

Consideration of Comments

Project 2012-INT-05 Interpretation of CIP-002-3 for OGE

The Project 2012-INT-05 Drafting Team thanks all commenters who submitted comments on the interpretation of CIP-002-3 – Cyber Security – Critical Cyber Asset Identification. The interpretation was posted for a 45-day public comment period from November 6, 2012 through December 20, 2012. Stakeholders were asked to provide feedback on the interpretation through a special electronic comment form. There were 25 responses, including responses and comments from approximately 87 different people from approximately 89 companies representing 8 of the 10 Industry Segments as shown in the table on the following pages.

All comments submitted may be reviewed in their original format on the interpretation's 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 Vice President and Director of Standards, Mark Lauby, at 404-446-2560 or at mark.lauby@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

¹ The appeals process is in the Standard Processes Manual: <u>http://www.nerc.com/files/Appendix 3A StandardsProcessesManual 20120131.pdf</u>



Index to Questions, Comments, and Responses

NERC

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

G	roup/Individual	Commenter		O	rganization				Regi	stered	l Ballo	ot Bod	y Segi	nent		
							1	2	3	4	5	6	7	8	9	10
1.	Group	Guy Zito	Northeast	Power	Coordinating Coun	cil										Х
	Additional Member	Additional Organiz	ation	Region	Segment Selection											
1.	Alan Adamson	New York State Reliability Co	uncil, LLC	NPCC	10											
2.	Carmen Agavriloai	Independent Electricity Syste	m Operator	NPCC	2											
3.	Greg Campoli	New York Independent Syste	m Operator	NPCC	2											
4.	Sylvain Clermont	Hydro-Quebec TransEnergie		NPCC	1											
5.	Chris de Graffenried	Consolidated Edison Co. of N	lew York, Inc.	NPCC	1											
6.	Gerry Dunbar	Northeast Power Coordinatin	g Council	NPCC	10											
7.	Mike Garton	Dominion Resources Service	s, Inc.	NPCC	5											
8.	Kathleen Goodman	ISO - New England		NPCC	2											
9.	Michael Jones	National Grid		NPCC	1											
10.	David Kiguel	Hydro One Networks Inc.		NPCC	1											

Group/Individual	Group/Individual Commenter			0	rganization			Reg	istere	d Ball	ot Boo	ly Seg	ment		
						1	2	3	4	5	6	7	8	9	10
11. Christina Koncz	PSEG Power LLC			NPCC	5										
12. Randy MacDonald	New Brunswick Power Tran	nsmiss	ion	NPCC	9										
13. Bruce Metruck	New York Power Authority			NPCC	6										
14. Silvia Parada Mitchel	II NextEra Energy, LLC			NPCC	5										
15. Lee Pedowicz	Northeast Power Coordinat	ting Co	uncil	NPCC	10										
16. Robert Pellegrini	The United Illuminating Col	mpany		NPCC	1										
17. Si-Truc Phan	Hydro-Quebec TransEnerg	gie		NPCC	1										
18. David Ramkalawan	Ontario Power Generation,	, Inc.		NPCC	5										
19. Brian Robinson	Utility Services			NPCC	8										
20. Brian Shanahan	National Grid			NPCC	1										
21. Wayne Sipperly	New York Power Authority			NPCC	5										
22. Donald Weaver	New Brunswick System Op	perator		NPCC	2										
23. Ben Wu	Orange and Rockland Utilit	ties		NPCC	1										
24. Petert Yost	Consolidated Edison Co. of	f New `	York, Inc.	NPCC	3										
2. Group	WILL SMITH	M	RO NSRF			х	х	х	х	х	х				
Additional Member	Additional Organization I	Region	Segmen	t Selec	tion										
1. MAHMOOD SAFI	OPPD N	MRO	1, 3, 5, 6												
2. CHUCK LAWRENCE	E ATC	MRO	1												
3. TOM BREENE	WPS	MRO	3, 4, 5, 6												
4. JODI JENSON	WAPA	MRO	1, 6												
5. KEN GOLDSMITH	ALTW	MRO	4												
6. ALICE IRELAND	XCEL	MRO	1, 3, 5, 6												
7. DAVE RUDOLPH	BEPC	MRO	1, 3, 5, 6												
8. ERIC RUSKAMP	LES	MRO	1, 3, 5, 6												
9. JOE DEPOORTER	MGE	MRO	2, 3, 4, 5												
10. SCOTT NICKELS	RPU	MRO	4												
11. TERRY HARBOUR	MEC	MRO	1, 3, 5, 6												
12. MARIE KNOX	MISO	MRO	2												
13. LEE KITTELSON	OTP N	MRO	1, 3, 5												
14. SCOTT BOS	MPW	MRO	1, 3, 5, 6												
15. TONY EDDLEMAN	NPPD	MRO	1, 3, 5												
16. MIKE BRYTOWSKI	GRE	MRO	1, 3, 5, 6												

Gro	oup/Individual	Commenter				Organi	zation				Reg	istere	d Ball	ot Boo	dy Seg	ment		
									1	2	3	4	5	6	7	8	9	10
17.	DAN INMAN	MPC	MF	RO 1,	3, 5													
3.		David Dockery - NEI	RC															
		Reliability Complian	nce	Assoc	ciated Elec	tric Coc	perative, Inc.	-										
	Group	Coordinator		JRO00	0088				Х		Х		Х	Х				
	Additio	onal Member	Addit	tional O	rganization	Regior	Segment Sele	ction										
1. C	entral Electric Pow	er Cooperative				SERC	1, 3											
2. K	AMO Electric Coop	perative				SERC	1, 3											
3. N	1 & A Electric Powe	r Cooperative				SERC	1, 3											
4. N	lortheast Missouri E	Electric Power Cooperative	9	SERC 1, 3														
5. N	.W. Electric Power	Cooperative, Inc.		SERC 1, 3														
6. S	ho-Me Power Elect	tric Cooperative		SERC 1, 3														
4.	Group	Trey Cross		ACES Power Marketing and Members				s			Х		Х	Х				
	Additi	onal Member	Add	litional	Organizatio	n Regio	n Segment Sel	ection										
1. N	orth Carolina Elect	ric Membership Corporatio	on			SERC	3, 5, 6											
5.	Group	Greg Rowland		Duke	Energy				Х		Х		Х	Х				
Α	dditional Member	Additional Organization	n Regio	on Seg	ment Select	ion												
1. D	oug Hils	Duke Energy	RFC	1														
2. L	ee Schuster	Duke Energy	FRC	C 3														
3. D	ale Goodwine	Duke Energy	SERC	C 5														
4. G	ireg Cecil	Duke Energy	RFC	6														
6.		Steve Alexanderson	۱								Х	Х					Х	
	Group	P.E.		West	ern Small I	Entity C	omment Grou	р										
	Additional Membe	er Additional Org	janizat	ion	Regior	Segme	nt Selection											
1.	Russell A. Noble	Cowlitz County PUD No	o. 1		WECC	3, 4, 5												
2.	Russ Schneider	Flathead Electric			WECC	3, 4												
3.	Rick Paschall	Blachly-Lane Electric Co	oopera	tive	WECC	3												
4.	Rick Paschall	Central Electric Coopera	ative		WECC	3												
5.	Rick Paschall	Consumers Power			WECC	1, 3												
6.	Rick Paschall	Clearwater Power Comp	pany		WECC	3												
7.	Rick Paschall	Douglas Electric Coope	rative		WECC	3												
8.	Rick Paschall	Fall River Rural Electric	Coope	erative	WECC	3												

Group/Individual	Commenter		Or	ganization			Regi	stere	d Ballo	ot Bod	y Seg	ment		
					1	2	3	4	5	6	7	8	9	10
9. Rick Paschall	Northern Lights		WECC 3											
10. Rick Paschall	Lane Electric Cooperative		WECC 3											
11. Rick Paschall	Lincoln Electric Cooperative		WECC 3											
12. Rick Paschall	Raft River Rural Electric Coop	perative	WECC 3											
13. Rick Paschall	Lost River Electric Cooperativ	e	WECC 3											
14. Rick Paschall	Salmon River Electric Cooper	ative	WECC 3											
15. Rick Paschall	Umatilla Electric Cooperative		WECC 1,	3										
16. Rick Paschall	Coos-Curry Electric Cooperat	ive	WECC 3											
17. Rick Paschall	West Oregon Electric Cooper	ative	WECC 4											
18. Rick Paschall	Pacific Northwest Generating	Cooperative	WECC 3,	4, 8										
19. Rick Paschall	Power Resources Cooperativ	е	WECC 5											
7. Group	Robert Rhodes	SPP Stan	dards Revi	ew Group		Х								
Additional Member	Additional Organization Re	gion Segme	nt Selectio	n										•
1. John Allen	City Utilities of Springfield SP	P 1, 4												
2. Christopher Bell	Oklahoma Gas & Electric SP	P 1, 3, 5												
3. John Boshears	City Utilities of Springfield SP	P 1, 4												
4. Eric Ervin	Westar Energy SP	P 1, 3, 5,	6											
5. Jonathan Hayes	Southwest Power Pool SP	P 2												
6. Valerie Pinamonti	American Electric Power SP	P 1, 3, 5												
7. Monica Strain	Kansas City Power & Light SP	P 1, 3, 5,	6											
8. Group	Jamison Dye	Bonnevil	le Power A	dministration	Х		Х		Х	Х				
Additional Member	Additional Organization Reg	ion Segmen	t Selection											
1. Forrest Krigbaum	System Operations WEG	CC 1												
2. Scott Smith	System Operations WEG	CC 1												
9. Group	Mary Jo Cooper	GP Strate	egies		Х		Х							
Additional Member	Additional Organization Re	egion Segm	ent Selectio	on										
1. Angela Kimmey	City of Pasadena W	ECC 1, 3												
2. Douglas Draeger	City of Pasadena W	ECC 3												
3. Colin Murphey	City of Ukiah W	ECC 3												
4. Elizabeth Kirkley	City of Lodi W	ECC 3												
5. Ken Dize	Salmon River Electric Coop W	F00 4 0												

Gro	oup/Individual	Commenter	Organization			Reg	istere	d Ball	ot Bod	ly Seg	ment		
				1	2	3	4	5	6	7	8	9	10
10.	Individual	Bob Steiger	Salt River Project	Х		Х		Х	Х				
11.	Individual	James Gower	Entergy	Х		Х		х					
12.	Individual	Paul Crosby	Platte River Power Authority	Х		Х		Х	Х				
13.	Individual	Thad Ness	American Electric Power	Х		Х	Х	Х					
14.	Individual	Nazra Gladu	Manitoba Hydro	Х		Х		Х	Х				
15.	Individual	Patrick Brown	Essential Power, LLC					Х					
16.	Individual	Michelle R. D'Antuono	Ingleside Cogeneration LP					Х					
17.	Individual	David Jendras	Ameren	Х		Х		Х	Х				
18.	Individual	Judy VanDeWoestyne	MidAmerican Energy Company	Х		Х		Х	Х				
19.	Individual	Michael R. Lombardi	Northeast Utilities	Х		Х		Х					
20.	Individual	Brett Holland	Kansas City Power & Light	Х		Х		Х	Х				
21.	Individual	Cheryl Moseley	Electric Reliability Council of Texas, Inc.		Х								
22.	Individual	Rich Salgo	NV Energy	Х		Х		Х					
23.	Individual	Tony Kroskey	Brazos Electric Power Cooperative, Inc.	Х									
24.	Individual	Darryl Curtis	Oncor Electric Delivery Company LLC	Х									
25.	Individual	Oliver Burke	Entergy Services, Inc. (Transmission)	Х									

If you support the comments submitted by another entity and would like to indicate you agree with their comments, please select "agree" below and enter the entity's name in the comment section (please provide the name of the organization, trade association, group, or committee, rather than the name of the individual submitter).

Summary Consideration: N/A

Organization	Supporting Comments of "Entity Name"
Entergy	Entergy echoes OGE's initial comments in the interpretation request.
Brazos Electric Power Cooperative, Inc.	ACES Power Marketing
Entergy Services, Inc. (Transmission)	OGE's comments on the standard.

1. Do you agree with this interpretation? If not, what, specifically, do you disagree with? Please provide specific suggestions or proposals for any alternative language.

Summary Consideration:

Three commenters indicated that they did not agree with the interpretation. One of those commenters agreed with the interpretation with the exception of the last sentence, but the IDT believes that the interpretation's explanation that Critical Asset identification is facts and circumstance-driven addresses the suggested scenario by the commenter. A second commenter that disagreed with the interpretation believes that the interpretation improperly addresses local distribution topics. The IDT notes that there are devices in the sub-transmission network that affect bulk power reliability (e.g., UVLS and UFLS devices, depending on their configuration and purpose) that are subject to NERC Reliability Standards. Similarly, the interpretation on the basis that the interpretation should be based on asset capability, not purpose or design, and that the IDT's interpretation does not account for misuse. The IDT respectfully does not agree with that approach, as the IDT believes that such an approach does not appropriately consider the facts and circumstances surrounding an asset's use or misuse for a particular configuration.

Many commenters agreed with the interpretation, and some of them provided other specific suggestions or alternatives for the IDT's consideration. A few commenters questioned whether an interpretation was necessary for this topic, but on balance, the IDT and most commenters agree that the interpretation serves to clarify the requirement in the context of emerging technologies. Some commenters requested that portions of the interpretation, particularly the last sentence, contain certain qualifying material, concepts from the background material, or additional words or phrases. The IDT carefully considered each suggestion, but it did not make changes to the interpretation. While the IDT did not include those concepts in the interpretation, the IDT believes in most instances, as noted in the individual responses, that the interpretation remains valid without including them. The background necessarily contains more details surrounding the particular facts and circumstances of the requestor, and the IDT has attempted to ensure that the interpretation (that will be permanently added to the standard) will remain valid for other emerging technologies, too, as opposed to applying only to one specific technology.

Therefore, consistent with the responses to those comments, the IDT has not made any changes to the interpretation.

Question 1 Comment

Organization	Yes or No	Question 1 Comment
Platte River Power Authority	No	Platte River agrees with the entire interpretation up to the last sentence. R1.2.5 says an entity must consider systems and facilities that meet all of the following:1. Critical to automatic load shedding,2. Under a common control system, and3. Capable of shedding 300 MW or moreSystems that do not meet all three criteria listed above (regardless of potential or capability) do not meet the criteria found in CIP-002-3.Platte River suggests the IDT replace the last sentence with the following language, "Therefore, an AMI system specifically built and configured to perform the Remote Disconnect function that is not: critical to automatic load shedding, under a common control system, or capable of shedding 300 MW or more would not meet the criteria found in CIP-002-3. Requirement R1.2.5.
		dered the proposed change, but the IDT believes that the interpretation's circumstance-driven addresses the suggested scenario.
Western Small Entity Comment Group	No	Please see our last comments and the SDT's response. The SDT apparently imagines applying Advanced Meter Infrastructure (AMI) remote service disconnects at transmission level voltages. OGE made it clear in their request for interpretation that they are asking about remote controlled AMI disconnects that serve individual retail customers. These disconnects are either located within a socket style meter, or within a sleeve located between a meter and meter base. Either way, clearance and safety dictate

Organization	Yes or No	Question 1 Comment
UFLS devices, depending on their configu interpretation specifies that AMI is only o		pose) that are subject to NERC Reliability Standards. Similarly, the er certain facts and circumstances.
Electric Reliability Council of Texas, Inc.	No	Requirement R1.2.5. requires that, "Systems and facilities critical to automatic load shedding under a common control system capable of shedding 300 MW or more." The requirement addresses capability, it does not address and should not address, the intentional use of the system or facility. One of the purposes of the CIP standards is to address misuse and the breach of systems to perform functions not planned. These systems and facilities should be assessed for criticality because of the potential effect on system reliability. By adding language regarding the intended use of the systems or facilities, the IDT has materially changed the requirement.
consider the facts and circumstances surr commenters have indicated, consideration	ounding a give n of only pote	, but the IDT believes that a capabilities approach does not appropriately on asset's use or misuse for a particular configuration. As other ntial effect based on capability, regardless of purpose or use, could clude almost any device, including those that are part of corporate systems,
SPP Standards Review Group	Yes	Additional clarification regarding the applicability of BES facilities is contained in the the last paragraph of the first page in the Background Section. This information is helpful in understanding the intent of the requirement. Unfortunately, this information is not included in the interpretation. Similarly, in the third paragraph of the Background Section on the second page specific clarification is given reminding entities that they need to "consider" whether assets described in Requirement 1.2.5 should be designated as Critical Assets. This reminder is also missing from the interpretation. While we agree with the interpretation, inclusion of this additional information in the interpretation itself will definitely be a plus and provide further clarification of the requirement.

Organization	Yes or No	Question 1 Comment
Response: Thank you for your comments a interpretation, the IDT believes that the int contains more details surrounding the part	nd support o erpretation r icular facts ar nently added	f the interpretation. While the IDT did not include those concepts in the emains valid without including them. The background necessarily nd circumstances of the requestor, and the IDT has attempted to ensure to the standard) will remain valid for other emerging technologies, too, as
Kansas City Power & Light	Yes	Additional clarification regarding the applicability of BES facilities is contained in the the last paragraph of the first page in the Background Section. This information is helpful in understanding the intent of the requirement. Unfortunately, this information is not included in the interpretation. Similarly, in the third paragraph of the Background Section on the second page specific clarification is given reminding entities that they need to "consider" whether assets described in Requirement 1.2.5 should be designated as Critical Assets. This reminder is also missing from the interpretation. While we agree with the interpretation, inclusion of this additional information in the interpretation itself will definitely be a plus and provide further clarification of the requirement.
Response: Please see response to SPP Stan	dards Review	v Group, above.
NV Energy	Yes	Agree with the interpretation. I question whether an interpretation was necessary in this instance, however. The requirement language is clear and unambiguous that the asset need only be considered if it performs automatic load shedding, which clearly excludes the AMI circumstance that was posed.
Response: Thank you for your support of t interpretation serves to clarify the requirer	-	ntion. On balance, the IDT and most commenters agree that the ontext of emerging technologies.
Duke Energy	Yes	Duke Energy agrees with the interpretation.

Organization	Yes or No	Question 1 Comment
Response: Thank you for your support o	the interpreta	tion.
Ingleside Cogeneration LP Yes		Ingleside Cogeneration LP believes that the updated interpretation comes to a far more definitive conclusion than the original draft. By stating unequivocally that an AMI function would not be considered a BES Critical Asset provided it was configured to perform remote disconnects in response to a manual action, the drafting team has captured a vital concept in our view. That is; it is possible to imagine a cyber scenario where almost any normally-docile microprocessor-based device with remote communications capability could be transformed into a base of operations for hostile interests. Although these scenarios are taken seriously, the extra expense required to cyber-harden these promising technologies will very likely delay or even prevent their deployment. To us, this threat of over-regulation is just as great - or greater - threat to long term BES reliability as a potential cyber attack could be. Without such Smart Grid capabilities, the industry will not be able to deploy the systems necessary to incorporate renewables, enhance wide-area monitoring capabilities, and encourage electricity conservation that society expects out of the next-generation BES.
Response: Thank you for your comments	and support fo	or the interpretation.
Manitoba Hydro	Yes	No comment.
Oncor Electric Delivery Company LLC	Yes	Oncor is in agreement with the Interpretation Drafting Team's interpretation that an Advanced Meter Infrastructure (AMI) system specifically built and configured to perform the Remote Disconnect function, and does not automatically shed load without human operator initiation, would not meet the criteria found in CIP-002-3, Requirement R1.2.5 for consideration as a Critical Asset.

Organization	Yes or No	Question 1 Comment
Response: Thank you for your comments	and support f	or the interpretation.
ACES Power Marketing and Members	Yes	We agree with the CIP Interpretation Drafting Team (IDT) in determining that a registered entity's RBAM should consider all equipment used to provide BES functionality by using a risk-based assessment methodology (RBAM). AMI technology should be considered in the RBAM with the proper analysis that it is not considered a CCA if the AMI is not designed or cannot shed load of 300 MW or more without human operator intervention.
Response: Thank you for your comments	and support o	f the interpretation.
GP Strategies	Yes	We agree with the interpretation.Furthermore, we feel this interpretation is also equivalent to other relays that may have the ability to shed load in a distribution system, which are designed to control the distribution system rather than part of the BES undervoltage or underfrequency load shedding plan, that similary should not be included in the category for identifying critical assets.
Response: Thank you for your comments may be applicable to other facts and circu		f the interpretation. The IDT agrees that the logic of this interpretation ond AMI.
Ameren	Yes	We believe that if a system has the ability to automatically shed load of 300 MW or more, Smart Grid or otherwise, it should be subject to CIP-002 R1.2.5. As OGE has stated, their Smart Grid advanced meter infrastructure presently is not designed to perform automated load shedding, although this capability could be provided in the future by some reprogramming. A system should be judged by what it is designed to do presently, and not what it could do in the future after it is modified. Therefore, we agree with the proposed interpretation.

Organization	Yes or No	Question 1 Comment
Response: Thank you for your comments a	nd support o	f the IDT's response.
MidAmerican Energy Company	Yes	We recommend two changes in the final paragraph of the interpretation for clarification. 1 - Insert after "300 MW or more" the words "under an individual common control system" to clarify values from separate common control systems should not be aggregated. 2 - Insert after "automatically shed load" the words "for a critical BES reliability purpose" so it reads:"Therefore, if a system or facility such as AMI meets the specifications of Requirement 1.2.5 (i.e., is both capable of shedding 300 MW or more under an individual common control system and is set up and purposed to automatically shed load for a critical BES reliability purpose), the Responsible Entity should consider the system or facility for identification as a Critical Asset under its RBAM. Otherwise, the Responsible Entity is not required to consider the system or facility for identification as a Critical Asset."
		the interpretation. The IDT notes that the paragraph referenced in this ad been modified in response to comments from that comment period.
Associated Electric Cooperative, Inc JRO00088	Yes	While AECI agrees with both this draft interpretation's Response, and the assertions made within this Comment Form's "Background Information" section, we do not believe the two necessarily agree with one another.
specific facts and circumstances in the back	ground while	tion. The IDT attempted to provide more specific discussion of OGE's e creating an interpretation that could be applicable more broadly, with that facts and circumstances of specific technologies may impact analysis
Northeast Power Coordinating Council	Yes	
Bonneville Power Administration	Yes	

Organization	Yes or No	Question 1 Comment
Salt River Project	Yes	
American Electric Power	Yes	
Essential Power, LLC	Yes	
Northeast Utilities	Yes	
MRO NSRF		The NSRF agrees with this interpretation but request the following wordin to provide additional clarity. The Interpretation team needs to clearly state that no matter what system or facilities are employed to automatically load shed, there must be a "common control system" utilized capable of shedding 300 Mw or more. For example, If an Entity had employed UFLS of 250 Mw's under a discrete common control system and an AMI system of 100 Mw utilizing a different discrete common control system, then neither the UFLS or AMI control systems meet the minimum threshold of 300 Mw (under a common control system since each system uses a different control system) and would not need to be considered by R2. R1.2.5 does not aggregrate "all systems" but utlizes the language of "common control system". Therefore, if the UFLS and AMI did not utilize the same (common control) system, and each individually fell below the 300Mw threshold, neither would need to be considered.

Response: That is consistent with the IDT's understanding, and such analysis underscores the IDT's explanation that the Critical Asset identification method is facts and circumstance-driven. The IDT considered the proposed change, but the IDT believes that the interpretation's explanation that Critical Asset identification is facts and circumstance-driven addresses the suggested scenario.

END OF REPORT