). This is a perfectly appropriate way to operate the wind turbine as there are other faster operating over current elements enabled on the same breaker (Short time and Instantaneous) that will protect for more severe faults. The element of time delay isn't specified in this standard which also adds issues.

Likes 0	
Dislikes 0	

Response

Thank you for your comments. The comment raised about the "OR" condition is the specific issue the SAR intends to resolve by addressing the "OR" conjunction used in the Applicability column of Table 1. This is addressed by item 3 in the SAR. No change made to the SAR. No change was made to the SAR.

The comment raised about the use of ANSI device numbers is an issue the SAR is addressing. Differences in ANSI device numbering is most apparent in low voltage protection of the dispersed power producing resources. See item 2 in the SAR concerning ANSI device numbering. No change was made to the SAR.



The comment raised about adjusting the resource breakers is an issue the SAR intends to resolve by providing one or more alternatives to the current Table 1 criteria for setting relays. See item 1 in the SAR concerning instances where manufacturer requirements or physical limitations of dispersed power producing resources and may result in an overly conservative relay setting. No change was made to the SAR.

Brian Van Gheem - ACES Power Marketing - 6 - NA - Not Applicable, Group Name ACES Standards Collaborators

Answer	
Document Name	

Comment

- (1) We believe the authors need to identify that Requirement R1 is only applicable to the small subset of GOs, TOs, and DPs that apply load-responsive protective relays at the Element terminals listed under the standard's applicability section. We recommend instructing the SDT to change the applicability of the requirement to "Responsible Entity" or "Functional Entity".
- (2) We question the overall urgency identified within the SAR, particularly since the current implementation plan does not require 100% compliance until 2019 or 2021 for retrofits. If there are concerns over current regional practices that exist, we believe pursing interpretations or regional variances may be a better alternative.
- (3) We thank you for this opportunity to provide these comments.

Likes 0	
Dislikes 0	

Response

- 1. The SAR drafting team does not agree that changing the applicable entities in Requirement R1 to "Responsible Entity" or "Functional Entity" adds any additional clarity. No change was made to the SAR.
- 2. There are no needs for any variances. The issues raised in the SAR impact a small number of entities and facilities; however, NERC is mindful of the time needed for industry input, approval, and subsequent regulatory approval prior to the set enforcement dates.
- 3. Thank you for your comments.

End of Report