

Consideration of Comments

Definition of the Bulk Electric System (Project 2010-17)

The Bulk Electric System Drafting Team thanks all commenters who submitted comments on the 2nd draft of the Definition of the Bulk Electric System (Project 2010-17). These standards were posted for a 45-day public comment period from August 26, 2011 through October 10, 2011. Stakeholders were asked to provide feedback on the standards and associated documents through a special electronic comment form. There were 113 sets of comments, including comments from approximately 255 different people from approximately 156 companies representing all 10 Industry Segments as shown in the table on the following pages.

All comments submitted may be reviewed in their original format on the standard's project page:

http://www.nerc.com/filez/standards/Project2010-17_BES.html

The SDT made the following changes to the definition due to industry comments received:

- Clarified the wording in Inclusion I1 to indicate that at least one secondary terminal must be at 100 kV or higher to accommodate multiple terminal transformers.
- Removed the reference to the ERO Statement of Compliance Registry Criteria in Inclusion I2 so that there is no chance of the registry values being changed and affecting the definition prior to resolution of threshold values in Phase 2 of this project.
- Clarified that generators were not part of Inclusion I5 to avoid improperly pulling in small generators.
- Clarified the language of Exclusion E2 by re-ordering the text as suggested.
- Clarified the language of Exclusion E3.b as suggested.
- Clarified the compliance obligation date of the revised definition in the Implementation Plan.

The SDT feels that it is important to remind the industry that Phase 2 of this project will begin immediately after the conclusion of Phase 1. For consistency, the same SDT will follow through with Phase 2.

Minority opinions expressed in this document are as follows:

- Some commenters feel that threshold values should be resolved in Phase 1. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist

through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

- Several commenters suggested that the requirement under Exclusion E3.b should apply only during normal operating conditions, in other words, commenters felt that some power flow should be allowed to flow from the candidate local network back into the BES as long as it only occurred under abnormal conditions. The SDT considered the addition of the phrase “under normal operating conditions”, as a qualifier to Exclusion E3.b, and determined that in order to maintain the intent of a bright-line characteristic in the BES definition such a qualifier could not be accommodated. However, the SDT pointed out that for those circumstances where a candidate for local network is unable to utilize the local network exclusion due to an abnormal situation that caused power to flow out of the network, the network could be a suitable candidate that could apply for exclusion under the Exception Process.
- Some commenters expressed the opinion that Blackstart Resources are not required for the normal operation of the interconnected transmission system. The directive by FERC to revise the definition of the BES has been interpreted by the SDT to include all Facilities necessary for reliably operating the interconnected transmission system under both normal and emergency conditions. This interpretation by the SDT includes situations related to Blackstart Resources and system restoration. Blackstart Resources have the ability to be started without the support of the interconnected transmission system in order to meet a Transmission Operator’s restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The SDT maintains that Blackstart Resources must be included in the definition.

The SDT is recommending that this project be moved forward to the recirculation ballot stage.

There were two comments that were repeated multiple times throughout the various documents. The first topic was about how to sort through the definition inclusions and exclusions, i.e., which takes precedence. The SDT offers this guidance on that issue:

The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the

Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. “

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.

Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2.

Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.

In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.

The second item is about providing specific guidance on how the information on the exception request form will be used in making decisions on inclusions/exclusions in the exception process. While not

technically part of this document which is about the definition, since the question did come up in these comments, the SDT provides the following information:

The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments. There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication.

Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal.

Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved."

The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals.

Finally, the SDT would point to the draft SAR for Phase 2 of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase 1 of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.

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, Herb Schrayshuen, at 404-446-2560 or at herb.schrayshuen@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

¹ The appeals process is in the Reliability Standards Development Procedures: <http://www.nerc.com/standards/newstandardsprocess.html>.

Index to Questions, Comments, and Responses

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3. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I2 (generation) including the reference to the ERO Statement of Compliance Registry Criteria? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. 97
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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

Group/Individual		Commenter	Organization	Registered Ballot Body Segment										
				1	2	3	4	5	6	7	8	9	10	
1.	Group	Gerald Beckerle	SERC OC Standards Review Group	X		X								
Additional Member		Additional Organization	Region	Segment Selection										
1.	Jeff Harrison	AECI		1, 3, 5, 6										
2.	Eugend Warnecke	Ameren		1, 3										
3.	Dan Roethemeyer	Dynegy		5										
4.	Danny Dees	MEAG	SERC	1, 3, 5										
5.	Brad Young	LGE/KU	SERC	3										
6.	Marc Butts	Southern	SERC	1, 5										
7.	Scott Brame	NCEMC	SERC	1, 3, 4, 5										
8.	Tim Hattaway	PowerSouth	SERC	1, 5										
9.	Steve McElhaney	SMEPA	SERC	1, 3, 4, 5										
10.	Joel Wise	TVA	SERC	1, 3, 5, 6										

Group/Individual	Commenter	Organization	Registered Ballot Body Segment												
			1	2	3	4	5	6	7	8	9	10			
11. Dwayne Roberts	OMU	SERC	3, 5												
12. Jake Miller	Dyegy	SERC	5												
13. Andy Burch	EEI	SERC	5												
14. Tom Burns	PJM	SERC	2												
15. M. R. Castello	Alabama Power	SERC	3												
16. Bob Dalrymple	TVA	SERC	1, 3, 5, 6												
17. Robert Thomasson	BREC	SERC	1												
18. Randy Hubbert	Southern	SERC	1, 5												
19. Phil Whitmer	Southern	SERC	1, 5												
20. Alvis Lanton	SIPC	SERC	1												
21. Jim Case	Entergy	SERC	1, 3, 6												
22. Mike Hirst	Cogentrix	SERC	5												
23. Gene Delk	SCEandG	SERC	1, 3, 5, 6												
24. Mike Bryson	PJM	SERC	2												
25. John Troha	SERC	SERC	10												
2.	Group	David Taylor	NERC Staff Technical Review												
No additional members listed.															
3.	Group	Guy Zito	Northeast Power Coordinating Council												X
Additional Member		Additional Organization		Region		Segment Selection									
1.	Alan Adamson	New York State Reliability Council, LLC		NPCC	10										
2.	Gregory Campoli	New York Independent System Operator		NPCC	2										
3.	Kurtis Chong	Independent Electricity System Operator		NPCC	2										
4.	Sylvain Clermont	Hydro-Quebec TransEnergie		NPCC	1										
5.	Chris de Graffenried	Consolidated Edison Co. of New York Inc.		NPCC	1										
6.	Gerry Dunbar	Northeast Power Coordinating Council		NPCC	10										
7.	Peter Yost	Consolidated Edison Co. of New York, Inc.		NPCC	3										
8.	Mike Garton	Dominion Resources Services, Inc.		NPCC	5										
9.	Kathleen Goodman	ISO - New England		NPCC	2										
10.	Chantel Haswell	FPL Group, Inc.		NPCC	5										
11.	David Kiguel	Hydro One Networks Inc.		NPCC	1										
12.	Michael Lombardi	Northeast Utilities		NPCC	1										

Group/Individual	Commenter	Organization	Registered Ballot Body Segment											
			1	2	3	4	5	6	7	8	9	10		
13. Randy MacDonald	New Brunswick Power Transmission	NPCC 9												
14. Bruce Metruck	New York Power Authority	NPCC 6												
15. Lee Pedowicz	Northeast Power Coordinating Council	NPCC 10												
16. Robert Pellegrini	The United Illuminating Company	NPCC 1												
17. Si Truc Phan	Hydro-Quebec TransEnergie	NPCC 1												
18. David Ramkalawan	Ontario Power Generation, Inc.	NPCC 5												
19. Saurabh Saksena	National Grid	NPCC 1												
20. Michael Schiavone	National Grid	NPCC 1												
21. Wayne Sipperly	New York Power Authority	NPCC 5												
22. Donald Weaver	New Brunswick System Operator	NPCC 2												
23. Ben Wu	Orange and Rockland Utilities	NPCC 1												
4.	Group	Charles Long	SERC Planning Standards Subcommittee	X										X
	Additional Member	Additional Organization	Region	Segment	Selection									
	1. Pat Huntley	SERC	SERC	10										
	2. John Sullivan	Ameren Services Co.	SERC	1										
	3. James Manning	NC Electric Membership Corp.	SERC	1										
	4. Philip Kleckley	SC Electric and Gas Co.	SERC	1										
	5. Bob Jones	Southern Company Services	SERC	1										
	6. Jim Kelley	PowerSouth Energy Cooperative	SERC	1										
5.	Group	Jonathan Hayes	Southwest Power Pool Standards Review Team		X									
	Additional Member	Additional Organization	Region	Segment	Selection									
	1. Gregory McAuley	Oklahoma Gas and Electric	SPP	1, 3, 5										
	2. Harold Wyble	Kansas City Power and Light	SPP	1, 3, 5, 6										
	3. Jamie Strickland	Oklahoma Gas and Electric	SPP	1, 3, 5										
	4. Mark Wurm	Board of Public Utilities City of McPherson	SPP	1, 3, 5										
	5. John Allen	City Utilities of Springfield	SPP	1, 4										
	6. Louis Guidry	CLECO	SPP	1, 3, 5										
	7. Robert Cox	Lea County Electric	SPP											
	8. Sean Simpson	Board of Public Utilities City of McPherson	SPP	1, 3, 5										
	9. Stephen McGie	Coffeyville	SPP											

Group/Individual	Commenter	Organization	Registered Ballot Body Segment												
			1	2	3	4	5	6	7	8	9	10			
10. Valerie Pinamonti	American Electric Power	SPP	1, 3, 5												
11. Michael Bensky		SPP													
12. Robert Rhodes	Southwest Power Pool	SPP	2												
13. Jonathan Hayes	Southwest Power Pool	SPP	2												
6.	Group	Frank Gaffney	Florida Municipal Power Agency	X		X	X	X	X						
Additional Member Additional Organization Region Segment Selection															
1.	Tim Beyrle	City of New Smyrna Beach	FRCC	4											
2.	Greg Woessner	Kissimmee Utility Authority	FRCC	3											
3.	Jim Howard	Lakeland Electric	FRCC	3											
4.	Lynne Mila	City of Clewiston	FRCC	3											
5.	Joe Stonecipher	Beaches Energy Services	FRCC	1											
6.	Cairo Vanegas	FPUA	FRCC	4											
7.	Randy Hahn	Ocala Utility Services	FRCC	3											
7.	Group	Steve Rueckert	WECC Staff												X
No additional members listed.															
8.	Group	Chris Higgins	Bonneville Power Administration	X		X		X	X						
Additional Member Additional Organization Region Segment Selection															
1.	Lorissa Jones	Transmission Internal Ops	WECC	1											
2.	Steve Larson	General Counsel	WECC	1, 3, 5, 6											
3.	Rebecca Berdahl	Long Term Sales and Purchases	WECC	3											
4.	John Anasis	Technical Operations	WECC	1											
5.	Erika Doot	Generation Support	WECC	3, 5, 6											
6.	Don Watkins	System Operations	WECC	1											
7.	Fran Halpin	Duty Scheduling	WECC	5											
8.	Joe Rogers	Transfer Services	WECC	3											
9.	Group	Bruce Wertz	Texas RE NERC Standards Subcommittee												X
Additional Member Additional Organization Region Segment Selection															
1.	David Baker	Bandera Electric Cooperative	ERCOT	NA											
2.	Gary L. Rayborn	Wharton County Electric Cooperative	ERCOT	NA											
3.	Phillip Amaya	Magic Valley EC	ERCOT	NA											
4.	Gary Nietzsche	Fayette EC	ERCOT	NA											

Group/Individual	Commenter	Organization	Registered Ballot Body Segment																	
			1	2	3	4	5	6	7	8	9	10								
5.	Tim Soles	Occidental Power Services	ERCOT	NA																
6.	Lee Stubblefield	City of Fredericksburg	ERCOT	NA																
7.	Lowell Ogle	City of Brenham	ERCOT	NA																
8.	John Ohlhausen	Medina EC	ERCOT	NA																
9.	Jimmy Sikes	City of Georgetown	ERCOT	NA																
10.	Ron Hughes	San Patricio EC	ERCOT	NA																
11.	Lou White	City of San Marcos	ERCOT	NA																
12.	David Peterson	Central Texas EC	ERCOT	NA																
13.	Gerry Nunan	Karnes EC	ERCOT	NA																
14.	Joe Farley	City of Weatherford	ERCOT	NA																
15.	Flint Geagley	City of Lampasas	ERCOT	NA																
16.	William Bisette	City of Seguin	ERCOT	NA																
17.	Brian Green	Farmers EC		NA																
18.	Jose Escamilla	CPS Energy	ERCOT	NA																
19.	Pam Zdenek	Infigen	NA - Not Applicable	NA																
10.	Group	Joe Tarantino	Balancing Authority Northern California		X															
Additional Member Additional Organization Region Segment Selection																				
1.	SMUD		WECC	1, 3, 4, 5, 6																
2.	MID		WECC	4, 5																
3.	City of Redding		WECC	3, 4, 5, 6																
4.	City of Roseville		WECC	NA																
11.	Group	Jean Nitz	ACES Power Marketing Standards Collaborators											X						
Additional Member Additional Organization Region Segment Selection																				
1.	Mohan Sachdeva	Buckeye Power, Inc.	RFC	3, 4																
2.	Susan Sosbe	Wabash Valley Power Association	SERC	3																
12.	Group	Louis Slade	Dominion		X		X		X	X										
Additional Member Additional Organization Region Segment Selection																				
1.	Connie Lowe		RFC	5, 6																
2.	Mike Garton		MRO	5, 6																
3.	Michael Gildea		NPCC	5, 6																

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
4. Michael Crowley			SERC	1, 3									
5. Sean Iseminger			SERC	5, 6									
13.	Group	David Thorne	Pepco Holdings Inc and Affiliates		X		X						
Additional Member		Additional Organization	Region Segment Selection										
1.	Carl Kinsley	Delmarva Power and Light Co	RFC	1, 3									
14.	Group	Cynthia S. Bogorad	Transmission Access Policy Study Group		X		X	X	X	X			
Please see www.tapsgroup.org for TAPS' more than 40 members.													
15.	Group	John P. Hughes	Electricity Consumers Resource Council (ELCON)		X		X		X	X	X		
No additional members listed.													
16.	Group	William D Shultz	Southern Company Generation						X				
Additional Member		Additional Organization	Region Segment Selection										
1.	Tom Higgins	Southern Company Generation	SERC	5									
2.	Terry Crawley	Southern Company Generation	SERC	5									
3.	Therron Wingard	Southern Company Genreation	SERC	5									
4.	Ed Goodwin	Southern Company Generation	SERC	5									
17.	Group	David Dockery or John Bussman	AECI and member GandTs, Central Electric Power Cooperative, KAMO Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power Cooperative		X		X		X	X			
No additional members listed.													
18.	Group	Janelle Marriott Gill	Tri-State Generation and Transmission Assn., Inc. Energy Management				X		X				
No additional members listed.													
19.	Group	Will Smith	MRO NERC Standards Review Forum (NSRF)										X
Additional Member		Additional Organization	Region Segment Selection										
1.	Mahmood Safi	Omaha Public Utility District	MRO	1, 3, 5, 6									
2.	Chuck Lawrence	American Transmission Company	MRO	1									

Group/Individual	Commenter	Organization	Registered Ballot Body Segment																	
			1	2	3	4	5	6	7	8	9	10								
3.	Tom Webb	Wisconsin Public Service Corporation	MRO	3, 4, 5, 6																
4.	Jodi Jenson	Western Aera Power Administration	MRO	1, 6																
5.	Ken Goldsmith	Alliant Energy	MRO	4																
6.	Alice Ireland	Xcel Energy	MRO	1, 3, 4, 6																
7.	Dave Rudolph	Basin Electric Power Cooperative	MRO	1, 3, 5, 6																
8.	Eric Ruskamp	Lincoln Electric System	MRO	1, 3, 5, 6																
9.	Joe DePoorter	Madison Gas and Electric	MRO	3, 4, 5, 6																
10.	Scott Nickels	Rochester Public Utilities	MRO	4																
11.	Terry Harbour	MidAmerican Energy Company	MRO	1, 3, 5, 6																
12.	Marie Knox	Midwest ISO Inc.	MRO	2																
13.	Lee Kittleson	Otter Tail Power Company	MRO	1, 3, 4, 5																
14.	Scott Bos	Muscantine Power and Water	MRO	1, 3, 5, 6																
15.	Tony Eddleman	Nebraska Public Power District	MRO	1, 3, 5																
16.	Mike Brytowski	Great River Energy	MRO	1, 3, 5, 6																
17.	Richard Burt	Minnkota Power Cooperative	MRO	1, 3, 5, 6																
18.	Will Smith	Midwest Reliability Orgnization	MRO	10																
20.	Group	Al DiCaprio	IRC Standards Review Committee			X														
Additional Member Additional Organization Region Segment Selection																				
1.	Steve Myers	ERCOT	ERCOT	2																
2.	Terry Bilke	MISO	MRO	2																
3.	Don Weaver	NBSO	NPCC	2																
4.	Mark Thompson	AESO	WECC	2																
5.	Greg Campoli	NYISO	NPCC	2																
6.	Charles Yeung	SPP	SPP	2																
7.	Ben Li	IESO	NPCC	2																
21.	Individual	Ian Grant	Tennessee Valley Authority		X		X		X										X	
22.	Individual	Janet Smith	Arizona Public Service Company		X		X		X	X										
23.	Individual	David Kiguel	Hydro One Networks Inc.		X		X													
24.	Individual	Mark Conner	Tri-State GandT		X															
25.	Individual	Brandy A. Dunn	Western Area Power Administration		X															

Group/Individual		Commenter	Organization	Registered Ballot Body Segment										
				1	2	3	4	5	6	7	8	9	10	
26.	Individual	William Bush	Holland Board of Public Works			X								
27.	Individual	Katie Coleman	Texas Industrial Energy Consumers							X				
28.	Individual	Sandra Shaffer	PacifiCorp	X		X		X	X					
29.	Individual	Heather Hunt	NESCOE										X	
30.	Individual	Antonio Grayson	Southern Company	X		X								
31.	Individual	Irion A. Sanger	Industrial Customers of Northwest Utilities							X				
32.	Individual	Doug Hohlbaugh	FirstEnergy Corp.	X		X	X	X	X					
33.	Individual	John Bee	Exelon	X		X		X						
34.	Individual	Gary Carlson	Michigan Public Power Agency					X						
35.	Individual	Richard Malloy	Idaho Falls Power			X		X						
36.	Individual	Anthony Jablonski	ReliabilityFirst											X
37.	Individual	Colin Anderson	Ontario Power Generation Inc.					X						
38.	Individual	Thomas C. Duffy	Central Hudson Gas and Electric Corporation			X								
39.	Individual	Manny Robledo	City of Anaheim			X	X							
40.	Individual	Deborah J Chance	Chevron U.S.A. Inc.					X		X	X			
41.	Individual	Alice Ireland	Xcel Energy	X		X		X	X					
42.	Individual	Edwin Tso	Metropolitan Water District of Southern California	X										
43.	Individual	Greg Rowland	Duke Energy	X		X		X	X					
44.	Individual	David Proebstel	Clallam County PUD No.1			X								
45.	Individual	Richard Salgo	NV Energy	X										
46.	Individual	Jerome Murray	Oregon Public Utility Commission Staff										X	
47.	Individual	Mary Jo Cooper	Z Global Engineering and Energy Solutions			X								
48.	Individual	Eric Salsbury	Consumers Energy			X	X	X						
49.	Individual	Tracy Richardson	Springfield Utility Board			X								

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
50.	Individual	Kerry Wiedrich	Mission Valley Power			X						X	
51.	Individual	Denise M. Lietz	Puget Sound Energy	X		X		X					
52.	Individual	Chris de Graffenried	Consolidated Edison Co. of NY, Inc.	X		X		X	X				
53.	Individual	Gail Shaw	Tillamook PUD			X						X	
54.	Individual	Thad Ness	American Electric Power	X		X		X	X				
55.	Individual	Joe Petaski	Manitoba Hydro	X		X		X	X				
56.	Individual	Robert Ganley	Long Island Power Authority	X									
57.	Individual	John A. Gray	The Dow Chemical Company					X		X	X		
58.	Individual	Rick Hansen	City of St. George			X		X				X	
59.	Individual	Donald E. Nelson	Massachusetts Department of Public Utilities									X	
60.	Individual	David Burke	Orange and Rockland Utilities, Inc.	X		X							
61.	Individual	Bud Tracy	Blachly-Lane Electric Cooperative (BLEC)			X							
62.	Individual	Roger Meader	Coos-Curry Electric Cooperative (CCEC)			X							
63.	Individual	Kathleen Goodman	ISO New England Inc		X								
64.	Individual	Dave Markham	Central Electric Cooperative (CEC)			X							
65.	Individual	Dave Hagen	Clearwater Power Company (CPC)			X							
66.	Individual	Eric Lee Christensen	Snohomish County PUD	X		X	X	X					
67.	Individual	Roman Gillen	Consumer's Power Inc.	X		X							
68.	Individual	Dave Sabala	Douglas Electric Cooperative (DEC)			X							
69.	Individual	Bryan Case	Fall River Rural Electric Cooperative (FALL)			X							
70.	Individual	Rick Crinklaw	Lane Electric Cooperative (LEC)			X							
71.	Individual	Michael Henry	Lincoln Electric Cooperative (LEC)								X		
72.	Individual	Jon Shelby	Northern Lights Inc. (NLI)			X							
73.	Individual	Randy MacDonald	NBPT	X									
74.	Individual	Ray Ellis	Okanogan County Electric Cooperative								X		

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
			(OCEC)										
75.	Individual	Donald Jones	Texas Reliability Entity										X
76.	Individual	Diane Barney	New York State Dept of Public Service									X	
77.	Individual	Rick Paschall	Pacific Northwest Generating Cooperative (PNGC)	X		X	X				X		
78.	Individual	Heber Carpenter	Raft River Rural Electric Cooperative (RAFT)			X							
79.	Individual	Marc Farmer	West Oregon Electric Cooperative								X		
80.	Individual	John Seelke	PSEG Services Corp	X		X		X	X				
81.	Individual	Sylvain Clermont	Hydro-Quebec TransEnergie	X								X	
82.	Individual	Michael Falvo	Independent Electricity System Operator		X								
83.	Individual	John Allen	Rochester Gas and Electric and New York State Electric and Gas	X									
84.	Individual	Steve Eldrige	Umatilla Electric Cooperative (UEC)	X		X							
85.	Individual	Steve Alexanderson	Central Lincoln			X	X					X	
86.	Individual	Allan Long	Memphis Light, Gas and Water Division	X									
87.	Individual	Shane Sweet	Harney Electric Cooperative, Inc.			X							
88.	Individual	Russell Noble	Cowlitz County PUD			X	X	X					
89.	Individual	Brian Evans-Mongeon	Utility Services, Inc.								X		
90.	Individual	Martyn Turner	LCRA Transmission Services Corporation	X									
91.	Individual	Saurabh Saksena	National Grid	X		X							
92.	Individual	Jennifer Flandermeyer	Kansas City Power and Light Company	X		X		X	X				
93.	Individual	Darryl Curtis	Oncor Electric Delivery Company LLC	X									
94.	Individual	Joe Tarantino	Sacramento Municipal Utility District	X		X	X	X	X				
95.	Individual	Don Schmit	Nebraska Public Power District	X		X		X					
96.	Individual	David M. Conroy	Central Maine Power Company	X									
97.	Individual	Kirit Shah	Ameren	X		X		X	X				
98.	Individual	Guy Andrews	Georgia System Operations Corporation			X	X						

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
99.	Individual	Scott Miller	MEAG Power	X		X		X					
100.	Individual	Paul Titus	Northern Wasco County PUD			X							
101.	Individual	Linda Jacobson-Quinn	Farmington Electric Utility System			X							
102.	Individual	Allen Rinard	South Houston Green Power, LLC					X		X			
103.	Individual	Angela P Gaines	Portland General Electric Company	X		X		X	X				
104.	Individual	Andrew Gallo	City of Austin dba Austin Energy	X		X	X	X	X				
105.	Individual	Martin Kaufman	ExxonMobil Research and Engineering	X				X					
106.	Individual	David Kahly	Kootenai Electric Cooperative			X							
107.	Individual	Andy Pusztai	ATC LLC	X									
108.	Individual	Bo Jones	Westar Energy	X		X		X	X				
109.	Individual	Mary Downey	Redding Electric Utility			X	X	X	X				
110.	Individual	Paul Cummings	City of Redding					X					
111.	Individual	Keith Morisette	Tacoma Power	X		X	X	X	X				
112.	Individual	Rex Roehl	Indeck Energy Services					X					
113.	Individual	Frank Cumpton	BGE	X									

1. The SDT has made clarifying changes to the core definition in response to industry comments. Do you agree with these changes? If you do not support these changes or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: After consideration of the comments below, the SDT has decided against making any changes to the draft core definition as the changes suggested do not provide additional clarity. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

No changes were made to the core definition.

Organization	Yes or No	Question 1 Comment
NERC Staff Technical Review	No	The sentence, "This does not include facilities used in the local distribution of electricity," is a commentary or statement of objective rather than a definition of what facilities comprise the BES. Including such information that does not define the facilities to be included or excluded will be a source of confusion in applying the definition. The BES definition as proposed by the SDT may in fact include such facilities and as stated in paragraph 37 of Order 743: "Determining where the line between "transmission" and "local distribution" lies, which includes an inquiry into which lower voltage "transmission" facilities are necessary to operate the interconnected transmission system, should be part of the exemption process the ERO develops."If the drafting team believes that Exclusions E1 through E4 in the

Organization	Yes or No	Question 1 Comment
		definition are sufficient to not include any facilities used in the local distribution of electricity then those exclusions, and not the aforementioned sentence in the “core definition,” define the facilities that are not included (i.e., the sentence is unnecessary).
<p>Response: The SDT discussed your comment and decided against deletion of the sentence in the core definition that refers to facilities used in the local distribution of electricity. There were many commenters who were in favor of the inclusion of the sentence in the core definition. Additionally, the SDT does not agree with the premise that the exclusions are fully sufficient to not include any facilities used in the local distribution of electricity in the definition. No change made.</p>		
Southwest Power Pool Standards Review Team	No	The last sentence of the core states that no distribution facilities will be included, but some of these facilities could be included due to blackstart resources. We don’t disagree with the idea of removing distribution facilities, but would like to see some clarification or qualifier.
Westar Energy	No	The last sentence of the core part of the definition states that no distribution facilities will be included, but we feel that some of these facilities could be included due to also being blackstart resources. We agree with the idea of removing distribution facilities, but would like to see some clarification or a qualifier with regards to blackstart resources.
<p>Response: The inclusion of Blackstart Resources in Inclusion I3 is meant to include the blackstart generators but is not meant to include any local distribution facilities at voltage levels < 100 kV that may connect the Blackstart Resources to the BES. No change made.</p>		
Southern Company Generation	No	<p>We have two concerns with the changes that are proposed. First, the use of "effective dates" and "compliance obligations ... shall begin" in the implementation plan of the definition change is confusing. Effective date is usually used to indicate the mandatory and enforceable date of a new item.</p> <p>Second, a radial circuit from 100kV to a generating facility with two (2) 20 MVA generators seems to meet both the inclusion criteria (I2) and the</p>

Organization	Yes or No	Question 1 Comment
		exculsion criteria (E1). Which criteria is dominant, inclusion or exclusion?
<p>Response: See the responses addressing the Effective Dates and the C compliance Obligations in Question 11.</p> <p>As to the second part of your question, the two generators would be included in the BES by virtue of their gross individual nameplate ratings. However, the radial circuit itself would be excluded since the gross generation was not equal to or greater than 75 MVA.</p> <p>The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.</p> <p>Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:</p> <p>“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. “</p> <p>Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.</p> <p>Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.</p> <p>Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.</p> <p>Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.</p> <p>Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2.</p>		

Organization	Yes or No	Question 1 Comment
<p>Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.</p> <p>In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.</p>		
National Grid	No	While we agree that the BES should not include facilities used in the local distribution of energy, we feel that this is already captured in Exclusion E3. Stating it in the core definition is confusing, and should be eliminated. We suggest removing “This does not include facilities used in the distribution of electric energy” from the core definition.
IRC Standards Review Committee	No	While we agree with the changes to the definition, we do not understand the purpose of the final sentence “This does not include facilities used in the local distribution of electric energy.” Since the issue of local (distribution) networks is addressed under Exclusion E3, we do not see the added benefit of the referenced text.
<p>Response: The SDT discussed your comment and decided against deletion of the sentence in the core definition that refers to facilities used in the local distribution of electricity. There were many commenters who were in favor of the inclusion of the sentence in the core definition. Furthermore, Exclusion E3 does not by itself define the entire population of facilities used in the local distribution of electricity.</p>		
Hydro One Networks Inc.	No	Although we agree with the concept and commend the SDT for developing explicit inclusions and exclusions as part of the definition, we believe there are several outstanding issues and concerns listed as our response to Q11 that need to be addressed by the SDT and by NERC as the ERO.
<p>Response: Please see the detailed response to Q11.</p>		

Organization	Yes or No	Question 1 Comment
Massachusetts Department of Public Utilities	No	<p>The Massachusetts Department of Public Utilities (“MA DPU”) appreciates the opportunity to provide comments on the second draft definition of the Bulk Electric System (“BES”). Massachusetts is the largest state by population and load in New England. It comprises 46% of both the region’s population and electricity consumption. Generating plants located in Massachusetts represent 42% of New England’s capacity and our capitol city, Boston, is the largest load center in the region. Some of the revisions since the last posting of the draft BES definition have improved the proposed language. However, the MA DPU has a number of concerns regarding both the substance of the definition and the process for developing this standard: 1) Phased Approach. While well-intentioned, separating the BES definition project into two separate phases is problematic from both a procedural and substantive perspective. While we recognize that the filing due date is rapidly approaching, the BES definition cannot be considered in a vacuum, divorced from the concerns raised by a number of parties in response to past postings of the BES definition. The issues NERC has identified for consideration during the proposed “Phase 2” are inseparable from the development of the BES definition (e.g., generation thresholds, technical justification for the 100 kV threshold) and should be squarely addressed before a definition is adopted and ratepayers incur costs related to compliance with mandates that may or may not be revised through the second phase of the project. The importance of considering concerns before adopting a definition is heightened by the proposed two-year implementation requirement. This short implementation period almost guarantees that entities will commit resources shortly after adoption of the definition to ensure compliance within the mandated period. In other words, ratepayers will bear costs related to compliance irrespective of any change resulting from the Phase 2 process or the exception process. Expediency, while understandable given the filing deadline, must be balanced against the risk that a multi-phased approach could lead to</p>

Organization	Yes or No	Question 1 Comment
		<p>significant consumer costs without attendant meaningful reliability benefits.</p> <p>2) Cost-Benefit Analysis. A cost impact analysis should be performed as part of developing any reliability standard. However, the development of the BES definition has failed to consider the cost impacts of the definition (and its inclusions and exclusions) and has not weighed these impacts against identified benefits that the definition would achieve. The MA DPU supported the May 21, 2011 comments from the New England States Committee on Electricity (“NESCOE”) on the last posting of the BES definition. In these comments, NESCOE stated that “any new costs a revised definition imposes - which fall ultimately on consumers - should provide meaningful reliability benefits.” A cost-benefit analysis should be integral to the development of a BES definition and, indeed, any reliability standard. This analysis should include a probabilistic risk assessment examining the likelihood of an event and the costs and risks resulting from such event, which should be weighed against the costs of complying with the proposed reliability measures.</p> <p>3) Technical Justification. In addition to performing a cost-benefit analysis, a technical basis must be provided to justify a proposed reliability standard. However, the proposed BES definition does not provide a technical justification for the 100 kV threshold, the threshold for generation resources, or other elements of the definition. As stated above, while well-intentioned and understandable, deferring this technical justification to a later and separate phase of the project is a flawed and potentially costly approach. Providing a technical justification for a reliability standard is a core function of standards development and should be addressed at the forefront of the process rather than relegated to a separate phase largely undertaken after a standard is filed. In Order 743, the Federal Energy Regulatory Commission (“FERC” or “the Commission”) directed NERC to revise the BES definition. Revision to Electric Reliability Organization Definition of Bulk Electric System, Order No. 743A, 134 FERC ¶ 61,210</p>

Organization	Yes or No	Question 1 Comment
		<p>(Mar. 17, 2011) at P 8, citing to Revision to Electric Reliability Organization Definition of Bulk Electric System, Order No. 743, 133 FERC ¶ 61,150 (2010). The Commission stated that one way NERC could address the technical and policy concerns FERC had identified would be to institute a “bright-line threshold that includes all facilities operated at or above 100 kV except defined radial facilities, and establish an exemption process and criteria for excluding facilities [NERC] determines are not necessary for operating the interconnected transmission network.” Id. at P 8. However, the Commission made clear in Order 743 that NERC may propose an alternative proposal and that the 100 kV threshold is an “initial line of demarcation” to be refined through exclusions and exemptions. Id. at PP 8, 40. Accordingly, unless and until NERC provides a technical justification for its approach, the Standard should use the 100 kV threshold concept in a way that is consistent with the Commission’s guidance. Specifically, the two criteria that bound the BES definition are (1) the statutory exclusion of facilities used in local distribution, and (2) the requirement that the facilities included be “necessary for reliable operation” of the interconnected transmission system. A definition that recognizes these limits, coupled with an efficient and transparent exception process, would appear to meet the Commission’s expectations. For these reasons, absent a technical justification for imposing a 100 kV threshold, the MA DPU supports the revised core definition offered by NESCOE in comments filed on this 2nd Draft: “All Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher that are necessary for the reliable operation of the interconnected transmission network, including but not limited to the facilities listed below as Inclusions, and excluding (1) facilities that are used in the local distribution of electric energy, and (2) the facilities and systems listed below as Exclusions. Other Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.” The definition of the BES is</p>

Organization	Yes or No	Question 1 Comment
		critical to NERC’s role as ERO and will have a significant impact on system reliability and cost to consumers. While FERC had concerns that the existing definitions for the bulk power system were under-inclusive, the proposed Standard, as drafted, risks erring in the opposite direction and appears inconsistent with the Commission’s guidance in this area.
NESCOE	No	<p>The New England States Committee on Electricity (“NESCOE”) appreciates the opportunity to provide comments on the revised BES definition. NESCOE is New England’s Regional State Committee and represents the collective views of the six New England states. Please consider this submission to reflect the views of the States of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont. Some of these states may submit separate comments in addition to this joint filing.</p> <p>NESCOE does not believe that the proposed changes address our fundamental concerns. As NESCOE pointed out in its comments on the previous draft, the definition’s reliance on a 100 kV “bright line” threshold may impose substantial costs on New England ratepayers without achieving meaningful reliability benefits. NERC and the drafting team have not provided any technical justification for imposing the 100 kV test, despite its potential for over-inclusiveness and significant costs. NESCOE believes that the Federal Energy Regulatory Commission (“FERC” or “the Commission”) recognizes the need to avoid this result. As the Commission pointed out in Order 743A, Order 743 does not mandate the application of a 100 kV threshold, and NERC is free to propose alternatives. Unless and until NERC provides a technical justification for its approach, the Standard should use the 100 kV threshold concept in a way that is consistent with the Commission’s guidance. Specifically, the Standard should make clear that the 100 kV threshold is an “initial line of demarcation,” and not the end of the analysis. According to Order 743A, the two criteria that bound the BES definition are (1) the statutory exclusion of facilities used in local</p>

Organization	Yes or No	Question 1 Comment
		<p>distribution, and (2) the requirement that the facilities included be “necessary for reliable operation” of the interconnected transmission system. A definition that recognizes these limits, coupled with an efficient and transparent exceptions process, would meet FERC’s expectations. The proposed definition does not meet this standard. For these reasons, absent a technical justification for imposing a 100 kV threshold, NESCOE suggests the following revised core definition: “All Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher that are necessary for the reliable operation of the interconnected transmission network, including but not limited to the facilities listed below as Inclusions, and excluding (1) facilities that are used in the local distribution of electric energy, and (2) the facilities and systems listed below as Exclusions. Other Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.”</p> <p>Where FERC had concerns that the existing definitions for the bulk power system were under-inclusive, the proposed Standard risks erring in the opposite direction. Because the definition of the BES is critical to NERC’s role as ERO and will have a significant impact on ratepayers, NESCOE believes the drafting team should track FERC’s guidelines as closely as possible, or provide a specific technical justification for relying on the 100 kV bright line threshold.</p>
<p>Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT’s efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission’s concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition</p>		

Organization	Yes or No	Question 1 Comment
		<p>coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that the best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission.</p> <p>The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.</p>
ReliabilityFirst	No	<p>This seems very confusing, but should be clear and easy enough for anyone to pickup, read, understand, apply and arrive at the same conclusion. The term local distribution needs to be either defined or have some guidance provided on what it is intended to cover. A suggestion for defining distribution would be that radials and local networks makeup distribution facilities. Radials usually terminate at distribution or customer substations and local networks are primarily used for distribution also. The Commission granted NERC the ability to define distribution in Order 743-A, paragraphs 67-71.</p> <p>It is not clear if the BES is meant to be a contiguous system or not from the language in the revised definition. ReliabilityFirst Staff believes that the BES should be contiguous, and therefore, any facilities needed to connect real and reactive resources to the BES need to be included. To maintain reliability, the BES cannot have pockets of generation that are not connected</p>

Organization	Yes or No	Question 1 Comment
		<p>to the BES via BES facilities. ReliabilityFirst Staff believes that without including the paths from BES generators in the BES, the reliable operation of the system could be jeopardized if the paths are unavailable due to non-compliance to Reliability Standards. For example, wind farm collector systems at voltages operated at less than 100 kV should be included in the BES for the above reason.</p>
<p>Response: The SDT discussed your comment and decided against deletion of the sentence in the core definition that refers to facilities used in the local distribution of electricity. There were many commenters who were in favor of the inclusion of the sentence in the core definition. Additionally, the SDT does not agree that Exclusions E1 and E3 are fully sufficient to not include any facilities used in the local distribution of electricity in the definition. No change made.</p> <p>The SDT has previously stated the existing BES definition does not mandate contiguity of the BES and the proposed definition is carrying that principle forward. Simply making a blanket statement the BES must be contiguous could have unintended consequences. However, the BES understands the importance of the concept and has agreed to discuss contiguity issues in Phase 2 of this project.</p>		
<p>Ontario Power Generation Inc.</p>	<p>No</p>	<p>OPG continues to question the need for the changes required (and costs imposed) as a result of this new definition. This is particularly true in the NPCC region where an impact based methodology is being used to determine the set of BES elements. A very clear 100kV bright line, as proposed in this draft, will dramatically increase the list of generation elements that must meet reliability standards, without a corresponding increase in wide-area reliability. OPG recommends that the work planned for phase II, technical justification of the generation and voltage thresholds, should be completed before implementing the new definition of BES.</p>
<p>Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or</p>		

Organization	Yes or No	Question 1 Comment
<p>contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission.</p>		
<p>Kansas City Power and Light Company</p>	<p>No</p>	<p>There is no established basis for the generation thresholds referenced through the ERO Statement of Compliance Registry Criteria in Appendix 5B and the specificity of 75 MVA in the proposed BES definition. The objectives identified in the Phase 2 SAR for the definition of the Bulk Electric System include establishing an engineering basis for the generation thresholds. Phase 2 will be critical in refining and improving the Bulk Electric System definition and bringing additional clarity to the definition.</p>
<p>New York State Dept of Public Service</p>	<p>No</p>	<p>The core definition is still deficient due to a lack of technical support for basing the BES definition on 100 kV and for lack of any cost/benefit analysis.</p>
<p>City of Anaheim</p>	<p>No</p>	<p>The City of Anaheim recommends either changing the E1 (b) language back to that of the previous BES definition draft, i.e. 75 MVA or above connected at 100 kV or above, or limit the amount of generation allowed within a Radial Element or Local Network to 300 MVA or less, which is the amount of uncontrolled load loss that constitutes a reportable "disturbance" pursuant to EOP-004 and DOE Form OE-417. If DOE and NERC do not consider a 300 MW uncontrolled loss of load a reportable event, then why would the potential loss of a 75 MVA of non-critical generator connected at 69 kV make a Radial Element or Local Network critical to the reliability of the BES? The current ERO Statement of Compliance Criteria does not require GO/GOP</p>

Organization	Yes or No	Question 1 Comment
		<p>registration for generation connected below 100 kV as long as it's not critical to the reliability of the BES, i.e. black start, etc., even if the amount of generation is greater than 75 MVA. There is good reason for this because the mere loss of 75 MVA generator would not affect the reliability of a system as big as the Western Interconnection, at all, and a fault at say 69 kV would have sufficient impedance not to affect the BES from an electrical perspective.</p>
<p>Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.</p>		
Consolidated Edison Co. of NY, Inc.	No	<ul style="list-style-type: none"> o Please clarify the phrase “facilities used in local distribution” as used in the ‘core’ BES Definition. What is the purpose of this phrase in the BES Definition? How does the SDT propose that an entity demonstrate that a facility is used in local distribution? o Does this phrase “facilities used in local distribution” establish a jurisdictional boundary which takes precedence over all other parts of the BES Definition and Designations? o If this phrase does not take precedence over the remainder of the BES Definition and Designations, i.e., perhaps only over some parts BES Definition and Designations, or over none of the BES Definition and Designations, then what was the drafting teams understanding of and intent

Organization	Yes or No	Question 1 Comment
		<p>with regard to “facilities used in local distribution?”</p> <ul style="list-style-type: none"> o What are Entities supposed to do with respect to “facilities used in local distribution” identified by State and Provincial regulators? o How has NERC assured that the posted BES Definition and Designations meet the intent of the Commission to establish an exemption process that avoids identifying “facilities used in local distribution” as part of the BES (¶37 and ¶39 below)? Recommendations: If “facilities used in local distribution” are to be excluded on jurisdictional grounds, then <ul style="list-style-type: none"> o The last sentence in the Core definition should be revised as follows: “This does not include facilities used in the local distribution of electric energy, as identified by a jurisdictional governmental authority.” o We strongly recommend that the BES SDT adopt the FERC Seven Factor test as a proven basis for establishing the boundary between jurisdictional Transmission and non-jurisdictional “facilities used in local distribution.” Supporting Discussion: In FERC Order 743-A the Commission stated⁶⁹. We agree ... that the Seven Factor Test could be relevant and possibly is a logical starting point for determining which facilities are local distribution for reliability purposes” By adopting this FERC Seven Factor test, the BES SDT will have fulfilled its obligation to respond to these FERC mandates relating to “local distribution” as stated in FERC Order 743: “Determining where the line between ‘transmission’ and ‘local distribution’ lies,” (¶37),”To the extent that any individual line would be considered to be local distribution, that line would not be considered part of the bulk electric system” (¶39), to establish “[A] means to track and review facilities that are classified as local distribution to ensure accuracy and consistent application of the definition” (¶119).Supporting References: FERC Order 743 observed some believe that “the Commission’s [and by extension NERC’s] proposal exceeds its jurisdiction by encompassing local distribution facilities that are not necessary for operating the interconnected transmission network.” [FERC

Organization	Yes or No	Question 1 Comment
		<p>Order 743, ¶27.]In this regard FERC Order 743 states: At ¶37, Congress specifically exempted “facilities used in the local distribution of electric energy” from the definition. ... Determining where the line between “transmission” and “local distribution” lies, which includes an inquiry into which lower voltage “transmission” facilities are necessary to operate the interconnected transmission system, should be part of the exemption process the ERO develops. And at ¶39, To the extent that any individual line would be considered to be local distribution, that line would not be considered part of the bulk electric system. And at ¶119, ... [W]e believe that it would be beneficial for the ERO in maintaining a list of exempted facilities, to consider including a means to track and review facilities that are classified as local distribution to ensure accuracy and consistent application of the definition. Similarly, the ERO could track exemptions for radial facilities. [Emphasis added]Note that in ¶119 the Commission clearly distinguishes between “radial facilities” and “local distribution” just as it differentiates between jurisdictional radials and non-jurisdictional local distribution facilities in footnote 82:82 As discussed further below, the Commission uses the term “exclusion” herein when discussing facilities expressly excluded by the statute (i.e., local distribution) and the term “exemption” when referring to the exemption process NERC will develop for use with facilities other than local distribution that may be exempted from compliance with the mandatory Reliability Standards for other reasons. FERC Order 743-A suggests:69. We agree with Consumers Energy, Portland General and others that the Seven Factor Test could be relevant and possibly is a logical starting point for determining which facilities are local distribution for reliability purposes ...”</p>
<p>Response: The SDT discussed your comments and decided not to make changes to the core definition. The SDT included the last sentence in the draft BES core definition as a reference to Section 215 of the Energy Power Act that excludes these facilities from the bulk power system. In addition, FERC specifically excluded these facilities in Orders No. 743 and 743-A. By asking if this sentence defines a jurisdictional boundary, you are asking the SDT for a legal conclusion that is beyond the scope of the project.</p>		

Organization	Yes or No	Question 1 Comment
		<p>The SDT expects that most of the facilities used in the local distribution of energy will be covered by the 100 kV voltage level as well as Exclusions E1 through E4. In the event the BES definition does not provide a definitive determination on whether an Element is classified as BES or non-BES, the Rules of Procedure Exception Process may be utilized on a case-by-case basis to either include or exclude an Element.</p> <p>While the SDT does not agree with the premise that Exclusions E1 through E4 are fully sufficient to not include any facilities used in the local distribution of electricity in the definition, the SDT declined to use the FERC Seven Factor Test to define the dividing line between transmission and distribution as this is not an applicable test in all areas of North America which includes the Canadian Provinces.</p> <p>The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.</p>
Hydro-Quebec TransEnergie	No	<p>The proposed revision to the definition maintaining this bright line of 100 kV would expand significantly what is considered to be BES in HQT's case (the amount of added facilities could be ten times more). Since the main structure of Quebec system is included in the BES where the best norms and standards apply, the inclusion in the BES of sub-systems at lower voltage and including generation will not bring significant impact on the reliable operation of the interconnected system, because of the nature of the Quebec Interconnection.</p> <p>Furthermore for HQT's system, the proposed BES definition combined with the exception procedure are presently incompatible or at least inconsistent</p>

Organization	Yes or No	Question 1 Comment
		<p>with the regulatory framework applicable in Quebec. The proposed changes have not address this concern, neither the SDT's responses to our previous comments last May (Q.1 and 12). We reiterate that the definition and the exception procedure shall be determined by Quebec's regulator, the Régie de l'énergie du Québec, (Quebec Energy Board) which has the responsibility to ensure that electric power transmission in Quebec is carried out according to the reliability standards it adopts. Per se, it would be necessary that E1 and E3 grant exclusions with much higher level of generation. It would also be necessary to allow for several levels of application for the Reliability Standards, in accordance with the Régie de l'énergie du Québec approach: the Bulk Power System (BPS) as determined using an impact-based methodology, the Main Transmission System (MTS), and other parts of Regional System. Standards related to the protection system (PRC-004-1 and PRC-005-1) and those related to the design of the transmission system (TPL 001-0 to TPL-004-0) shall be applicable to the first level, but all other reliability standards shall be applied to the second level, the MTS. The MTS definition is somewhat different than the Bulk Electric System definition, and it includes elements that impact the reliability of the grid, supply-demand balance and interchanges. We argue that it would be necessary for NERC to address the regulatory issues outside of the present context of the SDT and ROP team.</p>
<p>Response: While the SDT appreciates the differences within the North American continent, it attempted to craft a BES definition that can be applied within the ERO footprint. It is neither within the scope of the SDT nor is it appropriate for the SDT to provide any regulatory resolution within the definition. As previously stated in our responses, the SDT believes that Acts and Regulations supersede the requirements of any Standard setting body. As such, we agree that NERC along with relevant Regions will have to address these types of non-jurisdictional situations directly or explicitly through the Exception Process.</p>		
<p>Rochester Gas and Electric and New York State Electric and Gas</p>	<p>No</p>	<p>The second sentence, "This does not include facilities used in the local distribution of electric energy," is vague and not sufficiently clear for northeast industry expert colleagues to be certain of what is "not included."</p>

Organization	Yes or No	Question 1 Comment
		<p>This sentence seems to apply only to distribution facilities that have already been classified based on the FERC “Seven Factor Test” in Order 888. If so, this sentence be re-written as follows for clarity: “This does not include facilities classified as distribution facilities.” For US entities, this classification is clearly delineated in our annual FERC Form 1 filing.</p>
<p>Central Maine Power Company</p>	<p>No</p>	<p>The second sentence, “This does not include facilities used in the local distribution of electric energy,” is vague and not sufficiently clear for northeast industry expert colleagues to be certain of what is “not included.” This sentence seems to apply only to distribution facilities that have already been classified based on the FERC “Seven Factor Test” in Order 888. If so, this sentence should be restated as follows for clarity: “This does not include facilities classified as distribution facilities.” For US entities, this classification is clearly delineated in our annual FERC Form 1 filing.</p>
<p>Response: The SDT discussed your comment and decided against revision of the sentence in the core definition that refers to facilities used in the local distribution of electricity. There were many commenters who were in favor of the inclusion of the sentence as written in the core definition.</p>		
<p>South Houston Green Power, LLC</p>	<p>No</p>	<p>South Houston Green Power, LLC [SHGP], a registered generator owner in ERCOT, submits the following comments: Cogeneration facilities, some of which are well over 75 MW in size, are located at a number of industrial sites owned by SHGP and its affiliates. Some of these cogeneration facilities generate power that is distributed within the industrial site and used for manufacturing plant operations. In some instances, excess power not required for plant operations is delivered back into the electric transmission grid through the tie line(s) connecting the industrial site to the grid. While the tie lines and some of the internal lines at these industrial sites operate at 100kV or higher, they do not perform anything that resembles a transmission function. Rather than transmit power long distances from generation to load centers, the tie lines and internal lines perform primarily</p>

Organization	Yes or No	Question 1 Comment
		<p>an end user distribution function consisting of the distribution of power brought in from the grid or generated internally to different plants within each industrial site. In some cases, the facilities also perform an interconnection function to the extent they enable power from cogeneration facilities to be delivered into the grid. The voltage of the tie lines and internal lines at these industrial sites is dictated by the load and basic configuration of each site. Higher voltage lines are used when necessary to meet applicable load requirements or to reduce line losses. That does not mean that such lines perform a transmission function. SHGP would oppose any BES definition that would by default subject either the tie lines or the internal lines at such industrial sites to the mandatory reliability standards applicable to Transmission Owners and Transmission Operators when they more readily fit the Generation Owner / Generation Operator standards. Such an expanded BES definition would subject registered entities to substantial compliance costs and create potential exposure to penalties, but would not likely substantially enhance the reliability of the BES. Perhaps such costs and exposure could be justified in exceptional circumstances, if subjecting these facilities to compliance with reliability standards were to result in a material increase in reliability of the BES. There is reason to believe, however, that in many cases the additional reliability benefit would be minimal at best. The tie lines and internal lines at industrial sites owned by SHGP and its affiliates have been operated for years as end user distribution and interconnection facilities, and practices and procedures have developed over the years that have enabled such operations to achieve a high degree of reliability for such sites. Requiring these facilities to now operate in a different manner as transmission facilities may well result in a degradation of the reliability of the manufacturing plants located at such sites. For example, outages would have to be coordinated with the RTO, which may not be interested in coordinating such outages with scheduled manufacturing plant outages. In</p>

Organization	Yes or No	Question 1 Comment
		<p>light of these considerations, SHGP agrees with the proposed revisions to the core definition, particularly the proposal to include a sentence expressly excluding facilities used in the local distribution of electric energy, provided it is understood that end user-owned delivery facilities located “behind-the-meter” are, regardless of voltage level, by default outside the scope of this definition.</p>
<p>Response: See the detailed comments on this issue in the responses to the comments on the Exception Process as well as the Detailed Information to Support an Exception Request Form.</p>		
<p>Indeck Energy Services</p>	<p>No</p>	<p>As acknowledged in the response to Question 12 comments on the previous BES definition, the BES definition is expansive compared to the definition of the BPS in the FPA Section 215. The inclusion of the limited Exclusions is an attempt to remedy the situation. However, the Exclusions need to include a fifth one that if, based on studies or other assessments, it can be shown that any transmission or generator element otherwise identified as part of the BES is not important to the reliability of the BPS, then that element should be excluded from the mandatory standards program. There has never been a study to show that elements, such as a 20 MW wind farm, 60 MW merchant generator (which operates infrequently in the depressed market) in a large BA (eg NYISO) or a radial transmission line connecting a small generator are important to the reliability of the BPS. They are covered by the mandatory standards program through the registration criteria. The BES Definition is the opportunity to permit an entity to demonstrate that an element is unimportant to reliability of the BPS. The SDT has identified a small subset of elements that it is willing to exclude. By their very nature, these exclusions dim the bright line that is the stated goal of this project. However, the SDT’s foresight seems limited in its selections. Analytical studies are used to evaluate contingencies that could lead to the Big Three (cascading outages, instability or voltage collapse). Such a study showing that a transmission or generation element is bounded by the N-1 or N-2</p>

Organization	Yes or No	Question 1 Comment
		<p>contingency would exclude it from the BES definition. For example, in a BA with a NERC definition Reportable Disturbance of approximately 400 MW (eg NYISO), a 20 MW wind farm, 60 MW merchant generator or numerous other smaller facilities would be bounded by larger contingencies. It would take more than six 60 MW merchant generators with close location and common mode failure to even be a Reportable Disturbance, much less become the N-1 contingency for the Big Three. Exclusion E5 should be “E5 - Any facility that can be demonstrated to the Regional Entity by analytical study or other assessment to be unimportant to the reliability of the BPS (with periodic reports by the Regional Entity to NERC of any such assessments).”</p>
<p>Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.</p> <p>In the event that the BES definition does not provide a definitive determination on whether an Element is classified as BES or non-BES, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.</p>		
<p>Snohomish County PUD Kootenai Electric Cooperative</p>	<p>Yes</p>	<p>The Public Utility District No. 1 of Snohomish County (“SNPD”) believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System (“BES”) that markedly improves both the existing definition and the SDT’s previous proposal. SNPD therefore strongly supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with</p>

Organization	Yes or No	Question 1 Comment
		<p>the BES definition; and, (2) the SDT moving forward expeditiously on Phase 2 of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date. SNPD strongly supports the following elements of the revised BES definition:</p> <p>(1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase “Unless modified by the lists shown below” to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., “all Transmission Elements operated at 100 kV or higher and Real Time and Reactive Power resources connected at 100 kV or higher”) and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft.</p> <p>(2) The exclusion for Local Distribution Facilities. As the starting point for the BES definition, SNPD supports use of the phrase “all Transmission Elements” and the qualifying sentence: “This does not include facilities used in the local distribution of electric energy.” This language helps ensure that FERC, NERC, and the Regional Entities (“REs”) will act within the jurisdictional constraints Congress placed in Section 215 of the Federal Power Act (“FPA”). In Section 215(a)(1), Congress unequivocally excluded “facilities used in the local distribution of electric energy” from the keystone “bulk-power system” definition. 16 U.S.C. § 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate - “instability, uncontrolled separation, [and] cascading failures,” 16 U.S.C. §</p>

Organization	Yes or No	Question 1 Comment
		<p>824o(a)(4) - will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. Â§ 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service). For similar reasons, Snohomish believes use of the phrase “Transmission Elements” as the starting point for the base definition is desirable because both “Transmission” and “Elements” are already defined in the NERC Glossary of Terms Used, and the term “Transmission” makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power.</p> <p>(3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria (“SCRC”) (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. Snohomish recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, Snohomish agrees with the approach taken by the SDT, which is to propose a Phase 2 of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase 2 proceeds expeditiously, Snohomish is prepared to support the BES definition as proposed by the SDT. While Snohomish strongly supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the</p>

Organization	Yes or No	Question 1 Comment
		<p>second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Our support for the definition is not contingent upon these changes being adopted. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, Snohomish believes a 200-kV threshold would be more appropriate for WECC than a 100-kV threshold. In addition, a 200-kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no technical analysis to support this view is therefore incorrect. That being said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, Snohomish will support the SDT’s proposal and will not further pursue its claims regarding the 200-kV threshold.</p> <p>Finally, we suggest that the SDT address the circumstance when an Element is covered by both an Inclusion and an Exclusion. We note that some of the inclusions already contain language addressing this question. For example, Inclusion 1 indicates that transformers falling within the specified parameters are part of the BES “. . . unless excluded under Exclusions E1 or E3.” Where it is not already included, similar language should be included in the other Inclusions and/or Exclusions to explain whether the SDT intends the Inclusions or the Exclusions to predominate in situations where facilities might be covered by both.</p>

Organization	Yes or No	Question 1 Comment
		We suggest clarifying language in our responses to Questions 2 and 5.
<p>Response: The exception process will be filed concurrently with the definition.</p> <p>Phase 2 of this project will begin immediately following the conclusion of Phase 1 as SDT resources free up.</p> <p>The goal of the SDT and the Rules of Procedure Team is to have the Exception Process begin concurrently with the implementation of the revised BES Definition.</p> <p>Please see responses to Q2 and Q5.</p>		
Metropolitan Water District of Southern California	Yes	Metropolitan Water District of Southern California (“MWDSC”) generally supports the core definition of the Bulk Electric System as proposed. However, some of the proposed Inclusions and Exclusions need to be clarified as identified in questionnaires #6 and #10 below.
<p>Response: Please see the detailed responses in Q6 and Q11 below.</p>		
<p>Clallam County PUD No.1</p> <p>Blachly-Lane Electric Cooperative (BLEC)</p> <p>Coos-Curry Electric Cooperative (CCEC)</p> <p>Central Electric Cooperatve (CEC)</p> <p>Clearwater Power Company (CPC)</p> <p>Consumer's Power Inc.</p> <p>Douglas Electric Cooperative (DEC)</p> <p>Fall River Rural Electric Cooperative (FALL)</p>	Yes	<p>The Public Utility District No. 1 of Clallam County (“CLPD”) believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System (“BES”) that markedly improves both the existing definition and the SDT’s previous proposal. CLPD therefore strongly supports the new definition, although our support is conditioned on: (1) a workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase 2 of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date.</p> <p>CLPD strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase “Unless modified by the lists shown below”</p>

Organization	Yes or No	Question 1 Comment
<p>Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (LEC) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) West Oregon Electric Cooperative Umatilla Electric Cooperative (UEC)</p>		<p>to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., “all Transmission Elements operated at 100 kV or higher and Real Time and Reactive Power resources connected at 100 kV or higher”) and eliminates a latent ambiguity in the first draft of the definition, discussed further in our comments on the first draft.</p> <p>(2) The exclusion for Local Distribution Facilities. As the starting point for the BES definition, CLPD supports use of the phrase “all Transmission Elements” and the qualifying sentence: “This does not include facilities used in the local distribution of electric energy.” This language helps ensure that FERC, NERC, and the Regional Entities (“REs”) will act within the jurisdictional constraints Congress placed in Section 215 of the Federal Power Act (“FPA”). In Section 215(a)(1), Congress unequivocally excluded “facilities used in the local distribution of electric energy” from the keystone “bulk-power system” definition. 16 U.S.C. Â§ 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission system, where the reliability problems Congress intended to regulate - “instability, uncontrolled separation, [and] cascading failures,” 16 U.S.C. Â§ 824o(a)(4) - will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. Â§ 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service).For similar reasons, Clallam believes use of the phrase “Transmission Elements” as the starting point for the base definition is desirable because both “Transmission” and “Elements” are already defined in the NERC Glossary of Terms Used, and the term</p>

Organization	Yes or No	Question 1 Comment
		<p>“Transmission” makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power.</p> <p>(3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry Criteria (“SCRC”) (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. Clallam recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, Clallam agrees with the approach taken by the SDT, which is to propose a Phase 2 of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase 2 proceeds expeditiously, Clallam is prepared to support the BES definition as proposed by the SDT. While Clallam strongly supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Our support for the definition is not contingent upon these changes being adopted. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our II proceeds expeditiously, Clallam is prepared to support the BES definition as proposed by the SDT. While Clallam strongly supports the overall approach adopted</p>

Organization	Yes or No	Question 1 Comment
		<p>by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Our support for the definition is not contingent upon these changes being adopted.</p> <p>Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Western Interconnection. As detailed in our previous comments, Clallam believes a 200-kV threshold would be more appropriate for WECC than a 100-kV threshold. In addition, a 200-kV threshold for the West is backed by solid technical analysis conducted by the WECC Bulk Electric System Definition Task Force, and repeated claims that there is no technical analysis to support this view is therefore incorrect. That being said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition that works in the Western Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, Clallam will support the SDT’s proposal and will not further pursue its claims regarding the 200-kV threshold.</p>
<p>Response: The exception process will be filed concurrently with the definition.</p> <p>Phase 2 of this project will begin immediately following the conclusion of Phase 1 as SDT resources free up.</p> <p>The goal of the SDT and the Rules of Procedure Team is to have the Exception Process begin concurrently with the implementation of the revised BES Definition.</p>		
Michigan Public Power Agency	Yes	The Michigan Public Power Agency (MPPA) believes the SDT continues to make substantial progress towards a clear and workable definition of the

Organization	Yes or No	Question 1 Comment
		<p>Bulk Electric System (“BES”) that markedly improves both the existing definition and the SDT’s previous proposal. MPPA therefore strongly supports the new definition, although our support is conditioned on: (1) A workable Exceptions process being developed in conjunction with the BES definition; and, (2) the SDT moving forward expeditiously on Phase 2 of the standards development process in accordance with the SAR recently put forward by the SDT, which would address a number of important technical issues that have been identified in the standards development process to date.</p> <p>MPPA strongly supports the following elements of the revised BES definition: (1) Clarification of how lists of Inclusions and Exclusions applies: The revised core definition moves the phrase “Unless modified by the lists shown below” to the beginning of the definition. This change makes clear that the Inclusions and Exclusions apply to all Elements that would otherwise be included in or excluded from the core definition (i.e., “all Transmission Elements operated at 100 kV or higher and Real Time and Reactive Power resources connected at 100 kV or higher”).</p> <p>(2) The exclusion for Local Distribution Facilities. As the starting point for the BES definition, MPPA supports use of the phrase “all Transmission Elements” and the qualifying sentence: “This does not include facilities used in the local distribution of electric energy.” This language helps ensure that FERC, NERC, and the Regional Entities (“REs”) will act within the jurisdictional constraints Congress placed in Section 215 of the Federal Power Act (“FPA”). In Section 215(a)(1), Congress unequivocally excluded “facilities used in the local distribution of electric energy” from the keystone “bulk-power system” definition. 16 U.S.C. § 824o(a)(1). Including the same language in the definition helps ensure that entities involved in enforcement of reliability standards will act within their statutory limits. In addition, as a practical matter, inclusion of the language will help focus both the industry and responsible agencies on the high-voltage interstate transmission</p>

Organization	Yes or No	Question 1 Comment
		<p>system, where the reliability problems Congress intended to regulate - “instability, uncontrolled separation, [and] cascading failures,” 16 U.S.C. Â§ 824o(a)(4) - will originate. At the same time, level-of-service issues arising in local distribution systems will be left to the authority of state and local regulatory agencies and governing bodies, just as Congress intended. 16 U.S.C. Â§ 824o(i)(2) (reserving to state and local authorities enforcement of standards for adequacy of service).</p> <p>MPPA also believes the use of the phrase “Transmission Elements” as the starting point for the base definition is desirable because both “Transmission” and “Elements” are already defined in the NERC Glossary of Terms Used, and the term “Transmission” makes clear that the BES includes only Elements used in Transmission and therefore excludes Elements used in local distribution of electric power. MPPA believes this was one of the many key elements addressed by FERC in Order No. 743 and reinforced by FERC Order No. 743A and has been missing from the previous definition as well as the original definition being used since Compliance efforts commenced in June, 2007 . Because of this lack of clarity MPPA has had numerous discussions with the region regarding all 17 of our member’s connection to the TO/TOP in Michigan. Our discussions have resulted in defending 6 of our members specifically from the “Bright Line definition” path while having no tools in our tool box to substantiate our exclusion. When a small municipality with a peak load of 12.6 MW and no generation must be defended from a TO and/or TOP registration just because of its connection to it’s TO/TOP the process requires needed adjustment for clarity. This was too small to even qualify as a DP under the Statement of Compliance Registry Criteria but must have to defend itself from a TO/TOP registration issue.</p> <p>(3) Appropriate Generator Thresholds. In the standards development process, it has become apparent that the thresholds for classifying generators as BES in the current NERC Statement of Compliance Registry</p>

Organization	Yes or No	Question 1 Comment
		<p>Criteria (“SCRC”) (20 MVA for individual generators, 75 MVA for multiple generators aggregated at a single site), which predate the adoption of FPA Section 215, were never the product of a careful analysis to determine whether generators of that size are necessary for operation of the interconnected bulk transmission system. Ideally, such an analysis would be conducted as part of the current standards development process. A member of MPPA has been involved in a registration issue and it has a 3rd party study conducted by a nation consulting firm showing for the MISO area, generation levels of 100 MVA and 300 MVA aggregate or above are below the standard calculation mathematical significant impact criteria for static and dynamic planning protocol. MPPA recognizes that, given the deadlines imposed by FERC in Order No. 743, it will not be possible for the SDT to conduct such an analysis within the time available. Accordingly, MPPA agrees with the approach taken by the SDT, which is to propose a Phase 2 of the standards development process that would address the generator threshold issue and several other technical issues that have arisen during the current process. As long as Phase 2 proceeds expeditiously, MPPA is prepared to support the BES definition as proposed by the SDT. While MPPA strongly supports the overall approach adopted by the SDT and much of the specific language incorporated into the second draft of the BES definition, we believe the second draft would benefit from further clarification or modification in a number of respects, most of which are detailed in our subsequent answers. Our support for the definition is not contingent upon these changes being adopted. Further, we believe a workable Exclusion Process is essential for a BES Definition that will meet the legal requirements of FPA Section 215, especially for systems operating in the Eastern Interconnection.</p> <p>That being said, we raise the issue here to emphasize the importance of the Exclusions for Local Networks and Radial Systems and the Exceptions process. These Exclusions and the Exceptions are essential for a definition</p>

Organization	Yes or No	Question 1 Comment
		<p>that works in the Eastern Interconnection because the core definition will be over-inclusive in our region. As long as those Exclusions and the Exceptions Process are retained in a form substantially equivalent to those produced by the SDT at this juncture, MPPA will support the SDT’s proposal.</p> <p>Finally, we suggest that the SDT address the circumstances when a facility is covered by both an Inclusion and an Exclusion. We note that some of the inclusions already contain language addressing this question. For example, Inclusion 1 indicates that transformers falling within the specified parameters are part of the BES “. . . unless excluded under Exclusions E1 or E3.” Where it is not already included, similar language should be included in the other Inclusions and/or Exclusions to explain whether the SDT intends the Inclusions or the Exclusions to predominate in situations where facilities might be covered by both. We suggest clarifying language in our comments to I1 and I4 below.</p>
<p>Response: The exception process will be filed concurrently with the definition.</p> <p>Phase 2 of this project will begin immediately following the conclusion of Phase 1 as SDT resources free up.</p> <p>The goal of the SDT and the Rules of Procedure Team is to have the Exception Process begin concurrently with the implementation of the revised BES Definition.</p> <p>See the detailed response to your comments regarding Inclusion I1 and I4 in the specific questions and responses below.</p>		
FirstEnergy Corp.	Yes	<p>However, consider changing the last sentence to read "This does not include facilities operated at less than 100kV, unless modified below, which are used in the local sub-transmission and distribution of electric energy."</p>
<p>Response: The SDT discussed your comments and decided not to change the core definition. The BES definition does not include facilities operated at less than 100 kV.</p>		
Industrial Customers of Northwest	Yes	<p>The Industrial Customers of Northwest Utilities (“ICNU”) submits the</p>

Organization	Yes or No	Question 1 Comment
Utilities		<p>following comments regarding the North American Electric Reliability Corporation’s (“NERC”) proposal for defining the Bulk Electric System (“BES”). ICNU is an incorporated, non-profit association of large end-use electric customers in the Pacific Northwest, with offices in Portland, Oregon. ICNU previously submitted comments in the Western Electricity Coordinating Council’s (“WECC”) process for defining the BES. ICNU’s members are not electric utilities, but some ICNU members own substations that are interconnected to utility transmission systems and utility distribution systems. In addition, in some cases, ICNU members operate local distribution facilities behind their substations to serve their end-use loads. In some cases, the ICNU member’s interconnection to the utility-owned transmission system or distribution system is via a utility-owned radial line; and, in others, the ICNU member’s distribution system is looped into the utility’s transmission system for reliability purposes. Finally, some ICNU members have local distribution systems that include the ICNU member’s backup generating facilities. ICNU is submitting comments, because these facilities arguably could fall within NERC’s proposed definition of BES. ICNU appreciates the work that NERC has done to date, and encourages NERC to develop a rule that recognizes the unique aspects of the Pacific Northwest transmission system and the particular needs of end-use customers. Given the arbitrary requirements and limitations imposed by the Federal Energy Regulatory Commission, ICNU supports NERC’s overall approach to defining the BES. NERC has proposed a bright line rule in which all transmission elements operated 100 kV or higher will be included in the definition, subject to certain inclusions and exclusions. ICNU supports NERC’s goal of excluding facilities in the local distribution of electric energy. NERC proposes three general classes of exclusions, which includes certain radial systems, generating units that serve all or part of retail customer’s load, and local networks. Specifically, NERC proposes that: 1) radial systems 100 kV and higher shall be excluded if they only serve load, or only include</p>

Organization	Yes or No	Question 1 Comment
		<p>certain generation resources less than 75 MVA; 2) generating units that serve customer load on the customer meter are excluded if the net capacity provided to the BES does not exceed 75 MVA and standby, back up and maintenance power services are provided; 3) local networks operated less than 300 kV that distribute power to load rather than transfer bulk power across the interconnected system; and 4) reactive power owned and operated by a retail customer solely for its own benefit. ICNU supports these exclusions; however, ICNU is concerned that certain end-use retail customer facilities that do not impact the BES may still be inappropriately included. NERC appears to recognize this possibility and includes an exception process to include or exclude facilities on a case-by-case basis. ICNU urges NERC to develop this exception process, and to review the work by WECC regarding how to structure an appropriate exception. At a minimum, the exception process should not require end-use customers to perform costly and complex studies, but should instead require utilities or regional organizations that have the relevant expertise to conduct the necessary studies to determine if a specific facility should be removed or included in the BES.</p> <p>ICNU is also concerned about the term “non-retail generation,” which does not appear to have a corresponding definition. ICNU understands that non-retail generation is intended to apply to generation behind the retail customer’s meter. ICNU recommends that net metered systems should not count towards the generation limits for radial and local network systems.</p>
<p>Response: See the detailed comments on this issue in the responses to the comments on the Rules of Procedure Exception Process as well as the Detailed Information to Support an Exception Request Form.</p> <p>To address your second comment, the SDT declined to change the term “non-retail generation”. Non-retail generation is the generation on the system (supply) side of the retail meter.</p>		

Organization	Yes or No	Question 1 Comment
PacifiCorp	Yes	<p>PacifiCorp believes the SDT continues to make substantial progress towards a clear and workable definition of the Bulk Electric System (“BES”) that markedly improves both the existing definition and the SDT’s previous proposal. PacifiCorp strongly supports the new definition, conditioned on:</p> <p>(1) a workable Exceptions process being developed in conjunction with the BES definition; and,</p> <p>(2) the SDT moving forward expeditiously on Phase 2 of the standards development process in accordance with the SAR recently put forward by the SDT.</p>
<p>Response: The SDT appreciates your support for the clarifying changes made to the core definition. The goal of the SDT and the Rules of Procedure Team is to have the Exception Process begin concurrently with the implementation of the revised BES Definition.</p> <p>Phase 2 of this project will begin immediately following the conclusion of Phase 1 as SDT resources free up.</p>		
Holland Board of Public Works	Yes	<p>Holland BPW believes that the proposed definition is an improvement to the status quo, but requires additional work. The thresholds for classifying generators as Bulk Electric System (BES) must be revised. There was little technical support for proposing the current thresholds. No greater evidence than that which was proffered for the initial thresholds should be required to modify those standards. Four years of compliance experience and industry feedback support increasing these thresholds. Holland BPW supports increasing the generation thresholds from 20 MVA (individual gross nameplate) and 75 MVA (aggregate gross nameplate) to not less than 100 MVA (individual gross nameplate) and 300 MVA (aggregate gross nameplate). Holland BPW recognizes that the SDT and NERC have committed to making these revisions as part of “Phase 2”, and are asking the industry to trust that such an initiative will not succumb to work on other initiatives. However, even if work on this initiative commences</p>

Organization	Yes or No	Question 1 Comment
		<p>immediately, entities that should be removed from the Compliance Registry face costs of compliance or the risk of non-compliance penalties even though their facilities are not necessary for the reliable operation of the interconnected transmission system.</p> <p>That said, there are two significant improvements in the revised draft. First, it is essential to make clear that the “Inclusions” and “Exclusions” apply only to the first sentence of the core definition (i.e., “Transmission Elements”). The revised definition appears to address this. By placing “Unless modified by the lists shown below” at the beginning of the first sentence of the definition clarifies that the lists of Inclusions and Exclusions pertain only to “Transmission Elements” that would otherwise be included or excluded from the core definition. The revised definition and the lists of Inclusions and Exclusions do not and cannot be applied in a manner to pull in facilities used in the local distribution of electric energy as BES facilities because Congress, by statute, has already determined that such facilities are outside of NERC’s reach, as recognized by the second sentence of the definition.</p> <p>Second, Holland BPW supports the addition of the second sentence of the core definition that states, “This does not include facilities used in the local distribution of electric energy.” This language provides necessary recognition to the jurisdictional limitation provided for in Section 215 of the Federal Power Act, and as recognized by the FERC in Orders 743 and 743-A (see, e.g., ¶¶ 58-59 in 743-A).</p> <p>Finally, if the revised definition goes forward, it is imperative that the rules of procedure providing for an exception process be adopted at the same time.</p>
<p>Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing</p>		

Organization	Yes or No	Question 1 Comment
<p>deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.</p> <p>As for your second group of comments, the SDT appreciates your support for the clarifying changes made to the core definition. The goal of the SDT and the Rules of Procedure Team is to have the Exception Process begin concurrently with the implementation of the revised BES Definition.</p>		
Dominion	Yes	Dominion agrees with the clarifying changes provided that the use of the capitalized terms “Transmission” and “Elements” mean that an Element that is radial is not part of the BES regardless of whether it is specifically included in the Exclusions (E1 through E4).
<p>Response: To the extent that a radial facility that is >100 kV does not meet the exclusion criteria as specified in Exclusions E1 through E4, the Exception Process can be used to provide a final decision on whether the facility is or is not a BES Element.</p>		
Sacramento Municipal Utility District	Yes	In an effort to avoid potential confusion and provide clarity we believe the following sentence “This does not include facilities used in the local distribution of electric energy” more appropriately fits under the “exclusions,” rather than “inclusions,” section.
ISO New England Inc	Yes	The second sentence is unclear with respect to its intent. If it’s intended to cover the exclusion described in E3, the sentence is not needed. If it’s intended to mean something else, it is unclear as to what is intended and likely should be deleted.
Manitoba Hydro	Yes	Manitoba Hydro agrees in general with the changes made to the core definition but the sentence ‘This does not include facilities used in the local

Organization	Yes or No	Question 1 Comment
		distribution of electric energy' should be removed as it is covered under Exclusion E3 and reduces the clarity of the core definition.
City of Austin dba Austin Energy	Yes	In an effort to avoid potential confusion and provide clarity we believe the sentence, "This does not include facilities used in the local distribution of electric energy," more appropriately fits under the "exclusions" (rather "inclusions") section.
Balancing Authority Northern California	Yes	In an effort to avoid potential confusion and provide clarity we believe the following sentence "This does not include facilities used in the local distribution of electric energy" more appropriately fits under the "exclusions," rather than "inclusions," section.
<p>Response: The SDT discussed your comment and decided against moving the sentence in the core definition that refers to facilities used in the local distribution of electricity to the Exclusions section. There were many commenters who were in favor of the inclusion of the sentence in the core definition.</p>		
ExxonMobil Research and Engineering	Yes	<p>However, in Order 743, FERC directed NERC to further delineate the differences between transmission systems (used to transfer electric power between regions) and distribution systems (used to deliver electric power locally). The inclusions and exclusions defined in the draft BES definition are a step in the right direction, but further work is necessary during Phase 2 to meet the intention of the order.</p> <p>Additionally, the SDT should consider defining terms, such as non-retail generation, or providing references (footnotes) that elaborate on the referenced concept.</p>
<p>Response: Thank you for your support of Phase 2.</p> <p>Non-retail generation is the generation on the system (supply) side of the retail meter.</p>		

Organization	Yes or No	Question 1 Comment
Transmission Access Policy Study Group	Yes	<p>TAPS appreciates the SDT’s work on this project. For the most part, TAPS supports what it believes to be the intent of the proposed language. The proposed specific exclusion of facilities used in the local distribution of electric energy is appropriate and consistent with Section 215 of the Federal Power Act. However, we have one suggestion to better carry out what we believe to be the SDT’s intent. The SDT proposes to change the core generation definition from the prior version’s “...Real Power resources as described below, and Reactive Power resources connected at 100 kV or higher unless such designation is modified by the list shown below,” to “Unless modified by the lists shown below, ... Real Power and Reactive Power resources connected at 100 kV or higher...” Because of this change from “as described below... unless... modified by the list shown below” to simply “unless modified by the lists shown below,” the proposed core definition now has the effect of including all generation, regardless of size, that is connected at over 100kV. We do not think this is the SDT’s intent. For the same reason, the core definition now has the effect of including all Reactive Power resources connected at over 100kV, including generators; Inclusion I5, which includes “[s]tatic or dynamic devices dedicated to supplying or absorbing Reactive Power,” does not alter the core definition’s inclusion of all Reactive Power resources connected at over 100kV (whether “dedicated” or not). The most straightforward solution to this problem is to simply delete Real and Reactive Power resources from the core definition, so that such resources are instead handled entirely in the Inclusions. The core definition would thus read: “Unless modified by the lists shown below, all Transmission Elements operated at 100 kV or higher. This does not include facilities used in the local distribution of electric energy.”</p>
Florida Municipal Power Agency	Yes	<p>FMPA appreciates the SDT’s work on this project. For the most part, FMPA supports what it believes to be the intent of the proposed language. The proposed specific exclusion of facilities used in the local distribution of</p>

Organization	Yes or No	Question 1 Comment
		<p>electric energy is appropriate and consistent with Section 215 of the Federal Power Act. However, we have suggestions to better carry out what we believe to be the SDT’s intent. The first sentence can be read as: “... all ... Real Power and Reactive Power resources connected at 100 kV or higher”, which is surely not what the SDT intends. The basic problem is that Inclusions I2 and I4 do not modify the first sentence, e.g., from a set theory perspective, the set described by the first sentence includes the sets described in inclusions I2 and I4; hence, I2 and I4 do not modify the first sentence. From a literal reading, this would cause any size generator connected at 100 kV to be included, which is surely not the intent of the SDT.</p> <p>For similar reasons, the core definition and Inclusion I5 now has the effect of including all generators connected at 100 kV since a generator is a “dynamic device ... supplying or absorbing Reactive Power”. The word “dedicated” in I5 is not sufficient in FMPA’s mind to unambiguously exclude generators from this statement.</p> <p>FMPA suggests the following wording to address these issues: "Transmission Elements (not including elements used in the local distribution of electric energy) and Real Power and Reactive Power resources as described in the list below, unless excluded by Exclusion or Exception: a. Transmission Elements other than transformers and reactive resources operated at 100 kV or higher. b. Transformers with primary and secondary terminals operated at 100 kV or higher. c. Generating resource(s) (with gross individual or gross aggregate nameplate rating per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above. d. Blackstart Resources identified in the Transmission Operator’s restoration plan. e. Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a</p>

Organization	Yes or No	Question 1 Comment
		voltage of 100 kV or above, but not including generation on the retail side of the retail meter. f. Non-generator static or dynamic devices dedicated to supplying or absorbing more than 6 MVAR of Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in bullet 2 above."
<p>Response: The SDT discussed your comments and declined to make changes to the core definition. However, clarifying changes were made to Inclusion I2 to specify the generation thresholds to be included in the BES. In addition, the SDT added a clarifying phrase to Inclusion I5 to emphasize that the item is not meant to apply to generators.</p>		
MEAG Power	Yes	MEAG agrees to the clarifying changes to the core definition in general, however, we maintain that 200kV and above is the correct bright line for the BES.
Electricity Consumers Resource Council (ELCON)	Yes	However, one of the FERC directives in Order 743 charged NERC with delineating the difference between transmission and distribution. The Inclusions and Exclusions are a step in that direction, but this subject will need more consideration in Phase 2.
Texas RE NERC Standards Subcommittee	Yes	However, one of the FERC directives in Order 743 charged NERC with delineating the difference between transmission and distribution. The Inclusions and Exclusions are a step in that direction, but this subject will need more consideration in Phase 2.
SERC OC Standards Review Group	Yes	The SERC OC Standards Review Group agrees to the clarifying changes to the core definition in general; however, we maintain that 200kV and above is the correct bright line for the Bulk Electric System.
AECl and member GandTs, Central Electric Power Cooperative, KAMO	Yes	In general, we agree with this revision. We however believe the correct voltage thresholds to be, transformer primary voltage of 200 kV or higher and

Organization	Yes or No	Question 1 Comment
Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power Cooperative		secondary voltage of 100 kV or higher.
Tennessee Valley Authority	Yes	TVA agrees to the clarifying changes to the core definition in general; however, we maintain that 200kV and above is the correct bright line for the Bulk Electric System, and requests that the Phase 2 for the project use 200kV and above or develop a transmission voltage and/or an MVA threshold that is technically based.
<p>Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.</p>		
Puget Sound Energy	Yes	This draft of the definition is very much improved. We appreciate the work of the Standard Development Team and its efforts to increase the clarity of this important definition. For additional clarity, the first paragraph should read "Unless specifically excluded under the list of exclusions below or included or excluded through the Procedure for Requesting and Receiving an Exception from the Application of the NERC Definition of Bulk Electric System, all Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher,

Organization	Yes or No	Question 1 Comment
		<p>including those Transmission Elements described in the list of inclusions below."</p> <p>The sentence "This does not include facilities used in the local distribution of electric energy." should be removed from the first paragraph. Because this issue is specifically addressed in exclusions E1 and E3, the inclusion of this general sentence here is unnecessary and could even be ambiguous (raising the question of whether additional Transmission Elements might be excluded even if not described in E1 or E2).</p>
<p>Response: The SDT discussed your comment and decided against deletion of the sentence in the core definition that refers to facilities used in the local distribution of electricity. There were many commenters who were in favor of the inclusion of the sentence in the core definition. Additionally, the SDT does not agree with the premise that the exclusions are fully sufficient to not include any facilities used in the local distribution of electricity in the definition. No change made.</p>		
Z Global Engineering and Energy Solutions	Yes	<p>We support these changes however feel that further clarification needs to be made regarding the E1 Note. This note currently states "Note - A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion" This note is not clear. We recommend that the note is rewritten to be clear that a normally open switching device should not be viewed as normally closed as the regions are currently doing. Possible language: "Note: A normally open switching device between radial systems, as depicted on prints or oneline diagrams, for example, does not classify the two or more radial lines as a loop line. The exclusion will still apply."}</p>
<p>Response: The SDT discussed your comment and declined to make the suggested change. It is the intent of the SDT that a switch that is marked normally open as depicted on prints or one-lines be treated as normally open when deciding whether a facility is or is not a BES Element.</p>		
Northern Wasco County PUD	Yes	<p>We agree with the changes. We must point out that the overall flow, or how one proceeds through the inclusions and exclusions is not clear. Can an item</p>

Organization	Yes or No	Question 1 Comment
		<p>that meets an inclusion be subsequently excluded? If so, this needs to be explicitly stated. So far, we only have the flow chart produced by the ROP team that indicates otherwise (http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf). This was made evident by the question at the 9/28 webinar regarding an I5 capacitor on an E3 local network. The questioner thought the capacitor was BES per I5, but the answer was that it was excluded per E3. We can find no support for the answer given. The listing of specific exclusions within I1 (exception proves the rule) argues for questioner’s stance that the capacitor is BES as written. Also, if included items could subsequently be excluded, they would be no different from any other item that met the voltage threshold of 100kV. There would be no need for any of the inclusions if all possible outputs from the inclusion tests go to the same exclusion test inputs. We strongly support the addition of the language regarding local distribution facilities, as it matches congressional intent to leave the regulation of these facilities to state and local authorities.</p>
Harney Electric Cooperative, Inc.	Yes	<p>HEC agrees with the changes by the SDT. Although HEC believes that there needs to be explicit language stating whether or not an item that meets inclusion can be overridden by an exclusion. An example of this was given during the Webinar on 9/28 regarding a Capacitor included under I5 yet excluded under E3 according to the NERC representative.</p>
Central Lincoln	Yes	<p>We agree with the changes. We must point out that the overall flow, or how one proceeds through the inclusions and exclusions is not clear. Can an item that meets an inclusion be subsequently excluded? If so, this needs to be explicitly stated. So far, we only have the flow chart produced by the ROP team that indicates otherwise (http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf). This was made evident by the question at the 9/28 webinar regarding an I5 capacitor on an E3 local network. The questioner thought the capacitor was</p>

Organization	Yes or No	Question 1 Comment
		<p>BES per I5, but the answer was that it was excluded per E3. We can find no support for the answer given. The listing of specific exclusions within I1 (exception proves the rule) argues for questioner’s stance that the capacitor is BES as written. Also, if included items could subsequently be excluded, they would be no different from any other item that met the voltage threshold of 100kV. There would be no need for any of the inclusions if all possible outputs from the inclusion tests go to the same exclusion test inputs. We strongly support the addition of the language regarding local distribution facilities, as it matches congressional intent to leave the regulation of these facilities to state and local authorities.</p>
Mission Valley Power	Yes	<p>Mission Valley Power - We agree with the changes. We must point out that the overall flow, or how one proceeds through the inclusions and exclusions is not clear. Can an item that meets an inclusion be subsequently excluded? If so, this needs to be explicitly stated. So far, we only have the flow chart produced by the ROP team that indicates otherwise (http://www.nerc.com/docs/standards/sar/20110428_BES_Flowcharts.pdf). This was made evident by the question at the 9/28 webinar regarding an I5 capacitor on an E3 local network. The questioner thought the capacitor was BES per I5, but the answer was that it was excluded per E3. We can find no support for the answer given. The listing of specific exclusions within I1 (exception proves the rule) argues for questioner’s stance that the capacitor is BES as written. Also, if included items could subsequently be excluded, they would be no different from any other item that met the voltage threshold of 100kV. There would be no need for any of the inclusions if all possible outputs from the inclusion tests go to the same exclusion test inputs. We strongly support the addition of the language regarding local distribution facilities, as it matches congressional intent to leave the regulation of these facilities to state and local authorities.</p>
<p>Response: The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will</p>		

Organization	Yes or No	Question 1 Comment
		<p>identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.</p> <p>Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:</p> <p>“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. “</p> <p>Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.</p> <p>Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.</p> <p>Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.</p> <p>Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.</p> <p>Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2.</p> <p>Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.</p> <p>In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.</p>

Organization	Yes or No	Question 1 Comment
Long Island Power Authority	Yes	Need to define the term "local distribution"
<p>Response: The SDT believes that with the last sentence in the core definition and Exclusions E1 and E3 that the term has been sufficiently distinguished with regard to the BES. No change made.</p>		
Utility Services, Inc.	Yes	<p>Upon reflection of the core definition and BES Inclusion Designations, Utility Services believes that there is an unintended redundancy between the two. Utility Services would like to suggest that the portion of the core definition that refers to the Real and Reactive Power resources be removed from the core and to leave the Inclusions as is.</p>
<p>Response: The SDT discussed your comment and decided against making a change to the core definition. However, a new parenthetical was added in Inclusion I5 to clarify that the item is meant to exclude generators.</p>		
Cowlitz County PUD	Yes	<p>Cowlitz County PUD No. 1 (Cowlitz) commends the SDT for the simplified concise core definition. However, Cowlitz believes that only Real and Reactive Power resources necessary for the support of the BES should be included. Therefore, Cowlitz suggests the core definition or the Inclusions section state this. This will allow basis for demonstrating resource Elements should be excluded from the BES through the Rules of Procedure exception process. This is not to say that owners of non-BES resource Elements should not be registered, as such entities may still have an obligation to contribute BES Reliability functions. Cowlitz votes affirmative and believes the above concern can be addressed in Phase 2.</p>
<p>Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of</p>		

Organization	Yes or No	Question 1 Comment
<p>industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.</p>		
<p>Ameren</p>	<p>Yes</p>	<p>a)The general concept is sound, but the Inclusion and Exclusion sections create so many circular references it is virtually impossible to take a definitive stance on whether an asset is included or excluded to the BES definition. Please revise the inclusion and exclusion criteria to give pinpointed statements that are final and do not reference other criteria, that then again reference other criteria.</p> <p>b)We believe that 200kV and above is the appropriate bright line for the Bulk Electric System.</p> <p>c)In I5, only those Reactive Power devices applied for the purpose of BES support or BES voltage control should be included. A Reactive Power device connected at >100kV but used for the purpose of voltage support to local load should not be included.</p> <p>d)The core definition uses "Transmission Elements" while E1 uses "transmission Elements". What is the difference? If one or both terms are applicable, their definition should be included.</p>
<p>Response: The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.</p> <p>Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:</p> <p>“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit</p>		

Organization	Yes or No	Question 1 Comment
		<p>breaker, bus section, or transmission line. An element may be comprised of one or more components. “</p> <p>Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.</p> <p>Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.</p> <p>Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.</p> <p>Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.</p> <p>Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2.</p> <p>Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.</p> <p>In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.</p> <p>The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the</p>

Organization	Yes or No	Question 1 Comment
		<p>definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.</p> <p>The SDT points the commenter to Exclusion E4 for the handling of such a situation.</p> <p>The SDT considered the disposition of the word “transmission” in the context of Exclusion E1, and determined that retention of this word – in lower-case – is necessary to modify the word “Element”. This is meant to eliminate the generation that would otherwise be included in the term “Element”.</p>
<p>The Dow Chemical Company</p>	<p>Yes</p>	<p>The Dow Chemical Company (“Dow) is an international chemical and plastics manufacturing firm and a leader in science and technology, providing chemical, plastic, and agricultural products and services to many essential consumer markets throughout the world. Dow and certain of its worldwide affiliates and subsidiaries, including Union Carbide Corporation, own and operate electrical facilities at a number of industrial sites within the U.S., principally, in Texas and Louisiana. The electrical facilities at these various industrial sites are configured similarly and perform similar functions. In most cases, a tie line or lines connect the industrial site to the electric transmission grid. Power is delivered from the electric transmission grid to the industrial site through the tie line(s). Lines “behind-the-meter” within the industrial site then deliver power to individual manufacturing plants within the site. Additionally, cogeneration facilities, some of which are well over 75 MW in size, are located at a number of industrial sites owned by Dow and its subsidiaries. These cogeneration facilities generate power that is distributed within the industrial site and used for manufacturing plant operations. In some instances, excess power not required for plant operations is delivered back into the electric transmission grid through the tie line(s) connecting the industrial site to the grid. While the tie lines and some of the internal lines at these industrial sites operate at 100kV or higher, they do not perform anything that resembles a transmission</p>

Organization	Yes or No	Question 1 Comment
		<p>function. Rather than transmit power long distances from generation to load centers, the tie lines and internal lines perform primarily an end user distribution function consisting of the distribution of power brought in from the grid or generated internally to different plants within each industrial site. In some cases, the facilities also perform an interconnection function to the extent they enable power from cogeneration facilities to be delivered into the grid. The voltage of the tie lines and internal lines at these industrial sites is dictated by the load and basic configuration of each site. Higher voltage lines are used when necessary to meet applicable load requirements or to reduce line losses. That does not mean that such lines perform a transmission function. At some sites, Dow is registered as a Generation Owner and Generation Operator. At other sites, the applicable Regional Entity has found that such registration is not required because of the relatively small amount of power supplied to the grid from the applicable cogeneration resources, even though those cogeneration resources have an aggregate capacity greater than 75 MVA (gross aggregate nameplate rating). Tie lines (to the grid) and internal lines at an industrial site that operate at 100kV or higher should be excluded from the BES definition if, due to the relatively small amount of power supplied to the grid from the generation resources at the site, the owner of those generation resources is not required to be registered as a Generation Owner and the operator of those generation resources is not required to be registered as a Generation Operator. At sites where the owner of the generation resources is registered as a Generation Owner and the operator of those generation resources is registered as a Generation Operator, the internal lines (between the generation resources and the manufacturing plants) that operate at 100kV or higher should be excluded from the BES definition, because they are distribution and not transmission facilities. The lines interconnecting the generation resources at such sites to the transmission grid should be included in the BES definition, but the owner and operator of such</p>

Organization	Yes or No	Question 1 Comment
		<p>interconnection lines should not be registered as a Transmission Owner or Transmission Operator. In no instance has a Regional Entity determined that Dow or any subsidiary should be registered as a Transmission Owner or Transmission Operator. Instead, such interconnection lines should be considered as part of the generation resource and Generation Owners and Generation Operators should be subject to reliability standards specifically developed for such interconnection lines. Dow is strongly opposed to any BES definition that would result in either the tie lines or the internal lines at industrial sites being subject to the mandatory reliability standards applicable to Transmission Owners and Transmission Operators.</p> <p>Complying with reliability standards would cause Dow and its subsidiaries to incur substantial compliance costs and create potential exposure to penalties in the future for noncompliance. Perhaps such costs and exposure could be justified if subjecting these facilities to compliance with reliability standards resulted in a material increase in reliability of the BES, but there is no reason to believe that will be the case. In fact, the opposite might be true. The tie lines and internal lines at industrial sites owned by Dow and its subsidiaries have been operated for decades as end user distribution and interconnection facilities, and practices and procedures have developed over the years that have enabled such operations to achieve a high degree of reliability for such sites. Requiring these facilities to now operate in a different manner as transmission facilities may well result in a degradation of the reliability of the manufacturing plants located at such sites. For example, outages would have to be coordinated with the RTO, which may not be interested in coordinating such outages with scheduled manufacturing plant outages. In light of these considerations, Dow agrees with the proposed revisions to the core definition, particularly the proposal to include a sentence expressly excluding facilities used in the local distribution of electric energy, provided it is understood that end user-owned delivery facilities located “behind-the-meter” are, regardless of</p>

Organization	Yes or No	Question 1 Comment
		voltage level, presumptively outside the scope of this definition.
<p>Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT’s efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission’s concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration.</p>		
City of Redding	Yes	<p>Redding is concerned that NERC has a predetermined definition of Distribution Facilities and will not evaluate networked distribution facilities fairly. NERC stated their predetermined position in their “MOTION TO INTERVENE AND COMMENTS OF THE NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION” filed in the case of the City of Holland, Michigan (Docket No. RC11-5-000). On page 10 and 11 of this motion, under the section labeled “A. Holland’s 138 kV lines are transmission rather than local distribution facilities” NERC states “Distribution facilities generally are characterized as elements that are designed and can carry electric energy (Watts/MW) in one direction only at any given time from a single source point (distribution substation) to final load centers.” NERC is clearly states that only radial facilities are considered distribution facilities and are unwilling to consider that network facilities over 100Kv could be classified as Distribution Facilities. Holland’s claim of NERC over reaching their authority appears to have credibility. In conclusion, Redding supports the addition of Distribution Facilities as an exclusion but believes that the BES Definition phase 2 needs to clearly define the difference between Distribution and Transmission Facilities by identifying the equipment “necessary for the Reliable Operation of the interconnected bulk power transmission system”.</p>
<p>Response: See the detailed comments on this issue in the Responses to the comments to the Question 2 of the Exception Process</p>		

Organization	Yes or No	Question 1 Comment
<p>as well as the Detailed Information to Support an Exception Request Form.</p> <p>The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.</p>		
Xcel Energy		In general, Xcel Energy supports the changes to the core definition of Bulk Electric System. Some additional clarification may be required as suggested below under the individual Inclusions or Exclusions.
Tacoma Power	Yes	Tacoma Power supports the core definition as currently written.
Redding Electric Utility	Yes	
ATC LLC	Yes	
Portland General Electric Company	Yes	
Farmington Electric Utility System	Yes	
Georgia System Operations Corporation	Yes	
Nebraska Public Power District	Yes	The drafting team has done a great job of adding clarity and to improving the BES definition. Although more work is needed as noted in comments

Organization	Yes or No	Question 1 Comment
		below, overall the drafting team is on the right track with the BES definition.
Oncor Electric Delivery Company LLC	Yes	
LCRA Transmission Services Corporation	Yes	
Memphis Light, Gas and Water Division	Yes	
Independent Electricity System Operator	Yes	
PSEG Services Corp	Yes	
Orange and Rockland Utilities, Inc.	Yes	
City of St. George	Yes	The core definition is acceptable as long as the concerns for inclusion and exclusion are addressed as outlined in the other comments.
American Electric Power	Yes	
Tillamook PUD	Yes	We strongly support the addition of the language regarding local distribution facilities, as it matches congressional intent to leave the regulation of these facilities to state and local authorities.
Consumers Energy	Yes	
Springfield Utility Board	Yes	SUB particularly agrees with the addition of, "This does not include facilities used in the local distribution of electric energy." to the BES draft definition.

Organization	Yes or No	Question 1 Comment
NV Energy	Yes	The core definition is simpler than the prior version. We support the addition of the last sentence regarding the exclusion of facilities used in the local distribution of electric energy.
Duke Energy	Yes	
Chevron U.S.A. Inc.	Yes	Yes. Very good progress was made in the process. The initial overly broad language was inadvertently including parties that are not necessary to meet the NERC and FERC goals. The current language has clarified some of the ambiguities.
Central Hudson Gas and Electric Corporation	Yes	
Idaho Falls Power	Yes	We generally support the changes made.
Exelon	Yes	
Southern Company	Yes	
Texas Industrial Energy Consumers	Yes	
Tri-State GandT	Yes	We believe that the new definition is a good clarification.
Western Area Power Administration	Yes	
Tri-State Generation and Transmission Assn., Inc. Energy Management	Yes	We believe that the new definition is a good clarification.
MRO NERC Standards Review Forum	Yes	

Organization	Yes or No	Question 1 Comment
(NSRF)		
Pepco Holdings Inc and Affiliates	Yes	
ACES Power Marketing Standards Collaborators	Yes	
WECC Staff	Yes	
Bonneville Power Administration	Yes	
Northeast Power Coordinating Council	Yes	
SERC Planning Standards Subcommittee	Yes	
BGE	Yes	No comment.
Response: Thank you for your support.		

2. **The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I1 (transformers)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.**

Summary Consideration: Several commenters asked for additional clarity in the description of the types of transformers covered by Inclusion I1 and in response the SDT has slightly revised the language in Inclusion I1 based upon comments received and to provide additional clarity as shown below.

Several commenters suggested that Inclusion I1 contain a statement to identify the subset of transformers that are not covered by Inclusion I1 and the SDT declined to make this revision. The SDT believes the use of language in the definition to state what is also excluded is redundant and not needed in the definition.

Some comments were received suggesting modifying to Inclusion I1 to add a 200 kV threshold. Using a 200 kV voltage threshold and/or an MVA threshold for inclusion of transformers in the BES and the addition of demarcation points will be considered in Phase 2 of this effort. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

Several commenters asked for additional clarity on the hierarchy of inclusions and exclusions. The SDT provides the following guidance on this topic.

The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. “

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.

Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2.

Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.

In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.

I1 - Transformers with the primary terminal and at least one secondary terminals operated at 100 kV or higher unless excluded under Exclusion E1 or E3.

Organization	Yes or No	Question 2 Comment
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Organization	Yes or No	Question 2 Comment
Northeast Power Coordinating Council	No	More specific description is needed for the equipment intended to be included in I1. For example, is it intended to include autotransformers, PARs, primary, secondary, tertiary windings, etc.? There will be difficulty applying the definition to facilities without this detail. Suggest rewording to: All transformers (including auto-transformers, voltage regulators, and phase angle regulators and all windings) with primary and secondary terminals operated at or above 100kV, and generator step-up (GSU) transformers with one terminal operated at or above 100KV, unless excluded by E1 or E3.
NESCOE	No	NESCOE supports the revised Inclusion I1 language that treats Exclusions E1 and E3 as alternative exclusions, either of which may qualify as an exclusion. However, specificity is needed regarding what equipment is included in I1 (e.g., autotransformers, PARs, primary, secondary, tertiary windings).
Massachusetts Department of Public Utilities	No	The MA DPU supports the revised Inclusion I1 language that treats Exclusions E1 and E3 as alternative exclusions, either of which may qualify as an exclusion. However, specificity is needed regarding what equipment is included in I1 (e.g., autotransformers, PARs, primary, secondary, tertiary windings).
<p>Response: Several commenters indicated that additional specificity is needed to describe the transformers in Inclusion I1 and the SDT added the word, “terminal” and the phrase, “at least one” to Inclusion I1 for additional clarity. The revised Inclusion I1 now reads:</p> <p>I1 - Transformers with <u>the</u> primary <u>terminal</u> and <u>at least one</u> secondary terminals operated at 100 kV or higher unless excluded under Exclusion E1 or E3.</p> <p>The SDT provides the following guidance with respect to inclusions and exclusions to provide clarity on how to use the definition and in response to your comment:</p> <p>The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.</p> <p>Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between</p>		

Organization	Yes or No	Question 2 Comment
		<p>BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:</p> <p>“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. “</p> <p>Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.</p> <p>Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.</p> <p>Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.</p> <p>Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.</p> <p>Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2.</p> <p>Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.</p> <p>In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.</p>
AECI and member GandTs,	No	“100 kV or above” should be modified to “200 kV or above with a registered

Organization	Yes or No	Question 2 Comment
Central Electric Power Cooperative, KAMO Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power Cooperative		rating of 150 MVA or greater.”
<p>Response: The issue of transformer voltage level and possibly an MVA threshold level will be discussed in Phase 2 of this project. No change made.</p>		
Duke Energy	No	For clarity regarding 3 and 4 winding transformers, it should say “primary and at least one secondary terminal operated at 100 kV or higher.
<p>Response: The SDT has revised the language to provide the clarity suggested in the comment.</p> <p>I1 - Transformers with <u>the primary terminal</u> and <u>at least one</u> secondary terminals operated at 100 kV or higher unless excluded under Exclusion E1 or E3.</p>		
New York State Dept of Public Service	No	o I1 lacks specificity that can lead to confusion and required clarifications. Suggested wording change: All transformers (including auto-transformers, voltage regulators, and phase angle regulators and all windings) with primary and secondary terminals operated at or above 100 kV, and generator step-up (GSU) transformers with one terminal operated at or above 100 kV, unless excluded by E1 or E3.
ISO New England Inc	No	I1 needs to be clarified such that it is clear on whether this includes autotransformers, phase angle regulators, and devices which have a tertiary winding. Using the tertiary winding as an example, it is not clear whether the tertiary winding itself is considered BES, especially if it is serving a radial system

Organization	Yes or No	Question 2 Comment
		as described in E1.
<p>Response: The SDT has slightly revised the language in Inclusion I1 based upon comments received and to provide clarity. Since a transformer is one Element, any additional tertiary windings would be included in the BES if a transformer meets this criterion for inclusion.</p> <p>I1 - Transformers with <u>the</u> primary <u>terminal</u> and <u>at least one</u> secondary terminals operated at 100 kV or higher unless excluded under Exclusion E1 or E3.</p>		
Rochester Gas and Electric and New York State Electric and Gas	No	We generally agree, but suggest modification to the language of Inclusion I1 to clarify its application for transformers with more than two windings: “Transformers with two or more terminals operated at 100 kV or higher, unless excluded under Exclusion E1 and E3.” Based on this wording, transformer tertiary windings would also be BES - is that the intent?
Central Maine Power Company	Yes	We generally agree, but suggest modification to the language of Inclusion I1 to clarify its application for transformers with more than two windings: “Transformers with two or more terminals operated at 100 kV or higher, unless excluded under Exclusion E1 or E3.” Based on this wording, transformer tertiary windings would also be BES - is that the intent?
<p>Response: It is correct that associated tertiary windings are included in the BES if the transformer is based upon the language in Inclusion I1. Also, the SDT has slightly revised the language in Inclusion I1 based upon comments received and to provide clarity. Since a transformer is one Element, any additional tertiary windings would be included in the BES if a transformer meets this criterion for inclusion.</p> <p>I1 - Transformers with <u>the</u> primary <u>terminal</u> and <u>at least one</u> secondary terminals operated at 100 kV or higher unless excluded under Exclusion E1 or E3.</p>		
LCRA Transmission Services Corporation	No	LCRA TSC supports the inclusion of transformers (with both the primary and secondary windings operated at 100-kV or higher) in the BES definition; however, additional clarification is suggested. The term transformers needs to

Organization	Yes or No	Question 2 Comment
		<p>be further defined with respect to function (auto transformers, phase angle regulators, generator step-up transformers, etc.). Similarly, a separate definition for “Transformer” could be developed and included in the NERC Glossary of Terms.</p>
<p>Response: The SDT believes the existing language is clear and the proposed additional language would be redundant. However, in response to comments from others, the SDT has made clarifying changes to Inclusion I1 that should address your concerns and obviate the need for a separate definition for transformers.</p> <p>I1 - Transformers with <u>the</u> primary <u>terminal</u> and <u>at least one</u> secondary terminals operated at 100 kV or higher unless excluded under Exclusion E1 or E3.</p>		
ExxonMobil Research and Engineering	Yes	<p>The Inclusion I1 contains the phrase “unless excluded under Exclusion E1 or E3”. While recognizing that this is a welcomed clarification on how I1 interacts with the Exclusion section, it is inconsistent with Inclusions I2 through I5. The BES SDT team should consider how to standardize the language around the interactions between the Inclusions and Exclusions (perhaps add an “unless” qualifier for each Inclusion).</p>
<p>Response: The SDT provides the following guidance with respect to inclusions and exclusions to provide clarity on how to use the definition and in response to your comment:</p> <p>The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.</p> <p>Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:</p> <p>“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. “</p> <p>Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of</p>		

Organization	Yes or No	Question 2 Comment
		<p>electric energy.</p> <p>Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.</p> <p>Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.</p> <p>Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.</p> <p>Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2.</p> <p>Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.</p> <p>In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.</p>
Ameren	Yes	<p>Agree in general, but have the following comments: a) We agree in general with the revisions to the specific inclusions for transformers in I1; however, we believe the transformer voltage level should be 200kV or above.</p> <p>b) The inclusion is unclear since it includes a certain voltage transformers, but excludes those that have E1 or E3 Exclusion criteria. Each exclusion criteria has multiple stipulations to its applicability, and then has a final inclusive reference to I3. Please make the wording exact and not dependent on clausal statements.</p>

Organization	Yes or No	Question 2 Comment
		<p>Response: The issue of transformer voltage level and possibly an MVA threshold level will be discussed in Phase 2 of this project.</p> <p>The SDT provides the following guidance with respect to inclusions and exclusions to provide clarity on how to use the definition and in response to your comment:</p> <p>The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.</p> <p>Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:</p> <p>“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. “</p> <p>Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.</p> <p>Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.</p> <p>Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.</p> <p>Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.</p> <p>Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2.</p>

Organization	Yes or No	Question 2 Comment
<p>Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.</p> <p>In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.</p>		
<p>Memphis Light, Gas and Water Division</p>	<p>Yes</p>	<p>We believe further clarification is needed to limit BES transformers only to those serving the transmission system and not distribution loads, such as excluding transformers with one or both terminals operating below 100 kV.</p>
<p>Response: Transformers are excluded from the BES if the secondary terminal operates below 100 kV. No change made.</p>		
<p>Puget Sound Energy</p>	<p>Yes</p>	<p>Inclusion I1 references primary and secondary terminals of transformers, while Inclusions I2 and I5 reference the high-side of transformers. The SDT should consider using consistent terminology throughout the definition for this concept.</p>
<p>Response: The SDT has reviewed the entire document for consistency in phrasing but in this particular situation finds no problem in the terminology employed. No change made.</p>		
<p>Michigan Public Power Agency Clallam County PUD No.1 Blachly-Lane Electric Cooperative (BLEC) Coos-Curry Electric Cooperative (CCEC) Central Electric Cooperative (CEC)</p>	<p>Yes</p>	<p>MPPA supports the SDT’s changes to the first Inclusion because it is more clear and simple than the initial approach. That being said, we suggest that an additional sentence of clarification would help avoid future controversy about the meaning of Inclusion 1. As MPPA understands it, the BES intends to include transformers only if both the primary and secondary terminals operate at 100 kV or above, which is why the definition uses the word “and” (“the primary and secondary terminals”). We support this approach since it would exclude transformers where the secondary terminals serve distribution loads, and which therefore function as distribution rather than transmission facilities. MPPA believes the SDT’s intent would be clarified by adding a sentence at the end of</p>

Organization	Yes or No	Question 2 Comment
<p>Clearwater Power Company (CPC)</p> <p>Snohomish County PUD</p> <p>Consumer's Power Inc.</p> <p>Douglas Electric Cooperative (DEC)</p> <p>Fall River Rural Electric Cooperative (FALL)</p> <p>Lane Electric Cooperative (LEC)</p> <p>Lincoln Electric Cooperative (LEC)</p> <p>Northern Lights Inc. (NLI)</p> <p>Okanogan County Electric Cooperative (OCEC)</p> <p>Pacific Northwest Generating Cooperative (PNGC)</p> <p>Raft River Rural Electric Cooperative (RAFT)</p> <p>West Oregon Electric Cooperative</p> <p>Umatilla Electric Cooperative (UEC)</p> <p>Kootenai Electric Cooperative</p>		<p>Inclusion 1 that reads: “Transformers with either primary or secondary terminals, or both, that operate at or below 100 kV are not part of the BES.” This language will help ensure that there is no controversy over whether the SDT’s use of the word “and” in the phrase “the primary and secondary terminals” was intentional.</p> <p>We also support the SDT’s proposal to develop detailed guidance concerning the point of demarcation between BES and non-BES elements in the Phase 2 SAR. In this regard, we note that, while Inclusion 1 at least implicitly suggests that the dividing line between BES and non-BES Elements should be at the transformer where transmission-level voltages are stepped down to distribution-level voltages, we believe further clarification of this point of demarcation between the BES and non-BES Elements is necessary. There are many different configurations of transformers and other equipment that may lie at the juncture between the BES and non-BES systems. If the point of demarcation is designated at the transformer without further elaboration, many entities that own equipment on the high side of a transformer will be swept into the BES, and thereby exposed to inappropriately stringent regulations and undue costs. For example, distribution-only utilities commonly own the switches, bus and transformer protection devices on the high side of transformers where they take delivery from their transmission provider. Ownership of these protective devices and high-voltage bus on the high side of the transformer should not cause these entities to be classified as BES owners. MPPA has some members who have been forced to sell of such assets in the hopes of remove the necessity for a TO/TOP registration path in this region.</p> <p>We also support the incorporation of language (“ . . . unless excluded under Exclusions E1 or E3”) making it clear that transformers that are operated as an integral part of a Radial System or Local Network should not be considered BES facilities, regardless of their operating voltage. Further clarification might be achieved by using the phrase “ . . . unless the transformer is operated as part of a Radial System meeting the requirements of Exclusion E1 or a Local Network</p>

Organization	Yes or No	Question 2 Comment
		meeting the requirements of Exclusion E2.”
<p>Response: The SDT has slightly revised Inclusion I1 to provide additional clarity. The SDT believes it is not necessary to state what transformers are not included in the BES, which would be redundant.</p> <p>I1 - Transformers with <u>the primary terminal</u> and <u>at least one</u> secondary terminals operated at 100 kV or higher unless excluded under Exclusion E1 or E3.</p> <p>The development of demarcation points will be included in Phase 2 of this project.</p> <p>The SDT provides the following guidance with respect to inclusions and exclusions to provide clarity on how to use the definition and in response to your comment:</p> <p>The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.</p> <p>Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:</p> <p>“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. “</p> <p>Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.</p> <p>Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.</p> <p>Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.</p> <p>Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3</p>		

Organization	Yes or No	Question 2 Comment
<p>(local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.</p> <p>Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2.</p> <p>Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.</p> <p>In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.</p>		
Cowlitz County PUD	Yes	Cowlitz supports the SDT’s efforts to simplify this inclusion. However, Cowlitz suggests the following change to clarify the inclusive nature of the use of “and:” Transformers with primary and secondary terminals both operated at 100 kV or higher...
City of Austin dba Austin Energy	Yes	We believe additional clarification of transformers to be included may be achieved with respect to auto transformers, phase angle regulators and generator step-up transformers by adding the following sentence: All transformers (including autotransformers, voltage regulators, and phase angle regulators) with primary and secondary terminals operated at or above 100kV, unless excluded by E1 or E3.
Sacramento Municipal Utility District	Yes	We believe additional clarification of transformers that are to be included may be achieved with respect to auto transformers, phase angle regulators and generator step-up transformers by adding the following recommended sentence: “All transformers (including autotransformers, voltage regulators, and phase angle regulators) with primary and secondary terminals operated at or above 100kV, unless excluded by E1 or E3.”

Organization	Yes or No	Question 2 Comment
Utility Services, Inc.	Yes	Utility Services supports the comments offered by other commenters who suggest that transformers and other related devices be mentioned in the inclusion.
PacifiCorp	Yes	PacifiCorp suggests a clarification to I1 to provide as follows: “Transformers with either primary or secondary terminals, or both, that operate at or below 100 kV are not part of the BES.”
Balancing Authority Northern California	Yes	We believe additional clarification of transformers that are to be included may be achieved with respect to auto transformers, phase angle regulators and generator step-up transformers by adding the following recommended sentence: “All transformers (including autotransformers, voltage regulators, and phase angle regulators) with primary and secondary terminals operated at or above 100kV, unless excluded by E1 or E3.”
<p>Response: The SDT has slightly revised the language in Inclusion I1 based upon comments received and to provide clarity.</p> <p>I1 - Transformers with <u>the</u> primary <u>terminal</u> and <u>at least one</u> secondary terminals operated at 100 kV or higher unless excluded under Exclusion E1 or E3.</p>		
PacifiCorp	Yes	PacifiCorp suggests a clarification to I1 to provide as follows: “Transformers with either primary or secondary terminals, or both, that operate at or below 100 kV are not part of the BES.”
<p>Response: The SDT believes it is not necessary to state what transformers are not included in the BES, which would be redundant. No change made.</p>		
Florida Municipal Power Agency	Yes	Please see comments to Question 1
<p>Response: Please see response to Q1.</p>		

Organization	Yes or No	Question 2 Comment
MEAG Power	Yes	We agree in general with the revisions to the specific inclusions for transformers in I1; however, we believe the transformer voltage level should be 200kV or above.
Tennessee Valley Authority	Yes	TVA agrees in general with the revisions to the specific inclusions for transformers in I1; however, we believe the low side transformer voltage level should be 200kV or above, and requests that the Phase 2 for the project use 200kV and above or develop a transmission voltage and/or an MVA threshold that is technically based.
SERC OC Standards Review Group	Yes	We agree in general with the revisions to the specific inclusions for transformers in I1; however, we believe the transformer voltage level should be 200kV or above.
<p>Response: The issue of transformer voltage level and possibly an MVA threshold level will be discussed in Phase 2 of this project. No change made.</p>		
National Grid	Yes	
Farmington Electric Utility System	Yes	
South Houston Green Power, LLC	Yes	
Portland General Electric Company	Yes	
Northern Wasco County PUD	Yes	Northern Wasco County PUD strongly agrees with this inclusion as written. It is consistent with the recent PRC-004 and PRC-005 interpretation and the NERC definition of Transmission. We believe the recent changes to this inclusion add

Organization	Yes or No	Question 2 Comment
		clarity.
Georgia System Operations Corporation	Yes	
Nebraska Public Power District	Yes	
Kansas City Power and Light Company	Yes	
Oncor Electric Delivery Company LLC	Yes	
Harney Electric Cooperative, Inc.	Yes	HEC agrees with the inclusions to I1 and believes that add clarity to the definition.
Central Lincoln	Yes	Central Lincoln strongly agrees with this inclusion as written. It is consistent with the recent PRC-004 and PRC-005 interpretation and the NERC definition of Transmission. We believe the recent changes to this inclusion add clarity.
PSEG Services Corp	Yes	
Hydro-Quebec TransEnergie	Yes	
Independent Electricity System Operator	Yes	
Orange and Rockland Utilities, Inc.	Yes	
Tillamook PUD	Yes	Tillamook PUD strongly agrees with this inclusion as written. It is consistent with the recent PRC-004 and PRC-005 interpretation and the NERC definition of

Organization	Yes or No	Question 2 Comment
		Transmission. We believe the recent changes to this inclusion add clarity.
American Electric Power	Yes	
Manitoba Hydro	Yes	
Long Island Power Authority	Yes	
The Dow Chemical Company	Yes	
City of St. George	Yes	
Mission Valley Power	Yes	Mission Valley Power - Comments: Mission Valley Power strongly agrees with this inclusion as written. It is consistent with the recent PRC-004 and PRC-005 interpretation and the NERC definition of Transmission. We believe the recent changes to this inclusion add clarity.
NV Energy	Yes	The changes made to I1 (Transformers) appropriately resolves several of the industry concerns about three-winding transformers as well as an inadvertent use of the word "and" rather than "or".
Z Global Engineering and Energy Solutions	Yes	
Consumers Energy	Yes	
Springfield Utility Board	Yes	SUB supports and appreciates the change in language from, "unless excluded under Exclusions E1 and E3" to "Exclusion E1 or E3". This makes it clear that Radial System or Local Network transformers should not be considered BES facilities, regardless of operating voltage.

Organization	Yes or No	Question 2 Comment
Chevron U.S.A. Inc.	Yes	
Metropolitan Water District of Southern California	Yes	
Idaho Falls Power	Yes	We support the language as drafted.
ReliabilityFirst	Yes	
Ontario Power Generation Inc.	Yes	
Central Hudson Gas and Electric Corporation	Yes	
City of Anaheim	Yes	
Southern Company	Yes	
FirstEnergy Corp.	Yes	
Exelon	Yes	
Hydro One Networks Inc.	Yes	
Tri-State GandT	Yes	
Western Area Power Administration	Yes	
Texas Industrial Energy Consumers	Yes	

Organization	Yes or No	Question 2 Comment
Tri-State Generation and Transmission Assn., Inc. Energy Management	Yes	
MRO NERC Standards Review Forum (NSRF)	Yes	
IRC Standards Review Committee	Yes	
ACES Power Marketing Standards Collaborators	Yes	
Dominion	Yes	The proposed changes are much clearer than proposed language in the 1st draft of this BES definition.
Pepco Holdings Inc and Affiliates	Yes	
Electricity Consumers Resource Council (ELCON)	Yes	
Southern Company Generation	Yes	
WECC Staff	Yes	
Bonneville Power Administration	Yes	
Texas RE NERC Standards	Yes	

Organization	Yes or No	Question 2 Comment
Subcommittee		
SERC Planning Standards Subcommittee	Yes	
Southwest Power Pool Standards Review Team	Yes	
NERC Staff Technical Review	Yes	
ATC LLC	Yes	
Westar Energy	Yes	
Redding Electric Utility	Yes	
City of Redding	Yes	
Tacoma Power	Yes	Tacoma Power supports Inclusion I1 as currently written.
BGE	Yes	No comment.
<p>Response: Thank you for your support. Due to comments received from others the SDT has made clarifying changes as follows:</p> <p>I1 - Transformers with <u>the</u> primary <u>terminal</u> and <u>at least one</u> secondary terminals operated at 100 kV or higher unless excluded under Exclusion E1 or E3.</p>		

3. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I2 (generation) including the reference to the ERO Statement of Compliance Registry Criteria? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: Comments received regarding the threshold level for generators, the relationship between the NERC Compliance Registry and the BES Definition and the need for contiguous BES elements will be considered in the Phase 2 review.

In response to comments regarding the reference to the ERO Statement of Compliance Registry Criteria (SCRC) the SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project.

The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

Inclusion I2 was clarified as follows:

I2 - Generating resource(s) (with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA per the ERO Statement of Compliance Registry Criteria) including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.

Organization	Yes or No	Question 3 Comment
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Organization	Yes or No	Question 3 Comment
Northeast Power Coordinating Council	No	In deference to direction given to the Drafting Team, Inclusion I2 should remove the reference to the Statement of Compliance Registry Criteria. The current language induces circular arguments without a true governing document. The definition should drive what appears in the registration criteria. I2 should be revised to read: "Generating resources with a gross nameplate rating of 20MVA or greater, or generating plant/facility connected at a common bus, with an aggregate nameplate rating of 75MVA or greater and is directly connected to a BES Element." This is consistent with the proposed I2 and the current Compliance Registry Criteria. Ultimately the definition should be the governing document and provide the details of what generation should be included. It is understood that Phase 2 of this project will address this.
Balancing Authority Northern California	No	We recommend removing the reference of the ERO Statement of Compliance Registry Criteria (Registry Criteria). The BES Definition should be the governing document and independent of ERO registration requirements. The definition should drive what appears in the Registry Criteria. Additionally, we support using the BES Phase 2 technical analysis to identify and provide technical support for determining the appropriate minimum MVA rating that a single unit, or the aggregation of multiple units, must meet to be considered part of the BES.
Oregon Public Utility Commission Staff	No	Reference to NERC Statement of Compliance Registry Criteria (SCRC) needs to be eliminated from the BES Definition. This circularity must be eliminated. Proposed revised language is: "I2 - Generating resource(s) with a gross individual nameplate rating greater than 20 MVA or with a gross aggregate nameplate rating greater than 75 MVA including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above."
American Electric Power	No	AEP is a proponent of cross-referencing related documents to avoid elements from becoming out of sync, however, rather than having the BES Definition document reference the ERO Statement of Compliance Registry Criteria, perhaps it should be

Organization	Yes or No	Question 3 Comment
		the other way around. This definition document undergoes a more thorough industry development and review process. The ERO Statement of Compliance Registry Criteria does not get specific in regards to device types. The BES Definition document is a more appropriate place to designate inclusion criteria.
New York State Dept of Public Service	No	In I2, there is a reference to the Statement of Compliance Registry Criteria. However, the Statement references the BES definition. This circular logic results in a fatally flawed definition. The statement reference should be replaced with the actual intended words.
Rochester Gas and Electric and New York State Electric and Gas	No	Inclusion I2 should remove the reference to the Statement of Compliance Registry Criteria. The definition should stand on its own. I2 should be revised to read: "Generators with a gross nameplate rating of 20 MVA or greater, or a generating plant/facility connected at a common bus, with a gross aggregate nameplate rating of 75 MVA or greater and is directly connected at a voltage of 100 kV or above. BES includes the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above." This is consistent with the proposed I2 and the current Compliance Registry Criteria.
Sacramento Municipal Utility District	No	We recommend removing the reference of the ERO Statement of Compliance Registry Criteria (Registry Criteria). The BES Definition should be the governing document and independent of ERO registration requirements. The definition should drive what appears in the Registry Criteria. Additionally, we support using the BES Phase 2 technical analysis to identify and provide technical support for determining the appropriate minimum MVA rating that a single unit, or the aggregation of multiple units, must meet to be considered part of the BES.
Central Maine Power Company	No	Inclusion I2 should remove the reference to the Statement of Compliance Registry Criteria. The definition should stand on its own. I2 should be revised to read: "Generators with a gross nameplate rating of 20 MVA or greater, or a generating plant/facility connected at a common bus, with a gross aggregate nameplate rating of

Organization	Yes or No	Question 3 Comment
		75 MVA or greater; and is directly connected at a voltage of 100 kV or above. BES includes the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.” This is consistent with the proposed I2 and the current Compliance Registry Criteria.
Farmington Electric Utility System	No	FEUS is concerned I2 is dependent on the Statement of Compliance Registry Criteria (SCRC). Modification of the SCRC is not required to go through the same process of modification of a Standard but section 1400 of the NERC Rules of Procedure. Section 1400 does allow for industry comment and requires multiple tiers of approval. However, it seems by changing the SCRC generating resources may be included or excluded from the BES - without requiring modification to the definition of the BES through the Standards Development Process. In addition, Page 4 Section I of the SCRC is dependent on the NERC definition of the BES. Logically, the SCRC should be dependent on the definition of the BES not the inverse.
<p>Response: The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project.</p> <p>I2 - Generating resource(s) (with gross individual <u>nameplate rating greater than 20 MVA</u> or gross <u>plant/facility</u> aggregate nameplate rating <u>greater than 75 MVA per the ERO Statement of Compliance Registry Criteria</u>) including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.</p>		
Electricity Consumers Resource Council (ELCON)	No	Since an aggregate of 75 MVA is allowed at a single site, there is no basis for maintaining the 20 MVA for a single generator. The proposed MOD-026 assigns thresholds by region that are much higher than 20 MVA for modeling purposes. Since modeling generally would require more granularity than what is necessary for the reliable operation of the interconnected transmission system (BES), the SDT might want to review the threshold basis for NERC Project 2007-09 (Generator Verification). It is understood that the threshold will be reconsidered in Phase 2 of the BES Definition Project; however, a modest change from 20 to 75 MVA seems

Organization	Yes or No	Question 3 Comment
		<p>appropriate on an interim basis justified by the current 75 MVA aggregate per site. The following phrase should be added at the end “unless excluded under Exclusion E2.”</p>
<p>Texas RE NERC Standards Subcommittee</p>	<p>No</p>	<p>Since an aggregate of 75 MVA is allowed at a single site, there is no basis for maintaining the 20 MVA for a single generator. The proposed MOD-026 assigns thresholds by region that are much higher than 20 MVA for modeling purposes. Since modeling generally would require more granularity than what is necessary for the reliable operation of the interconnected transmission system (BES), the SDT might want to review the threshold basis for NERC Project 2007-09 (Generator Verification).</p>
<p>Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.</p> <p>Coordination between the BES Definition and the MOD Standards will be addressed in Phase 2.</p>		
<p>Tri-State GandT</p>	<p>No</p>	<ol style="list-style-type: none"> 1. The parenthetical phrase regarding the ERO SCRC is not clear. Is the intent that the inclusion applies to any generating resource that is required to register as a Generator or Generator Operator per the ERO SCRC? Or was a reference to the 75 MVA threshold inadvertently omitted? It also seems that it wouldn't need to be in parentheses, just make it a phrase in the sentence. 2. The wording of the sentence after the parenthetical phrase is also worded

Organization	Yes or No	Question 3 Comment
		awkwardly. Suggest changing it to “including the generator terminals and all electrical equipment up to and including the high side of generator step up transformers, if they are connected at a voltage of 100 kV or higher.
Tri-State Generation and Transmission Assn., Inc. Energy Management	No	<p>1. The parenthetical phrase regarding the ERO SCRC is not clear. Is the intent that the inclusion applies to any generating resource that is required to register as a Generator or Generator Operator per the ERO SCRC? Or was a reference to the 75 MVA threshold inadvertently omitted? It also seems that it wouldn’t need to be in parentheses, just make it a phrase in the sentence.</p> <p>2. The wording of the sentence after the parenthetical phrase is also worded awkwardly. Suggest changing it to “including the generator terminals and all electrical equipment up to and including the high side of generator step up transformers, if they are connected at a voltage of 100 kV or higher.</p>
Pepco Holdings Inc and Affiliates	No	<p>The definition should not reference the ERO Statement of Compliance Registry Criteria; rather the actual generation threshold criteria should be listed in the definition itself. This way the definition can stand on it’s own without having to refer to another document for applicability.</p> <p>Also, the wording should be changed to read “including the generator terminals through the high side of any dedicated generator step-up transformer(s), connected at a voltage of 100kV or above.” Otherwise, the present wording could ensnare distribution facilities (similar to the cranking path argument in I3) if a 21 MVA generator was connected on a distribution line with no dedicated generator step-up transformer. In that case the distribution line and substation feeder transformer might be construed to be in scope.</p>
<p>Response: The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project.</p> <p>I2 - Generating resource(s) with gross individual <u>nameplate rating greater than 20 MVA</u> or gross <u>plant/facility</u> aggregate</p>		

Organization	Yes or No	Question 3 Comment
		<p>nameplate rating greater than 75 MVA per the ERO Statement of Compliance Registry Criteria including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.</p> <p>The I2 inclusion refers only to generation “ ... through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.” No change made.</p>
ExxonMobil Research and Engineering	No	The Inclusion I1 contains the phrase “unless excluded under Exclusion E1 or E3”. While recognizing that this is a welcomed clarification on how I1 interacts with the Exclusion section, it is inconsistent with Inclusions I2 through I5. The BES SDT team should consider how to standardize the language around the interactions between the Inclusions and Exclusions (perhaps add an “unless” qualifier for each Inclusion).
South Houston Green Power, LLC	No	SHGP agrees with the proposed revisions to Inclusion I2, but requests the following phrase added at the end “unless excluded under Exclusion E2”.
Nebraska Public Power District	No	Inclusion 2 does not take into consideration a later exclusion (Exclusion 3). At the end of Inclusion 2 after the words “..100 kV or above.” Add the words “, unless excluded under Exclusion 3”.
MRO NERC Standards Review Forum (NSRF)	No	Unless excluded under E2.
<p>Response: The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.</p> <p>Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. <i>Element is defined</i> in the NERC Glossary of Terms as:</p> <p>“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. “</p>		

Organization	Yes or No	Question 3 Comment
<p>Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.</p> <p>Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.</p> <p>Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.</p> <p>Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.</p> <p>Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2.</p> <p>Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.</p> <p>In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.</p>		
Harney Electric Cooperative, Inc.	No	HEC would like to see the inclusion of specific thresholds that are technically justified.
City of St. George	No	The basis for the Compliance Registry Criteria generation levels for inclusion seems to be arbitrary with little or no justification. As currently proposed, a small 20 MVA

Organization	Yes or No	Question 3 Comment
		<p>generator must comply with same requirements as large units of several hundred MVA of generation capacity. Phase 2 of the BES project may help address the issue but in the meantime many facilities must comply with numerous standards with little or no benefit to the reliability of the actual BES. No timeline for Phase 2 is indicated. Finding a bright line number for the generation levels on a per unit or overall plant basis will be a difficult task, but the present MVA levels of the Registration Criteria are very low for automatic inclusion. The compliance requirements of an entity should match the impact to the system.</p>
NV Energy	No	<p>While we do not agree with making specific reference and linkage to the generator thresholds of the SCRC, it is understood that a timely justification of any alternative threshold was not possible. It is of paramount importance that the subject of generation thresholds be addressed in subsequent development of this Definition. We are of the opinion that generation ought to be considered as a “user” of the BES, not necessarily a part of the BES, similar in concept to the way Load uses the BES. Using this concept, the BES would be restricted to the “wires” type facilities. Standards would nevertheless be applicable to generators that use the BES, so no gap in reliability would exist.</p>
Idaho Falls Power	No	<p>Reliance upon the Registry Criteria falls back to the 20MVA threshold. We believe this threshold is very low and unnecessarily draws in small entities for which there is no impact to the BES. We understand the barriers and the volume of technical evidence required for any change and we therefore have no alternative language to suggest.</p>
PacifiCorp	No	<p>Requiring owners of single generators (20 MVA - 75 MVA) to meet reliability standards that owners of distributed power producing resources (See I4) do not have to meet is discriminatory. The limit for a single unit should be set to 75 MVA until such time as a technical review can determine the appropriate levels for all generation resources. However, even with this concern, PacifiCorp supports the entire BES definition in its current form based on the timeframe under which the SDT</p>

Organization	Yes or No	Question 3 Comment
		is operating and with an emphasis based on a phase II SAR to address PacifiCorp’s objections regarding generation levels.
Holland Board of Public Works	No	It is essential that regional entities and NERC recognize that “facilities used in the local distribution of electric energy” are not included in the definition of BES, regardless of the gross individual or gross aggregate nameplate rating of generation resources. While the addition of the second sentence in the core definition makes this clarification, Holland BPW believes it is necessary that regional entities and NERC recognize that neither this Inclusion nor any of the Inclusions may be used as a basis to compel registration and compliance in such instances, regardless of the size of the generators. The statutory exemption of facilities used in the local distribution of electric energy is not limited by generator number or capability. NERC’s definitions cannot impose limitations that are not set forth in the statute. For purposes of the exclusion of facilities that might otherwise meet the definition of BES, the thresholds for determining what generating resources constitute BES facilities should be modified from the current levels (gross individual nameplate capacity of 20 MVA or gross aggregate nameplate rating of 75 MVA). Holland BPW supports modification of the thresholds to not less than 100 MVA (gross individual nameplate capacity) and 300 MVA (gross aggregate nameplate).
Hydro One Networks Inc.	No	We do not agree with the thresholds of 20 MVA for a single unit and 75 MVA aggregate at a plant, carried forward from the compliance registry. We understand the suggested phased approach and expect that the issue will be dealt with at that future time. With the exception of units that are must runs for reliability reasons, we suggest that the SDT should consider units smaller than 75 MVA or x MVA is designated as BES support element and not BES element. These units should only be required to comply with a handful of relevant NERC Standards. For example, <ul style="list-style-type: none"> o Voltage and frequency ride through capability o Voltage control (AVR, etc.) o Underfrequency trip setting o Protection relay setting coordination o Data submission for modeling; verification of capability and model These smaller and geographically dispersed generating resources should neither be designated as BES

Organization	Yes or No	Question 3 Comment
		<p>element nor be required to have its connection path be designated as BES. We suggest removing the parentheses enclosing the text “with gross individual...” since their inclusion may lead to an erroneous reading of provision to include generators that do not meet ERO Statement of Compliance Registry Criteria.</p>
<p>Response: The SDT acknowledges and appreciates your comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.</p>		
Ontario Power Generation Inc.	No	<p>OPG does not agree that the question of the 20 MVA (single) versus 75 MVA (aggregate) threshold should be deferred until a subsequent phase of the standard development process ("Phase 2"). This question should be resolved now. In general, key elements of the development process should not be parsed out into multiple phases, in hopes that "Standard Development Fatigue" will eliminate critics of the approach.</p> <p>Further, selecting the generator terminals as the boundary for BES within the generating station means that the Isolated Phase Bus (IPB), which connects the generator terminals to the Low Voltage (LV) terminals of the generator step-up (GSU) transformer, is now included as a BES element. The IPB is operated at low voltage, no more than 22kV, so including it as a BES element is going beyond the FERC order 743 and 743a. OPG strongly recommends that the BES boundary be moved to the LV terminals of the GSU transformer.</p>

Organization	Yes or No	Question 3 Comment
<p>Response: The SDT acknowledges and appreciates your perspective and frustration. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.</p> <p>The I2 inclusion refers to generation“... including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above. Comments received regarding the threshold level for generators, the relationship between the NERC Compliance Registry and the BES Definition and the need for contiguous BES elements will be considered in the Phase 2 review.</p>		
Chevron U.S.A. Inc.	No	<p>It is not logical to allow an aggregate of 75 MVA at a single site for multiple generators while maintaining 20 MVA for a single generator.</p> <p>Further, if a party exceeds export of 75 MVA to meet an emergency condition on the grid, it should not be a triggering event for BES definition. Parties should be concerned with keeping the grid operational rather than the adverse effect of exceeding 75 MVA.</p>
<p>Response: The SDT acknowledges and appreciates your comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric</p>		

Organization	Yes or No	Question 3 Comment
<p>System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.</p> <p>Please see the detailed responses to Q9.</p>		
Massachusetts Department of Public Utilities	No	<p>Failing to establish a known MVA rating at this stage is problematic. The BES definition cannot be considered in a vacuum, and adjusting or establishing thresholds such as MVA ratings will create regulatory uncertainty and may result in additional costs and unnecessary system upgrades.</p> <p>Additionally, Inclusion I2 should remove the reference to the Statement of Compliance Registry Criteria. The definition should be the governing document regarding generation that is included in the BES.</p>
NESCOE	No	<p>Failing to establish a known MVA rating at this stage is problematic. The BES definition cannot be considered in a vacuum, and adjusting or establishing thresholds such as MVA ratings will create regulatory uncertainty and may result in additional costs and unnecessary system upgrades.</p> <p>Additionally, Inclusion I2 should remove the reference to the Statement of Compliance Registry Criteria. The definition should be the governing document regarding generation that is included in the BES.</p>
Northern Wasco County PUD	No	<p>Referencing the Criteria which in turn references the BES definition creates a circular definition. Northern Wasco County PUD encourages the adoption of specific thresholds that are technically justified. We also note that the Criteria and its revisions do not go through the standards development process, so that thresholds may change with little warning and without triggering an implementation plan for facilities that may be swept into the BES as a result.</p>
Central Lincoln	No	<p>Referencing the Criteria which in turn references the BES definition creates a circular definition. Central Lincoln encourages the adoption of specific thresholds that are</p>

Organization	Yes or No	Question 3 Comment
		<p>technically justified. We also note that the Criteria and its revisions do not go through the standards development process, so that thresholds may change with little warning and without triggering an implementation plan for facilities that may be swept into the BES as a result.</p>
Tillamook PUD	No	<p>Referencing the Criteria which in turn references the BES definition creates a circular definition. Tillamook PUD encourages the adoption of specific thresholds that are technically justified. We also note that the Criteria and its revisions do not go through the standards development process, so that thresholds may change with little warning and without triggering an implementation plan for facilities that may be swept into the BES as a result.</p>
Mission Valley Power	No	<p>Mission Valley Power - Referencing the Criteria which in turn references the BES definition creates a circular definition.</p> <p>Mission Valley Power encourages the adoption of specific thresholds that are technically justified. We also note that the Criteria and its revisions do not go through the standards development process, so that thresholds may change with little warning and without triggering an implementation plan for facilities that may be swept into the BES as a result.</p>
<p>Response: The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project.</p> <p>I2 - Generating resource(s) (with gross individual <u>nameplate rating greater than 20 MVA</u> or gross <u>plant/facility</u> aggregate nameplate rating <u>greater than 75 MVA per the ERO Statement of Compliance Registry Criteria</u>) including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.</p> <p>The SDT acknowledges and appreciates your comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications</p>		

Organization	Yes or No	Question 3 Comment
<p>that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.</p>		
<p>City of Austin dba Austin Energy</p>	<p>No</p>	<p>We recommend removing the reference of the ERO Statement of Compliance Registry Criteria (Registry Criteria). The BES Definition should be the governing document and independent of ERO registration requirements. The definition should drive what appears in the Registry Criteria.</p> <p>Additionally, we support using the BES Phase 2 technical analysis to identify and provide technical support for determining the appropriate minimum MVA rating that a single unit, or the aggregation of multiple units, must meet to be part of the BES.</p>
<p>The Dow Chemical Company</p>	<p>No</p>	<p>Comments: Dow agrees with the proposed revisions to Inclusion I2, particularly the proposal to expressly reference the ERO Statement of Compliance Registry Criteria, but the following phrase should be added at the end “unless excluded under Exclusion E2”.</p>
<p>Response: The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project due to numerous comments received.</p> <p>I2 - Generating resource(s) (with gross individual <u>nameplate rating greater than 20 MVA</u> or gross <u>plant/facility</u> aggregate nameplate rating <u>greater than 75 MVA per the ERO Statement of Compliance Registry Criteria</u>) including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.</p> <p>The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.</p>		

Organization	Yes or No	Question 3 Comment
		<p>Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. <i>Element is defined</i> in the NERC Glossary of Terms as:</p> <p style="padding-left: 40px;">“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. “</p> <p>Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.</p> <p>Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.</p> <p>Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.</p> <p>Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.</p> <p>Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2.</p> <p>Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.</p> <p>In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either</p>

Organization	Yes or No	Question 3 Comment
include or exclude an Element.		
LCRA Transmission Services Corporation	No	
Response: Without a specific comment the SDT is unable to respond.		
Kansas City Power and Light Company	No	Nameplate rating of the generator is not a reflection of what can be actually injected into the transmission system with resulting electrical impacts on transmission loading and behavior. Recommend the BES definition be based on a generators established net accredited generating capacity instead of what it could do by nameplate rating. In addition, many generators do not achieve their nameplate rating due to limitations imposed by the limitations and capabilities of their turbine/boiler capabilities. Using the nameplate rating will not allow the exclusion of some generators that should be excluded. Recommend the following language: Generating resource(s) with a net accredited capability per the ERO Statement of Compliance Registry Criteria and including the generator terminals through the high-side of the step-up transformer(s), connected at a voltage of 100 kV or above.
<p>Response: For Phase 1, the SDT has used nameplate rating in order to maintain consistency with the ERO Statement of Compliance Registry Criteria. No change made.</p> <p>The SDT acknowledges and appreciates your comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values</p>		

Organization	Yes or No	Question 3 Comment
and provide compelling justification for modifications to the existing values.		
Ameren	No	<p>a) This definition becomes dependent on a document that can be changed without direct correlation to the BES definition. Remove the reference to the ERO Statement of Compliance Registry Criteria, and simply state the criteria as currently used. There is no need to look up another definition in another document to identify what is included in the BES definition.</p> <p>b) All MOD Standards' requirements for generators should also follow this definition.</p>
<p>Response: The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project.</p> <p>I2 - Generating resource(s) (with gross individual <u>nameplate rating greater than 20 MVA</u> or gross <u>plant/facility</u> aggregate nameplate rating <u>greater than 75 MVA per the ERO Statement of Compliance Registry Criteria</u>) including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.</p> <p>b) Coordination between the BES Definition and the MOD Standards will be addressed in Phase 2.</p>		
Tacoma Power	Yes	<p>Tacoma Power generally supports Inclusion I2 and deferring the appropriate quantitative thresholds to those that will be determined in Phase 2. However, the term “gross individual” and “gross aggregate” nameplate rating, although industry used terms, are not industry defined or uniformly understood and applied. Nameplate ratings are determined from discussions and negotiations between the designer, supplier and the owner and it is the owner that makes the final determination of the generating station equipment nameplate ratings. Nameplate ratings for thermal or hydro plants may be based on such things as: fuel mix (best, worst and average), fuel delivery capacity, reservoir level, best efficiency point, normal operating point, ancillary equipment capacities, emissions and discharge restrictions, continuous versus peak output and designed versus installed and tested capacities. It would be more uniform to establish new or use existing criteria to</p>

Organization	Yes or No	Question 3 Comment
		<p>define “gross individual” and “gross aggregate” nameplate ratings, such as that used in the Code of Federal Regulations CFR 18, Part 11.1, “Authorized Installed Capacity” for hydraulic units and CFR 18, Part 287.101, “Determination of Powerplant Design Capacity” for steam electric, combustion turbine and combined cycle units.</p>
<p>Response: For Phase 1, the SDT has used nameplate rating in order to maintain consistency with the ERO Statement of Compliance Registry Criteria. No change made.</p> <p>The SDT acknowledges and appreciates your comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.</p>		
Hydro-Quebec TransEnergie		<p>We believe that automatic inclusion of such generation and the path to connect them to the BES would bring a great amount of facilities in the BES. Generation should be considered on a different level such as "BES Support Elements" and provisions should be made so that some specific reliability standards would apply to them.</p>
<p>Response: The SDT acknowledges and appreciates your comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the</p>		

Organization	Yes or No	Question 3 Comment
<p>technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.</p>		
<p>Snohomish County PUD Kootenai Electric Cooperative</p>	<p>Yes</p>	<p>SNPD supports the changes made in Inclusion 2 and believe that the definition in its current form adds clarity. In particular, we support the SDT’s decision to collapse Inclusions 2 and 3 from the previous draft definition into a single Inclusion that addresses the treatment of generation for purposes of the BES definition. We also support the SDT’s proposal for a Phase 2 of the BES Definition process to examine the technical justification for these thresholds and to establish new thresholds based on a careful technical analysis. It is our understanding that the generator threshold issue will be vetted through the complete standards development process. We agree with this approach because if the generator threshold is treated as merely an element of NERC’s Rules of Procedure, it can be changed with considerably less due process and industry input than the Standards Development Process. Compare NERC Rules of Procedure Â§ 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). See also Order No. 743-A, 134 FERC Â¶ 61,210 at P 4 (2011) (“Order No. 743 directed the ERO to revise the definition of ‘bulk electric system’ through the NERC Standards Development Process” (emph. added)). Addressing all aspects of Phase 2 through the Standards Development Process will improve the content of the definition by bringing to bear industry expertise on all aspects of the definition and will ensure that, once firm guidelines are established, they can be relied upon by both industry and regulators without threat that they will be changed with little notice and little due process. SNPD also believes further clarification of the proposed language would be appropriate. The SDT proposes continued reliance upon the thresholds that are used in the NERC Statement of Compliance Registry Criteria for registration of Generation Owners and Generation Operators, which is currently 20 MVA for an individual generation unit and 75 MVA for multiple units on a single site. Conceptually, we are concerned about this</p>

Organization	Yes or No	Question 3 Comment
		<p>approach because, as we understand it, the purpose of the Compliance Registry is to sweep in all generators that might be material to the reliable operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the reliable operation of the BES. As the SCRC itself states, the SCRC is intended only to identify “candidates for registration.” SCRC at p.3, Â§ 1 (emph. added). Accordingly, we believe that the generator threshold determined in Phase 2 should be incorporated directly into the BES Definition rather than being incorporated by reference from the SCRC. We also believe that the specific language proposed by the SDT could be further clarified. The SDT proposes to include generation in the BES if the “Generation resource(s)” has a “nameplate rating per the ERO Statement of Compliance Registry.” We understand this language is intended to be a placeholder for the results of the technical analysis that would occur in Phase 2 but we believe simply stating that the threshold will be “per the ERO Statement of Compliance Registry” is ambiguous. Further, for the reasons noted above, we believe the threshold should be part of the BES Definition, and should not simply be a cross-reference to the SCRC (and, given the different purposes of the BES Definition and the SCRC, it is not clear that the same threshold should be used in both). We therefore propose that Inclusion 2 be rewritten to state: “Qualifying Individual Generation Resources or Qualifying Aggregate Resources connected at a voltage of 100 kV or above.” Two definitions would then be added to the note at the end of the definition to read as follows: “For purposes of this BES Definition, Qualifying Individual Generation Resources means an individual generating unit that meets the materiality threshold to be included in this definition or, in the absence of such a materiality threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of such a resource as a Generation Owner under the ERO Statement of Compliance Registry Criteria.” “For purposes of this BES Definition, Qualifying Aggregate Generation Resources means any facility consisting of one or more generating units that are connected at a common bus that meets the materiality threshold to be included in this definition, or, in the absence of such a threshold, that meets the gross nameplate capacity voltage threshold requiring</p>

Organization	Yes or No	Question 3 Comment
		<p>registration of the owner of multiple-unit generator as a Generation Owner under the ERO Statement of Compliance Registry Criteria."The "materiality threshold" is intended to refer to the generator threshold developed in Phase 2. We suggest using definitions in this fashion for several reasons. First, we believe the language we suggest more clearly states the intention of the SDT, which we understand is to classify generation units as part of the BES if they are necessary for operation of the BES, but to exclude smaller generating units because they are not material to the operation of the interconnected transmission grid. Second, we believe use of the defined terms better reflects the intention of the SDT to reserve the specific question about generator thresholds to the technical analysis that will occur in Phase 2 without having to revise the BES Definition at the end of that process. That is, the definitions are designed to allow the SDT to include revised thresholds in the definition at the conclusion of the Phase 2 process based upon the technical analysis planned for Phase 2, and the revised thresholds will be automatically incorporated into the BES Definition if the language we suggest is used. The thresholds used in the SCRC would only be a fall-back, to be used only until Phase 2 is completed.Third, the definitions can be incorporated into other parts of the BES Definition, which will add consistency and clarity. As noted in our answers to several of the questions below, the specific 75 MVA threshold is retained in several of the Exclusions and Inclusions, and we believe the industry would be better served if the revised thresholds arrived at after technical analysis in Phase 2 are automatically incorporated into all relevant provisions of the BES Definition. There is no reason for the SDT to continue to rely on the 75 MVA threshold once the analysis planned for Phase 2 on the threshold issue is completed. Fourth, the phrase "or that meets the materiality threshold to be included in this definition" is intended to preserve the SDT's flexibility to make a determination that generators below a specific threshold are not "necessary to" maintain the reliability of the interconnected transmission system, and to incorporate that finding as part of the definition itself, even if a different threshold is used in the SCRC to identify potential candidates for registration. Accordingly, our proposed language makes clear that a specific threshold in the definition controls over any</p>

Organization	Yes or No	Question 3 Comment
		<p>threshold that might be included in the SCRC. For the reasons stated above, we believe is it highly desirable to include any material threshold in the BES Definition itself rather than relegating the threshold to the SCRC, which is merely a procedural rule rather than a full-fledged Reliability Standard. Hence, we agree with the SDT’s decision to examine the question of where the line between BES and non-BES Elements should be drawn more closely in Phase 2 under the rubric of “contiguous vs. non-contiguous BES,” and commend the work of the Project 2010-07 Standards Drafting Team and the GO-TO Team as a good starting point for the SDT’s analysis on this issue. We understand Inclusion 2 would classify generators exceeding specific thresholds as part of the BES, but would not necessarily require facilities interconnecting such generators to be part of the BES. As discussed more fully in our answer to Question 9, based on extensive technical analysis that has already been performed by the NERC Project 2010-07 Standards Drafting Team and its predecessor, the NERC “GO-TO Team,” regulating as part of the BES a dedicated interconnection facility connecting a BES generator to the interconnected bulk transmission grid will result in an unnecessary regulatory burden that produces considerable expense for the owner of the interconnection facility with little or no improvement in bulk system reliability. We also believe the clauses at the end of Inclusion 2 are somewhat confusing and that greater clarity would be achieved by changing “. . . including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above” so that the Inclusion covers transformers with terminals “connected at a voltage of 100 kV or above, including the generator terminal(s) on the high side of the step-up transformer(s) if operated at a voltage of 100 kV or above.”</p> <p>Finally, as discussed further in our answer to Questions 5 and 6, SNPD believes more clarity may be achieved by collapsing Inclusion 5, addressing Reactive Power resources, and Inclusion 4, which addresses dispersed renewable resources, into a single Inclusion that addresses “power producing resources” (the language used in current Inclusion 4).</p>

Organization	Yes or No	Question 3 Comment
<p>Response: Thank you – the SDT acknowledges and appreciates your comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.</p> <p>The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project.</p> <p>I2 - Generating resource(s) (with gross individual <u>nameplate rating greater than 20 MVA</u> or gross <u>plant/facility</u> aggregate nameplate rating <u>greater than 75 MVA per the ERO Statement of Compliance Registry Criteria</u>) including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.</p> <p>Please see detailed responses to Q5 and Q6.</p>		
Independent Electricity System Operator	Yes	While we agree with Inclusion I2, we suggest removing the parentheses enclosing the text “with gross individual...” since their inclusion may lead to an erroneous reading of provision to include generators that do not meet ERO Statement of Compliance Registry Criteria.
Puget Sound Energy	Yes	The term "per" should be replaced by "greater than the levels specified for a Generator Owner/Operator in". For a definition of this importance, the term "per" is too vague.
<p>Response: The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2,</p>		

Organization	Yes or No	Question 3 Comment
<p>instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project.</p> <p>12 - Generating resource(s) (with gross individual <u>nameplate rating greater than 20 MVA</u> or gross <u>plant/facility</u> aggregate nameplate rating <u>greater than 75 MVA per the ERO Statement of Compliance Registry Criteria</u>) including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.</p>		
<p>Clallam County PUD No.1 Blachly-Lane Electric Cooperative (BLEC) Coos-Curry Electric Cooperative (CCEC) Central Electric Cooperative (CEC) Clearwater Power Company (CPC) Consumer's Power Inc. Douglas Electric Cooperative (DEC) Fall River Rural Electric Cooperative (FALL) Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (LEC) Northern Lights Inc. (NLI) Okanogan County Electric</p>	<p>Yes</p>	<p>CLPD supports the changes made in Inclusion 2 and believe that the definition in its current form adds clarity. In particular, we support the SDT’s decision to collapse Inclusions 2 and 3 from the previous draft definition into a single Inclusion that addresses the treatment of generation for purposes of the BES definition. We also support that aspect of the SDT’s proposal for a Phase 2 of the BES Definition process that would examine the technical justification for these thresholds and that would establish new thresholds based on a careful technical analysis. It is our understanding that the generator threshold issue will be vetted through the complete standards development process. We agree with this approach because if the generator threshold is treated as merely an element of NERC’s Rules of Procedure, it can be changed with considerably less due process and industry input than the Standards Development Process. Compare NERC Rules of Procedure Â§ 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). See also Order No. 743-A, 134 FERC Â¶ 61,210 at P 4 (2011) (“Order No. 743 directed the ERO to revise the definition of ‘bulk electric system’ through the NERC Standards Development Process” (emph. added)). Addressing all aspects of Phase 2 through the Standards Development Process will improve the content of the definition by bringing to bear industry expertise on all aspects of the definition and will ensure that, once firm guidelines are established, they can be relied upon by both industry and regulators without threat that they will be changed with little notice and little due process. CLPD believes further clarification of the proposed language would be appropriate. The SDT proposes continued reliance</p>

Organization	Yes or No	Question 3 Comment
<p>Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) West Oregon Electric Cooperative Umatilla Electric Cooperative (UEC)</p>		<p>upon the thresholds that are used in the NERC Statement of Compliance Registry Criteria for registration of Generation Owners and Generation Operators, which is currently 20 MVA for an individual generation unit and 75 MVA for multiple units on a single site. as we understand it, the purpose of the Compliance Registry is to sweep in all generators that might be material to the reliable operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the reliable operation of the BES. As the SCRC itself states, the SCRC is intended only to identify “candidates for registration.” SCRC at p.3, Â§ 1 (emph. added). Accordingly, we believe that the generator threshold determined in Phase 2 should be incorporated directly into the BES Definition rather than being incorporated by reference from the SCRC. We also believe that the specific language proposed by the SDT could be further clarified. The SDT proposes that generation be included in the BES if the “Generation resource(s)” has a “nameplate rating per the ERO Statement of Compliance Registry.” We understand this language is intended to be a placeholder for the results of the technical analysis that would occur in Phase 2 but we believe simply stating that the threshold will be “per the ERO Statement of Compliance Registry” is ambiguous. Further, for the reasons noted above, we believe the threshold should be part of the BES Definition, and should not simply be a cross-reference to the SCRC (and, given the different purposes of the BES Definition and the SCRC, it is not clear that the same threshold should be used in both). We therefore propose that Inclusion 2 be rewritten to state: “Qualifying Individual Generation Resources or Qualifying Aggregate Resources connected at a voltage of 100 kV or above.” Two definitions would then be added to the note at the end of the definition to read as follows: For purposes of this BES Definition, Qualifying Individual Generation Resources means an individual generating unit that meets the materiality threshold to be included in this definition or, in the absence of such a materiality threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of such a resource as a Generation Owner under the ERO Statement of Compliance Registry Criteria. For purposes of this BES Definition, Qualifying Aggregate Generation Resources means any facility consisting of one or more generating units that are</p>

Organization	Yes or No	Question 3 Comment
		<p>connected at a common bus that meets the materiality threshold to be included in this definition, or, in the absence of such a threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of multiple-unit generator as a Generation Owner under the ERO Statement of Compliance RegistryCriteria..The “materiality threshold” is intended to refer to the generator threshold developed in Phase 2. We suggest using definitions in this fashion for several reasons. First, we believe the language we suggest more clearly states the intention of the SDT, which we understand is to classify generation units as part of the BES if they are necessary for operation of the BES, but to exclude smaller generating units because they are not material to the operation of the interconnected transmission grid. Second, we believe use of the defined terms better reflects the intention of the SDT to reserve the specific question about generator thresholds to the technical analysis that will occur in Phase 2 without having to revise the BES Definition at the end of that process. That is, the definitions are designed to allow the SDT to include revised thresholds in the definition at the conclusion of the Phase 2 process based upon the technical analysis planned for Phase 2, and the revised thresholds will be automatically incorporated into the BES Definition if the language we suggest is used. The thresholds used in the SCRC would only be a fall-back, to be used only until Phase 2 is completed.Third, the definitions can be incorporated into other parts of the BES Definition, which will add consistency and clarity. As noted in our answers to several of the questions below, the specific 75 MVA threshold is retained in several of the Exclusions and Inclusions, and we believe the industry would be better served if the revised thresholds arrived at after technical analysis in Phase 2 are automatically incorporated into all relevant provisions of the BES Definition. There is no reason for the SDT to continue to rely on the 75 MVA threshold once the analysis planned for Phase 2 on the threshold issue is completed. Fourth, the phrase “or that meets the materiality threshold to be included in this definition” is intended to preserve the SDT’s flexibility to make a determination that generators below a specific threshold are not “necessary to” maintain the reliability of the interconnected transmission system, and to incorporate</p>

Organization	Yes or No	Question 3 Comment
		<p>that finding as part of the definition itself, even if a different threshold is used in the SCRC to identify potential candidates for registration. Accordingly, our proposed language makes clear that a specific threshold in the definition controls over any threshold that might be included in the SCRC. For the reasons stated above, we believe it is highly desirable to include any material threshold in the BES Definition itself rather than relegating the threshold to the SCRC, which is merely a procedural rule rather than a full-fledged Reliability Standard. Finally, we agree with the SDT’s decision to examine the question of where the line between BES and non-BES Elements should be drawn more closely in Phase 2 under the rubric of “contiguous vs. non-contiguous BES,” and commend the work of the Project 2010-07 Standards Drafting Team and the GO-TO Team as a good starting point for the SDT’s analysis on this issue. We understand Inclusion 2 would classify generators exceeding specific thresholds as part of the BES, but would not necessarily require facilities interconnecting such generators to be part of the BES. As discussed more fully in our answer to Question 9, based on extensive technical analysis that has already been performed by the NERC Project 2010-07 Standards Drafting Team and its predecessor, the NERC “GO-TO Team,” regulating as part of the BES a dedicated interconnection facility connecting a BES generator to the interconnected bulk transmission grid will result in an unnecessary regulatory burden that produces considerable expense for the owner of the interconnection facility with little or no improvement in bulk system reliability. We also believe the clauses at the end of Inclusion 2 are somewhat confusing and that greater clarity would be achieved by changing “. . . including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above” so that the Inclusion covers transformers with terminals “connected at a voltage of 100 kV or above, including the generator terminal(s) on the high side of the step-up transformer(s) if operated at a voltage of 100 kV or above.”</p>
<p>Response: The SDT acknowledges and appreciates your comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing</p>		

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<p>deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.</p> <p>The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project.</p> <p>I2 - Generating resource(s) (with gross individual <u>nameplate rating greater than 20 MVA</u> or gross <u>plant/facility</u> aggregate nameplate rating <u>greater than 75 MVA per the ERO Statement of Compliance Registry Criteria</u>) including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.</p>		
Southern Company Generation	Yes	<p>Yes, provided that the minimum gross individual nameplate rating threshold is the same as the gross aggregate nameplate rating (currently > 75MVA).</p> <p>The MVA ratings are specified in many places in the BES definition, where a reference is made in I2 to using the Statement of Compliance Registry Criteria. We believe that the BES definition should point to the Statement of Compliance Registry Criteria and not include MVA values.</p> <p>We also believe individual units < 75MVA should be excluded unless they have been shown to be critical to BES reliability through a technical justification study performed by the transmission planning authority.</p>
Michigan Public Power Agency	Yes	<p>MPPA supports the changes made in Inclusion 2 and believe that the definition in its current form adds clarity. In particular, we support the SDT’s decision to collapse Inclusions 2 and 3 from the previous draft definition into a single Inclusion that addresses the treatment of generation for purposes of the BES definition. MPPA also supports the SDT’s proposal for a Phase 2 of the BES Definition process that would</p>

Organization	Yes or No	Question 3 Comment
		<p>examine the technical justification for these thresholds and that would establish new thresholds based on a careful technical analysis. It is our understanding that the generator threshold issue will be vetted through the complete standards development process. We agree with this approach because if the generator threshold is treated as merely an element of NERC’s Rules of Procedure, it can be changed with considerably less due process and industry input than the Standards Development Process. Compare NERC Rules of Procedure Â§ 1400 (providing for changes to Rules of Procedure upon approval of the NERC board and FERC) with NERC Standards Process Manual (Sept. 3, 2010) (providing for, e.g., posting of SDT proposals for comment, successive balloting, and super-majority approval requirements). See also Order No. 743-A, 134 FERC Â¶ 61,210 at P 4 (2011) (“Order No. 743 directed the ERO to revise the definition of ‘bulk electric system’ through the NERC Standards Development Process” (emph. added)). Addressing all aspects of Phase 2 through the Standards Development Process will improve the content of the definition by bringing to bear industry expertise on all aspects of the definition and will ensure that, once firm guidelines are established, they can be relied upon by both industry and regulators without threat that they will be changed with little notice and little due process. MPPA also believes further clarification of the proposed language would be appropriate.</p> <p>The SDT proposes continued reliance upon the thresholds that are used in the NERC Statement of Compliance Registry Criteria for registration of Generation Owners and Generation Operators, which is currently 20 MVA for an individual generation unit and 75 MVA for multiple units on a single site. Conceptually, we are concerned about this approach because, as we understand it, the purpose of the Compliance Registry is to sweep in all generators that might be material to the reliable operation of the BES, and not to definitively determine whether a given generator is, in fact, material to the reliable operation of the BES. As the SCRC itself states, the SCRC is intended only to identify “candidates for registration.” SCRC at p.3, Â§ 1 (emph. added). Accordingly, we believe that the generator threshold determined in Phase 2 should be incorporated directly into the BES Definition rather than being incorporated by</p>

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		<p>reference from the SCRC. We also believe that the specific language proposed by the SDT could be further clarified. The SDT proposes to include generation in the BES if the “Generation resource(s)” has a “nameplate rating per the ERO Statement of Compliance Registry.” We understand this language is intended to be a placeholder for the results of the technical analysis that would occur in Phase 2 but we believe simply stating that the threshold will be “per the ERO Statement of Compliance Registry” is ambiguous. Further, for the reasons noted above, we believe the threshold should be part of the BES Definition, and should not simply be a cross-reference to the SCRC (and, given the different purposes of the BES Definition and the SCRC, it is not clear that the same threshold should be used in both). We therefore propose that Inclusion 2 be rewritten to state: “Qualifying Individual Generation Resources or Qualifying Aggregate Resources connected at a voltage of 100 kV or above.”</p> <p>Two definitions would then be added to the note at the end of the definition to read as follows: For purposes of this BES Definition, Qualifying Individual Generation Resources means an individual generating unit that meets the materiality threshold to be included in this definition or, in the absence of such a materiality threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of such a resource as a Generation Owner under the ERO Statement of Compliance Registry Criteria. For purposes of this BES Definition, Qualifying Aggregate Generation Resources means any facility consisting of one or more generating units that are connected at a common bus that meets the materiality threshold to be included in this definition, or, in the absence of such a threshold, that meets the gross nameplate capacity voltage threshold requiring registration of the owner of multiple-unit generator as a Generation Owner under the ERO Statement of Compliance Registry Criteria..The “materiality threshold” is intended to refer to the generator threshold developed in Phase 2. We suggest using definitions in this fashion for several reasons. First, we believe the language we suggest more clearly states the intention of the SDT, which we understand is to classify generation units as part of the BES if they are necessary for operation of the BES, but to exclude smaller</p>

Organization	Yes or No	Question 3 Comment
		<p>generating units because they are not material to the operation of the interconnected transmission grid. Second, we believe use of the defined terms better reflects the intention of the SDT to reserve the specific question about generator thresholds to the technical analysis that will occur in Phase 2 without having to revise the BES Definition at the end of that process. That is, the definitions are designed to allow the SDT to include revised thresholds in the definition at the conclusion of the Phase 2 process based upon the technical analysis planned for Phase 2, and the revised thresholds will be automatically incorporated into the BES Definition if the language we suggest is used. The thresholds used in the SCRC would only be a fall-back, to be used only until Phase 2 is completed. Third, the definitions can be incorporated into other parts of the BES Definition, which will add consistency and clarity. As noted in our answers to several of the questions below, the specific 75 MVA threshold is retained in several of the Exclusions and Inclusions, and we believe the industry would be better served if the revised thresholds arrived at after technical analysis in Phase 2 are automatically incorporated into all relevant provisions of the BES Definition. There is no reason for the SDT to continue to rely on the 75 MVA threshold once the analysis planned for Phase 2 on the threshold issue is completed. Fourth, the phrase “or that meets the materiality threshold to be included in this definition” is intended to preserve the SDT’s flexibility to make a determination that generators below a specific threshold are not “necessary to” maintain the reliability of the interconnected transmission system, and to incorporate that finding as part of the definition itself, even if a different threshold is used in the SCRC to identify potential candidates for registration. Accordingly, our proposed language makes clear that a specific threshold in the definition controls over any threshold that might be included in the SCRC. For the reasons stated above, we believe it is highly desirable to include any material threshold in the BES Definition itself rather than relegating the threshold to the SCRC, which is merely a procedural rule rather than a full-fledged Reliability Standard.</p> <p>Finally, we agree with the SDT’s decision to examine the question of where the line between BES and non-BES Elements should be drawn more closely in Phase 2 under</p>

Organization	Yes or No	Question 3 Comment
		<p>the rubric of “contiguous vs. non-contiguous BES,” and commend the work of the Project 2010-07 Standards Drafting Team and the GO-TO Team as a good starting point for the SDT’s analysis on this issue. We understand Inclusion 2 would classify generators exceeding specific thresholds as part of the BES, but would not necessarily require facilities interconnecting such generators to be part of the BES. As discussed more fully in our answer to Question 9, based on extensive technical analysis that has already been performed by the NERC Project 2010-07 Standards Drafting Team and its predecessor, the NERC “GO-TO Team,” regulating as part of the BES a dedicated interconnection facility connecting a BES generator to the interconnected bulk transmission grid will result in an unnecessary regulatory burden that produces considerable expense for the owner of the interconnection facility with little or no improvement in bulk system reliability. We also believe the clauses at the end of Inclusion 2 are somewhat confusing and that greater clarity would be achieved by changing “. . . including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above” so that the Inclusion covers transformers with terminals “connected at a voltage of 100 kV or above, including the generator terminal(s) on the high side of the step-up transformer(s) if operated at a voltage of 100 kV or above.”</p> <p>MPPA and its members believe it is essential that regional entities and NERC recognize that “facilities used in the local distribution of electric energy” are not included in the definition of BES, regardless of the gross individual or gross aggregate nameplate rating of generation resources. While the addition of the second sentence in the core definition makes this clarification, MPPA and its members believes it is necessary that regional entities and NERC recognize that neither this Inclusion nor any of the Inclusions may be used as a basis to compel registration and compliance in such instances, regardless of the size of the generators. The statutory exemption of facilities used in the local distribution of electric energy is not limited by generator number or capacity. NERC’s definitions cannot impose limitations that are not set forth in the statute. For purposes of the exclusion of facilities that might otherwise meet the definition of BES, the thresholds for determining what generating resources</p>

Organization	Yes or No	Question 3 Comment
		<p>constitute BES facilities should be modified from the current levels (gross individual nameplate capacity of 20 MVA or gross aggregate nameplate rating of 75 MVA). MPPA and its members would support modification of the thresholds to not less than 100 MVA (gross individual capacity) and 300 MVA (gross aggregate nameplate).</p>
<p>Response: The SDT acknowledges and appreciates your comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.</p> <p>The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project.</p> <p>I2 - Generating resource(s) (with gross individual <u>nameplate rating greater than 20 MVA</u> or gross <u>plant/facility</u> aggregate nameplate rating <u>greater than 75 MVA per the ERO Statement of Compliance Registry Criteria</u>) including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.</p>		
Texas Industrial Energy Consumers	Yes	<p>The interplay between Inclusion I2, which references the Statement of Registry Compliance, and Exclusions E1-E3 is unclear. Under the Registry criteria, “a customer-owned or operated generator/generation that serves all or part of retail load with electric energy on the customer’s side of the retail meter may be excluded as a candidate for registration ... if (i) the net capacity provided to the bulk power system does not exceed the criteria above.” It appears that the SDT intended to invoke this provision by referencing the Statement of Registry Compliance, which counts only the “net” capacity provided, by referencing the Statement of Compliance</p>

Organization	Yes or No	Question 3 Comment
		<p>Registry Criteria. However, Exclusions E1 and E3 exclude generation on the basis of “gross nameplate ratings.” For customer-owned facilities, this treatment is inconsistent with netting treatment provided in the Statement of Registry Compliance. Exclusions E1-E3 should be revised to reference the Statement of Compliance Registry Criteria as well so that customer-owned generation is included or excluded based on its net capacity to the grid rather than its gross nameplate capacity.</p> <p>TIEC also supports revisiting and potentially raising the thresholds that trigger registration as a Generation Owner or Operator. TIEC understands that the SDT has decided to maintain the status quo as reflected in NERC’s Registry Criteria at this time. TIEC looks forward to addressing potential modifications to the thresholds in the appropriate context.</p>
<p>Response: The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.</p> <p>Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. <i>Element is defined</i> in the NERC Glossary of Terms as:</p> <p style="padding-left: 40px;">“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. “</p> <p>Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.</p> <p>Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.</p>		

Organization	Yes or No	Question 3 Comment
		<p>Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.</p> <p>Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.</p> <p>Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2.</p> <p>Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.</p> <p>In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.</p> <p>The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.</p>
<p>AECI and member GandTs, Central Electric Power Cooperative, KAMO Power,</p>	<p>Yes</p>	<p>The word “identified” should be replaced with “designated”.</p>

Organization	Yes or No	Question 3 Comment
MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power Cooperative		
<p>Response: The SDT believes this comment was intended for Q4 and directs you to the detailed response provided there.</p>		
Dominion	Yes	Dominion interprets the revised language to exclude generating resources connected at less than 100 kV. If this interpretation is not accurate, then Dominion does not support the revised language.
<p>Response: The I2 inclusion refers only to generation “ ... through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.”</p>		
Transmission Access Policy Study Group	Yes	TAPS supports the intent of proposed Inclusion I2. For the sake of clarity, we suggest revising “per the ERO Statement of Compliance Registry Criteria” to “as described in the ERO Statement of Compliance Registry Criteria.”
ACES Power Marketing Standards Collaborators	Yes	We’d prefer to see the language from the ERO Statement of Compliance Registry Criteria repeated within the BES Definition itself instead of referencing an outside document. As it stands right now, the Compliance Registry Criteria needs to stay intact for Phase 1 of this project. That makes the Compliance Registry Criteria reliant on the BES Definition and vice versa. We understand that the Statement of Compliance Registry Criteria may be reviewed/ revised at the same time Phase 2 of this project is being developed, therefore we agree with Inclusion I2 of this draft.
<p>Response: The SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the possibility of the registry values being changed</p>		

Organization	Yes or No	Question 3 Comment
<p>and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project.</p> <p>I2 - Generating resource(s) (with gross individual <u>nameplate rating greater than 20 MVA</u> or gross <u>plant/facility</u> aggregate nameplate rating <u>greater than 75 MVA per the ERO Statement of Compliance Registry Criteria</u>) including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.</p>		
Florida Municipal Power Agency	Yes	Please see comments to Question 1
<p>Response: Please see response to Q1.</p>		
Redding Electric Utility	Yes	Redding believes that the definition should drive what appears in the Registry Criteria, therefore we only support this on a temporary basis based on the premise that the BES Phase 2 technical analysis will identify and provide technical support for determining the appropriate minimum MVA rating for a single unit or the aggregation of multiple units.
City of Redding	Yes	Redding believes that the definition should drive what appears in the Registry Criteria, therefore we only support this on a temporary basis based on the premise that the BES Phase 2 technical analysis will identify and provide technical support for determining the appropriate minimum MVA rating for a single unit or the aggregation of multiple units.
MEAG Power	Yes	We agree in general with the revisions to I2 for generation; however, we maintain that 200kV and above is the correct bright line for the Bulk Electric System.
Tennessee Valley Authority	Yes	TVA agrees in general with the revisions to I2 for generation; however, we maintain that 200kV and above is the correct bright line for generation connected to the Bulk Electric System, and requests that the Phase 2 for the project use 200kV and above or develop a transmission voltage and/or an MVA threshold that is technically based.

Organization	Yes or No	Question 3 Comment
SERC Planning Standards Subcommittee	Yes	We are concerned that the generator MVA limits are too low and strongly support addressing this issue in Phase 2 of this project.
NERC Staff Technical Review	Yes	The drafting team’s proposed approach for Inclusion I2 (generation), including the reference to the ERO Statement of Compliance Registry Criteria, is generally acceptable given the scope of this project and the breaking of the project into two phases. Thresholds for generator MVA rating and interconnection voltage should be considered in the second phase of this project.
SERC OC Standards Review Group	Yes	We agree in general with the revisions to I2 for generation; however, we maintain that 200kV and above is the correct bright line for the Bulk Electric System.
<p>Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.</p>		
ATC LLC	Yes	
Westar Energy	Yes	
Portland General Electric Company	Yes	

Organization	Yes or No	Question 3 Comment
Georgia System Operations Corporation	Yes	
Oncor Electric Delivery Company LLC	Yes	
National Grid	Yes	
Cowlitz County PUD	Yes	Cowlitz also strongly supports Phase 2 to address the lack of technical justification of the MVA bright line criteria.
Utility Services, Inc.	Yes	
PSEG Services Corp	Yes	
ISO New England Inc	Yes	
Manitoba Hydro	Yes	
Long Island Power Authority	Yes	
Z Global Engineering and Energy Solutions	Yes	
Consumers Energy	Yes	
Metropolitan Water District of Southern California	Yes	
Duke Energy	Yes	

Organization	Yes or No	Question 3 Comment
Central Hudson Gas and Electric Corporation	Yes	
City of Anaheim	Yes	
ReliabilityFirst	Yes	
Southern Company	Yes	
FirstEnergy Corp.	Yes	
Exelon	Yes	
Western Area Power Administration	Yes	
IRC Standards Review Committee	Yes	
WECC Staff	Yes	
Bonneville Power Administration	Yes	BPA agrees with the I2 changes and feels that they are excellent.
Southwest Power Pool Standards Review Team	Yes	
BGE	Yes	No comment.
<p>Response: Thank you for your support. However, the SDT made a clarifying change removing the ERO Statement of Compliance Registry Criteria reference in Inclusion I2, instead specifying the 20/75 MVA reference threshold values in order to avoid the</p>		

Organization	Yes or No	Question 3 Comment
		<p>possibility of the registry values being changed and thus affecting the BES Definition prior to the resolution of the threshold values in Phase 2 of this project.</p> <p>I2 - Generating resource(s) (with gross individual <u>nameplate rating greater than 20 MVA</u> or gross <u>plant/facility</u> aggregate nameplate rating <u>greater than 75 MVA per the ERO Statement of Compliance Registry Criteria</u>) including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.</p>

4. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I3 (blackstart)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: The directive by FERC to revise the definition of the BES has been interpreted by the SDT to include all Facilities necessary for reliably operating the interconnected transmission system under both normal and emergency conditions. This interpretation by the SDT includes situations related to Blackstart Resources and system restoration. Blackstart Resources have the ability to be started without the support of the interconnected transmission system in order to meet a Transmission Operators restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The SDT maintains that Blackstart Resources must be included in the definition however their associated Cranking Paths are not included in the BES definition as they can fall within distribution class levels. Cranking Paths will be discussed further in Phase 2 of this project.

No changes were made to Inclusion I3 from the previous posting.

Organization	Yes or No	Question 4 Comment
SERC OC Standards Review Group	No	We agree with the changes but believe clarity would be added by changing the word “identified” to “designated”.
Tennessee Valley Authority	No	TVA agrees with the changes but believe clarity would be added by changing the word “identified” to “designated”.
Southern Company	No	We agree with the changes but believe clarity would be added by changing the word “identified” to “designated”.
MEAG Power	No	We agree with the changes but believe clarity would be added by changing the word “identified” to “designated”.
<p>Response: ‘Identified’ is consistent with the wording in EOP-005-2. The SDT does not feel that this change would add any additional clarity. No change made.</p>		

Organization	Yes or No	Question 4 Comment
Texas Reliability Entity	No	We feel that the Cranking Path should be included in the BES definition. Inclusion of the Cranking Path is vital to a functional, sustainable and reliable system restoration (and restoration plan) regardless of where the Cranking Path is located. CIP-002-4 Attachment 1 recognizes the critical nature of the Cranking Path.
NERC Staff Technical Review	No	The cranking path(s) identified in the Transmission Operator’s restoration plan should be included in the BES definition.
<p>Response: Cranking Paths identified in a Transmission Operator’s restoration plans are often composed of distribution system Elements. The Transmission Operator’s restoration plans identify a number of possible system restoration scenarios to address the uncertainty of the actual requirements needed to address a particular restoration event including Cranking Paths. Therefore, the SDT maintains that Cranking Paths are not required to be included in the BES definition as they are essentially a moving target and could include distribution Elements. The Cranking Paths issue will be discussed anew in Phase 2 of this project. No change made.</p>		
NESCOE	No	While NESCOE appreciates that cranking paths were excluded in response to industry comments, as we stated in comments to the prior posting of the BES definition, blackstart units should be excluded from the BES. Such units are appropriately covered under regional restoration procedures and applicable NERC standards (see for example, Emergency Operating Procedure EOP-005-2). However, should blackstart units be included in subsequent postings of the definition, we suggest that the language be revised to state that only those units “material to” the BES are included.
Ontario Power Generation Inc.	No	To assure availability of the generation blackstart resources identified in the Transmission Operator’s Power System Restoration Plan the generators are tested according to the requirements of reliability standard EOP-009. Blackstart resources are only required post LOBES (Loss of Bulk Electric System) and in many cases do not contribute to the reliability of the BES under normal operating conditions. OPG recommends that this inclusion be removed from the new definition of BES.
IRC Standards Review	No	We support the SDT’s decision to exclude the cranking paths from the BES definition since testing and verification of the use of facilities in the cranking path is already

Organization	Yes or No	Question 4 Comment
Committee		<p>covered by the appropriate EOP standards.</p> <p>This inclusion is extraneous given there is already a designation specific for system restoration covered by an existing standard to recognize their reliability impacts and to ensure their expected performance. NERC Standards EOP-005-2 stipulates the requirements for testing blackstart resource and cranking paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed, which meets the intent of identifying their criticality to reliability. We therefore suggest removing Inclusion I3.</p>
Hydro One Networks Inc.	No	<p>We agree with the SDT in excluding the cranking paths from the BES definition, a point we had raised in our comments to the previous posting.</p> <p>We also disagree with the inclusion of blackstart resources and reiterate our view that their inclusion is superfluous given there is already a designation specific for system restoration covered by an existing standard, to recognize their reliability impacts and to ensure their expected performance. NERC Standard EOP-005-2 stipulates the requirements for testing blackstart resources and cranking paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed, which meets the intent of identifying their criticality to reliability. We therefore suggest completely removing Inclusion I3. We suggest the SDT to drop I3 on the basis that:</p> <ul style="list-style-type: none"> o The availability and performance expectations of blackstart resources are ensured by existing related standards; and o Unless they meet the BES definition under inclusion I2, there is no perceived reliability value in everyday operation of the BES.
Northeast Power Coordinating Council	No	<p>Eliminating I3 should be considered based on the availability and performance expectations of black start resources being ensured by existing standards, and unless they meet the BES definition under the I2 inclusion they do not have any reliability impact on BES operation. If I3 is retained, suggest rewording Inclusion I3 to read as follows: Black start resources material to and designated as part of the Transmission</p>

Organization	Yes or No	Question 4 Comment
		Operator’s restoration plan.
Independent Electricity System Operator	No	We thank the SDT for excluding the cranking paths from the BES definition, a point we had raised in our comments to the previous posting. However, we had also disagreed with the inclusion of Blackstart Resources and reiterate our view that their inclusion is superfluous given there is already a designation specific for system restoration covered by an existing standard, to recognize their reliability impacts and to ensure their expected performance. NERC Standards EOP-005-2 stipulates the requirements for testing blackstart resource and cranking paths. This testing requirement suffices to ensure that the facilities critical to system restoration are functional when needed, which meets the intent of identifying their criticality to reliability. We therefore suggest removing Inclusion I3 entirely.
FirstEnergy Corp.	Yes	We agree with the team's conclusion to remove cranking paths from the BES definition since NERC (i.e. EOP standards) specifically address reliability matters associated with cranking paths. Although we believe item I3 (blackstart unit) is unnecessary as part of the BES Definition, we will not object to its inclusion. A blackstart unit is a facility necessary for BES restoration, but not necessarily required to be included within the BES Definition.

Response: The SDT disagrees that Blackstart Resources should not be included in the BES Definition. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator’s restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator’s restoration plan. For these reasons, the SDT continues to include Blackstart Resources identified in the Transmission Operator’s restoration plan as BES elements. No change made.

Organization	Yes or No	Question 4 Comment
<p>ACES Power Marketing Standards Collaborators</p>	<p>No</p>	<p>Blackstart Resources can actually be on the distribution system. There is still the question of whether the distribution system would then be subjected to the enforceable standards. If so, there would most likely be a significant cost increase associated with tracking compliance for these distribution systems without a commensurate increase in reliability since Blackstart Resources are rarely used. This could very well cause entities to un-designate Blackstart Resources on distribution systems to avoid these distribution systems from becoming part of the BES. The same rationale that was used for eliminating cranking paths could also be applied to Blackstart Resources.</p>
<p>Response: Cranking Paths identified in a Transmission Operator’s restoration plans are often composed of distribution system Elements. The Transmission Operator’s restoration plans identify a number of possible system restoration scenarios to address the uncertainty of the actual requirements needed to address a particular restoration event including Cranking Paths. Therefore, the SDT maintains that Cranking Paths are not required to be included in the BES definition as they are essentially a moving target and could include distribution Elements. The Cranking Paths issue will be discussed anew in Phase 2 of this project. The SDT feels that the situation described would fall within a minimal percentage of units and therefore would be subject to the Exception Process as applicable. No change made.</p>		
<p>ReliabilityFirst</p>	<p>No</p>	<p>Blackstart Resource is a defined NERC term, but as outlined in the definition, it could be read to include the transmission assets that also make up the resource as part of the TOP plan. Is that the intent?</p> <p>ReliabilityFirst Staff also feels that without including the Cranking Paths, the reliable operation of the system could be jeopardized if a restoration is required and the Cranking Paths are unavailable due to non-compliance to Reliability Standards.</p>
<p>Response: The SDT does not agree that the definition of Blackstart Resource necessarily encompasses transmission assets. No change made.</p> <p>Cranking Paths identified in a Transmission Operator’s restoration plans are often composed of distribution system Elements. The Transmission Operator’s restoration plans identify a number of possible system restoration scenarios to address the uncertainty of the actual requirements needed to address a particular restoration event including Cranking Paths. Therefore,</p>		

Organization	Yes or No	Question 4 Comment
<p>the SDT maintains that Cranking Paths are not required to be included in the BES definition as they are essentially a moving target and could include distribution Elements. The Cranking Paths issue will be discussed anew in Phase 2 of this project. No change made.</p>		
<p>Central Maine Power Company</p>	<p>No</p>	<p>Inclusion I3 should be changed to include the phrase, “material to,” currently in the Statement of Compliance Registry Criteria (Section 3C3). Based on the definition wording, the Generator Step-Up transformer (GSU) would not be BES if the generator would not otherwise already be included as BES under another definition provision.</p>
<p>Rochester Gas and Electric and New York State Electric and Gas</p>	<p>No</p>	<p>Inclusion I3 should be changed to include the phrase, “material to,” currently in the Statement of Compliance Registry Criteria (Section 3C3). Based on the definition wording, the Generator Step-Up transformer (GSU) would not be BES if the generator would not otherwise already be included as BES under another definition provision.</p>
<p>Orange and Rockland Utilities, Inc.</p>		<p>Minimum Power system and material? NERC registry criteria for generation section "3C3"</p>
<p>Massachusetts Department of Public Utilities</p>	<p>No</p>	<p>The inclusion should be revised to specify that only those blackstart units that are “material to” the BES are included in the definition.</p>
<p>Consolidated Edison Co. of NY, Inc.</p>	<p>No</p>	<p>We suggest using wording from the Statement of Compliance Registry Criteria:Any generator regardless of size which is material to ... [Ref: Statement of Compliance Registry Criteria, III.c.3-Blackstart]Define “material to” as a generator listed as a necessary part of the TOP-defined minimum system to restore the BES. This term “material to” should exclude Blackstart-capable generators not necessary for BES restoration or only used for local distribution system restoration. Wording Recommendation: Following the words “identified in” add the words “and material to” so that the new Inclusion reads:I3 - Blackstart Resources identified in and material to the Transmission Operator’s restoration plan.</p>
<p>Response: The SDT believes that adding language such as “material to” does not provide clarity and remains immeasurable. No</p>		

Organization	Yes or No	Question 4 Comment
change made.		
Manitoba Hydro	No	Inclusion I3 should specifically state that only the Blackstart Resources specified through EOP-005-2 R1.4 are included in the BES since “Transmission Operator restoration plan’ is not a NERC defined term. Suggested wording:”I3 - Blackstart Resources identified through EOP-005-2 R1.4”
<p>Response: The SDT appreciates your concern but does not believe it is appropriate to reference a standard in the definition. Any modification to the standard including an interpretation or a simple re-versioning for errata would change the standard number and thus require that the definition be updated. No change made.</p>		
ISO New England Inc	No	<p>The SDT has interpreted the FERC Directive to revise the BES definition in a manner that goes beyond the mandate of ensuring that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT states that operation is interpreted as being under both normal and emergency conditions. However, loss of all electric power is the end state condition when all normal and emergency remediating actions have failed to prevent a collapse of the grid. System restoration involves the use of blackstart generators that are not resources necessary for operating the electrical grid but rather a means to recover following (not part of the emergency itself) an extreme emergency. The SDT should simply refer to the current Compliance Registry, which, for now, appears to adequately deal with the issue of how to treat Blackstart resources. I3 states “Blackstart Resources identified in the Transmission Operator’s restoration plan”. This is contrary to the preferred language that is part of the approved ERO Statement of Compliance Registry, III.C.3 that states, “Any generator, regardless of size, that is a blackstart unit material to (emphasis added) and designated as part of a transmission operator entity’s restoration plan”. This language is necessary to distinguish between those Blackstart Resources that are depended upon to restore the BES following an emergency (“Key Facilities”) as compared to those Blackstart Resources that are used to restore power to customer load.</p>

Organization	Yes or No	Question 4 Comment
		<p>Additionally, discussions with others during the preparation of comments have revealed that some interpret this requirement to include the GSU. We do not interpret this in this manner, but this should be clarified to avoid confusion.</p>
<p>Response: The SDT disagrees that Blackstart Resources should not be included in the BES Definition. The Commission directed NERC to revise its BES definition to ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network. The SDT interprets this to include operation under both normal and emergency conditions, which includes situations related to black starts and system restoration. Blackstart Resources have the ability to be started without support from the System or can be energized without connection to the remainder of the System, in order to meet a Transmission Operator’s restoration plan requirements for Real and Reactive Power capability, frequency, and voltage control. The associated resources of the electric system that can be isolated and then energized to deliver electric power during a restoration event are essential to enable the startup of one or more other generating units as defined in the Transmission Operator’s restoration plan. For these reasons, the SDT continues to include Blackstart Resources identified in the Transmission Operator’s restoration plan as BES elements. No change made.</p> <p>The SDT does not agree that the definition of Blackstart Resource necessarily encompasses transmission assets such as GSUs.</p>		
SRP	No	<p>The Blackstart ‘Cranking Path’ has been deleted from Inclusion 3 of the BES definition. However, NERC Standards EOP-005 and CIP-002, R1.2.4, require documenting the Cranking Path. In addition, CIP-002—4 identifies the Cranking Path as a Critical Asset in Attachment 1. Compliance to the NERC Standards needs to be an exact science whenever possible. SRP does not argue the inclusion or exclusion of Cranking Path. However, if it is excluded, guidance must be provided on whether or not a Cranking Path is subject to the previously mentioned Standards.</p>
<p>Response: Cranking Paths are subject to any standard in which they are specifically spelled out.</p>		
Tacoma Power	Yes	<p>Tacoma Power generally support Inclusion I3 as written. We continue to believe the BES should only include the Blackstart Resources that support a regional recovery. We propose changing Inclusion I3 to read, “Blackstart Resources identified in the Transmission Operator’s restoration plan and included in a regional restoration plan.”</p>

Organization	Yes or No	Question 4 Comment
<p>Response: The SDT does not agree that the definition should specify Blackstart Resources included in regional restoration plans as those regional systems may not be included in the BES nor have any impact on the BES. No change made.</p>		
Ameren	Yes	<p>a)The definition should include only those black start generators connected 100 kV and above and included in the restoration plan.</p> <p>b)We agree with the changes but believe clarity would be added by changing the word “identified” to “designated”.</p>
<p>Response: Blackstart Resources are required to be registered regardless of connected voltage level. The SDT is remaining consistent with its earlier position on that point. No change made.</p> <p>‘Identified’ is consistent with the wording in EOP-005-2. The SDT does not feel that this change would add any additional clarity at this time. No change made.</p>		
Utility Services, Inc.	Yes	<p>Utility Services supports suggestions by others that request that the language of the Inclusion use the exact language of the SCRC III.3.c. Leaving the language as is will likely increase the number of black start facilities beyond those currently applicable.</p>
<p>Response: Adding language such as “material to” found in the ERO Statement of Compliance Registry Criteria does not provide clarity and remains immeasurable. No change made.</p>		
<p>AECI and member GandTs, Central Electric Power Cooperative, KAMO Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power</p>	Yes	<p>In general, we agree with this revision. However, the aggregate MVA threshold should be 150 MVA or greater, and threshold voltage level should be 200kV or higher.</p>

Organization	Yes or No	Question 4 Comment
Cooperative		
<p>Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.</p>		
City of Redding	Yes	<p>Redding recommends the following rewording: “The Primary Blackstart resources designated in the Transmission Operator’s restoration plan.” We believe it reduces reliability if all Blackstart generation either primary or secondary are required to be BES. Requiring all Blackstart capable units to be BES creates an incentive to leave certain blackstart units out of restoration plans in order to avoid BES inclusion. By making only the primary Blackstart unit a BES element then Transmission Operators will be more willing to include ALL Blackstart units in their plan thus creating a complete procedure for the Transmission Operator to restore the system.</p>
Redding Electric Utility	Yes	<p>Redding recommends the following rewording: “The Primary Blackstart resources designated in the Transmission Operator’s restoration plan.” We believe it reduces reliability if all Blackstart generation either primary or secondary are required to be BES. Requiring all Blackstart capable units to be BES creates an incentive to leave certain blackstart units out of restoration plans in order to avoid BES inclusion. By making only the primary Blackstart unit a BES element then Transmission Operators will be more willing to include ALL Blackstart units in their plan thus creating a complete procedure for the Transmission Operator to restore the system.</p>

Organization	Yes or No	Question 4 Comment
City of Austin dba Austin Energy	Yes	We recommend rewording Inclusion I3 as follows: “Only Primary Blackstart resources designated as part of the Transmission Operator’s restoration plan.” We have concerns that making all Blackstart generation either primary or secondary BES elements creates an incentive to remove those secondary Blackstart capable units in an effort to avoid BES inclusion. We believe that making the primary Blackstart unit the only BES element will remove this incentive. In so doing, this will allow the secondary Blackstart units to remain in the Transmission Operator’s plan and training program as an alternate tool for the Transmission Operator to restore the system.
Sacramento Municipal Utility District	Yes	We recommend rewording Inclusion I3 as follows: “Only Primary Blackstart resources designated as part of the Transmission Operator’s restoration plan.” We have concerns that making all Blackstart generation either primary or secondary BES elements will create an incentive to remove those secondary Blackstart capable units in order to avoid BES inclusion. Making the primary Blackstart unit the only BES element will remove this incentive. In so doing, this will allow the secondary Blackstart units to remain in the Transmission Operator’s plan and training program as an alternate tool for the Transmission Operator to restore the system.
Balancing Authority Northern California	Yes	We recommend rewording Inclusion I3 as follows: “Only Primary Blackstart resources designated as part of the Transmission Operator’s restoration plan.” We have concerns that making all Blackstart generation either primary or secondary BES elements will create an incentive to remove those secondary Blackstart capable units in order to avoid BES inclusion. Making the primary Blackstart unit the only BES element will remove this incentive. In so doing, this will allow the secondary Blackstart units to remain in the Transmission Operator’s plan and training program as an alternate tool for the Transmission Operator to restore the system.
<p>Response: The SDT discussed the recommended wording and determined that it did not provide further clarity to the definition. Utilizing “primary” and “secondary” as a deterministic method for inclusion would create regional inconsistencies with application of the definition which is contrary to the intent to create a consistent continent-wide definition. No change made.</p>		

Organization	Yes or No	Question 4 Comment
WECC Staff	Yes	WECC agrees with the inclusion of the blackstart units, but does not agree with the deletion of the cranking path from the I3. The cranking path should be included in the definition since the NERC standards EOP-005 and CIP-002 R1.2.4 require documenting the cranking path. The revised CIP-002-4 Standard identifies the cranking path as a critical asset in Attachment 1 (1.5).
<p>Response: Cranking Paths identified in a Transmission Operator’s restoration plans are often composed of distribution system Elements. The Transmission Operator’s restoration plans identify a number of possible system restoration scenarios to address the uncertainty of the actual requirements needed to address a particular restoration event including Cranking Paths. Therefore, the SDT maintains that Cranking Paths are not required to be included in the BES definition as they are essentially a moving target and could include distribution Elements. The Cranking Paths issue will be discussed anew in Phase 2 of this project. No change made.</p>		
Florida Municipal Power Agency	Yes	Please see comments to Question 1
<p>Response: Please see response to Q1.</p>		
ExxonMobil Research and Engineering	Yes	
ATC LLC	Yes	
Westar Energy	Yes	
Northern Wasco County PUD	Yes	We agree with the removal of the voltage language, since the inclusions and exclusions apply only to equipment over 100 kV.
Farmington Electric Utility System	Yes	

Organization	Yes or No	Question 4 Comment
South Houston Green Power, LLC	Yes	
Portland General Electric Company	Yes	
Georgia System Operations Corporation	Yes	
Nebraska Public Power District	Yes	
LCRA Transmission Services Corporation	Yes	
National Grid	Yes	
Kansas City Power and Light Company	Yes	
Oncor Electric Delivery Company LLC	Yes	
Umatilla Electric Cooperative (UEC)	Yes	UEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Central Lincoln	Yes	We agree with the removal of the voltage language, since the inclusions and exclusions apply only to equipment over 100 kV.
Harney Electric Cooperative,	Yes	HEC agrees with the inclusions to the core definition.

Organization	Yes or No	Question 4 Comment
Inc.		
Cowlitz County PUD	Yes	
PSEG Services Corp	Yes	
Hydro-Quebec TransEnergie	Yes	
Pacific Northwest Generating Cooperative (PNGC)	Yes	PNGC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Raft River Rural Electric Cooperative (RAFT)	Yes	RAFT supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
West Oregon Electric Cooperative	Yes	WOEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Lincoln Electric Cooperative (LEC)	Yes	LEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Northern Lights Inc. (NLI)	Yes	NLI supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is

Organization	Yes or No	Question 4 Comment
		simply a specific type of such an interconnection facility.
Okanogan County Electric Cooperative (OCEC)	Yes	OCEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Douglas Electric Cooperative (DEC)	Yes	DEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Fall River Rural Electric Cooperative (FALL)	Yes	FALL supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Lane Electric Cooperative (LEC)	Yes	LEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Clearwater Power Company (CPC)	Yes	CPC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Snohomish County PUD	Yes	SNPD supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.

Organization	Yes or No	Question 4 Comment
Consumer's Power Inc.	Yes	CPI supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Central Electric Cooperative (CEC)	Yes	CEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Coos-Curry Electric Cooperative (CCEC)	Yes	CCEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Blachly-Lane Electric Cooperative (BLEC)	Yes	BLEC supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Long Island Power Authority	Yes	
The Dow Chemical Company	Yes	
City of St. George	Yes	
American Electric Power	Yes	
Tillamook PUD	Yes	Tillamook PUD agrees with the removal of the voltage language since the inclusions and exclusions only apply to equipment over 100 kV.

Organization	Yes or No	Question 4 Comment
NV Energy	Yes	
Z Global Engineering and Energy Solutions	Yes	
Consumers Energy	Yes	
Mission Valley Power	Yes	Mission Valley Power - We agree with the removal of the voltage language, since the inclusions and exclusions apply only to equipment over 100 kV.
Puget Sound Energy	Yes	
Central Hudson Gas and Electric Corporation	Yes	
City of Anaheim	Yes	
Chevron U.S.A. Inc.	Yes	
Metropolitan Water District of Southern California	Yes	
Duke Energy	Yes	
Clallam County PUD No.1	Yes	CLPD supports the removal of the Cranking Path language in I3. As noted in our response to Question 9, there is no reason to classify as BES the facilities interconnecting a BES generator to the bulk interstate system. A Cranking Path is simply a specific type of such an interconnection facility.
Exelon	Yes	

Organization	Yes or No	Question 4 Comment
Michigan Public Power Agency	Yes	
Idaho Falls Power	Yes	We support the inclusion as drafted.
Tri-State GandT	Yes	
Western Area Power Administration	Yes	
Texas Industrial Energy Consumers	Yes	
PacifiCorp	Yes	PacifiCorp supports the removal of reference to Cranking Paths in I3. There is no reason to classify as BES the facilities interconnecting a BES generator to the interconnected transmission system.
Tri-State Generation and Transmission Assn., Inc. Energy Management	Yes	
MRO NERC Standards Review Forum (NSRF)	Yes	
Electricity Consumers Resource Council (ELCON)	Yes	
Southern Company Generation	Yes	
Pepco Holdings Inc and Affiliates	Yes	Agree with the SDT decision to delete the inclusion of Black Start Cranking Paths.

Organization	Yes or No	Question 4 Comment
Dominion	Yes	
Bonneville Power Administration	Yes	
Texas RE NERC Standards Subcommittee	Yes	
SERC Planning Standards Subcommittee	Yes	
Southwest Power Pool Standards Review Team	Yes	
BGE	Yes	No comment.
<p>Response: Thank you for your support.</p>		

5. **The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4 (dispersed power)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.**

Summary Consideration: Several comments sought clarification that Inclusion I4 was directed at including resources such as wind and solar farms and sought a distinction between Inclusions I2 and I4. The SDT believes this is presently clear in the definition. Inclusion I4 specifically addresses wind and solar farms being dispersed power producing resources that “utilize[e] a system designed primarily for aggregating capacity.” The essential distinction between Inclusion I2 and I4 is that Inclusion I2 may not include generating resources that use lower voltage collection systems while Inclusion I4 is specifically designed to accomplish this purpose.

The SDT also clarifies that Inclusion I4 speaks towards the inclusion of the generation resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2.

There were a number of comments seeking clarification on the location of the common point of connection. While the SDT does not believe additional clarification of the term “common point” is needed in the BES definition, the following guidance is provided. The common point of connection, which is the point from where generation is aggregated to determine if the 75 MVA threshold is met, is the point where the individual transmission Element(s) of a collector system ultimately meet the 100 kV transmission system.

Some stakeholders asked for clarity on the issue of units on the customer’s side of the retail meter. Generating units on the customer’s side of the retail meter are not included under Inclusion I4 since customer-side retail generation typically does not “utilize[e] a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above.”

Several comments sought clarification of the definitional difference between “dispersed power” and “distributed generation” as used in the BES definition. While the SDT does not believe that further clarity of these terms is needed in the BES definition, it clarifies that distributed generation is generally defined as: a generator that is located close to the particular Load that it is intended to serve and is interconnected to the utility distribution system. The U.S Energy Information Administration (EIA) and FERC generally use this as a basic definition. The language of Inclusion I4 stating “Dispersed power producing resources . . . utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above” was selected so as not to confuse what is traditionally considered distributed generation with the types of systems to be included in Inclusion I4.

The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

No changes were made to Inclusion I4 based on comments provided in response to this question.

Organization	Yes or No	Question 5 Comment
Northeast Power Coordinating Council	No	<p>Suggest the term “common point” needs clarification and/or definition (is risk of single mode failure intended, i.e. where all the resources could be lost for a single event?). Suggest the following wording: “connected at a common point through a dedicated step-up transformer with a high-side voltage of 100 KV or above.”</p> <p>Dispersed power producing sources such as wind and solar should not be included as BES elements because of the variable and intermittent nature of these resources. If these dispersed power producing resources had dedicated energy storage facilities only then that could make them BES elements. Generally the collector systems for these resources (from the bulk transmission system reliability perspective) do not differ from distribution systems which are excluded from the BES.</p>

Response: While the SDT does not believe that additional clarification of the term “common point” is needed in the BES definition, the following guidance is provided. The common point of connection, which is the point from where generation is aggregated to determine if the 75 MVA threshold is met, is the point where the

Organization	Yes or No	Question 5 Comment
		<p>individual transmission Element(s) of a collector system ultimately meet the 100 kV transmission system. No change made.</p> <p>The SDT disagrees with excluding dispersed power producing sources such as wind and solar from the BES definition. These resources comprise a significant share of the North American resource mix. No change made.</p> <p>The SDT does not believe further clarification of Dispersed Power Resources is needed. Inclusion I4 is directed at including resources such as wind and solar farms. This is denoted by the requirement that the dispersed power producing resources “utilize[e] a system designed primarily for aggregating capacity.” Furthermore, Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made.</p>
<p>Southwest Power Pool Standards Review Team</p>	<p>No</p>	<p>We believe that the removal of the wording “single site” in I2 would remove the need to cover dispersed power producing resources in I4. What is the reason for keeping I4 in this version?</p> <p>Also we understand that 75MVA is held in I4 because of no direct link to the registry criteria, but feel that this number could change in phase two of the project which would create unnecessary work in the future.</p>
<p>Response: The essential distinction between Inclusions I2 and I4 is that Inclusion I2 may not include generating resources that use lower voltage collection systems while Inclusion I4 is specifically designed to accomplish this purpose. Inclusion I4 is directed at including resources such as wind and solar farms. This is denoted by the requirement that the dispersed power producing resources “utilize[e] a system designed primarily for aggregating capacity.” No change made.</p> <p>The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry</p>		

Organization	Yes or No	Question 5 Comment
<p>stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.</p>		
<p>Pepco Holdings Inc and Affiliates</p>	<p>No</p>	<p>The SDT reworded Inclusion I4 to use the phrase “utilizing a system designed primarily for aggregating capacity”. This was to address a concern that the previous definition could ensnare distributed generation or small generators in a distribution system. We agree with the intent of this modification. I4 was intended solely to address wind and solar farms that use a collector system to aggregate their capacity. Therefore, to provide better clarity on the intent of this Inclusion, perhaps it would be better to specifically mention these examples in the wording: “Dispersed power producing resources (such as wind and solar farms, etc.) which utilize a system designed primarily for aggregating capacity, where the capacity is greater than 75MVA (gross aggregate nameplate rating) and the facility is connected at a common point at a voltage of 100kV or above.”</p>
<p>Response: Use of the term ‘etc.’ is not suitable for a definition as it is completely open ended. Inclusion of a list is problematic as it may not be complete especially with regard to future technology enhancements which could force a revision of the definition. The SDT does not believe the suggested change provides any additional clarity. The SDT does not believe further clarification of Dispersed Power Resources is needed. Inclusion I4 is directed at including resources such as wind and solar farms. This is denoted by the requirement that the dispersed power producing resources “utilize[e] a system designed primarily for aggregating capacity.” No change made.</p>		
<p>Hydro One Networks Inc.</p>	<p>No</p>	<p>Although we agree with the I4 concept, we suggest that the SDT should consider that this category primarily includes wind and solar farms and their collector system. We believe these facilities should not be included</p>

Organization	Yes or No	Question 5 Comment
		<p>as BES elements but rather as supporting elements (see comments under I2) for the following reasons: a) Any additional benefit of classifying these resources as BES is insignificant for the reliability of supply (capacity and energy), considering the intermittent and widely variable nature of these resources. The planning and operational standards and practices make sure that their unavailability or unexpected (sudden) loss, which are significantly more likely due to the natural elements than those due to mechanical or electrical causes, will not jeopardize the reliability of the supply; and b) The reliability of the aspects of the collector system of these resources (their impact on reliability of the bulk transmission system) is not different from that of distribution systems (load serving feeders) which are excluded from the BES.</p> <p>We agree with the revised portion of Inclusion I4 which does indeed clarify that there is no requirement for a contiguous BES path from the dispersed generation resources to the point of interconnection to the BES.</p>
<p>Response: The SDT disagrees with excluding dispersed power producing sources such as wind and solar from the BES definition. These resources comprise a significant share of the North American resource base. No change made.</p> <p>Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made.</p>		
Western Area Power Administration	No	<p>Need to clarify the systems associated with this inclusion. The phrase “dispersed power producing resources” in inclusion (I4) is confusing and does not clearly communicate the focus of this inclusion. Without reviewing the reference information provided in the 1st draft comment form, it’s not clear that dispersed power producing resources refer to wind and solar resources. Recommendation: Include examples after phrase “dispersed power producing resources” for clarification to this</p>

Organization	Yes or No	Question 5 Comment
		inclusion. Change I4 to read - Dispersed power producing resources (i.e. wind and solar resources) with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above.
<p>Response: The SDT does not believe that the suggestion provides any additional clarity. No change made.</p>		
PacifiCorp	No	<p>Setting a dispersed power producing resource limit to 75 MVA at a common point discriminates against single generator owners who own generators between 20 MVA and 75 MVA (inclusion I1), typically connected at a common point and requires such owners to be subject to additional standards that dispersed power producing owners are not required. However, even with this concern, PacifiCorp supports the entire BES definition in its current form based on the timeframe under which the SDT is operating and with an emphasis based on a phase II SAR to address PacifiCorp’s objections regarding generation levels.</p> <p>Under the attached scenario, please identify which elements would be considered BES: This response included a drawing. This format will not allow the submission of the drawing. The drawing will be sent separately in an email. Reference "Proj 2010-17 PAC Drawing".</p>
<p>Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. All recommendations for modifications to the technical</p>		

Organization	Yes or No	Question 5 Comment
<p>aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System will be considered. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.</p> <p>The examples provided will be reviewed as part of Phase 2.</p>		
<p>Massachusetts Department of Public Utilities</p>	<p>No</p>	<p>The aggregate 75 MVA of connected generation does not appear to be adequately supported by technical analysis and appears, on its face, as too low. Among our concerns is that such a low level will have a potential adverse impact on the development of renewable generation resources.</p> <p>In addition, the inclusion needs to be clarified in order that entities have clear guidance on what is meant by “common point of interconnection.”</p>
<p>NESCOE</p>	<p>No</p>	<p>NESCOE continues to disagree with this proposed inclusion. NESCOE is concerned with the potential adverse impact this may have on the development of renewable generation resources.</p> <p>In addition, NESCOE suggests that the aggregate 75 MVA of connected generation is too low and is not adequately supported by technical analysis. The threshold value should be related to the largest contingency the applicable control area is designed to operate to. A level of 300 MVA would be appropriate.</p> <p>Finally, the inclusion needs to be clarified in order that entities have clear guidance on what is meant by “common point of interconnection.”</p>
<p>Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded</p>		

Organization	Yes or No	Question 5 Comment
		<p>the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. The SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.</p> <p>While the SDT does not believe that additional clarification of the term “common point” is needed in the BES definition, the following guidance is provided. The SDT believes the common point of connection, which is the point from where generation is aggregated to determine if the 75 MVA threshold is met, is the point where the individual transmission Element(s) of a collector system ultimately meet the 100 kV transmission system. No change made.</p>
Idaho Falls Power	No	<p>As drafted, it appears to draw in all generation resources that sum to 75 MVA or higher. We question then if there is value of categorizing every wind turbine on a >75MVA wind farm as a BES asset and, what would be the unintended consequences.</p> <p>Perhaps language delineating the point of aggregation as the demarcation point of a BES asset would better serve.</p>
		<p>Response: Inclusion I4 denotes an aggregate threshold. This is clear from the requirement inclusion threshold of “aggregate capacity greater than 75 MVA (gross aggregate nameplate rating).” Once this aggregate threshold is met, all generation resources that comprise the facility would be included. No change made.</p> <p>While the SDT does not believe that additional clarification of the term “common point” is needed in the BES definition, the following guidance is provided. The SDT believes the common point of connection, which is the point from where generation is aggregated to determine if the 75 MVA threshold is met, is the point where the individual transmission Element(s) of a collector system ultimately meet the 100 kV transmission system. No change made.</p>

Organization	Yes or No	Question 5 Comment
ReliabilityFirst	No	<p>The term “Dispersed Power Producing Resource” is not a defined term and needs further clarification.</p> <p>However, I4 is not needed and is already included in I2. I4 does not add any additional facilities that are not already included in I2. How are “dispersed power producing resources” different from “generating resources” described in I2? If the intent of I4 is to include wind generators but exclude wind farm collector systems in the BES, ReliabilityFirst Staff disagrees.</p> <p>To maintain reliability, the BES cannot have pockets of generation that are not connected to the BES via BES facilities. ReliabilityFirst Staff believes that without including the paths from BES generators in the BES, the reliable operation of the system could be jeopardized if the paths are unavailable due to non-compliance to Reliability Standards. For example, wind farm collector systems at voltages operated at less than 100 kV should be included in the BES for the above reason. I4 could be deleted.</p>
<p>Response: The SDT does not believe further clarification of Dispersed Power Resources is needed. Inclusion I4 is directed at including resources such as wind and solar farms. This is denoted by the requirement that the dispersed power producing resources “utilize[e] a system designed primarily for aggregating capacity.” No change made.</p> <p>The essential distinction between Inclusions I2 and I4 is that Inclusion I2 may not include generating resources that use lower voltage collection systems while Inclusion I4 is specifically designed to accomplish this purpose. Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made.</p> <p>The contiguous nature of the BES will be discussed as part of Phase 2 of the project. No change made.</p>		
Xcel Energy	No	Xcel Energy believes that this inclusion is still a little vague and could use some clarification. For instance, if a wind farm has an aggregated capacity greater than 75 MVA (and therefore meets Inclusion I4) exactly

Organization	Yes or No	Question 5 Comment
		<p>what facilities are included as part of the BES, every turbine, all distribution transformers and cables, etc. If all equipment is included, what level of detail is required of this BES facility for modeling purposes, and who is responsible for modeling this system. Or, is the intent to only include the facilities at the common point of connection, whereby the facility could be modeled as 1 large facility?</p>
<p>Response: Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made.</p>		
<p>Central Maine Power Company</p>	<p>No</p>	<p>The term “common point” needs clarification and/or definition. (e.g., is it intended to apply to the risk of single mode failure, where all the resources could be lost for a single event?) Some northeast industry expert colleagues interpret I2 to mean the collector system itself needs to be 100 kV or above in order to be BES. I2 seems to not include the collector system itself in BES. I4 should be restated as follows: “Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system connected at a common point. BES includes the interconnecting substation with the step-up transformer(s) connected at a voltage of 100 kV or above.”[alternatively, replace "interconnecting substation with" with, “generator terminals through the high-side of” if the entire collector system is intended to be BES]Also note that some wind collector systems require supplemental dynamic reactive resources or special control system to met reliability standards. As written, these reactive resources or controls may not be considered to be BES.</p>
<p>New York State Dept of Public Service</p>	<p>No</p>	<p>I4 reference to a “common point” lacks clarity that can lead to confusion and required clarifications. Suggested wording change: ... connected at a common point through a dedicated step-up transformer with a high-</p>

Organization	Yes or No	Question 5 Comment
		side voltage of 100 kV or above.”
American Electric Power	No	We believe more clarity is needed as to where exactly the “common point” is, for example in the case of a wind farm. This first common point could be interpreted as the output voltage of the wind generator, would be less than the 100kv threshold and thereby could (unintentionally?) exclude the facility as a whole. If this was unintentional, we recommend rewording I4 in a manner similar to I2.
<p>Response: While the SDT does not believe that additional clarification of the term “common point” is needed in the BES definition, the following guidance is provided. The SDT believes the common point of connection, which is the point from where generation is aggregated to determine if the 75 MVA threshold is met, is the point where the individual transmission Element(s) of a collector system ultimately meet the 100 kV transmission system. No change made.</p>		
The Dow Chemical Company	No	<p>It is not clear how “Dispersed power producing resources” differ from “Generating Resource (s)” in I2. Inclusion I4 should clarify this.</p> <p>We suggest that the phrase “Variable Energy Resources” be used instead of “Dispersed power producing resources”. Variable Energy Resources should be defined as “Resources producing electricity using wind or solar energy.”</p> <p>The following phrase should be added at the end “unless excluded under Exclusion E2”.</p>
<p>Response: The essential distinction between Inclusion I2 and I4 is that Inclusion I2 may not include generating resources that use lower voltage collection systems while Inclusion I4 is specifically designed to accomplish this purpose. Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made.</p> <p>The SDT does not believe that the suggestion provides any additional clarity. No change made.</p>		

Organization	Yes or No	Question 5 Comment
		<p>The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.</p> <p>Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:</p> <p>“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. “</p> <p>An Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.</p> <p>Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.</p> <p>Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.</p> <p>Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.</p> <p>Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2.</p>

Organization	Yes or No	Question 5 Comment
<p>Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.</p> <p>In the event that the BES definition does not provide a definitive determination on whether an Element is classified as BES or non-BES, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. No change made.</p>		
City of St. George	No	<p>This language follows the 75 MVA plant requirements from the Registration Criteria. See comments to question 3 (for I2) above.</p> <p>Additional detail is needed to clarify exactly at what point in the dispersed system the BES starts and what is not BES.</p>
<p>Response: Please see response to Q3.</p> <p>While the SDT does not believe that additional clarification of the term “common point” is needed in the BES definition, the following guidance is provided. The SDT believes the common point of connection, which is the point from where generation is aggregated to determine if the 75 MVA threshold is met, is the point where the individual transmission Element(s) of a collector system ultimately meet the 100 kV transmission system. No change made.</p>		
ISO New England Inc	No	<p>I4 is unclear as to whether or not the collector system (or system designed primarily for aggregating capacity) itself is BES or just the resource.”Utilizing a system designed primarily for aggregating capacity” needs to be more clearly defined to account for multiple systems that may exist out of one common point. A suggestion would be to modify the end of the sentence to say “connected at any common point.”</p> <p>I4 will allow for significant amounts of dispersed power producing resources to be excluded from the BES. This includes wind resources which are increasing in numbers and having a significant impact on system operations. It does not seem appropriate that having ten 70 MVA (total of 700 MVA) installations each with their own connection to a 115</p>

Organization	Yes or No	Question 5 Comment
		<p>kV bus should fall outside of the BES. As currently written, they would fall outside of the inclusion if they do not utilize the same collector system. It is unclear whether or not supplemental equipment associated with the dispersed power producing resources is included in the BES. As an example, many wind resources are being interconnected utilizing supplemental dynamic and static reactive devices which are crucial to the operation of these resources. The dynamic devices are often controlling themselves and static reactive devices, which may or may not be connected above 100 kV. Leaving these devices out of the BES definition seems to be a potential gap.</p>
<p>Response: The essential distinction between Inclusion I2 and I4 is that Inclusion I2 may not include generating resources that use lower voltage collection systems while Inclusion I4 is specifically designed to accomplish this purpose. Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made.</p> <p>The clustering of dispersed power producing resources and supplemental equipment will be discussed as part of Phase 2 of the project. No change made.</p>		
<p>Rochester Gas and Electric and New York State Electric and Gas</p>	<p>No</p>	<p>The term “common point” needs clarification and/or definition. (e.g., is it intended to apply to the risk of single mode failure, where all the resources could be lost for a single event?)</p> <p>Some northeast industry expert colleagues interpret I2 to mean the collector system itself needs to be 100 kV or above in order to be BES. I2 seems to not include the collector system itself in BES. I4 be restated as follows: “Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a collector system connected at a common point. BES includes the interconnecting substation with the step-up transformer(s) connected at a voltage of 100 kV or above.” [alternatively, replace the bold italics with,</p>

Organization	Yes or No	Question 5 Comment
		<p>“generator terminals through the high-side of”]</p> <p>Also note that some wind collector systems require supplemental dynamic reactive resources or special control system to met reliability standards. As written, these reactive resources or controls may not be considered to be BES.</p>
<p>Response: While the SDT does not believe that additional clarification of the term “common point” is needed in the BES definition, the following guidance is provided. The SDT believes the common point of connection, which is the point from where generation is aggregated to determine if the 75 MVA threshold is met, is the point where the individual transmission Element(s) of a collector system ultimately meet the 100 kV transmission system. No change made.</p> <p>The essential distinction between Inclusion I2 and I4 is that Inclusion I2 may not include generating resources that use lower voltage collection systems while Inclusion I4 is specifically designed to accomplish this purpose. Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made.</p> <p>The inclusion of supplemental equipment will be discussed as part of Phase 2 of the project. No change made.</p>		
LCRA Transmission Services Corporation	No	LCRA TSC suggests consistency between this inclusion criteria and the criteria used in I2 for “generation”.
<p>Response: The essential distinction between Inclusion I2 and I4 is that Inclusion I2 may not include generating resources that use lower voltage collection systems while Inclusion I4 is specifically designed to accomplish this purpose. Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made.</p>		
Kansas City Power and Light Company	No	It is not clear that it is the injection at the collection point that is the defining point for the injection. Nameplate rating of the generator is not a reflection of what can be actually injected into the transmission system with resulting electrical impacts on transmission loading and behavior. Recommend the BES definition be based on a generating resource(s)

Organization	Yes or No	Question 5 Comment
		<p>established net accredited generating capacity at the common point instead of what it could do by nameplate rating that may not be achievable. Recommend the following language: Dispersed power producing resources utilizing a system designed primarily for aggregating capacity connected through a common point at a voltage of 100 kV or above with aggregate net accredited capacity at the common point of greater than 75 MVA.</p>
<p>Response: For Phase 1, the SDT has used nameplate rating in order to maintain consistency with the ERO Statement of Compliance Registry Criteria. No change made.</p> <p>This can be discussed in Phase 2 of the project. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.</p>		
Farmington Electric Utility System	No	<p>FEUS feels additional clarity should be added to I4. It appears I4 is not intended to include each individual wind turbine generating unit in a wind farm as a BES element, but rather to include the point at which the aggregation becomes large enough to meet the aggregate capacity threshold of 75MVA.</p>
<p>Response: inclusion I4 denotes an aggregate threshold. This is clear from the requirement inclusion threshold</p>		

Organization	Yes or No	Question 5 Comment
		<p>of “aggregate capacity greater than 75 MVA (gross aggregate nameplate rating).” Once this aggregate threshold is met, all generation resources that comprise the facility would be included. No change made.</p>
<p>South Houston Green Power, LLC</p>	<p>No</p>	<p>Further clarification of “Dispersed power producing resources” is needed. Multiple small resources should not be included.</p> <p>The following phrase should be added at the end of Inclusion I4 “unless excluded under Exclusion E2”.</p>
<p>Response: The SDT does not believe that additional clarification is needed. Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made.</p> <p>The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.</p> <p>Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:</p> <p>“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. “</p> <p>An Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.</p> <p>Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.</p>		

Organization	Yes or No	Question 5 Comment
<p>Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.</p> <p>Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.</p> <p>Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2.</p> <p>Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.</p> <p>In the event that the BES definition does not provide a definitive determination on whether an Element is classified as BES or non-BES, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. No change made.</p>		
Westar Energy	No	<p>We believe that the removal of the wording “single site” in I2 would eliminate the need to include dispersed power producing resources in I4. We feel that I4 should be removed to reduce redundancy in the definition, unless there is some other reason to include it.</p> <p>Also, we understand that 75 MVA is retained in I4 because there is no direct link to the ERO Statement of Compliance Registry Criteria, but we have concerns that this number could change in phase two of the project, creating unnecessary work in the future.</p>
<p>Response: The essential distinction between Inclusion I2 and I4 is that I2 may not include generating resources that use lower voltage collection systems while I4 is specifically designed to accomplish this purpose, therefore I4 is needed. No change made.</p>		

Organization	Yes or No	Question 5 Comment
		<p>The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. The SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.</p>
<p>Hydro-Quebec TransEnergie</p>		<p>Same comment than Q. 3.</p> <p>Also, since the path to connect the dispersed generation is often done at distribution voltage, that lower voltage path should not be included in BES.</p>
<p>Response: Please see response to Q3.</p> <p>Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made.</p>		
<p>Tacoma Power</p>	<p>Yes</p>	<p>Tacoma Power generally supports the Inclusion I4 as currently written. However, we support further refinement of the aggregate nameplate rating definition and support deferring the appropriate quantitative thresholds to those that will be determined in Phase 2.</p>
<p>Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders</p>		

Organization	Yes or No	Question 5 Comment
<p>No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. The SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.</p>		
Ameren	Yes	<p>a)For a consistent application, we suggest that the definition of the terms "Dispersed power producing resources" is included. Consider including some examples also.</p>
<p>Response: The SDT does not believe further clarification of Dispersed Power Resources is needed. Inclusion I4 is directed at including resources such as wind and solar farms. This is denoted by the requirement that the dispersed power producing resources “utilize[e] a system designed primarily for aggregating capacity.” No change made.</p>		
Cowlitz County PUD	Yes	<p>However, Cowlitz suggests Inclusion 4 be made parallel with Inclusion 2: ...(greater than the gross aggregate name plate rating per the ERO Statement of Compliance Registry Criteria) utilizing...</p>
<p>Response: The SDT believes that Inclusions I2 and I4 do use consistent language and this point has been clarified with the clarifying language changes to Inclusion I2. No change made.</p>		
Long Island Power Authority	Yes	<p>Need to define the term "common point"</p>
<p>Response: While the SDT does not believe that additional clarification of the term “common point” is needed in the BES definition, the following guidance is provided. The SDT believes the common point of connection,</p>		

Organization	Yes or No	Question 5 Comment
<p>which is the point from where generation is aggregated to determine if the 75 MVA threshold is met, is the point where the individual transmission Element(s) of a collector system ultimately meet the 100 kV transmission system.</p>		
<p>AECI and member GandTs, Central Electric Power Cooperative, KAMO Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power Cooperative</p>	<p>Yes</p>	<p>This inclusion should be limited to reactive devices 150 MVAR or greater (gross aggregate nameplate rating) connected through a common point at the 200 kV level or higher level.</p>
<p>Manitoba Hydro</p>	<p>Yes</p>	<p>Manitoba Hydro agrees with I4 but it does create a discrepancy between the BES Definition and the Registration Criteria Document. The Registration Criteria document should be updated and I2 and I4 should be combined into a single Inclusion.</p>
<p>Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. The SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for</p>		

Organization	Yes or No	Question 5 Comment
<p>modifications to the existing values. Possible revisions to the ERO Statement of Compliance Registry Criteria will be discussed as part of Phase 2 of the project. No change made.</p>		
<p>Consumers Energy</p>	<p>Yes</p>	<p>We agree, but would like further clarification on what wind farm equipment (e.g., collector systems or other equipment) would be considered a part of the BES. Is the system designed for aggregating capacity considered to be part of the dispersed plant or part of the BES.</p>
<p>Response: Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made.</p>		
<p>Michigan Public Power Agency Clallam County PUD No.1 Blachly-Lane Electric Cooperative (BLEC) Coos-Curry Electric Cooperative (CCEC) Central Electric Cooperative (CEC) Clearwater Power Company (CPC) Snohomish County PUD Consumer's Power Inc. Douglas Electric Cooperative (DEC) Fall River Rural Electric</p>	<p>Yes</p>	<p>MPPA supports the revised language generally, but believes additional changes would make the language clearer. Specifically, we believe Inclusion 4 should not incorporate a hard 75 MVA generation threshold (i.e., “resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)”). Instead, we urge the SDT to replace this language with the defined term “Qualifying Aggregate Generation Resources,” which is discussed in more detail in our response to Question 3. This language, or some equivalent, will preserve the SDT’s ability to revise the 75 MVA threshold in Phase 2, with the result of Phase 2 included in the BES Definition by operation rather than requiring further revision of the Definition.</p> <p>More generally, we are not certain what is accomplished by Inclusion 4 that is not already accomplished by Inclusion 2, which also addresses whether generation should be defined as BES. The SDT’s stated concern is with variable generation units such as wind and solar plants. It is not clear to us why this concern is not fully addressed in Inclusion 2, which addresses multiple generation units connected at a common bus, the configuration of most variable generation plants with multiple units.</p> <p>We are also concerned that the language, as proposed, could have</p>

Organization	Yes or No	Question 5 Comment
<p>Cooperative (FALL) Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (LEC) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) West Oregon Electric Cooperative Umatilla Electric Cooperative (UEC) Kootenai Electric Cooperative</p>		<p>unintended consequences and improperly classify local distribution systems as BES in certain circumstances. This is because multiple distributed generation units could render a local distribution system a “collector system” and the entire system the equivalent of an aggregated generation unit, causing the local distribution system to be improperly denied status as a LN. If many different distributed generation units are connected to a local distribution system, it is very unlikely that more than a few of those units would fail simultaneously, and it is therefore unlikely that multiple generation units would produce a measureable impact on the interconnected bulk transmission system, especially if the units individually do not otherwise exceed the materiality threshold to be established by the SDT in Phase 2.</p> <p>Further, we are concerned that, if small distributed generation units become the industry norm, Inclusion 4 could unintentionally sweep in local distribution systems, especially where local policies favor the growth of small solar or other renewable generation systems for public policy reasons.</p> <p>Finally, we suggest that the SDT add the phrase “. . . unless the dispersed power producing resources operate within a Radial System meeting the requirements of Exclusion E1 or a Local Network meeting the requirements of Exclusion E2.” This language, which parallels the language included at the end of Inclusion I1, would make clear that dispersed small-scale generators scattered throughout a Radial System or Local Network serving retail load would not convert the Radial System or Local Network into a BES system, even if the aggregate capacity of those small generators exceeds the relevant threshold.</p>
<p>Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders</p>		

Organization	Yes or No	Question 5 Comment
		<p>No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. The SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.</p> <p>The essential distinction between Inclusions I2 and I4 is that Inclusion I2 may not include generating resources that use lower voltage collection systems while Inclusion I4 is specifically designed to accomplish this purpose. No change made.</p> <p>Inclusion I4 is directed at including resources such as wind and solar farms. This is denoted by the requirement that the dispersed power producing resources “utilize[e] a system designed primarily for aggregating capacity.” Furthermore, Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. Therefore distribution systems would not be inadvertently included. No change made.</p>
National Grid	Yes	<p>We agree with Inclusion I4, however we feel that the inclusion could be interpreted in some different ways. This inclusion could be interpreted to exclude dispersed generation greater than 75 MVA if the first common point is less than 100 kV. To eliminate any confusion in the interpretation of this inclusion, we suggest this wording: Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) connected to a Transmission Element at 100 kV or above, utilizing a system designed primarily for aggregating capacity which includes all transformers between the generator(s) and the Transmission Element.</p>

Organization	Yes or No	Question 5 Comment
MRO NERC Standards Review Forum (NSRF)	Yes	I4 - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above starting at the point of aggregation to 75 MVA or more through to the point of interconnection at 100 kV or above."
<p>Response: The SDT does not believe that the suggested change provides additional clarity. No change made.</p>		
Electricity Consumers Resource Council (ELCON)	Yes	<p>The term “dispersed power” and “dispersed generation” are often synonymous with distributed generation, which includes behind-the-meter generation (CHP). The Inclusion should be clarified by specifically referencing wind and solar, or adopt the FERC term “Variable Energy Resources.”</p> <p>Also, to distinguish this Inclusion from Inclusion I2, the SDT might want to clarify that the collection system (usually at voltage below 100 KV anyway) is not part of the BES-just the resources and any transformers included by I1, if this is indeed the intent of this Inclusion. The following phrase should be added at the end “unless excluded under Exclusion E2.”</p>
<p>Response: The SDT believes that inclusion of a list is problematic as it may not be complete especially with regard to future technology enhancements which could force a revision of the definition. Furthermore, the SDT does not believe further clarification of Dispersed Power Resources is needed. Inclusion I4 is directed at including resources such as wind and solar farms. This is denoted by the requirement that the dispersed power producing resources “utilize[e] a system designed primarily for aggregating capacity.” No change made.</p> <p>The SDT does not believe that additional clarification is needed. Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made.</p>		

Organization	Yes or No	Question 5 Comment
ACES Power Marketing Standards Collaborators	Yes	Further clarification on what “dispersed power” means would be helpful. How does it compare to distributed generation?
<p>Response: While the SDT believes that further clarity of the terms “dispersed power” and “distributed generation” is not needed, it notes that distributed generation is generally defined as: a generator that is located close to the particular load that it is intended to serve and is interconnected to the utility distribution system. The U.S EIA and FERC generally use this as a basic definition. The language of Inclusion I4 stating “Dispersed power producing resources . . . utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above” was selected so as not to confuse what is traditionally considered distributed generation with the types of systems to be included in Inclusion I4. No change made.</p>		
Texas RE NERC Standards Subcommittee	Yes	To distinguish this Inclusion from Inclusion I2, the SDT might want to clarify that the collection system (usually at voltage below 100 KV anyway) is not part of the BES-just the resources and any transformers included by I1, if this is indeed the intent of this Inclusion.
<p>Response: The SDT does not believe that additional clarification is needed. Inclusion I4 speaks towards the inclusion of the resources themselves, not the transmission Element(s) of the collector systems operated below 100 kV or not included under Inclusion I2. No change made.</p>		
ExxonMobil Research and Engineering	Yes	The BES SDT should clarify the difference between “dispersed power producing resources” and “generation resources” in such a manner that it is clear that an industrial plant containing providing the BES with power from ten 7.5MVA machines connected at a common point at a voltage of 100 kV or higher meets the qualifications for generation resources and does not meet the qualifications for a “dispersed power producing resource”.
Portland General Electric	Yes	PGE requests additional clarity in the wording of Inclusion 4. Inclusion 4 is not intended to include each individual wind turbine generating unit in a

Organization	Yes or No	Question 5 Comment
Company		wind farm as a BES element, but rather to include the point at which the aggregation becomes large enough to meet the aggregate capacity threshold of 75 MVA. However, the response to comments from the last comment posting and the current wording of Inclusion 4 does not provide sufficient clarity to answer this question.
Bonneville Power Administration	Yes	BPA suggests adding, “Including generating terminals of the high side” as clarifying language to the end of the sentence. (Specifically where the 100kV is to be measured as clarified in I2). BPA believes that Inclusion 4 is not intended to include each individual wind turbine/generator unit in a wind farm as a BES element, but rather to include the point at which the aggregation becomes large enough to meet the aggregate capacity threshold of 75 MVA.
WECC Staff	Yes	WECC seeks further clarification on Inclusion 4. Several comments were submitted in the last round of comments whether each individual wind turbine in a wind farm, will be included in the BES. WECC believes the language change to I4 by the SDT did not address this issue. The current language in I4 could be interpreted as each individual turbine (example 1MW) would be part of the BES. WECC believes that I4 is not intended to include each individual wind turbine in a wind farm as a BES element but rather to include the point at which the aggregation becomes large enough to meet the aggregate capacity threshold of 75 MVA. WECC recommends the SDT modify the language in I4 to clarify this issue.
<p>Response: The SDT does not believe that additional clarification is needed. Inclusion I4 denotes an aggregate threshold. This is clear from the requirement wording of “aggregate capacity greater than 75 MVA (gross aggregate nameplate rating).” Once this aggregate threshold is met, all generation resources that comprise the facility would be included. No change made.</p>		
Transmission Access Policy	Yes	We recommend clarifying that the dispersed power resources covered by

Organization	Yes or No	Question 5 Comment
Study Group		this inclusion do not include generators on the retail side of the retail meter. Specifically, we recommend that the Inclusion read: “Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100kV or above, but not including generation on the retail side of the retail meter.”
Florida Municipal Power Agency	Yes	We recommend clarifying that the dispersed power resources covered by this inclusion do not include generators on the retail side of the retail meter. Specifically, we recommend that the Inclusion read: “Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100kV or above, but not including generation on the retail side of the retail meter.”
<p>Response: The SDT does not believe that additional clarification is needed. The SDT further clarifies that generating units on the customer’s side of the retail meter are not included under Inclusion I4 since customer-side retail generation typically does not “utilize[e] a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above.” No change made.</p>		
Redding Electric Utility	Yes	
City of Redding	Yes	
ATC LLC	Yes	
City of Austin dba Austin Energy	Yes	

Organization	Yes or No	Question 5 Comment
Georgia System Operations Corporation	Yes	
MEAG Power	Yes	
Northern Wasco County PUD	Yes	Northern Wasco County PUD agrees both with the inclusion and with the revised language. The revised language removes the need to provide a separate definition for "Collector System".
Sacramento Municipal Utility District	Yes	<p>We support using the BES Phase 2 technical analysis to identify and provide technical support for determining the appropriate minimum MVA rating that the aggregation of multiple units must meet to be considered part of the BES.</p> <p>We also support using the Phase 2 studies to identify an appropriate minimum MVA level that a single unit of the aggregation of multiple units must be considered BES.</p>
Oncor Electric Delivery Company LLC	Yes	
Utility Services, Inc.	Yes	
Harney Electric Cooperative, Inc.	Yes	HEC agrees with the inclusions and revised language to the definition
Central Lincoln	Yes	Central Lincoln agrees both with the inclusion and with the revised language. The revised language removes the need to provide a separate definition for "Collector System".
Independent Electricity	Yes	The revised Inclusion I4 does indeed clarify that there is no requirement

Organization	Yes or No	Question 5 Comment
System Operator		for a contiguous BES path from the dispersed generation resources to the point of interconnection to the BES.
PSEG Services Corp	Yes	
Mission Valley Power	Yes	Mission Valley Power agrees both with the inclusion and with the revised language. The revised language removes the need to provide a separate definition for "Collector System".
Puget Sound Energy	Yes	
Tillamook PUD	Yes	Tillamook PUD agrees both with the inclusion and with the revised language. The revised language removes the need to provide a separate definition for "Collector System".
NV Energy	Yes	
Z Global Engineering and Energy Solutions	Yes	
Metropolitan Water District of Southern California	Yes	
Duke Energy	Yes	
Ontario Power Generation Inc.	Yes	

Organization	Yes or No	Question 5 Comment
Central Hudson Gas and Electric Corporation	Yes	
City of Anaheim	Yes	This is OK because the 75 MVA is connected at 100 kV or above.
Chevron U.S.A. Inc.	Yes	
Southern Company	Yes	
FirstEnergy Corp.	Yes	
Texas Industrial Energy Consumers	Yes	
Tri-State GandT	Yes	
Tennessee Valley Authority	Yes	
IRC Standards Review Committee	Yes	The revised Inclusion I4 does clarify that there is no requirement for a contiguous BES path from the dispersed generation resources to the point of interconnection to the BES.
Tri-State Generation and Transmission Assn., Inc. Energy Management	Yes	
Southern Company Generation	Yes	
Dominion	Yes	

Organization	Yes or No	Question 5 Comment
Balancing Authority Northern California	Yes	
SERC Planning Standards Subcommittee	Yes	
SERC OC Standards Review Group	Yes	
NERC Staff Technical Review	Yes	
BGE	Yes	No comment.
Response: Thank you for your support.		

6. The SDT has added specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I5 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: In response to comments, the SDT added further clarification to Inclusion I5 to exclude small generators that would be improperly brought into the BES.

The SDT believes Inclusion I5 incorporates the necessary resources for the reliable operation of the BES, without unintentionally including any distribution devices, or including any of the dedicated transformers which are not identified in the core definition or Inclusion I1.

Additionally, Exclusion E4 will further exclude those non-generator Reactive Power resource devices that were identified through the core definition or through Inclusion I5 which are on the load side of the customer meter solely for the customer’s own use.

Using a threshold for inclusion of non-generator Reactive Power resource devices in the BES will be considered in Phase 2 of this effort. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

I5 –Static or dynamic devices (excluding generators) dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.

Organization	Yes or No	Question 6 Comment
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Organization	Yes or No	Question 6 Comment
SERC OC Standards Review Group	No	We feel that this inclusion should be limited to dynamic devices with an aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) connected through a common point.
Tennessee Valley Authority	No	TVA feels that this inclusion should be limited to dynamic devices with an aggregate capacity greater than 75 MVAR (gross aggregate nameplate rating) connected through a common point at a voltage of 200kV or above, and requests that the Phase 2 for the project use 75 MVAR connected at 200kV or above or develop a transmission voltage and/or an MVAR threshold that is technically based.
Tri-State GandT	No	There should be a limitation on what reactive components needs to be included. The limits could be based on capacity of the units or on the voltage step that occurs upon switching of the device.
Western Area Power Administration	No	This inclusion should be worded to only include static or dynamic reactive devices which are necessary to meet the NERC Planning Criteria in terms of normal and post-disturbance voltage profiles. We shouldn't have to include smaller shunt cap banks and reactors which are used primarily for voltage support (not voltage collapse). Recommendation: Change I5 to read - Static or dynamic devices dedicated to supplying or absorbing Reactive Power which are necessary to meet the NERC Planning Criteria in terms of normal and post-disturbance voltage profiles that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1
Southern Company	No	We believe that the size of the reactive power resource should be considered as a key factor to be part of BES. When considering generating resources, the size, e.g., greater than 75 MVA, was a key part of criteria to be included or excluded as BES. A similar approach should be applied when considering reactive power resources. We also suggest the removal of static reactive resources from this inclusion.
<p>Response: Using a threshold for inclusion of non-generator Reactive Power resource devices in the BES will be considered in</p>		

Organization	Yes or No	Question 6 Comment
<p>Phase 2 of this effort. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.</p>		
New York State Dept of Public Service	No	I5 - which has been newly added and significantly expands the BES definition - should be dropped due to lack of technical justification.
Northeast Power Coordinating Council	No	Technical studies need to be conducted to confirm reactive resource impacts on the reliability of the BES. The inclusion of reactive resources is a significant expansion of the current BES definition and therefore requires technical justification for inclusion. Inclusion I5 as written is confusing with a reference to Inclusion I1 in the definition. Suggest removing references to reactive resources from Phase 1 until technical justification can be demonstrated (as part of Phase 2).
<p>Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects of the definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will provide compelling justification.</p>		

Organization	Yes or No	Question 6 Comment
No change made.		
Southwest Power Pool Standards Review Team	No	We understand that this inclusion is used to capture those devices other than generation resources, but the language leads us to believe that it could include all generators used to supply or absorb reactive power. We would suggest that I5 be changed to read “-Static or dynamic devices specifically used for supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.
Consumers Energy	No	This inclusion appears to pull small generators that have an AVR that are connected to 138 kV into the BES. These generators are primarily intended to provide real power.
<p>Response: The SDT added further clarifications to Inclusion I5 to specifically exclude generators.</p> <p>I5 –Static or dynamic devices <u>(excluding generators)</u> dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.</p>		
Dominion	No	<p>The language in the last part of Inclusion I5 “...or through a transformer that is designated in Inclusion I1” introduces ambiguity. Specifically, it is not clear how implementation of this language would result in the inclusion of any Static or dynamic device that is not already included. Dominion suggests that the language in I5 be revised to read “Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or connected through a dedicated transformer with at least one terminal voltage of 100 kV or higher.”</p> <p>Dominion understands that the SDT intended for this Inclusion to not address generators or power producing resources because they are covered elsewhere (I2 and I4) and requests that the SDT confirm this understanding.</p>
<p>Response: The SDT believes these qualifications on non-generator Reactive Power resource devices in Inclusion I5 do include the</p>		

Organization	Yes or No	Question 6 Comment
<p>necessary resources for the reliable operation of the BES, without unintentionally including any distribution devices, or including any of the dedicated transformers which are not identified in the core definition or Inclusion I1. No change made.</p> <p>The SDT confirms that Dominion’s understanding of the intent of this inclusion is correct.</p> <p>In response to comments, the SDT added further clarifications to Inclusion I5.</p> <p>I5 –Static or dynamic devices (<u>excluding generators</u>) dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.</p>		
Pepco Holdings Inc and Affiliates	No	Agree in principle. However, the last phrase “or through a transformer that is designated in Inclusion I1” is unnecessary, since if the resource were connected through a transformer meeting Inclusion I1 it would by nature be connected at 100kV or higher.
<p>Response: The SDT believes the Inclusion I1 wording is necessary to capture those devices dedicated to supplying or absorbing Reactive Power. No change made.</p>		
MRO NERC Standards Review Forum (NSRF)	No	NSRF recommends the following proposed language for I5 to address the concern: "I5 - Static or dynamic devices which 1) are dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1 and 2) are pertinent to meeting the NERC Planning Criteria in terms of normal and post-disturbance voltage profiles."
<p>Response: The SDT does not believe this change provides additional clarity as it diverts from the bright-line concept. No change made.</p>		
PacifiCorp	No	PacifiCorp recommends the addition of the phrase “...unless excluded under E1 or E3.” Otherwise, PacifiCorp believes that I5 is currently acceptable. However, phase II should identify limits and technically justify the appropriate limit(s).

Organization	Yes or No	Question 6 Comment
		<p>Response: The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.</p> <p>Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:</p> <p>“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. “</p> <p>Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.</p> <p>Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.</p> <p>Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.</p> <p>Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.</p> <p>Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2.</p> <p>Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.</p> <p>In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.</p>

Organization	Yes or No	Question 6 Comment
<p>Using a threshold for inclusion of non-generator Reactive Power resource devices in the BES will be considered in Phase 2 of this effort. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.</p>		
<p>Massachusetts Department of Public Utilities</p>	<p>No</p>	<p>The inclusion of all devices that supply reactive power to the BES is unnecessary and will result in unjustified costs to the ratepayer. Static devices (fixed capacitors) should remain excluded from the BES as they are dispatched by operations personnel, and if one fixed capacitor bank fails, the operator can replace its impact by switching in another fixed bank. This represents routine operation of the system. On the other hand, dynamic devices may be important to maintaining voltage stability of the system. These installations typically are rated to supply or absorb 75 MVA or more to or from the BES. Therefore, the MA DPU suggests that dynamic reactive power devices rated at 75 MVA or more could be included in the BES.</p> <p>Further, revised inclusion I5 is a new inclusion that lacks definition (and appears to be redundant with the general BES definition). NERC should provide technical justification for the additional language under Inclusion I5.</p>
<p>NESCOE</p>	<p>No</p>	<p>NESCOE believes that inclusion of all devices that supply reactive power to the BES is unnecessary and will result in transferring unjustified costs to the ratepayer. Static devices (fixed capacitors) should remain excluded from the BES as they are dispatched by operations personnel, and if one fixed capacitor bank fails, the operator can replace its impact by switching in another fixed bank. This represents routine operation of the</p>

Organization	Yes or No	Question 6 Comment
		<p>system. On the other hand, dynamic devices may be important to maintaining voltage stability of the system. These installations typically are rated to supply or absorb 75 MVA or more to or from the BES. Therefore, NESCOE suggests that dynamic reactive power devices rated at 75 MVA or more be included in the BES.</p> <p>Further, revised inclusion I5 is a new inclusion that lacks definition (and appears to be redundant with the general BES definition). NERC should provide additional technical justification for the additional language under Inclusion I5.</p>
<p>Response: The SDT believes these qualifications on non-generator Reactive Power resource devices in Inclusion I5 do include the necessary resources for the reliable operation of the BES, without unintentionally including any distribution devices, or including any of the dedicated transformers which are not identified in the core definition or Inclusion I1. No change made.</p> <p>The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will provide compelling justifications.</p>		
<p>Clallam County PUD No.1 Blachly-Lane Electric Cooperative (BLEC) Coos-Curry Electric Cooperative (CCEC) Central Electric Cooperative (CEC) Clearwater Power Company</p>	<p>No</p>	<p>CLPD has several concerns about the new language in Inclusion 5. First, because Reactive Power devices produce power, they are “power producing resources” and we therefore believe Inclusion 5 is duplicative of Inclusion 4, which addresses “power producing devices.”</p> <p>Second, there is no capacity threshold specified in Inclusion 5 for Reactive Power devices that would be considered part of the BES. This is inconsistent with the approach taken in the balance of the definition, where thresholds are specified for generators and other types of power producing devices.</p> <p>Finally, CLPD believes the appropriate threshold for inclusion or exclusion of Reactive</p>

Organization	Yes or No	Question 6 Comment
(CPC) Snohomish County PUD Consumer's Power Inc Douglas Electric Cooperative (DEC) Fall River Rural Electric Cooperative (FALL) Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (LEC) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) West Oregon Electric Cooperative Umatilla Electric Cooperative (UEC) Kootenai Electric Cooperative Cowlitz County PUD		Power devices from the BES should be subject to the same technical analysis that will cover generators in the Phase 2 process.

Organization	Yes or No	Question 6 Comment
Michigan Public Power Agency	No	<p>MPPA has several concerns about the new language in Inclusion 5. First, because Reactive Power devices produce power, they are “power producing resources” and we therefore believe Inclusion 5 is duplicative of Inclusion 4, which addresses “power producing devices.”</p> <p>Second, there is no capacity threshold specified in Inclusion 5 for Reactive Power devices that would be considered part of the BES. This is inconsistent with the approach taken in the balance of the definition, where thresholds are specified for generators and other types of power producing devices.</p> <p>Finally, MPPA believes the appropriate threshold for inclusion or exclusion of Reactive Power devices from the BES should be subject to the same technical analysis that will cover generators in the Phase 2 process. Without such analysis either: 1) no threshold except for those connected at 100kV, or: 2) of .95 power factor of a 20 MVA generator, or 6 MVAR and use the fact that most Facility Connection Requirements require a power factor in the range of between 0.85 - 0.9 lagging to 0.9 - 0.95 leading for a generator. Hence, a 20 MVA generator (the smallest to meet the registry criteria) will need to absorb a minimum of 6 MVAR and use that as the technical justification.</p>
<p>Response: The SDT added further clarifications to Inclusion I5 to address your concerns and those of others.</p> <p>I5 –Static or dynamic devices <u>(excluding generators)</u> dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.</p> <p>The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical</p>		

Organization	Yes or No	Question 6 Comment
<p>aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made. .</p>		
<p>Ontario Power Generation Inc.</p>	<p>No</p>	<p>OPG recommends that the wording of this inclusion be made clear that the BES boundary extends to the Low Voltage terminals of the transformer, used in the interface connection, and does not include the static or dynamic reactive power source itself unless it is directly connected to the BES.</p>
<p>Response: The SDT refers the commenter to Inclusion I1 which addresses the situation presented here when used in conjunction with Inclusion I5. No change made.</p>		
<p>Metropolitan Water District of Southern California</p>	<p>No</p>	<p>Inclusion 5 should be changed to be consistent with the core definition and to clarify Reactive Power devices. Under I5, the additional phrase "or through a dedicated transformer with a high side voltage of 100 kV or higher," appears to conflict with the core definition's phrase "and Real Power and Reactive Power resources connected at 100 kV or higher". For example, if you have a device connected to a 69Kv system which is used solely for an end-user's load, but the 69kv system is transformed up to a 115kV system, such device could be included as BES or you would have to define what is meant by "dedicated. If Reactive Power is meant to agree with the definition under NERC's Glossary of Terms, there should be consistency and less verbiage.</p> <p>MWDSC also agrees with WECC's comment that there should be some minimum threshold for Reactive Power devices similar to that identified for generating resources in Inclusion 2.</p> <p>MWDSC recommends that Inclusion 5 be changed as follows: I5 - "Reactive Power devices dedicated to support the BES that are connected at 100kV or higher, or through a transformer that is designated in Inclusion I1."</p>
<p>Response: The SDT does not believe that a contradiction exists. Proper application of the definition and inclusions (see explanation of process immediately following) would seem to preclude the situation described by the commenter. No change</p>		

Organization	Yes or No	Question 6 Comment
		<p>made.</p> <p>The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.</p> <p>Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. Element as defined in the NERC Glossary of Terms as:</p> <p>“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. “</p> <p>Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.</p> <p>Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.</p> <p>Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.</p> <p>Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.</p> <p>Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2.</p> <p>Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.</p> <p>In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of</p>

Organization	Yes or No	Question 6 Comment
<p>the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.</p> <p>The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.</p> <p>The SDT does not believe this change provides additional clarity. No change made.</p>		
LCRA Transmission Services Corporation	No	This inclusion conflicts with exclusion E4. Which one takes priority?
Duke Energy	No	Need to add the exception for exclusions under E1 or E3, and also reword to exclude devices connected to a transformer winding less than 100 kV unless that is the only connection to that winding. Suggested rewording of I5 : “Unless excluded under Exclusions E1 or E3, static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage or 100 kV or higher, or through a transformer winding less than 100 kV that is designated in Inclusion I1 if the winding does not have any circuits or load connected to it.” This would eliminate having to include a capacitor connected to the 69 kV winding of a three winding BES transformer such as 230/138/69 kV if that winding had other connections such as 69 kV circuits. The voltage threshold of 100 kV and above should capture devices connected to 100 kV or

Organization	Yes or No	Question 6 Comment
		higher windings of transformers designated in Inclusion I1.
<p>Response: The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.</p> <p>Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:</p> <p>“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. “</p> <p>Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.</p> <p>Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.</p> <p>Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.</p> <p>Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.</p> <p>Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2.</p> <p>Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.</p> <p>In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either</p>		

Organization	Yes or No	Question 6 Comment
include or exclude an Element.		
Tacoma Power	No	Tacoma Power generally supports the intent of Inclusion I5 as currently written. However, we believe the definition of the MVA threshold level must be included in the Phase 2 evaluation and should be determined in a similar manner to the generator threshold that will be determined for I2.
Farmington Electric Utility System	No	I5 should be modified to identify a minimum Reactive Power threshold for static or dynamic devices. As drafted a 1 MVA device supplying or absorbing Reactive Power that is connected at 100 kV or higher would be included in the BES.
MEAG Power	No	We feel that this inclusion should be limited to dynamic devices with an aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) connected through a common point.
Harney Electric Cooperative, Inc.	No	HEC believes this inclusion should include a technically justified capacity limit on reactive resources to warrant inclusion.
City of St. George	No	A reasonable minimum value for inclusion should be added. As presently written all static or dynamic devices would be included in the BES regardless of size.
Tillamook PUD	No	<p>While we agree that reactive devices of sizable capacity connected at 100 kV or higher are needed for BES reliability, Tillamook PUD fails to see why this inclusion is needed as they are already captured by the 100 kV threshold. We would propose instead to eliminate this inclusion and substitute an exclusion for smaller capacity devices.</p> <p>If the SDT really believes an inclusion for reactive devices is needed, we suggest the SDT provide a technically justified capacity limit within the inclusion. In addition we suggest also including the phrase "...unless excluded under Exclusion E1, E2 or E4" similar to that in I1.</p>

Organization	Yes or No	Question 6 Comment
Mission Valley Power	No	<p>Mission Valley Power - While we agree that reactive devices of sizable capacity connected at 100 kV or higher are needed for BES reliability, Mission Valley Power fails to see why this inclusion is needed as they are already captured by the 100 kV threshold. We would propose instead to eliminate this inclusion and substitute an exclusion for smaller capacity devices. If the SDT really believes an inclusion for reactive devices is needed, we suggest the SDT provide a technically justified capacity limit within the inclusion. In addition we suggest also including the phrase "...unless excluded under Exclusion E1, E2 or E4" similar to that in I1. Please see the answer to Q1 above Q10 below.</p>
<p>Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.</p>		
Consolidated Edison Co. of NY, Inc.	No	<p>Normally, static and dynamic devices supply Reactive Power (VARs) to or absorb VARs from the surrounding system. By their nature, VARs do not travel far, e.g., miles. So, VARs by their nature only produce local impacts. Please explain the meaning of the phrase "dedicated to supplying or absorbing Reactive Power," with emphasis on explaining why the term "dedicated" was employed?</p> <p>How does an Entity determine if a particular static or dynamic device is "dedicated" to the BES? What Guidance documents can the BES SDT provide describing "dedicated"</p>

Organization	Yes or No	Question 6 Comment
		static and dynamic devices?
<p>Response: The word 'dedicated' was used to identify those Elements whose sole purpose is supplying or absorbing Reactive Power. The language limits those devices dedicated to voltages at 100 kV and higher (via the core definition or through Inclusion I5), unless it can be excluded via Exclusion E4.</p>		
American Electric Power	No	I5 only specifies voltage limits, and makes no mention of reactive limits. We suggest that the drafting team consider adding reactive capacity to these criteria as well.
<p>Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.</p>		
South Houston Green Power, LLC	No	The phrase should be added at the end “unless excluded under Exclusion E4”.
National Grid	No	We see some potential conflicts between this inclusion and the exclusions. Without some additional wording, it seems like some devices that are in a Local Distribution Network would be considered BES. In addition, reference to a transformer in Inclusion I1 is not necessary since the definition includes “all Transmission Elements operated at 100 kV”, thus by definition and I5, those connected to 100 kV and higher are already included. We suggest: Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100kV or higher unless the device is in an area

Organization	Yes or No	Question 6 Comment
		excluded from BES by Exclusion E1 or E3, or through a dedicated transformer with a high-side voltage of 100kV or higher, unless excluded by Exclusion E4.
Orange and Rockland Utilities, Inc.	No	Should also mention "unless excluded under Exclusion E1 or E3".
The Dow Chemical Company	No	<p>The phrase “or through a dedicated transformer with a high-side voltage of 100 kV or higher” is inconsistent with I1 and would bring Reactive Power Equipment that is lower than 100Kv into the BES definition. This phrase should be deleted.</p> <p>The following phrase should be added at the end “unless excluded under Exclusion E4”.</p>
<p>Response: The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.</p> <p>Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:</p> <p>“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. “</p> <p>Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.</p> <p>Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.</p> <p>Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.</p> <p>Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the</p>		

Organization	Yes or No	Question 6 Comment
<p>exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.</p> <p>Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2.</p> <p>Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.</p> <p>In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. No change made.</p>		
Hydro-Quebec TransEnergie	No	
<p>Response: Without specific comments the SDT is unable to respond.</p>		
Northern Wasco County PUD	No	<p>While we agree that reactive devices of sizable capacity connected at 100 kV or higher are needed for BES reliability, Northern Wasco County PUD fails to see why this inclusion is needed as they are already captured by the 100 kV threshold. We would propose instead to eliminate this inclusion and substitute an exclusion for smaller capacity devices. If the SDT really believes an inclusion for reactive devices is needed, we suggest the SDT provide a technically justified capacity limit within the inclusion. In addition we suggest also including the phrase “...unless excluded under Exclusion E1, E2 or E4” similar to that in I1.</p> <p>Please see the answer to Q1 above Q10 below.</p>
Central Lincoln	No	<p>While we agree that reactive devices of sizable capacity connected at 100 kV or higher are needed for BES reliability, Central Lincoln fails to see why this inclusion is needed as they are already captured by the 100 kV threshold. We would propose instead to eliminate this inclusion and substitute an exclusion for smaller capacity devices.If the</p>

Organization	Yes or No	Question 6 Comment
		<p>SDT really believes an inclusion for reactive devices is needed, we suggest the SDT provide a technically justified capacity limit within the inclusion.</p> <p>In addition we suggest also including the phrase "...unless excluded under Exclusion E1, E2 or E4" similar to that in I1. Please see the answer to Q1 above Q10 below.</p>
<p>Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.</p> <p>The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.</p> <p>Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:</p> <p>"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "</p> <p>Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.</p> <p>Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with</p>		

Organization	Yes or No	Question 6 Comment
		<p>specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.</p> <p>Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.</p> <p>Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.</p> <p>Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2.</p> <p>Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.</p> <p>In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. No change made.</p> <p>Please see detailed responses to Q1 and Q10.</p>
Ameren	No	<p>a)Only those Reactive Power devices applied for the purpose of BES support or BES voltage control should be included. A Reactive Power device connected at >100kV but used for the purpose of voltage support to local load and/or needed to support local networks should be excluded.</p> <p>b)We believe that this inclusion should be limited to dynamic devices with an aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) connected through a common point.</p> <p>c)See the response to question 2: The inclusion is unclear since it includes a certain voltage transformers, but excludes those that have E1 or E3 Exclusion criteria. Each exclusion criteria has multiple stipulations to its applicability, and then has a final inclusive reference to I3. Please make the wording exact and not dependent on</p>

Organization	Yes or No	Question 6 Comment
		clausal statements.
<p>Response: a) The SDT believes that the proper application of the core definition with Inclusion i1 and I5 plus the application of Exclusions E1, E3, and E4 will cover the situation described in most applications. In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. No change made.</p> <p>b) The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.</p> <p>c) The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.</p> <p>Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:</p> <p>“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. “</p> <p>Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.</p> <p>Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the</p>		

Organization	Yes or No	Question 6 Comment
<p>application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.</p> <p>Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.</p> <p>Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.</p> <p>Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2.</p> <p>Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.</p> <p>In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. No change made.</p>		
ExxonMobil Research and Engineering	No	<p>The BES SDT should work on clarifying the differences between Inclusion I5 and Exclusion E4.</p> <p>The phrase “solely for its own use” in Exclusion E4 is vague and open to interpretation. It is unclear whether equipment, such as power factor correction facilities, surge capacitors located in motor terminal boxes and excitation capacitors installed for use by a motor located on the low side of a 138 kV primary transformer would be excluded from the BES. Is the intent of this requirement to capture “reactive resources” that provide VARs to the BES in regions that exhibit voltage stability issues?</p>
<p>Response: The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.</p> <p>Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and</p>		

Organization	Yes or No	Question 6 Comment
		<p>non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:</p> <p>“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. “</p> <p>Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.</p> <p>Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.</p> <p>Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.</p> <p>Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.</p> <p>Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2.</p> <p>Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.</p> <p>In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. No change made.</p> <p>The BES definition is predicated on operations at 100 kV or higher. In the example cited, the equipment in question appears to be below that threshold and thus is not included in the BES. No change made.</p>
ATC LLC	No	ATC agrees with the inclusion provided the last clause is removed, as noted below.

Organization	Yes or No	Question 6 Comment
		<p>The BES definition is intended to establish a bright line BES definition. The clause “dedicated transformer” is undefined and unclear. Inclusion I5 -Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher (deletion of remainder of clause).</p>
<p>Response: The SDT considered the disposition of the word “dedicated” and determined that retention of this word is necessary to show the SDT’s intent that the conditions described by the inclusion are for configurations where the intended device is only going through one transformation. No change made.</p>		
Westar Energy	No	<p>We understand that I5 is being used to capture those devices other than generation resources, but the language used leads us to believe that it could include all generators that supply or absorb reactive power.</p> <p>We also believe the language should be changed to be consistent with I1. We suggest that I5 be changed to read: “Static or dynamic devices specifically used for supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side terminal operated at 100 kV or higher, or through a transformer that is designated in Inclusion I1.”</p>
<p>Response: The SDT has clarified the wording of Inclusion I5 to address your concern.</p> <p>I5 –Static or dynamic devices (<u>excluding generators</u>) dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.</p> <p>The SDT does not believe your suggested wording provides additional clarity. No change made.</p>		
Florida Municipal Power Agency		<p>To help clarify and to avoid inclusion of de minimis reactive resources, we propose a size threshold of 6 MVAR consistent with the smallest size generator included in the BES at a 0.95 power factor, which is a common leading power factor used in Facility Connection Requirements for generators. In other words, 6 MVAR is consistent with typically the least amount of MVAR required to be absorbed by the smallest generator</p>

Organization	Yes or No	Question 6 Comment
		meeting the registry criteria.
Redding Electric Utility	Yes	Redding believes that an appropriate MVAR level should be established during Phase 2.
City of Redding	Yes	Redding believes that an appropriate MVAR level should be established in during Phase 2.
City of Austin dba Austin Energy	Yes	Appropriate MVAR level should be established. Reactive resources should be treated similar to generation criteria and included in the technical studies associated with the Phase 2 technical analysis in order to establish the appropriate MVAR level included as BES.
Sacramento Municipal Utility District	Yes	However, appropriate MVAR level should be established. Reactive resources should be treated similar to generation criteria and included in the technical studies associated with the Phase 2 technical analysis in order to establish the appropriate MVAR level included as BES.
Tri-State Generation and Transmission Assn., Inc. Energy Management	No	There should be a limitation on what reactive components needs to be included. The limits could be based on capacity of the units or on the voltage step that occurs upon switching of the device
AECI and member GandTs, Central Electric Power Cooperative, KAMO Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power	Yes	This inclusion should be limited to reactive devices 150 MVAR or greater (gross aggregate nameplate rating) connected through a common point at the 200 kV level or higher level.

Organization	Yes or No	Question 6 Comment
Cooperative		
Memphis Light, Gas and Water Division	Yes	We are in general agreement with this inclusion, except that there is no threshold for reactive resources as there is for generators and transformers. We recommend that a minimum level be established for this equipment, such as 100 MVAR, or that studies be conducted to determine an appropriate threshold.
Southern Company Generation	Yes	We believe that the size of the reactive power resource should be considered as a key factor to be part of BES. When considering generating resources, the size, e.g., greater than 75 MVA, was a key part of criteria to be included or excluded as BES. A similar approach should be applied when considering reactive power resources. Moreover, the language at the end of I5, "or through a transformer that is designated in Inclusion I1," appears to be redundant since the reactive power resources are connected to 100 kV or higher already without this additional language. The following language is suggested: I5 - Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, and with an aggregate continuous nameplate rating greater than 30 MVA.
ACES Power Marketing Standards Collaborators	Yes	We understand the SDT's logic behind not setting any threshold values for reactive resources during Phase 1 of this project. Ample time and effort should be given to developing the technical justification behind such values. However, we encourage the SDT to consider adding threshold values in Phase 2 of the project to provide even more clarity to this inclusion.
Balancing Authority Northern California	Yes	However, appropriate MVAR level should be established. Reactive resources should be treated similar to generation criteria and included in the technical studies associated with the Phase 2 technical analysis in order to establish the appropriate MVAR level included as BES.
WECC Staff	Yes	WECC believes I5 should be modified to identify a minimum Reactive Power threshold

Organization	Yes or No	Question 6 Comment
		<p>for static or dynamic devices similar to the threshold identified for generating resources in I2. As worded, any size device dedicated to supplying or absorbing Reactive Power that is connected at 100 kV or higher, no matter how small, would be included in the BES.</p>
<p>Response: Using a threshold for inclusion of non-generator Reactive Power resource devices in the BES will be considered in Phase 2 of this effort. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.</p>		
Springfield Utility Board	Yes	<p>SUB agrees in general, but does not agree that ALL reactive resources should be automatically included in the BES Definition. For example, is a local network (100 kV or above), which is otherwise excluded, but has a reactive device used for power factor correction (100 kV or above), still excluded? There are a significant number of reactive resources that are used to serve systems that provide service primarily to load, with either no or a minimal amount of generation. If this section is included, the Exclusion language needs to be modified to exclude those reactive resources from the BES that are radial serving only load or local networks that serve load (with less than 75MVA of generation).</p> <p>SUB does not agree with the language referring to only those “retail customer” reactive power devices for Exclusion E.4. This is too narrow and does not accurately reflect the use of reactive power devices installed by registered entities when retail customers do not “fix” their reactive power issues on their own. SUB recommends</p>

Organization	Yes or No	Question 6 Comment
		<p>that the language in I5 and E4 be consistent, and that “retail customer” should include Registered Entities as well as end users. This present language is overly broad and, absent modifications to the BES definition, will generate a significant amount of paperwork. SUB suggests the following language change:I5 -Static or dynamic devices dedicated to supplying or absorbing Reactive Power that:a)are connected at 100 kV or higher and are not part of a radial system or area network that are excluded from the BES, or;b)are connected through a dedicated transformer with a high-side voltage of 100 kV or higher and are not part of a radial system or area network that are excluded from the BES, or;c)are connected through a transformer that is designated in Inclusion I1 and are not part of a radial system or area network that are excluded from the BES .</p>
<p>Response: The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.</p> <p>Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:</p> <p>“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. “</p> <p>Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.</p> <p>Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.</p> <p>Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.</p> <p>Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5.</p>		

Organization	Yes or No	Question 6 Comment
<p>The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.</p> <p>Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2.</p> <p>Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.</p> <p>In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element. No change made.</p> <p>The SDT team considered the disposition of the word “retail” in the context of Inclusion I5, and determined that retention of this word is important and correct. This is meant to eliminate non-generator Reactive Power devices that (are owned and operated on the load side of a customer meter). No change made.</p>		
FirstEnergy Corp.	Yes	While we do not object to I5, we question its need based on item I2 and believe I2 also covers this item
<p>Response: The SDT added further clarifications to Inclusion I5 to address your concern.</p> <p>I5 –Static or dynamic devices <u>(excluding generators)</u> dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.</p>		
Central Maine Power Company	Yes	There is no such thing as “supplying or absorbing Reactive Power” but the intended meaning is sufficiently clear since it is industry ‘shorthand’. We suggest an alternative wording of: “Static or dynamic Reactive Power resources that are connected at 100 kV or higher, or...”
Rochester Gas and Electric and New York State Electric and Gas	Yes	There is no such thing as “supplying or absorbing Reactive Power” but the intended meaning is sufficiently clear since it is industry ‘shorthand’. Suggest alternative wording:”Static or dynamic Reactive Power resources that are connected at 100 kV or

Organization	Yes or No	Question 6 Comment
		higher, or..."
<p>Response: The SDT elected to also include the word 'dedicated' in front of the quotation listed to identify those Elements whose sole purpose is supplying or absorbing Reactive Power. Re-arranging the words as suggested would not capture the same effect. No change made.</p>		
Portland General Electric Company	Yes	
Georgia System Operations Corporation	Yes	
Kansas City Power and Light Company	Yes	
Oncor Electric Delivery Company LLC	Yes	
Utility Services, Inc.	Yes	
Independent Electricity System Operator	Yes	The provisions of Inclusion I5 fully address the concerns we expressed in our previous comments.
PSEG Services Corp	Yes	
ISO New England Inc	Yes	
Manitoba Hydro	Yes	
Long Island Power Authority	Yes	

Organization	Yes or No	Question 6 Comment
Puget Sound Energy	Yes	
NV Energy	Yes	The SDT has appropriately captured the necessary inclusion of high voltage transmission reactive resources.
Z Global Engineering and Energy Solutions	Yes	
Central Hudson Gas and Electric Corporation	Yes	
City of Anaheim	Yes	
Chevron U.S.A. Inc.	Yes	
Idaho Falls Power	Yes	We have no comments.
ReliabilityFirst	Yes	
Exelon	Yes	
Texas Industrial Energy Consumers	Yes	
Hydro One Networks Inc.	Yes	
IRC Standards Review Committee	Yes	
Transmission Access Policy Study Group	Yes	

Organization	Yes or No	Question 6 Comment
Electricity Consumers Resource Council (ELCON)	Yes	
Bonneville Power Administration	Yes	
Texas RE NERC Standards Subcommittee	Yes	
SERC Planning Standards Subcommittee	Yes	
NERC Staff Technical Review	Yes	
BGE	Yes	No comment.
<p>Response: Thank you for your support.</p>		

7. **The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E1 (radial system)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.**

Summary Consideration: Exclusion E1 is an exclusion for the contiguous transmission Elements connected at or above 100 kV. Generation resources connected within the radial system are qualifiers for this exclusion.

The “single point of connection of 100 kV or higher” is where the radial system will begin if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation.

Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100 kV or higher may qualify for exclusion under Exclusion E3. The owner always has the option to seek exclusion through the exception process.

The SDT considered the disposition of the word “transmission” in the context of Exclusion E1, and determined that retention of this word – in lower-case – is necessary to modify the word “Element”. This is meant to eliminate the generation that would otherwise be included in the term “Element”.

The SDT has determined that it should be conservative with regard to allowing exclusion for radial systems that are depended upon for blackstart functionality, as these will arguably be more important to the reliable operation of the transmission system than equivalent radial systems without blackstart resources.

Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term “non-retail generation” in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier “non-retail” would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion.

Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing

threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 development of the BES definition.

Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator’s responsibility to indicate how a switch is used in the normal operating environment.

No changes were made to Exclusion E1 due to received comments.

Organization	Yes or No	Question 7 Comment
NERC Staff Technical Review	No	While we appreciate the improvement in the text for Exclusion E1, but we continue to believe that E1 should require (i) the normally open switch must not be used to make a parallel connection if the normally switch is operated at 100 kV or higher and (ii) an automatic interrupting device that is part of the BES must be provided at the point of interconnection between the radial system and the BES.
American Electric Power	No	AEP supports the concept of the exclusion of radial systems, however further clarification is needed regarding whether or not the source equipment is included as part of the radial system (for example, ring bus or breaker and a half bus configurations). Regarding the following text: “Note - A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.” We interpret this as not including two radial lines which could be tied together through a normally open switch, are we correct? Additional clarity may be needed regarding this note.
<p>Response: Radial systems should be assessed with the normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator’s responsibility to indicate how a switch is used in the normal operating environment. No change made.</p>		

Organization	Yes or No	Question 7 Comment
<p>The “single point of connection of 100 kV or higher” is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial and the owner of the bus would need to insure the reliability of the substation. No change made.</p>		
<p>Northeast Power Coordinating Council</p>	<p>No</p>	<p>E1 can be simplified by not dividing in three subsets of a, b and c. The end result is that a Radial system is excluded if it does not have more than 75 MVA aggregate non-retail generation.</p> <p>There seems to be an error with reference to I3. Black start unit paths are not designated as BES and were taken out in this version under I3 so E1 and E3 should not reference I3. This contradicts the radial or LN exclusion from I3. Suggest deleting the reference to I3 in E1 and E3 because this reference is in contradiction to I3. I3 does not require a path to be BES, but it implied that a radial cannot be excluded if there is a black start unit on the radial.</p> <p>Further clarification is needed to the language in the Note referring to the “Normally Open switch”. The E1 reference Note should be re-worded to state “Radial systems shall be assessed with all normally open switching devices in their open positions.” Explanatory figures should be included to illustrate the system configurations addressed. Black start unit paths must be considered in the construction of E1.</p> <p>In E1c, what is meant by “non-retail”?</p>
<p>Response: The SDT believes that the distinction between Load only, generation only, and Load with generation provides a bright-line exclusion for radial systems that is needed to cover all of the possible scenarios. No change made.</p> <p>The SDT appreciates the suggestion that there could be an appearance of an inconsistency between Inclusion I3 and Exclusions E1 and E3. The SDT has determined that it should be conservative with regard to allowing exclusion for radial systems that are depended upon for blackstart functionality, as these will arguably be more important to the reliable operation of the transmission system than equivalent radial systems without Blackstart Resources. No change made.</p>		

Organization	Yes or No	Question 7 Comment
<p>The SDT agrees that the radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator’s responsibility to indicate how a switch is used in the normal operating environment.</p> <p>Non-retail generation is the generation on the system (supply) side of the meter.</p>		
Consumers Energy	No	In general we agree, but believe the word "transmission" should be removed from "A group of contiguous transmission Elements..."
Southwest Power Pool Standards Review Team	No	Why was the defined term for “T”ransmission dropped in this version of the definition? This should be kept in this version of the definition as well.
<p>Response: The SDT team considered the disposition of the word “transmission” in the context of Exclusion E1, and determined that retention of this word – in lower-case – is necessary to modify the word “Element”. This is meant to eliminate the generation that would otherwise be included in the term “Element”. No change made.</p>		
Bonneville Power Administration	No	<p>BPA believes that a system left connected in a network configuration, via use of a normally open switch for temporary network connection, without the protections afforded through the standards that apply to BES should be limited to less than 24 hours.</p> <p>BPA believes that the term “non-retail generation” in E1(c) should be clearly defined.</p> <p>In addition, BPA believes that there needs to be a means to isolate the radial system from the BES during a fault on the radial system by means of a automatic fault interrupting device. Automatic fault interrupting device should be a defined term.</p>
<p>Response: The exclusion for radial systems does not provide requirements in the operating environment. Any attempt to hard code time duration into the exclusion language will create any number of one off situations when applied on a continent-wide basis. It is the owner and operator’s responsibility to indicate how a switch is used in the normal operating environment. No change made.</p> <p>Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term “non-</p>		

Organization	Yes or No	Question 7 Comment
		<p>retail generation” in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier “non-retail” would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.</p> <p>The “single point of connection of 100 kV or higher” is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. No change made.</p>
<p>Dominion</p>	<p>No</p>	<p>Dominion does not agree that exclusion of a radial should be based upon the aggregate capacity of generation. A radial serving only generation should be excluded just as it is for load (as proposed by the SDT in 1a). No reliability gaps exist since the owner and/or operator of generation (with an individual with gross individual or gross aggregate nameplate rating per the ERO Statement of Compliance Registry Criteria) must comply with applicable reliability standards.</p> <p>Dominion requests that the SDT provide technical justification for E1a and E1b as it did for E3, and explain the intent of the footnote in E1.</p>
<p>Response: The SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the NERC Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.</p> <p>Exclusion E1.a is a retained exclusion form the existing definition and as such requires no technical justification at this time.</p> <p>As for Exclusion E1.b, the SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical</p>		

Organization	Yes or No	Question 7 Comment
<p>justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.</p> <p>The SDT believe that the radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator’s responsibility to indicate how a switch is used in the normal operating environment.</p>		
<p>Pepco Holdings Inc and Affiliates</p>	<p>No</p>	<p>1) Additional clarification is needed on whether certain bus sections supplying radial systems would be considered part of the BES. It is critical that the BES definition address this issue, since it will define what transmission Protection Systems fall in scope for PRC-004 and 005. One way to address this issue would be to add a qualifier to Exclusion E1 that states, “if a radial system is supplied from a bus section in a substation, then this bus section is considered part of the radial system and is not considered part of the BES if the tripping of this bus section does not result in an interruption to any BES facilities when the station is operating in its normal configuration.”</p> <p>2) Since the SDT deleted the inclusion of Black Start Cranking Paths in I3 then reference to I3 in criteria E1b and E1c should also be removed. Limits on connected generation should only be constrained by the 75MVA limit. In summary, delete the phrase “not identified in Inclusion I3” from both Exclusions E1b and E1c.</p>
<p>Response: The “single point of connection of 100 kV or higher” is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial and the owner of the bus would need to insure</p>		

Organization	Yes or No	Question 7 Comment
<p>the reliability of the substation. No change made.</p> <p>The SDT appreciates the suggestion that there could be an appearance of an inconsistency between Inclusion I3 and Exclusions E1 and E3. The SDT has determined that it should be conservative with regard to allowing exclusion for radial systems that are depended upon for blackstart functionality, as these will arguably be more important to the reliable operation of the transmission system than equivalent radial systems without Blackstart Resources. No change made.</p>		
<p>Southern Company Generation</p>	<p>No</p>	<p>Subpart (b) uses the term "generation resources" while subpart (c) uses the term "non-retail generation", why are these different terms used?</p> <p>Further, why is it important that the term "non-retail generation" is used in subpart (c)? In addition, the SDT needs to clarify what the term "non-retail generation" means. Is this what is commonly referred to as "customer owned" or "behind-the-meter" generation?</p> <p>The change in version 2 that removed the requirement that an excluded radial system have an automatic interruption device at the single point of connection to the rest of the BES creates a problem. Three-terminal circuits are common below 230 kV. The "tapped portion" should not be left out of the BES since a fault on that portion takes out the whole line. We propose this revised language in the first sentence on E1: "E1 - Radial systems: A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher, where the connection has an automatic interruption device,..."</p> <p>Exclusion E1, subpart (c) uses the phrase "an aggregate capacity of ... less than or equal to 75 MVA ...". Exclusion E3. subpart (a) provides that the local networks "do not have an aggregate capacity of ... greater than 75 MVA ...". Why are these phrases stated differently even though they appear to address the same resources?</p>
<p>Response: Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion.</p>		

Organization	Yes or No	Question 7 Comment
		<p>The “single point of connection of 100 kV or higher” is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial and the owner of the bus would need to insure the reliability of the substation. No change made.</p> <p>The SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.</p>
<p>IRC Standards Review Committee</p>	<p>No</p>	<p>While we support the provisions of E1 in principle, we are seeking clarification to the following issues. Does the connection voltage of generation referred to in E1.b affect whether a radial system could be excluded under E1?</p> <p>Please clarify the meaning of “non-retail” generation used in E1.c.</p>
		<p>Response: Exclusion E1 is an exclusion for the contiguous transmission Elements connected at or above 100 kV. Generation resources connected within the radial system are qualifiers for this exclusion. No change made.</p> <p>Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term “non-retail generation” in E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier “non-retail” would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.</p>
<p>Hydro One Networks Inc.</p>	<p>No</p>	<p>Although we agree with the exclusion of radial systems, we believe that the reliability of the interconnected transmission network should not be determined by the amount of installed generation on the radial system. We believe that the generation limit is restrictive and has little or no technical basis. It is not the size of a unit on the radial system that should determine the reliability impact on the BES but more importantly its location, configuration and system characteristics such as reliability must run unit.</p>

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		<p>We believe that there is no reason to divide E1 in three subsets of a, b and c. The end result is that a radial system is excluded if it does not have more than 75 MW of aggregate non-retail generation. However, consistent with E2 we suggest replacing "an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating)" with "a maximum net capacity of non-retail generation provided to the BES of 75 MVA."</p> <p>We suggest deleting the references to I3 in E1 and E3 because we believe that this reference is in contradiction to I3 and probably an oversight and should be corrected. I3 does not require path to be BES but it implies here that a radial system cannot be excluded if there is a Blackstart unit on it.</p>
<p>Response: The SDT believes that the distinction between Load only, generation only, and Load with generation provides a bright-line exclusion for radial systems that is needed to cover all of the possible scenarios. No change made.</p> <p>Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.</p> <p>The SDT appreciates the suggestion that there could be an appearance of an inconsistency between Inclusion I3 and Exclusions E1 and E3. The SDT has determined that it should be conservative with regard to allowing exclusion for radial systems that are depended upon for blackstart functionality, as these will arguably be more important to the reliable operation of the transmission system than equivalent radial systems without Blackstart Resources. No change made.</p>		
Southern Company	No	<p>Subpart (b) uses the term "generation resources" while subpart (c) uses the term "non-retail generation", why are these different terms used? Further, why is it important that the term "non-retail generation" is used in subpart (c)? In addition, the SDT needs to clarify what the term "non-retail generation" means. Is this what is commonly referred to as "customer owned" or "behind-the-meter" generation?</p> <p>The change in version 2 that removed the requirement that an excluded radial system</p>

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		<p>have an automatic interruption device at the single point of connection to the rest of the BES creates a problem. Three-terminal circuits are common below 230 kV. The "tapped portion" should not be left out of the BES since a fault on that portion takes out the whole line. We propose this revised language in the first sentence on E1: "E1 - Radial systems: A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher, where the connection has an automatic interruption device,..." Exclusion E1, subpart (c) uses the phrase "an aggregate capacity of ... less than or equal to 75 MVA ...".</p> <p>Exclusion E3. subpart (a) provides that the local networks "do not have an aggregate capacity of ... greater than 75 MVA ...". Why are these phrases stated differently even though they appear to address the same resources?</p>
<p>Response: Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term "non-retail generation" in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier "non-retail" would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.</p> <p>The "single point of connection of 100 kV or higher" is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. No change made.</p> <p>The SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.</p>		
ReliabilityFirst	No	The term radial must be specifically defined in this application. ReliabilityFirst Staff believes this to mean a true radial in the sense that an adverse impact by the radial

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		<p>facilities does NOT affect or impact BES facilities.</p> <p>In the first sentence the word “Element” is capitalized but “transmission” is not, we believe both terms should be capitalized.</p> <p>The phrase “single point of connection” should have guidance so that everyone reading this definition reads the single point of interconnection the same. Some have read this phrase to be a single substation, while others have read this phrase to be one and only one line or supply (i.e. interconnection point), which is it?</p> <p>The “Note” we disagree with. In any and all cases if there is any operation or use of the BES, the facilities should be included. By the wording of this exclusion, one cannot determine if taps (sections of line from a BES transmission line to a single substation) are intended to be included in the BES or not. More specifically, where does the radial facility begin and the BES end? This determination was clearer in the previous version of the definition with the use of the language “...originating with an automatic interruption device...”.</p>
<p>Response: The SDT team considered the disposition of the word “transmission” in the context of Exclusion E1, and determined that retention of this word – in lower-case – is necessary to modify the word “Element”. This is meant to eliminate the generation that would otherwise be included in the term “Element”. No change made.</p> <p>The “single point of connection of 100 kV or higher” is where the radial will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100 kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made.</p> <p>Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used</p>		

Organization	Yes or No	Question 7 Comment
in the normal operating environment. No change made.		
Ontario Power Generation Inc.	No	Non-retail generation needs to be properly defined in the text of the exclusion.
<p>Response: Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term “non-retail generation” in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier “non-retail” would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion.</p>		
City of St. George	No	Radial systems should be excluded as generally outlined in E1, however the generation levels (of 75 MVA) are too restrictive. The primary criteria should be, does power flow into the radial system? If there is always flow into the radial system, generation levels should not prevent exclusion from the BES.
City of Anaheim	No	<p>The City of Anaheim recommends either changing the E1 (b) language back to that of the previous BES definition draft, i.e. 75 MVA or above connected at 100 kV or above, or limit the amount of generation allowed within a Radial Element or Local Network to 300 MVA or less, which is the amount of uncontrolled load loss that constitutes a reportable "disturbance" pursuant to EOP-004 and DOE Form OE-417. If DOE and NERC do not consider a 300 MW uncontrolled loss of load a reportable event, then why would the potential loss of a 75 MVA of non-critical generator connected at 69 kV make a Radial Element or Local Network critical to the reliability of the BES? The current ERO Statement of Compliance Criteria does not require GO/GOP registration for generation connected below 100 kV as long as it's not critical to the reliability of the BES, i.e. black start, etc., even if the amount of generation is greater than 75 MVA. There is good reason for this because the mere loss of 75 MVA generator would not affect the reliability of a system as big as the Western Interconnection, at all, and a fault at say 69 kV would have sufficient impedance not to affect the BES from an electrical perspective.</p>
<p>Response: Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate</p>		

Organization	Yes or No	Question 7 Comment
<p>amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the NERC Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.</p>		
Xcel Energy	No	<p>Xcel Energy believes that some more definition is required to clarify the intent of the note under Exclusion E1 related to normal open switching device. A direct statement would remove any ambiguity, such as “a normally open switch in a system that could be interconnected or experience loop flows will be considered (BES/non BES)”.</p>
<p>Response: Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made.</p>		
Northern Wasco County PUD	No	<p>Northern Wasco County PUD notes that a new term has been introduced, “non-retail generation,” with no definition provided. The answer to the question on this during the 9/28 webinar indicated that non-retail generation was behind the retail customer’s meter. We can see no reason why the net-metered PV systems should count toward the aggregate limit (exceeding the limit means no exclusion) while a non-blackstart thermal plant doesn’t (the radial system is excluded if any amount of load is present). We have also heard the SDT meant just the opposite of what was stated in the webinar. We ask that a reasonable definition for non-retail be provided within the BES definition document.</p> <p>We strongly agree that radial systems should be excluded and that the presence of normally open switching devices between radial systems should not cause them to be considered non-radial. Such a result would cause the removal of these devices to the detriment of the local level of service. We note that the singular “A normally open switching device” is used and suggest that an allowance be made for the possibility of multiple devices. “Normally open switching devices...”</p>

Organization	Yes or No	Question 7 Comment
LCRA Transmission Services Corporation	No	The current wording is unclear with respect to the treatment of normally open switching devices. LCRA TSC suggests the following language to replace the existing language on the note to E1: “Two radial systems connected by a normally open, manually operated switching device, as depicted on prints or one-line diagrams for example, may be considered as radial systems under this exclusion.” The current wording is unclear with respect to “non-retail generation”. The sudden loss of large, radial-supplied load may result in reliability deficiencies. LCRA TSC suggests stating a load level or a load capacity in the exclusion.
Tillamook PUD	No	Tillamook PUD notes that a new term has been introduced, “non-retail generation,” with no definition provided. The answer to the question on this during the 9/28 webinar indicated that non-retail generation was behind the retail customer’s meter. We can see no reason why the net-metered PV systems should count toward the aggregate limit (exceeding the limit means no exclusion) while a non-blackstart thermal plant doesn’t (the radial system is excluded if any amount of load is present). We have also heard the SDT meant just the opposite of what was stated in the webinar. We ask that a reasonable definition for non-retail be provided within the BES definition document. We strongly agree that radial systems should be excluded and that the presence of normally open switching devices between radial systems should not cause them to be considered non-radial. Such a result would cause the removal of these devices to the detriment of the local level of service. We note that the singular “A normally open switching device” is used and suggest that an allowance be made for the possibility of multiple devices. “Normally open switching devices...”
Mission Valley Power	No	Mission Valley Power notes that a new term has been introduced, “non-retail generation,” with no definition provided. The answer to the question on this during the 9/28 webinar indicated that non-retail generation was behind the retail customer’s meter. We can see no reason why the net-metered PV systems should count toward the aggregate limit (exceeding the limit means no exclusion) while a non-blackstart thermal plant doesn’t (the radial system is excluded if any amount of

Organization	Yes or No	Question 7 Comment
		<p>load is present). We have also heard the SDT meant just the opposite of what was stated in the webinar. We ask that a reasonable definition for non-retail be provided within the BES definition document.</p> <p>We strongly agree that radial systems should be excluded and that the presence of normally open switching devices between radial systems should not cause them to be considered non-radial. Such a result would cause the removal of these devices to the detriment of the local level of service. We note that the singular “A normally open switching device” is used and suggest that an allowance be made for the possibility of multiple devices. “Normally open switching devices...”</p>
Central Lincoln	No	<p>Central Lincoln notes that a new term has been introduced, “non-retail generation,” with no definition provided. The answer to the question on this during the 9/28 webinar indicated that non-retail generation was behind the retail customer’s meter. We can see no reason why the net-metered PV systems should count toward the aggregate limit (exceeding the limit means no exclusion) while a non-blackstart thermal plant doesn’t (the radial system is excluded if any amount of load is present). We have also heard the SDT meant just the opposite of what was stated in the webinar. We ask that a reasonable definition for non-retail be provided within the BES definition document.</p> <p>We strongly agree that radial systems should be excluded and that the presence of normally open switching devices between radial systems should not cause them to be considered non-radial. Such a result would cause the removal of these devices to the detriment of the local level of service. We note that the singular “A normally open switching device” is used and suggest that an allowance be made for the possibility of multiple devices. “Normally open switching devices...”</p>
<p>Response: Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term “non-retail generation” in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier “non-retail” would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.</p>		

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<p>Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator’s responsibility to indicate how a switch is used in the normal operating environment. No change made.</p>		
BGE	No	<p>During the previous comment period, BGE asked for clarification regarding the exclusion of “radial facilities”. The particular example configuration in question involved two 115 kV lines emanating from two different points of connection and “tied” on the “low side” at 34.5 kV. The SDT responded that this was not a radial facility but would be excluded under the E3-Local Network exclusion. BGE believes that this particular configuration should be excluded under the E1-Radial Systems exclusion. BGE does not believe that two otherwise radial lines are made “non-radial” because they are tied at a voltage lower than 100 kV.</p>
Orange and Rockland Utilities, Inc.	No	<p>Please clarify on “single point of connection”. It seems like less confusion if “single source” is used here instead of “single point of connection”.</p>
<p>Response: The “single point of connection of 100 kV or higher” is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100 kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made.</p>		
ISO New England Inc	No	<p>The term “single point” is not clear. A better explanation is necessary. For example, the same bus in a bus/branch model should suffice as a “single point”. There should not be a requirement to be at the same node as found in a nodal model.</p> <p>The term “a group of contiguous transmission elements” is ambiguous and needs to</p>

Organization	Yes or No	Question 7 Comment
		<p>be clarified.</p> <p>The “Non-retail” qualifier in E1.c) should be deleted. It adds confusion to the exclusion and is not defined.</p>
<p>Response: The “single point of connection of 100 kV or higher” is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100 kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made.</p> <p>The SDT team considered the disposition of the word “transmission” in the context of Exclusion E1, and determined that retention of this word – in lower-case – is necessary to modify the word “Element”. This is meant to eliminate the generation that would otherwise be included in the term “Element”. No change made.</p> <p>Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term “non-retail generation” in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier “non-retail” would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.</p>		
<p>Kansas City Power and Light Company</p>	<p>No</p>	<p>Nameplate rating of the generator is not a reflection of what can be actually injected into the transmission system with resulting electrical impacts on transmission loading and behavior. Recommend the BES definition be based on a generating resource(s) established net accredited generating capacity instead of what it could do by nameplate rating that may not be achievable. Recommend the following change to the b) and c) parts of E1: b) Only includes generation resources not identified in Inclusion I3 with an aggregate net accredited capacity less than or equal to 75 MVA. Or, c) Where the radial system serves Load and includes generation resources not identified in Inclusion I3 with an aggregate net accredited capacity of non-retail</p>

Organization	Yes or No	Question 7 Comment
		generation less than or equal to 75 MVA.
Hydro-Quebec TransEnergie	No	<p>Even with the modification proposed, it is too much restrictive to refuse exclusion of radial system when they have generator or multiple generating units of aggregate capacity greater than 75 MVA, especially when a system is able to function reliably with the loss of generation much higher than this amount. To count on the exception procedure to exclude radial system with greater generation is risky since no specific criteria have been given to guide such exclusion. In most cases for radial or local system including generation, the path that connects the generation should not be included in the BES. Generators should be allowed to be considered "BES support elements" and reliability standards should apply to them in specific.</p>
<p>Response: Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.</p>		
Independent Electricity System Operator	No	<p>We support the provisions of E1 in principle but require clarification of some issues and suggest alternative wording in some cases. It is unclear if the connection voltage of generation referred to in E1.b affects whether a radial system could be excluded under E1 although from the context it appears that it would. For clarity we suggest appending “connected at 100 kV or higher.”</p> <p>Please provide in the BES definition document an explanation of “non-retail” and “retail” generation used in E1.c.</p> <p>Additionally, despite the fact the revisions to Inclusion I3 (Blackstart Resources) removed any reference to Cranking Paths, Exclusion 1 (b) and (c) both indicate that the exclusion of a radial system would not be allowed if generation identified in I3 were connected to it. This implies that the Cranking Path for this Blackstart Resource would have to be BES. This appears to be an inconsistency. We suggest removing the</p>

Organization	Yes or No	Question 7 Comment
		<p>phrase “not identified in Inclusion I3” in both instances.</p> <p>We disagree with notion that the capacity of generation connected to a radial system ought to determine whether that radial system should be classified as BES. Firstly, it is a given that the generation connected to the subject radial that meets the registry criteria would already be captured within the core BES definition and Inclusion I2. The function served by a radial that is of importance in the current context is that of delivering surplus power to the rest of the bulk power system and so, the impact on the BES of loss of the radial system or its connected generation needs to be considered. In our view, the “BES-status” of the radial itself is immaterial and so too is the aggregate capacity of generation resources connected to it. Detailed arguments regarding impact on the BES can be made in support of an application for an exclusion under the Exception Process, but it would be beneficial to avoid unnecessarily including a radial merely because it has more than 75 MVA of qualifying generation connected to it, without equal consideration of the connected load. To put a “bright line” on the consideration of impact referred to above, we suggest: In E1 (b): Replace "an aggregate capacity less than or equal to 75 MVA (gross nameplate rating)" with "a net capacity provided to the BES of less than or equal to 75 MVA." In E1 (c): Replace "an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating)" with "a net capacity of non-retail generation provided to the BES of 75 MVA."This wording would be consistent with E2 (i).</p> <p>Finally the word “affect” stated in the note accompanying E1 lends itself to mis-interpretation. We therefore suggest the following revision to achieve greater clarity:”This exclusion applies to radial systems connected by a normally open switch.”</p>
<p>Response: Exclusion E1 is an exclusion for the contiguous transmission Elements connected at or above 100 kV. Generation resources connected within the radial system are qualifiers for this exclusion. No change made.</p> <p>Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term “non-retail generation” in ExclusionE1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier “non-retail” would cause candidate local networks with retail generation to</p>		

Organization	Yes or No	Question 7 Comment
		<p>be unfairly biased against obtaining this exclusion. No change made.</p> <p>The SDT appreciates the suggestion that there could be an appearance of an inconsistency between Inclusion I3 and Exclusions E1 and E3. The SDT has determined that it should be conservative with regard to allowing exclusion for radial systems that are depended upon for blackstart functionality, as these will arguably be more important to the reliable operation of the transmission system than equivalent radial systems without Blackstart Resources. No change made.</p> <p>Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.</p> <p>Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made.</p>
<p>Central Maine Power Company</p>	<p>No</p>	<p>E1 needs to be revised to make it less confusing. “Radial systems” leaves the impression that E1 is not simply a “radial line exclusion”, because of the plural and the word “systems.” Northeast industry expert colleagues are not clear what this sentence specifies: “A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher.”</p> <ul style="list-style-type: none"> o Does E1 apply only to a single radial transmission line (and its associated “group of Elements”)? o Alternatively, does E1 apply to multiple radial lines “emanating from” the same substation regardless of the bus configuration - would a ring bus or a two-bus system that is connected with a tie breaker be considered as “a single point of connection”? o If the radial line is simply tapped off a BES line without any automatic interruption device, should not the radial line be included as part of the BES since a permanent fault on this radial line will take out the BES line it is tapping off of? If the radial line is defined as part of the BES, it could be subject to certain requirements such as vegetation management for overhead lines. o Should not the exclusion include some description of the

Organization	Yes or No	Question 7 Comment
		<p>operational requirements to help resolve the ambiguity? As it is, the exclusion is scenarios-based. When a specific scenario is overlooked, the oversight becomes a source of ambiguity. This definition is not clear. Clarity is imperative. E1(c) should define or replace the term “non-retail”. Industry needs clarity on exactly what generation this clause applies to, in order to properly apply this definition. The Note referring to the “Normally Open switch” needs further clarification. As written, it seems to conflict with FERC order 743, paragraph 55: “While commenters would like to expand the scope of the term “radial” to exclude certain transmission facilities such as tap lines and secondary feeds via a normally open line, we are not persuaded that such categorical exemption is warranted.” E1 should be restated as follows: “Radial systems: A single transmission line or transformer not otherwise identified in the Inclusions above, with a single point of connection of 100 kV or higher and: a) Only serves Load. Or, b) Only includes generation resources, not identified in the Inclusions above. Or, c) Both serves Load and only includes generation resources not identified in the Inclusions above.”</p>
<p>Rochester Gas and Electric and New York State Electric and Gas</p>	<p>No</p>	<p>E1 needs to be revised to make it less confusing. “Radial systems” leaves the impression that E1 is not simply a “radial line exclusion”, because of the plural and the word “systems.” Northeast industry expert colleagues are not clear at all what this sentence specifies: “A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher.”</p> <ul style="list-style-type: none"> o Does E1 apply only to a single radial transmission line (and its associated “group of Elements”)? o Alternatively, does E1 apply to multiple radial lines “emanating from” the same substation regardless of the bus configuration - would a ring bus or a two-bus system that is connected with a tie breaker be considered as “a single point of connection”? This definition is not clear. Clarity is imperative. <p>E1(c) should define or replace the term “non-retail”. Industry needs clarity on exactly what generation this applies to, in order to properly apply this definition.</p> <p>The Note referring to the “Normally Open switch” needs further clarification. As written, it seems to conflict with FERC order 743, paragraph 55: “While commenters</p>

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		<p>would like to expand the scope of the term “radial” to exclude certain transmission facilities such as tap lines and secondary feeds via a normally open line, we are not persuaded that such categorical exemption is warranted.”</p> <p>E1 should be restated as follows:”Radial systems: A single transmission line or transformer not otherwise identified in the Inclusions above, with a single point of connection of 100 kV or higher and: a) Only serves Load. Or, b) Only includes generation resources, not identified in the Inclusions above. Or, c) Both serves Load and only includes generation resources, not identified in the Inclusions above.</p>
<p>Response: The “single point of connection of 100 kV or higher” is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100 kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made.</p> <p>Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term “non-retail generation” in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier “non-retail” would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.</p> <p>Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made.</p> <p>The SDT does not believe that the suggested wording provides any additional clarity. No change made.</p>		
South Houston Green Power, LLC	No	SHGP generally supports with the proposed revisions to Exclusion E1, but suggests several additional clarifying revisions should be made. First, the phrase “a single point

Organization	Yes or No	Question 7 Comment
		<p>of connection” in the introductory sentence should be revised to read “a single point of connection (including multiple connections to the same ring bus or substation where the energy normally flows in the same direction)”. This revision is intended to ensure that radial systems which involve multiple parallel lines and are designed to operate as a single radial system, but that nevertheless connect to the grid through more than line for reliability.</p> <p>Second, for this same reason, an additional (i.e., second) note should be added to the end of Exclusion E1 that reads as follows: “Note, a normally closed switching device that enables multiple lines emanating from the same grid ring bus or different grid buses to operate as a single radial system does not affect this exclusion.”</p> <p>Third, the phrase “with an aggregate capacity of non-retail generation less than or equal to 75 MVA should be eliminated.</p>
<p>Response: The “single point of connection of 100 kV or higher” is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100 kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made.</p> <p>Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made.</p> <p>Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of</p>		

Organization	Yes or No	Question 7 Comment
further review under Phase 2 of the BES definition. No change made.		
Tacoma Power	Yes	<p>Tacoma Power generally supports the Exclusion E1 as currently written. However, the “note” at the end of E1 is confusing and can be interpreted inconsistently. We recommend moving the language from the “note” to part of the exclusion as its own section, as follows:(d) Normally-open switching devices between radial elements as depicted and properly identified on system one-line diagrams should not be used to deny this exclusion.</p> <p>Additionally, we believe it is not appropriate for E1 to state an MVA threshold in Section b) when determining such thresholds is the purpose for Phase 2. We urge the SDT to defer the determination of a MVA threshold in E1 to Phase 2.</p>
<p>Response: Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made.</p> <p>Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.</p>		
City of Austin dba Austin Energy	Yes	<p>For the E1 reference “Note,” we would benefit from additional clarification identifying the treatment of a normally open switch and offer the following: “Radial systems shall be assessed with all normally open switching devices in their open positions.”</p> <p>The wording in Exclusion 1-c should more clearly reflect what is intended by using the term “non-retail generation.”</p> <p>Also, as with the technical justification for Inclusions I2 and I4, we recommend that the generation threshold, i.e. gross nameplate values, be deferred to Phase 2.</p>

Organization	Yes or No	Question 7 Comment
<p>Response: Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made.</p> <p>Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term “non-retail generation” in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier “non-retail” would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.</p> <p>Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.</p>		
Ameren	Yes	<p>a)We suggest the wording “non-retail generation’ should be clarified with an explanation of why it is used in this exclusion.</p> <p>b)This exclusion criterion has multiple stipulations to its applicability, and also has a final inclusive reference to I3. Please make the wording exact and not dependent on clausal statements.</p>
<p>Response: Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term “non-retail generation” in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier “non-retail” would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.</p> <p>The SDT believes that the distinction between Load only, generation only, and Load with generation provides a bright-line exclusion for radial systems that is needed to cover all of the possible scenarios. In addition, the SDT has determined that it should be conservative with regard to allowing exclusion for radial systems that are depended upon for blackstart functionality, as these will arguably be more important to the reliable operation of the transmission system than equivalent radial systems</p>		

Organization	Yes or No	Question 7 Comment
without blackstart resources. No change made.		
Utility Services, Inc.	Yes	<p>Utility Services is very concerned that the "single point of connection" lacks clarity and applications need to be identified.</p> <p>Utility Services suggests that the SDT publish illustrative one-line diagrams to aid the industry in determining when the designations are best applied.</p>
<p>Response: The “single point of connection of 100 kV or higher” is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100 kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made.</p> <p>Publishing diagrams will be considered in Phase 2.</p>		
PSEG Services Corp	Yes	<ol style="list-style-type: none"> 1. If a 50 MVA generator that is included per I2 is connected to an excluded radial system, would the generator be excluded or included per E1b)? If yes, then the language “unless excluded under Exclusion E1 and E3” in I1 needs to be added to I2, I4, and I5. 2. Non-retail generation in E1c) was described behind-the-meter generation in the Webinar. The term “non-retail generation” should be defined because one could infer that generation defined by E2 is “retail generation.” <p>Also, is the 75 MVA limit intended apply to the generator (as stated) or its net capacity as defined in E2? If it means the generator MVA, does that mean that generation excluded in E2 cannot exceed 75 MVA when connected to an excluded radial system?3. In general, the definition needs to better define the impact that “exclusion” has on a different “inclusion” or “exclusion.”</p>

Organization	Yes or No	Question 7 Comment
<p>Response: Exclusion E1 is an exclusion for the contiguous transmission Elements connected at or above 100 kV. Generation resources connected within the radial system are qualifiers for this exclusion. No change made.</p> <p>Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term “non-retail generation” in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier “non-retail” would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.</p> <p>Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.</p>		
Massachusetts Department of Public Utilities	Yes	The aggregate 75 MVA of connected generation appears too low and would benefit from additional technical justification.
<p>Response: Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.</p>		
The Dow Chemical Company	Yes	Dow generally agrees with the proposed revisions to Exclusion E1, but believes that several additional clarifying revisions should be made. First, the phrase “a single point of connection” in the introductory sentence should be revised to read “a single point of connection (including multiple connections to the same ring bus or different buses where the energy normally flows in the same direction)”. This revision is intended to ensure that radial systems include arrangements involving multiple parallel lines that are designed to operate as a single radial system, but that nevertheless connect at the grid ring bus or different buses on the grid for reliability.

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		<p>Second, for this same reason, an additional (i.e., second) note should be added to the end of Exclusion E1 that reads as follows: “Note, a normally closed switching device that enables multiple lines emanating from the same grid ring bus or different grid buses to operate as a single radial system does not affect this exclusion.”</p> <p>Third, in “c),” the phrase “with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating)” is confusing and potentially inconsistent to the extent that “non-retail generation” may be different from “gross nameplate rating.” The apparent intent of the clause is to exclude radial systems that serve both load and generation, provided the generation capacity made available to the transmission grid does not exceed 75 MVA. Dow would recommend that the phrase be revised to read “where the net capacity provided to the transmission grid does not exceed 75 MVA.” This revision would provide greater clarity and is consistent with the language used in Exclusion E2.</p>
<p>Response: The “single point of connection of 100 kV or higher” is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100 kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made.</p> <p>Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made.</p> <p>Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term “non-retail generation” in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier “non-retail” would cause candidate local networks with retail</p>		

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generation to be unfairly biased against obtaining this exclusion. No change made.		
ExxonMobil Research and Engineering	Yes	The removal of the requirement for an automatic fault interrupting device from this requirement is a welcomed change from the first posting. This Exclusion helps preserve the current NERC Registry and explicitly excludes many facilities used in the distribution of electric power.
Long Island Power Authority	Yes	Need to clarify what is a "single point of interconnection" e.g. is it a bus section or a substation
<p>Response: The “single point of connection of 100 kV or higher” is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made.</p>		
Manitoba Hydro	Yes	Manitoba Hydro agrees with E1 but the wording of the note regarding ‘normally open switching devices’ is unclear. In the Industry Webinar on September 28th, the Drafting Team made it clear that the note means that if an element can be connected to the BES from multiple points but under normal operating conditions it is only connected to the BES at a single point by means of normally open switches, then the element is still excluded from the BES provided it meets either the E1 a, b, or c criteria. The team also noted that the discretion to operate the normally open switching devices in the best interests of reliability rests with the operating entity. Suggested wording: “Note: The ability to connect a group of contiguous transmission Elements from multiple connection points of 100kV or higher through normally open switching devices does not negate this Exclusion. “

Organization	Yes or No	Question 7 Comment
		As well, part c) of E1 should be changed to “c) Only serves Load and includes...”
<p>Response: The “single point of connection of 100 kV or higher” is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100 kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made.</p> <p>Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made.</p>		
ATC LLC	Yes	Unless there is a specific reason to the contrary, ATC suggests that Exclusion E1b include the qualification of “aggregate capacity of non-retail generation less than or equal to 75 MVA” to be consistent with the wording in E1c.
Puget Sound Energy	Yes	The language addressing generation resources in sections b and c of E1 could be more clear (an example of clearer language is section a of E3). At the least, the language in these two sections should be revised to read "... includes generation resources that are not identified in Inclusion I3 and that do not have an aggregate capacity exceeding 75 MVA ...".
<p>Response: Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.</p>		

Organization	Yes or No	Question 7 Comment
NV Energy	Yes	There may be an opportunity to consolidate the sub-items of E1 into a single inclusion statement in order to simplify this exclusion designation. We propose the following replacement option: “E1 - Radial systems: A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher and serves any combination of load and/or generation, provided that the generation resources are not identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating).”
<p>Response: The SDT believes that the distinction between Load only, generation only, and Load with generation provides a bright-line exclusion for radial systems that is needed to cover all of the possible scenarios. No change made.</p>		
Clallam County PUD No.1 Blachly-Lane Electric Cooperative (BLEC) Coos-Curry Electric Cooperative (CCEC) Central Electric Cooperative (CEC) Clearwater Power Company (CPC) Snohomish County PUD Consumer's Power Inc. Douglas Electric Cooperative (DEC) Fall River Rural Electric Cooperative (FALL) Lane Electric Cooperative	Yes	<p>CLPD continues to support the radial system exclusion, which is necessary as a legal matter, because, for example, FERC in Orders No. 743 and 743-A has required that the existing radial exemption in the NERC Statement of Compliance Registry Criteria be maintained. As a practical matter, radial systems are used for service to retail loads, usually in remote or rural areas, and not for the transmission of bulk power. Hence, operation of the radials has little or nothing to do with the reliable operation of the interconnected bulk transmission network. We also support the inclusion of the note discussing normally open switches because this language provides needed clarity for a common radial system configuration. We also agree with the substantive thrust of this language, which is that a radial system should not be considered part of the BES if it is interconnected at a single point, even if there is an alternative point of delivery that is normally open. While we support the Exclusion for Radial Systems, we believe several clarifications and refinements are necessary. (1) The term “transmission Elements” in the initial paragraph should be changed to “Elements.” Radial systems are not transmission systems and including the word “transmission” in the Radial System exclusion is therefore unnecessary and confusing.</p> <p>(2) Subparagraph (b) of Exclusion 1 refers to “generation resources . . . with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating)”. We urge the SDT to replace this language with the defined term “Qualifying Aggregate Generation</p>

Organization	Yes or No	Question 7 Comment
<p>(LEC) Lincoln Electric Cooperative (LEC) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) West Oregon Electric Cooperative Umatilla Electric Cooperative (UEC) Kootenai Electric Cooperative</p>		<p>Resources,” discussed in more detail in our response to Question 3. This language, or some equivalent, will preserve the SDT’s ability to revise the 75 MVA threshold in Phase 2, with the result of Phase 2 included in the BES Definition by operation rather than requiring further revision of the Definition.</p> <p>(3) Subparagraph (b) also seems to assume that if a Radial System contains a generator exceeding the 75 MVA threshold, the Radial System itself must be included in the BES because it links the generator to the interconnected bulk transmission system. As discussed more fully in our response to Question 9, below, NERC’s Project 2010-17 Standards Drafting Team and GO-TO Task Force have both concluded that this assumption is unwarranted.</p> <p>(4) The “Note” as drafted by the SDT indicates that “a normally open switching device between radial systems” will not serve to disqualify the Radial from exclusion under Exclusion 1. As noted above, CLPD strongly supports the note conceptually. However, we believe this language should be included in a separate subparagraph (d), rather than a note, because treatment as a “note” suggests it is less important than other portions of the Exclusion. We also suggest the language be changed to read: (d) Normally-open switching devices between radial elements as depicted and properly identified on system one-line diagrams does not affect this exclusion. This will make clear that a radial with more than one normally-open switch connecting it to another radial is still a radial. From the perspective of the BES Definition, the key question is whether switches operating between Radials are normally open, not whether there is more than one normally-open switch.</p>
<p>Response: 1) The SDT team considered the disposition of the word “transmission” in the context of Exclusion E1, and determined that retention of this word – in lower-case – is necessary to modify the word “Element”. This is meant to eliminate the generation that would otherwise be included in the term “Element”. No change made.</p> <p>2) Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent</p>		

Organization	Yes or No	Question 7 Comment
		<p>with the existing threshold in the NERC Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.</p> <p>3) See response to Q9.</p> <p>4) Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made.</p>
Michigan Public Power Agency	Yes	<p>MPPA and its members continue to support the radial system exclusion, which is necessary as a legal matter, because, for example, FERC in Orders No. 743 and 743-A has required that the existing radial exemption in the NERC Statement of Compliance Registry Criteria be maintained. As a practical matter, radial systems are used for service to retail loads, usually in remote or rural areas, and not for the transmission of bulk power. Hence, operation of the radials has little or nothing to do with the reliable operation of the interconnected bulk transmission network. But we believe that further clarification is necessary. First, the deletion of “originating with an automatic interruption device” is a step in the right direction. However, “emanates from a single point of connection” could be too narrowly interpreted (i.e., multiple buses within a single substation could be viewed as multiple points of connection). MPPA and its members proposes the following modification: “emanates from a single substation connected to the BES at 100 kV or higher ...”. Entities whose only connection emanates from a single substation and otherwise meet the BES definition should not be denied exclusion under E1 solely because they connect to multiple buses within a single substation. Additionally, adoption of “E3- Local Networks” renders specious any argument that clams that connecting to multiple buses within a single substation makes a material difference for reliability purposes since local networks would have multiple connections anyway.</p> <p>Additionally, it is not clear why it is necessary to include the note at the end of the revised definition. (“A normally open switching device between radial systems, as</p>

Organization	Yes or No	Question 7 Comment
		<p>depicted on prints or one-line diagrams for example, does not affect this exclusion.”) This raises questions as to what “normally open” means, and whether the only evidence demonstrating what “normally open” means will be prints or one-line diagrams. Further, it is not entirely clear what is meant by the language “does not affect this exclusion”. If the note remains, it should be modified to read something like, “a normally open switching device between radial systems does not prevent application of this exclusion.”</p> <p>Finally, the generation threshold limit in E1(b) and E1(c) should be revised as discussed in response to Q1. Specifically, the proposed threshold of 75 MVA for this exclusion should be raised to not less than 300 MVA in both E1(b) and E1 (c).</p>
<p>Response: The “single point of connection of 100 kV or higher” is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100kV or higher. Networks that have multiple connections at 100 kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made.</p> <p>Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made.</p> <p>Exclusion E1.b refers to a radial system that contains only generation and the SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.</p>		

Organization	Yes or No	Question 7 Comment
NESCOE	Yes	NESCOE suggests that the aggregate 75 MVA of connected generation is too low and would benefit from additional technical justification. The threshold value should be related to the largest contingency to which the applicable control area is designed to operate. A level of 300 MVA would be appropriate. This 300 MVA limit represents 25% of the 1200 MVA loss of source that is typically assumed for operation of the Northeast portion of the Eastern Interconnection. Depending on system conditions, this number may be as high as 1500 MVA. Therefore, the suggested value of 300 MVA has a technical basis and falls well within typical loss of source expectations for the Northeast.
<p>Response: The SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.</p>		
Z Global Engineering and Energy Solutions	Yes	As stated in comment one. I recommend the Note is rewritten: "Note - A normally open switching device between radial systems, as depicted on prints or oneline diagrams, for example, does not classify the two or more radial lines as a loop line. The exclusion will still apply."
Harney Electric Cooperative, Inc.	Yes	HEC strongly agrees that radial systems should be excluded from the BES and that the presence of a normally open switching device between radial systems should not cause them to be considered non-radial
PacifiCorp	Yes	: The note in E1 as written is ambiguous and requires clarification. PacifiCorp assumes the note means that two radial systems separated by a normally open switching device allows for the exclusion of both radial systems. PacifiCorp recommends that the SDT revise the note to serve as a paragraph clarifying E1 that, "Radial systems separated by normally open switching device(s) as depicted on prints or one-line diagrams for example, and operated in the normally open position, except during

Organization	Yes or No	Question 7 Comment
		abnormal operating conditions, qualifies both radial systems under this exclusion.”
<p>Response: Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made.</p>		
Texas Industrial Energy Consumers	Yes	<p>As noted in response to Question 3, above, Exclusion E1 would only allow exclude radial systems with “aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).” The reference to “non-retail” generation in subsection (c) indicates that the SDT may have intended to preserve the “netting” approach set forth in the Statement of Registry Compliance, but this should be made clearer. The description in subsection (c) should be revised to exclude “Where the radial system serves Load and includes generation resources not identified in Inclusions I2 or I3,” and the remainder of that sentence referencing a 75 MVA gross nameplate rating should be removed. This will provide a reference back to the Statement of Registry Compliance and clarify that only net capacity is considered for customer-owned facilities.</p>
<p>Response: Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term “non-retail generation” in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier “non-retail” would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. The SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.</p>		
Holland Board of Public Works	Yes	<p>Holland BPW supports the exclusion of radial systems from the BES definition, but believes that further clarification is necessary. First, the deletion of “originating with an automatic interruption device” is a step in the right direction. However,</p>

Organization	Yes or No	Question 7 Comment
		<p>“emanates from a single point of connection” could be too narrowly interpreted (i.e., multiple buses within a single substation could be viewed as multiple points of connection). Holland BPW proposes the following modification: “emanates from a single substation connected to the BES at 100 kV or higher...” Entities whose only connection emanates from a single substation and otherwise meet the BES definition should not be denied exclusion under E1 solely because they connect to multiple buses at that single substation. Additionally, adoption of “E3 - Local Networks” renders specious any argument that claims that connecting to multiple buses within a single substation makes a material difference for reliability purposes since local networks would have multiple connections anyway.</p> <p>Additionally, it is not clear why it is necessary to include the note at the end of the revised definition. (“A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.”) This raises questions as to what “normally open” means, and whether the only evidence demonstrating what “normally open” means will be prints or one-line diagrams. Further, it is not entirely clear what is meant by the language “does not affect this exclusion”. If the note remains, it should be modified to read something like, “a normally open switching device between radial systems does not prevent application of this exclusion.”</p> <p>Finally, the generation threshold limit in E1(b) and E1(c) should be revised as discussed in response to Q1. Specifically, the proposed threshold of 75 MVA for this exclusion should be raised to not less than 300 MVA in both E1(b) and E1(c).</p>
<p>Response: The “single point of connection of 100 kV or higher” is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100 kV or higher. Networks that have multiple connections at 100 kV or higher may qualify under Exclusion E3. The owner</p>		

Organization	Yes or No	Question 7 Comment
<p>always has the option to seek exclusion through the exception process. No change made.</p> <p>Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made.</p> <p>The threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.</p>		
<p>AECI and member GandTs, Central Electric Power Cooperative, KAMO Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power Cooperative</p>	<p>Yes</p>	<p>Remove “non-retail” because it is irrelevant to reliability.</p> <p>In general, we agree with the remaining concepts. However transformer voltage threshold should be 200 kV or higher, the power thresholds should be 150 MVA or greater.</p>
<p>Response: Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term “non-retail generation” in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier “non-retail” would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.</p> <p>The SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the NERC Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.</p>		
<p>Electricity Consumers</p>	<p>Yes</p>	<p>ELCON supports the changes made from the first posting for both E1 and E3 (which complements E1), as this will help maintain the status quo referred to in the</p>

Organization	Yes or No	Question 7 Comment
Resource Council (ELCON)		<p>introductory text. We seek one clarification: Some large industrial customers that operate in remote, rural locations provide distribution services to third parties (usually on a pro bono basis) where the local utility (LSE) is unable or unwilling to serve. These transactions, which are akin to “border-line sales” in utility parlance, are typically de minimis relative to the Load of the entity that delivers the power. While the distribution is at low voltages (less than 100 kV), the power may have been received by the entity at a higher voltage. We seek affirmation by the SDT that such situations are not precluded by Exclusion E1.</p>
<p>Response: This is a bright-line definition for the BES and Exclusion E1 can be used to exclude radial systems for the contiguous transmission Elements connected at or above 100 kV and lower voltage systems are already excluded from the BES. The definition does not draw a distinction between ownership or connection arrangements. Without an exact configuration it is impossible for the SDT to comment further but if this situation somehow slips through the cracks, there is always the option to seek an exception. No change made.</p>		
ACES Power Marketing Standards Collaborators	Yes	<p>The term “non-retail generation” used in Exclusion E1 (item c) and again in E3 (item a) should be clarified (see comments for question 8 below).</p> <p>The Note after item c should also be clarified to indicate that closing a normally open switch doesn’t affect this exclusion.</p>
<p>Response: Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made.</p> <p>Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term “non-retail generation” in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier “non-retail” would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.</p>		
Sacramento Municipal Utility	Yes	For the E1 reference “Note,” we would benefit from additional clarification identifying

Organization	Yes or No	Question 7 Comment
District		<p>the treatment of a normally open switch and offer the following: “Radial systems shall be assessed with all normally open switching devices in their open positions.”</p> <p>The wording in Exclusion 1-c should more clearly reflect what is intended by using the term “non-retail generation.”</p> <p>Also, as with the technical justification for Inclusions I2 and I4, it is recommended that the generation threshold, i.e. gross nameplate values, be deferred to Phase 2.</p>
Balancing Authority Northern California	Yes	<p>For the E1 reference “Note,” we would benefit from additional clarification identifying the treatment of a normally open switch and offer the following: “Radial systems shall be assessed with all normally open switching devices in their open positions.”</p> <p>The wording in Exclusion 1-c should more clearly reflect what is intended by using the term “non-retail generation.”</p> <p>Also, as with the technical justification for Inclusions I2 and I4, it is recommended that the generation threshold, i.e. gross nameplate values, be deferred to Phase 2.</p>
<p>Response: Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operators responsibility to indicate how a switch is used in the normal operating environment. No change made.</p> <p>Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term “non-retail generation” in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier “non-retail” would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.</p> <p>The SDT believes that a limit on the aggregate amount of connected (non-retail) generation within the radial system is necessary to ensure that there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the ERO Statement of Compliance Registry Criteria, and this threshold is a subject of further review under Phase 2 of the BES definition. No change made.</p>		

Organization	Yes or No	Question 7 Comment
<p>Florida Municipal Power Agency Transmission Access Policy Study Group</p>	<p>Yes</p>	<p>FMPA supports the exclusion of radial systems from the BES Definition. Such systems are generally not “necessary for operating an interconnected electric transmission network,” the standard in Orders 743 and 743-A. We have several suggestions to clarify the proposed language for this Exclusion. Proposed Exclusion E1 refers to “[a] group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher.” We appreciate the SDT’s clarification of the point of connection requirement, but the term “a single point of connection” should be further defined (more clearly than just by voltage), and should be generic enough to encompass the various bus configurations. It is not the case, for example, that each individual breaker position in a ring bus is a separate point of connection for this purpose; in that situation, a bus at one voltage level at one substation should be considered “a single point of connection.” Some examples of configurations that should be considered a single point of connection for this purpose are at https://www.frc.com/Standards/StandardDocs/BES/BESAppendixA_V4_clean.pdf, Examples 1-6.</p> <p>Although the core definition (appropriately) refers to “Transmission Elements” (with a capital “T”), proposed Exclusion E1 refers to “transmission Elements” (with a lowercase “t”). To avoid confusion, either “Transmission” should be capitalized in both locations, or the word “transmission” should simply be deleted from Exclusion E1, leaving a “group of contiguous Elements.” We understand that the lack of capitalization may have been a deliberate choice by the SDT in an attempt to avoid confusion that SDT members believe exists in the Glossary definition. If the Glossary definition of Transmission is unclear-which FMPA does not necessarily believe is the case-the answer is not to simply abandon the Glossary definition in favor of an entirely undefined term; it is to submit a SAR to improve the Glossary definition.</p> <p>Exclusion E1(c) refers to “an aggregate capacity of non-retail generation less than or equal to 75 MVA.” “Non-retail generation” is potentially ambiguous, because it could be read as distinguishing between generation that will be sold at wholesale and generation that is used by the retail provider to meet retail load. On the</p>

Organization	Yes or No	Question 7 Comment
		<p>understanding that the intent is in fact to describe generation behind the end-user meter, sometimes referred to as “behind-the-second-meter generation,” we suggest the following revision: “an aggregate generation capacity less than or equal to 75 MVA, not including generation on the retail customer’s side of the retail meter.”</p> <p>Exclusion E1 concludes with a “Note”: “A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.” The Note should not specify the types of evidence required to prove a normally open switch, and the phrase “as depicted on prints or one-line diagrams” should be deleted. This phrase is equivalent to a “Measure” in a standard and should not be embedded in the equivalent of a “Requirement.” Since the phrase only gives an “example,” it does not in fact add anything to the Note, but may lead to confusion over what sort of evidence is required.</p>
<p>Response: The “single point of connection of 100 kV or higher” is where the radial system will begin, if it meets the language of Exclusion E1 including parts a, b, or c and does not necessarily include an automatic interrupting device (AID). For example, the start of the radial system may be a hard tap of the transmission line where no automatic interruption device is used. The owner of the transmission line will need to insure the reliability of the transmission line. Another example is the tap point within a ring or breaker and a half bus configuration could also be the beginning of the radial system and the owner of the bus would need to insure the reliability of the substation. Furthermore, the SDT believes that radial systems cannot have multiple connections at 100kV or higher. Networks that have multiple connections at 100kV or higher may qualify under Exclusion E3. The owner always has the option to seek exclusion through the exception process. No change made.</p> <p>The SDT team considered the disposition of the word “transmission” in the context of Exclusion E1, and determined that retention of this word – in lower-case – is necessary to modify the word “Element”. This is meant to eliminate the generation that would otherwise be included in the term “Element”. No change made.</p> <p>Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term “non-retail generation” in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier “non-retail” would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.</p> <p>Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent</p>		

Organization	Yes or No	Question 7 Comment
<p>the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator’s responsibility to indicate how a switch is used in the normal operating environment. No change made.</p>		
MRO NERC Standards Review Forum (NSRF)	Yes	Unless there is a specific reason to the contrary the NSRF suggests that E1b include the qualification of “aggregate capacity of non-retail generation less than or equal to 75 MVA” be added to be consistent with the wording in E1c.
MEAG Power	Yes	We suggest the wording “non-retail generation’ should be clarified with an explanation of why it is used in this exclusion.
SERC OC Standards Review Group	Yes	We suggest the wording “non-retail generation’ should be clarified with an explanation of why it is used in this exclusion.
Consolidated Edison Co. of NY, Inc.	Yes	Please define the term “non-retail generation.”
Tennessee Valley Authority	Yes	TVA suggests the wording “non-retail generation’ should be clarified with an explanation of why it is used in this exclusion.
SERC Planning Standards Subcommittee	Yes	The SDT needs to clarify what is meant by "non-retail generation." Is this what is commonly referred to as "customer owned" or "behind-the-meter" generation?
<p>Response: Non-retail generation is the generation on the system (supply) side of the meter. The SDT has intentionally utilized the term “non-retail generation” in Exclusion E1.c in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier “non-retail” would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.</p>		
WECC Staff	Yes	The use of the word “affect” in the note may cause problems with interpretation by users. WECC suggests replacing the term "affect" with “alter”.
<p>Response: The SDT considered your comments and chose to leave the existing wording unchanged as it does not provide any</p>		

Organization	Yes or No	Question 7 Comment
<p>additional clarity.</p> <p>Radial systems should be assessed with all normally open (NO) switches in the open position and these NO switches will not prevent the owner or operator from using this exclusion. The note provides an example that can be used to indicate the switch is operated in the normally open position; however, it is the owner and operator’s responsibility to indicate how a switch is used in the normal operating environment. No change made.</p>		
Westar Energy	Yes	
Redding Electric Utility	Yes	
City of Redding	Yes	
Portland General Electric Company	Yes	
Farmington Electric Utility System	Yes	
Georgia System Operations Corporation	Yes	
Oncor Electric Delivery Company LLC	Yes	
National Grid	Yes	
Cowlitz County PUD	Yes	
Memphis Light, Gas and Water Division	Yes	

Organization	Yes or No	Question 7 Comment
Springfield Utility Board	Yes	SUB supports a radial system exclusion.
Oregon Public Utility Commission Staff	Yes	
Metropolitan Water District of Southern California	Yes	
Duke Energy	Yes	
Chevron U.S.A. Inc.	Yes	This is very important exclusion for an entity operating in remote areas of the country that provides distribution service to third parties where utilities are unable or unwilling to serve. While the distribution is at a low voltage, the power was initially received by the operating entity at a high voltage.
Central Hudson Gas and Electric Corporation	Yes	
Idaho Falls Power	Yes	We support the exclusion as drafted.
FirstEnergy Corp.	Yes	
Exelon	Yes	
Tri-State GandT	Yes	
Western Area Power Administration	Yes	
Tri-State Generation and Transmission Assn., Inc.	Yes	

Organization	Yes or No	Question 7 Comment
Energy Management		
Texas RE NERC Standards Subcommittee	Yes	This is a much needed change from the first posting, as this will maintain the status quo referred to in the introduction text.
Response: Thank you for your support.		

8. The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E2 (behind-the-meter generation)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: The majority of commenters are in agreement with Exclusion E2 but there were some requests for additional clarification and the SDT responded by clarifying the language as shown below.

There were also questions raised about threshold levels in the exclusion. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

Some commenters have questioned the reasoning behind Exclusion E2 (ii). Condition (ii) in Exclusion E2 is derived from FERC or provincial regulations applicable to qualifying cogeneration and small power production facilities. For example, see 18 CFR §292.101 and §292.305(b) for the requirements specific to the US. The SDT believes that condition (ii), which requires that the generation serving the retail customer load self provide reserves, is essential for the integrity of the exclusion. This is not new ground and is simply clarifying language that has been present in the ERO Statement of Compliance Registry Criteria for quite some time. The SDT believes that the meaning of the definition will be understood in Balancing Authority Areas where it is applicable as it reflects existing practice. Therefore, the SDT has declined to delete condition (ii).

E2 - A generating unit or multiple generating units on the customer's side of the retail meter that serve all or part of the retail customer Load with electric energy ~~on the customer's side of the retail meter~~ if: (i) the net capacity provided to the BES does not exceed 75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority.

Organization	Yes or No	Question 8 Comment
MEAG Power	No	Clarification needs to be provided for what is meant by E2 (ii), regarding generation on the customer’s side of the retail meter; otherwise we have trouble developing a position on this question.
SERC OC Standards Review Group	No	Clarification needs to be provided for what is meant by E2 (ii), regarding generation on the customer’s side of the retail meter; otherwise we have trouble developing a position on this question.
Tennessee Valley Authority	No	Clarification needs to be provided for what is meant by E2 (ii), regarding generation on the customer’s side of the retail meter; otherwise we have trouble developing a position on this question.
ReliabilityFirst	No	It is not clear why “ii” is needed. If the net generation exceeds 75 MVA, then it is included in the BES whether or not there are ancillary services provided for that generation. Would customer owned generation less than a net of 75 MVA but greater than 20 MVA be included in the BES if item ii was not met?
FirstEnergy Corp.	No	We suggest striking item "ii"
Dominion	No	Dominion supports exclusion for behind-the-meter generation, (if connected at >100 kV) if the load behind the meter (to which that generation is intended to support) does not rely on generation outside that metered point for purposes of back-up energy or any type of ancillary services at any time. The proposed language appears to suggest that standby, back-up, and maintenance power services are always required. There are alternative means to provide these services, such as reducing load to match ‘reliability services’ provided by the available behind-the-meter generation. Further, even if standby, back-up, and maintenance power services are always required, the exclusion criteria obligation should be placed on the retail load, not the generation outside the metered point

Response: Condition (ii) in Exclusion E2 is derived from FERC or provincial regulations applicable to qualifying cogeneration and

Organization	Yes or No	Question 8 Comment
<p>small power production facilities. For example, see 18 CFR §292.101 and §292.305(b) for the requirements specific to the US. The SDT believes that condition (ii), which requires that the generation serving the retail customer load self provide reserves, is essential for the integrity of the exclusion. This is not new ground and is simply clarifying language that has been present in the ERO Statement of Compliance Registry Criteria for quite some time. The SDT believes that the meaning of the definition will be understood in Balancing Authority Areas where it is applicable. No change made.</p>		
<p>Northeast Power Coordinating Council</p>	<p>No</p>	<p>Why are references to Balancing Authority, Generator Owner, and Generator Operator included in E2 which is part of the BES definition? The wording of Exclusion E2 should be consistent with the Statement of Compliance Registry Criteria in Section III.c.4.</p>
<p>Response: The roles of the Balancing Authority, Generator Owner, and Generator Operator are implied in the ERO Statement of Compliance Registry Criteria and the terms were added as the result of industry requests for clarification. No change made.</p>		
<p>Southern Company</p>	<p>No</p>	<p>We suggest that clarification is needed for what is meant by E2 (ii), regarding generation on the customer’s side of the retail meter.</p> <p>Also, we would like for a clarification of the difference between the terms "retail load" and "retail customer load" as used in exclusions E2 and E3.</p>
<p>Response: Condition (ii) in Exclusion E2 is derived from FERC or provincial regulations applicable to qualifying cogeneration and small power production facilities. For example, see 18 CFR §292.101 and §292.305(b) for the requirements specific to the US. The SDT believes that condition (ii), which requires that the generation serving the retail customer load self provide reserves, is essential for the integrity of the exclusion. This is not new ground and is simply clarifying language that has been present in the ERO Statement of Compliance Registry Criteria for quite some time. The SDT believes that the meaning of the definition will be understood in Balancing Authority Areas where it is applicable. No change made.</p> <p>The SDT accepts your recommendation regarding “retail Load” and has clarified Exclusion E2 to read:</p> <p>E2 - A generating unit or multiple generating units <u>on the customer’s side of the retail meter</u> that serve all or part of <u>the</u> retail customer Load with electric energy on the customer’s side of the retail meter if: (i) the net capacity provided to the BES does not exceed 75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator</p>		

Organization	Yes or No	Question 8 Comment
Owner or Generator Operator, or under terms approved by the applicable regulatory authority.		
Southwest Power Pool Standards Review Team	No	This number could change in phase two of the project which would create unnecessary work in the future.
Farmington Electric Utility System	No	E2 should be modified to include a size and threshold for individual generating units, similar to that identified in I2. As currently worded E2 places the same threshold (75 MVA) on a single generating unit as is placed on multiple generating units.
Westar Energy	No	As expressed in our comment to question 5, we have concerns that the 75 MVA number could change in phase two of the project, creating unnecessary work in the future.
American Electric Power	No	It appears an entity with less than 75 MVA would not have been included as part of the earlier inclusions. Is it necessary to note this threshold once again in the exclusion section? Might it be possible to add some of the “behind the meter load” to the inclusion section to reduce the amount of both the inclusions and exclusions? Doing so would likely provide more clarity to the standard.
City of Anaheim	No	Again, 75 MVA should be increased to 300 MVA in E2 for the reasons stated in response to Question 7.
<p>Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values</p>		

Organization	Yes or No	Question 8 Comment
and provide compelling justification for modifications to the existing values. No change made.		
City of St. George	No	Same basic comments and concerns as question #7.
Response: See response to Q7.		
ISO New England Inc	No	<p>Exclusion E2 is confusing as written and seems counter intuitive. As an example, a 400 MW generator which is behind the meter with a 400 MW load could be excluded. This generator could have a significant impact on the performance of the system and yet it is excluded. As a simple example, loss of the 400 MW generator would require that the 400 MW load be supplied from the system, possibly leading to low voltages and thermal overloads. Additionally, a machine of this size could adversely impact the dynamic response of the system, leading to damping concerns or unit instability.</p> <p>If E2 is to be retained, it is not clear under what load conditions should the load at the facility be measured. Load levels, and resulting net flows to the system, can be significantly different between seasons, time of day, and the status of end user equipment at large industrial/manufacturing sites.</p> <p>The term “Retail Customer Load” needs to be defined.</p> <p>The Balancing Authority should not be included as an entity providing this service. In general the Statement of Compliance Registry has provided the preferred language to use here (Page 9, [Exclusions: second paragraph]).</p>
<p>Response: The SDT believes that Exclusion E2 should be dedicated to the situation faced by behind-the-meter (i.e., retail customer owned) generation that are PURPA qualifying facilities (in the US) (e.g., see 18 CFR Part 292 for the regulations that are applicable in the US), and similarly situated generators in Canada. Condition (ii) in Exclusion E2 is derived from FERC or provincial regulations applicable to qualifying facilities. The SDT believes that condition (ii), which requires that the generation serving the retail customer load self provide reserves, is essential for the integrity of the exclusion. No change made.</p> <p>The roles of the Balancing Authority, Generator Owner, and Generator Operator are implied in the ERO Statement of Compliance Registry Criteria and the terms were added to Exclusion E2 as the result of industry requests for clarification.</p>		

Organization	Yes or No	Question 8 Comment
<p>The SDT has clarified Exclusion E2 to read:</p> <p>E2 - A generating unit or multiple generating units <u>on the customer's side of the retail meter</u> that serve all or part of <u>the</u> retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed 75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority.</p>		
<p>Central Maine Power Company</p>	<p>No</p>	<p>E2 should be consistent with the Statement of Compliance Registry Criteria. References to Balancing Authority, Generator Owner, and Generator Operator should not be included in the BES definition. "Net capacity" is unclear - must flow never exceed 75 MVA on an instantaneous or integrated hourly energy basis per either design or operating experience? There is a potential for hundreds of MW to be interconnected at a customer facility, with the "net capacity" (= flow into the transmission system? Instantaneous? Annual average? On an integrated hourly basis at any hour?) being less than 75 MVA - are hundreds of MW of generation "not material" to BES reliability? The conditions under which direction of flow (i.e., "net capacity") is assessed are critical, but E2(i) is silent on this. In E2(ii), the "and", "or", and "or" are not clear - what are the necessary terms of the referenced "binding obligation" and what is an "applicable regulatory authority"? Are "standby" and "back-up" and "maintenance" power services independently defined and provided by a GOP, GO, or BA? Northeast industry expert colleagues do not understand the relevance of E2(ii) to BES reliability. E2 should be restated as follows: "A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the meter if the flow to or from the BES can never exceeds 75 MVA."</p>
<p>Rochester Gas and Electric and New York State Electric and Gas</p>	<p>No</p>	<p>E2 should be consistent with the Statement of Compliance Registry Criteria. References to Balancing Authority, Generator Owner, and Generator Operator should not be included in the BES definition.</p>

Organization	Yes or No	Question 8 Comment
		<p>“Net capacity” is unclear - must flow never exceed 75 MVA on an instantaneous or integrated hourly energy basis per either design or operating experience? There is a potential for hundreds of MW to be interconnected at a customer facility, with the “net capacity” (= flow into the transmission system? Instantaneous? Annual average? On an integrated hourly basis at any hour?) being less than 75 MVA - are hundreds of MW of generation “not material” to BES reliability? The conditions under which direction of flow (i.e., “net capacity”) is assessed are critical, but E2(i) is silent on this.</p> <p>In E2(ii), the “and”, “or”, and “or” are not clear - what are the necessary terms of the referenced “binding obligation” and what is an “applicable regulatory authority”?</p> <p>Are “standby” and “back-up” and “maintenance” power services independently defined and provided by a GOP, GO, or BA?</p> <p>Northeast industry expert colleagues do not understand the relevance of E2(ii) to BES reliability. E2 should be restated as follows: “A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer’s side of the meter if the flow to or from the BES never exceeds 75 MVA”</p>
<p>Response: The wording of (ii) is essentially the same as the wording on this topic in the ERO Statement of Registry Criteria which has been in existence for several years and is well understood in the industry. Qualifying for Exclusion E2 will be determined the same as every other inclusion or exclusion; there is nothing special about Exclusion E2 that separates it from the rest of the definition. The roles of the Balancing Authority, Generator Owner, and Generator Operator are implied in the ERO Statement of Compliance Registry Criteria and the terms were added to Exclusion E2 as the result of industry requests for clarification.</p> <p>The SDT believes that Exclusion E2 should be dedicated to the situation faced by behind-the-meter (i.e., retail customer owned) generation that are PURPA qualifying facilities (in the US) (e.g., see 18 CFR Part 292 for the regulations that are applicable in the US), and similarly situated generators in Canada. Condition (ii) in Exclusion E2 is derived from FERC or provincial regulations applicable to qualifying facilities. The primary purpose of retail customer owned generation in the context of Exclusion E2 is the integrity of steam production that supports a manufacturing process. The electrical load of that process does not exist without steam.</p> <p>The SDT believes that condition (ii), which requires that the generation serving the retail customer load self provide reserves (i.e., standby, backup and maintenance power), is essential for the integrity of the exclusion. These reserves maintain steam generation</p>		

Organization	Yes or No	Question 8 Comment
<p>and the load to sustain the manufacturing process. In the US, the terms and conditions of standby, backup and maintenance services are defined and administered by State PSCs (i.e., the “applicable regulatory authority” in the US) subject to FERC oversight. These services are provided under contract or tariff with GOs, GOPs or BAs in regions that do not have ISOs or RTOs, and provided by ISOs and RTOs where so-called “organized markets” operate.</p> <p>The first condition (i) in Exclusion E2 had to reference the net generation (in MWs) since it was how the generation was operated, and the residual (“net”) amount exported to the BES that was deemed relevant to the exclusion and reliability, not the nameplate rating. The export is subject to the 75 MVA threshold; the requirement for reserves under a “binding obligation” (standby, backup and maintenance power) matches part or all of the on-site load and is not subject to the threshold.</p> <p>No change made.</p>		
LCRA Transmission Services Corporation	No	
<p>Response: Without any specific comment, the SDT is unable to respond.</p>		
Kansas City Power and Light Company	No	Any facilities that are customer owned regardless of size or configuration are not under the jurisdiction or responsibility of the Registered Entity and should not be considered as included with a Registered Entity.
<p>Response: Exclusion E2 was based on the ERO Statement of Compliance Registry Criteria. No change made.</p>		
Ameren	No	<p>a)If retail generation fails to meet (i) or (ii) it appears that the retail generation would be included. The wording of (ii) is complex. Who will police this with retail behind-the-meter generators?</p> <p>b)Clarification needs to be provided for what is meant by E2 (ii), regarding generation on the customer’s side of the retail meter; otherwise we have trouble developing a position on this question.</p>
<p>Response: The wording of (ii) is essentially the same as the wording on this topic in the ERO Statement of Registry Criteria which has been in existence for several years and is well understood in the industry. Qualifying for the E2 Exclusion will be determined the same</p>		

Organization	Yes or No	Question 8 Comment
<p>as every other inclusion or exclusion; there is nothing special about Exclusion E2 that separates it from the rest of the definition. Condition (ii) in Exclusion E2 is derived from FERC or provincial regulations applicable to qualifying facilities. The SDT believes that condition (ii), which requires that the generation serving the retail customer load self provide reserves, is essential for the integrity of the exclusion. The first condition (i) in Exclusion E2 had to reference the net generation (in MWs) since it was how the generation was operated that was deemed relevant to the exclusion, not the nameplate rating. No change made.</p>		
Nebraska Public Power District	Yes	However the exclusion needs to be noted in I2, so as to non conflict with I2. (See comment on #2 above.)
<p>Response: Any retail generation that meets the criteria in Exclusion E2 is not in the BES so there is no conflict. No change made.</p>		
National Grid	Yes	We agree with this exclusion, but the intention of point (i), the net capacity provided to the BES does not exceed 75 MVA, is not clear. We suggest this wording: "the net capacity provided to the BES for 90% of the hours of the year does not exceed 75 MVA".
<p>Response: The first condition (i) in Exclusion E2 had to reference the net generation (in MWs) since it was how the generation was operated that was deemed relevant to the exclusion, not the nameplate rating. The threshold level for generators will be considered in the Phase 2 review. No change made.</p>		
Utility Services, Inc.	Yes	Utility Services supports the comments offered by others suggesting that the language be revised to be identical to the language in the SCRC.
<p>Response: The SDT modified the language in response to industry requests for clarification. For example, the terms Balancing Authority, Generator Owner, and Generator Operator are implied in the ERO Statement of Compliance Registry Criteria. No change made.</p>		
South Houston Green Power, LLC	Yes	SHGP generally agrees with the proposed revisions to Exclusion E2, but believes that a clarifying revision should be made. Substitute "transmission grid" for "BES" in the phrase "provided to the BES" to insure that the metering is to the grid.

Organization	Yes or No	Question 8 Comment
The Dow Chemical Company	Yes	Dow generally agrees with the proposed revisions to Exclusion E2, but believes that a clarifying revision should be made. Substitute “transmission grid” for “BES” in the phrase “provided to the BES” to insure that the measurement is to the grid.
<p>Response: The SDT believes that BES is the appropriate point of measurement because Exclusion E2 is defined in relation to the BES. No change made.</p>		
Manitoba Hydro	Yes	Manitoba Hydro agrees with E2 but suggests that the phrase ‘A generating unit or multiple generating units’ be replaced with ‘Generating resource(s)’ for clarity and consistency.
<p>Response: The SDT does not see where the suggested change will add any additional clarity. No change made.</p>		
<p>Michigan Public Power Agency Clallam County PUD No.1 Blachly-Lane Electric Cooperative (BLEC) Coos-Curry Electric Cooperative (CCEC) Central Electric Cooperative (CEC) Clearwater Power Company (CPC) Snohomish County PUD Consumer's Power Inc. Douglas Electric Cooperative (DEC)</p>	Yes	<p>MPPA and its members support the revised language. The language provides clarity regarding the BES status of customer-owned cogeneration facilities. However, MPPA and its members urge the SDT to remove the reference to the 75 MVA threshold and replace it with the defined term “Qualifying Aggregate Generation Resources” or some equivalent language for the reasons stated in our responses to Questions 3, 5, and 7.</p> <p>In addition, we are concerned that Exclusion 2 will place local distribution utilities in a difficult position because, under Exclusion 1 or Exclusion 3 as drafted, they could lose their status as a Radial System or a Local Network through the actions of a customer constructing behind-the-meter generation. With respect to Radial Systems, the appearance of behind-the-meter generators could cause the Radial System to exceed the thresholds specified in subparagraphs (b) and (c) of Exclusion 1 through no fault of the Radial System owner. Similar, a Local Network could lose its status because behind-the-meter generation could be of sufficient size that power moves into the interconnected grid in certain hours or under certain contingencies, rather than moving purely onto the Local Network, as required in subparagraph (b) of Exclusion 3. The Exclusions for Radial Systems and Local Networks should be made consistent with the Exclusion for behind-the-meter generation. There is no technical reason to believe</p>

Organization	Yes or No	Question 8 Comment
Fall River Rural Electric Cooperative (FALL) Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (LEC) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) West Oregon Electric Cooperative Umatilla Electric Cooperative (UEC) Cowlitz County PUD Kootenai Electric Cooperative		the power flowing from a behind-the-meter customer-owned generator will have less impact on the bulk system than an equivalent-sized generator owned by a utility operating a Radial System or LN.
<p>Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the</p>		

Organization	Yes or No	Question 8 Comment
<p>technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.</p> <p>The thresholds in Exclusions E1 and E3 apply only to non-retail generators (i.e., generation on the system (supply) side of the retail meter) and are not affected by presence of retail generation. No change made.</p>		
Massachusetts Department of Public Utilities	Yes	While the MA DPU generally supports Exclusion E2, no information has been provided by NERC demonstrating that the 75 MVA rating is based on any sound technical analysis.
NESCOE	Yes	While NESCOE generally supports Exclusion E2, no information has been provided by NERC demonstrating that the 75 MVA rating is based on any sound technical analysis.
<p>Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.</p>		
Texas Industrial Energy Consumers	Yes	Please see the response to Question 3, above. Unlike exclusions E1 and E3, this exclusion refers specifically to the “net capacity” provided, which is consistent with existing treatment for generation that is netted against internal load under the Statement of Registry Compliance.
<p>Response: See response to Q3.</p>		

Organization	Yes or No	Question 8 Comment
AECI and member GandTs, Central Electric Power Cooperative, KAMO Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power Cooperative	Yes	E2 “retail meter” should read “retail meter(s)”. (i) Should be reworded as “the maximum net impact to the BES does not exceed 150 MVA, connected at 200 kV or higher.” (ii) if we understand this clause correctly, we believe our proposed (i) wording will handle the issue. Also, all load’s inclusion, within a BA, is dictated within the BAL standards and so remove entirely or additional clarification is needed.
<p>Response: It is accepted use in NERC Reliability Standards that singular words and terms apply to plural conditions as well. No change made.</p> <p>The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.</p> <p>Condition (ii) in Exclusion E2 is derived from FERC or provincial regulations applicable to qualifying cogeneration and small power production facilities. For example, see 18 CFR §292.101 and §292.305(b) for the requirements specific to the US. The SDT believes that condition (ii), which requires that the generation serving the retail customer load self provide reserves, is essential for the integrity of the exclusion. This is not new ground and is simply clarifying language that has been present in the ERO Statement of Compliance Registry Criteria for quite some time. The SDT believes that the meaning of the definition will be understood in Balancing Authority Areas where it is applicable. No change made.</p>		

Organization	Yes or No	Question 8 Comment
Southern Company Generation	Yes	<p>Some editing is needed. The second part, (ii), of the and logic provided for the exclusion criteria E2 is confusing. The initial criteria, (i), seems to be adequate regarding impact to the BES. The criteria listed after "(ii)" does not seem to be relevant to the impact on the BES. What does it mean to provide standby, back-up, and maintenance power services to a generating unit or multiple generating units? It is unclear who is providing the power service. If this is needed, the statement needs to be simplified so it can be understood.</p> <p>What is the difference between the terms "retail Load" and "retail customer Load" as used in Exclusions E2 and E3?</p>
<p>Response: Condition (ii) in Exclusion E2 is derived from FERC or provincial regulations applicable to qualifying cogeneration and small power production facilities. For example, see 18 CFR §292.101 and §292.305(b) for the requirements specific to the US. The SDT believes that condition (ii), which requires that the generation serving the retail customer load self provide reserves, is essential for the integrity of the exclusion. This is not new ground and is simply clarifying language that has been present in the ERO Statement of Compliance Registry Criteria for quite some time. The SDT believes that the meaning of the definition will be understood in Balancing Authority Areas where it is applicable.</p> <p>The SDT accepts your recommendation regarding “retail Load” and has clarified Exclusion E2 to read:</p> <p>E2 - A generating unit or multiple generating units <u>on the customer’s side of the retail meter</u> that serve all or part of <u>the retail customer</u> Load with electric energy on the customer’s side of the retail meter if: (i) the net capacity provided to the BES does not exceed 75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority.</p>		
ACES Power Marketing Standards Collaborators	Yes	<p>“A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer’s side of the retail meter” sounds a lot like “non-retail generation” that is used in E1 and E3 which was described in the webinar as generation that resides on the customer side of the retail meter and is used to supply energy to that customer’s load and is owned by the customer. Is E2 assuming that this generation is not owned by the customer?</p>

Organization	Yes or No	Question 8 Comment
		Also, part ii) adds to the confusion. Conceptually we agree with this exclusion but further clarification is preferred.
<p>Response: Exclusion E2 does not apply to non-retail generation, which the SDT defines as generation on the system (supply) side of the retail meter.</p> <p>Condition (ii) in Exclusion E2 is derived from FERC or provincial regulations applicable to qualifying cogeneration and small power production facilities. For example, see 18 CFR §292.101 and §292.305(b) for the requirements specific to the US. The SDT believes that condition (ii), which requires that the generation serving the retail customer load self provide reserves, is essential for the integrity of the exclusion. This is not new ground and is simply clarifying language that has been present in the ERO Statement of Compliance Registry Criteria for quite some time. The SDT believes that the meaning of the definition will be understood in Balancing Authority Areas where it is applicable. No change made.</p>		
Bonneville Power Administration	Yes	BPA believes that if E2 is intended to exclude behind-the-meter generation, the phrase “on the customer’s side of the retail meter” should immediately follow “generating units” in the first line. Otherwise, the phrase could be seen as modifying “retail customer Load.”
<p>Response: The SDT has clarified Exclusion E2 as suggested.</p> <p>E2 - A generating unit or multiple generating units <u>on the customer’s side of the retail meter</u> that serve all or part of <u>the retail customer</u> Load with electric energy on the customer’s side of the retail meter if: (i) the net capacity provided to the BES does not exceed 75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority.</p>		
WECC Staff	Yes	E2 is inconsistent with Section III.c. of the NERC Statement of Compliance Registry Criteria and is in conflict with I2. As written, E2 uses a net capacity threshold of 75MVA, which does not distinguish between a single generating unit and multiple generating units. The threshold in the NERC Statement of Compliance Registry Criteria for a single generating unit is 20MVA. As a result, E2 would appear to exclude generators from 20MVA to 75MVA that serve any amount of retail load behind the

Organization	Yes or No	Question 8 Comment
		meter. WECC recommends replacing “(i) the net capacity provided to the BES does not exceed 75 MVA” with “(i) the net capacity provided to the BES does not exceed the individual or gross nameplate ratings provided in the NERC Statement of Compliance Registry Criteria.” WECC’s recommended change makes E2 consistent with I2 and the SDT’s plan to address generator thresholds in Phase 2.
<p>Response: Comments received on Inclusion I2 made it clear that industry did not want circular references in the definition so the SDT has refrained from using the wording suggested here both in Inclusion I2 and Exclusion E2. The threshold levels of generators and the relationship between the ERO Statement of Compliance Registry Criteria and the BES definition will be considered in the Phase 2 review. However, the SDT believes that a value was needed for Phase 1 and decided to proceed with the single 75 MVA threshold. No change made.</p>		
ATC LLC	Yes	
Portland General Electric Company	Yes	
City of Austin dba Austin Energy	Yes	
ExxonMobil Research and Engineering	Yes	
Northern Wasco County PUD	Yes	
Georgia System Operations Corporation	Yes	
Oncor Electric Delivery Company LLC	Yes	

Organization	Yes or No	Question 8 Comment
Central Lincoln	Yes	
Harney Electric Cooperative, Inc.	Yes	
PSEG Services Corp	Yes	
Independent Electricity System Operator	Yes	
Long Island Power Authority	Yes	
Mission Valley Power	Yes	
Puget Sound Energy	Yes	
Tillamook PUD	Yes	
NV Energy	Yes	
Oregon Public Utility Commission Staff	Yes	
Z Global Engineering and Energy Solutions	Yes	
Consumers Energy	Yes	
Metropolitan Water District of Southern California	Yes	

Organization	Yes or No	Question 8 Comment
Duke Energy	Yes	
Chevron U.S.A. Inc.	Yes	This is a very important exclusion for Combined Heat and Power facilities that utilize large amounts of steam and power, and secure and/or provide their own operating reserves.
Ontario Power Generation Inc.	Yes	
Central Hudson Gas and Electric Corporation	Yes	
Idaho Falls Power	Yes	We support the exclusion as drafted.
Exelon	Yes	
PacifiCorp	Yes	
Hydro One Networks Inc.	Yes	
Tri-State GandT	Yes	
Western Area Power Administration	Yes	
Tri-State Generation and Transmission Assn., Inc. Energy Management	Yes	
MRO NERC Standards Review Forum (NSRF)	Yes	

Organization	Yes or No	Question 8 Comment
IRC Standards Review Committee	Yes	
Pepco Holdings Inc and Affiliates	Yes	
Transmission Access Policy Study Group	Yes	
Electricity Consumers Resource Council (ELCON)	Yes	ELCON supports the proposed revisions to Exclusion E2.
Texas RE NERC Standards Subcommittee	Yes	
Florida Municipal Power Agency	Yes	
SERC Planning Standards Subcommittee	Yes	
Redding Electric Utility	Yes	
City of Redding	Yes	
Tacoma Power	Yes	Tacoma Power supports the Exclusion E2 as currently written.
BGE	Yes	No comment.
NERC Staff Technical Review	Yes	

Organization	Yes or No	Question 8 Comment
		<p>Response: Thank you for your support. Due to other comments received, the SDT has made a slight clarifying change to Exclusion E2 as shown:</p> <p>E2 - A generating unit or multiple generating units <u>on the customer's side of the retail meter</u> that serve all or part of <u>the</u> retail customer Load with electric energy on the customer's side of the retail meter if: (i) the net capacity provided to the BES does not exceed 75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority.</p>

9. **The SDT has revised the specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E3 (local network)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.**

Summary Consideration: Commenters were generally supportive of the concept of the local network Exclusion E3 as proposed in the second posting of the BES definition. The most prevalent comments, and the SDT’s response to those comments, were as follows:

Several commenters suggested that the requirement under Exclusion E3.b should apply only during normal operating conditions. In other words, commenters felt that some power flow should be allowed to flow from the candidate local network back into the BES as long as it only occurred under abnormal conditions. To address this suggestion, the SDT considered the addition of the phrase “under normal operating conditions”, as a qualifier to Exclusion E3.b, but determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. . However, the SDT believes that, in circumstances where a local network is unable to utilize the local network exclusion solely because, under abnormal system conditions power flows out of the network, the same network could be a suitable candidate for exclusion under the Exception Process.

Numerous comments were received that either challenged the generator thresholds in Exclusion E3.a or suggested that the Exclusion for local networks should be silent on generator thresholds until the question of appropriate generation thresholds is addressed in Phase 2 of Project 2010-17. The SDT agrees that the threshold(s) for generation throughout the BES definition should be addressed in Phase 2 of this effort. However, to satisfy to the Commission’s directives in Orders 743 and 743-A743-A in a timely fashion, the SDT believes it is necessary to use a generation threshold that is consistent with the in-force ERO Statement of Compliance Registry Criteria.

The SDT introduced the term “non-retail generation” in the E3 Exclusion, and a number of commenters questioned the SDT’s understanding of the term. For the purpose of Exclusion E3 (and Exclusion E1), the SDT intends “non-retail generation” to mean generation that is on the system (supply) side of the retail meter.

Numerous commenters suggested that the word “transmission” be removed from the phrase in the first paragraph of Exclusion E3. The SDT considered the disposition of the word “transmission” in Exclusion E3, and determined that retention of this word – in lower-case – is necessary to modify the word “Element”. This is meant to eliminate the generation that would otherwise be included in the term “Element”.

Several commenters expressed some confusion about Exclusion E3.b. Commenters felt that two separate and distinct ideas were being addressed in Exclusion E3.b, and that the expression following the colon is expected to clarify the expression preceding the colon. The SDT agrees that these two ideas are separate, but related. The SDT decided to revise Exclusion E3.b to provide this clarity, as follows:

E3.b: Power flows only into the LN: ~~and~~ **and** the LN does not transfer energy originating outside the LN for delivery through the LN;

This minor revision is clarifying only, and does not represent any material change to the Exclusion provision.

Organization	Yes or No	Question 9 Comment
SERC OC Standards Review Group	No	We would agree with the exclusion if the wording of the exclusion includes the following phrase (in quotation marks) added at the end of E3 b): Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN “under normal operating conditions”.
Tennessee Valley Authority	No	TVA would agree with the exclusion if the wording of the exclusion includes the following phrase (in italics) added at the end of E3 b): “Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN under normal operating conditions; and”
MEAG Power	No	We would agree with the exclusion if the wording of the exclusion includes the following phrase (in italics) added at the end of E3 b): Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN “under normal operating conditions”.
<p>Response: The SDT considered the addition of the phrase “under normal operating conditions”, as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made.</p>		
NERC Staff Technical Review	No	While we appreciate the improvement in the text of Exclusion E3, but we continue to believe that E3 should require automatic interrupting devices that are part of the BES must be provided at the points of interconnection between the Local Network and the BES.
<p>Response: The SDT considered the suggested requirement for separation of the LN via automatic fault interrupting devices during the</p>		

Organization	Yes or No	Question 9 Comment
<p>development of the language for the second posting, and determined that such a qualifier could not be enforced for facilities that are not essential for the reliable operation of an interconnected transmission network. No change made.</p>		
<p>Northeast Power Coordinating Council</p>	<p>No</p>	<p>What is the technical justification for 300kv and higher?</p> <p>Local Network is capitalized (network not capitalized at the beginning of E3) throughout E3, yet it is not defined in the NERC Glossary.</p> <p>The installed generation limit in a Local Network should be addressed in Phase 2.</p> <p>Any studies supporting E3 should be made available.</p>
<p>Response: The threshold of 300 kV is used as a cap, not a minimum. Please refer to the companion document in the second posting of the BES Definition under Project 2010-17 for a description of the technical justification for local network exclusion.</p> <p>The term “local network” is not capitalized anywhere in the Exclusion E3 section of the definition except where it is placed as a section title, and when abbreviated. The SDT understands that “local network” is not a NERC Glossary term.</p> <p>The SDT agrees that the threshold(s) for generation throughout the BES definition should be addressed in Phase 2 of this effort; however, to satisfy the Commission’s directives in Order 743 and 743-A in a timely fashion, it is necessary to use a generation threshold that is consistent with the in-force Statement of Compliance Registry Criteria. No change made.</p> <p>Please refer to the companion document in the second posting of the BES Definition under Project 2010-17 for a description of the technical justification for local network exclusion.</p>		
<p>Bonneville Power Administration</p>	<p>No</p>	<p>BPA has several concerns regarding Exclusion E3. First, BPA strongly believes that Exclusion E3 must retain the requirement that the local network (LN) be separable from the BES by an automatic fault interrupting device wherever the LN interconnects with the BES. BPA believes that this is necessary in order to protect both the BES and the LN during faults, especially if there is any possibility that backfeed could occur. BPA recommends retaining the original language: Separable by automatic fault interrupting devices: Wherever connected to the BES, the LN must be connected through automatic fault interrupting devices.</p> <p>In addition, as stated in our comments in May, 2011, “automatic fault interrupting device” should be a defined term.</p>

Organization	Yes or No	Question 9 Comment
		<p>BPA strongly believes that Exclusion E3 should not be allowed for any facilities above 200kV instead of the 300kV limit in shown in the current proposal. Networks operated above 200kV have significant fault duties, carry much more power, and have a greater potential for cascading if something does not operate properly than networks operated below 200kV. Therefore, BPA believes that these networks should be part of the BES.</p> <p>BPA believes the term “non-retail generation” in E3(a) should also be defined.</p>
<p>Response: The SDT considered the suggested requirement for separation of the LN via automatic fault interrupting devices during the development of the language of the second posting, and determined that such a qualifier could not be enforced for facilities that are not essential for the reliable operation of an interconnected transmission network. No change made.</p> <p>As the SDT does not propose the inclusion of the requirement for an automatic fault interrupting device, the definition of the term is not necessary.</p> <p>The threshold cap of 300 kV was a modification added for the second posting of the definition. The prior version of the definition had no upper bound on operating voltage for the local network, and the SDT has now adopted a 300 kV upper limit pursuant to comments received. Please refer to the technical justification document for local networks that accompanied the second posting under Project 2010-17 for details about the selection of 300kV as the cap for local networks. No change made.</p> <p>Non-retail generation is meant to be the generation on the system (supply) side of the retail meter. This is a well understood interpretation which the SDT took from official literature and does not need to be officially defined.</p>		
<p>ACES Power Marketing Standards Collaborators</p>	<p>No</p>	<p>The term “non-retail generation” used in Exclusion E1 (item c) and again in E3 (item a) should be clarified.</p> <p>The following applies to E3 (item c): A flowgate should not be used to limit applicability of E3. First, there is no definition for what constitutes a permanent flowgate. Second, flowgates are often created for a myriad of reasons that have nothing to do with them being necessary to operate the BES. While section c) in E3 attempts to limit the applicability to permanent flowgates, there is no definition for what constitutes a permanent flowgate particularly since no flowgate is truly permanent. The NERC Glossary of Terms definition of flowgate includes flowgates in the IDC. This is a problem because flowgates are included in the IDC for many reasons not just because reliability issues are identified. Flowgates could be included to simply study the impact of schedules on a particular interface as an</p>

Organization	Yes or No	Question 9 Comment
		<p>example. It does not mean the interface is critical. As an example, it could be used to generate evidence that there are no transactional impacts to support exclusion from the BES. Furthermore, the list of flowgates in the IDC is dynamic. The master list of IDC flowgates is updated monthly and IDC users can add temporary flowgates at anytime. While the "permanent" adjective applied to flowgates probably limits the applicability from the "temporary" flowgates, it is not clear which of the monthly flowgates would be included from the IDC since they might be added one month and removed another. Flowgates are created for many reasons that have nothing to do with them being necessary to operate the BES. First, flowgates are created to manage congestion. The IDC is more of a congestion management tool than a reliability tool. FERC recognized this in Order 693, when they directed NERC to make clear in IRO-006 that the IDC should not be relied upon to relieve IROs that have been violated. Rather, other actions such as re-dispatch must be used in conjunction. Second, flowgates are used as a convenient point to calculate flows to sell transmission service. The characteristics of the flowgate make it a good proxy for estimating how much contractual use has been sold not necessarily how much flow will actually occur. While some flowgates definitely are created for reliability issues such as IROs, many simply are not.</p>
<p>Response: Non-retail generation is meant to be the generation on the system (supply) side of the retail meter.</p> <p>The SDT believes that the language in Exclusion E3.c prohibiting "Flowgates" from qualifying for definitional exclusion is appropriate and necessary. As a definitional exclusion characteristic, Exclusion E3.c must follow the principle of being a bright-line and easily identifiable, and as such, the SDT feels that the definition cannot allow some types of Flowgates and disallow others. Flowgates must continue to be a prohibiting characteristic under Exclusion E3, since these facilities are more likely to be used in the transfer of bulk power than not. An entity who wishes to make a case for exclusion of a unique type of Flowgate facility can do so through the exception process. The SDT believes that the continued qualifier of "permanent" associated with the term "Flowgate" addresses the majority of the concern in this comment. No change made.</p>		
Dominion	No	Dominion could support if E3a were eliminated.
<p>Response: The SDT continues to believe that it is necessary to establish a limit on the allowable quantity of generation that may be significant to the reliable operation of the surrounding interconnected transmission system. Please note that the issues surrounding the appropriate generation threshold, among other topics, will be taken up in Phase 2 of this BES definition effort. No change made.</p>		

Organization	Yes or No	Question 9 Comment
Pepco Holdings Inc and Affiliates	No	<p>1) In the Drafting Teams Consideration of Comments on the previous version, it was stated, “....It is not the SDT’s intent to specifically exclude any facilities in major metropolitan areas; it expects that the specific examples mentioned (NYC, Washington DC) would not qualify for exclusion under the revised Exclusion E3.” The currently proposed E3 will result in specific exclusion of major local networks in major metropolitan areas. These major LNs qualify for exclusion under proposed E3, and its qualifiers, in that they distribute power to the local load rather than act as facilities to transfer bulk power across the interconnected system. However, the LNs that supply large amounts of load in very dense load areas should have some transmission reliability considerations. To capture the appropriate LNs in question, consideration should be given to limiting the amount of load supplied by a LN to some load level. For example if an LN has a peak load level of less than 1,000MVA it would qualify for LN exclusion and if it exceeds 1,000MVA it would not qualify for exclusion. There are certainly many LNs that supply relatively small amounts of load, just as radial facilities. They should be excluded. It is important to develop a load level that would provide the proper balance between the small LNs and the major LNs.</p> <p>2) Since the SDT deleted the inclusion of Black Start Cranking Paths in I3 then reference to I3 in criteria E3a should also be removed. Limits on connected generation should only be constrained by the 75MVA limit. Therefore E3a should then read “Limits on connected generation: The LN and its underlying Elements do not include generation resources with an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating);”</p>
<p>Response: The SDT appreciates your concern about the possible exclusion of large metropolitan load centers through the exclusion for local networks in Exclusion E3. However, the SDT feels that it has accurately captured the characteristics of facilities that are used in the local distribution of electric energy within Exclusion E3 (and Exclusion E1), which the Commission’s Order specifically targeted for exclusion. To the suggestion of a 1,000 MW demand cap on the exclusion for local networks, the SDT sees no technical basis upon which to make such a change. Also, the SDT is unaware of any situations of a network of facilities serving a load of that size that would not be precluded in some way under at least one of the three characteristics of Exclusion E3. Finally, an Exception Process will exist in the event that an entity seeks an inclusion of such facilities. No change made.</p> <p>The SDT appreciates the suggestion that the elimination of the inclusion for Cranking Paths, while maintaining the qualifier prohibiting blackstart resources from existing in a qualifying local network could be viewed as an inconsistency. Given that the concept of</p>		

Organization	Yes or No	Question 9 Comment
<p>exclusion of ‘local networks’ is already an issue requiring careful technical justification, the SDT has determined that it should be conservative with regard to allowing such an exclusion for facilities that are depended upon for blackstart functionality, as these will arguably be more important to the reliable operation of the transmission system than equivalent networks without blackstart resources. It is nevertheless possible to achieve exclusion through the Exception Process. No change made.</p>		
<p>Tri-State Generation and Transmission Assn., Inc. Energy Management</p>	<p>No</p>	<p>1. b) should be reworded to “Normally there is power flow only into the LN: The LN is not normally used to transfer power originating outside of the LN for delivery through the LN.” There could be conditions inside the LN, such as large loads shut down for maintenance, which would allow the parallel transmission Elements to allow power to flow through the LN. Those conditions would have no negative or adverse effect on the BES.</p> <p>2. Capitalize “Network” at the beginning of the Exclusion</p>
<p>Tri-State GandT</p>	<p>No</p>	<p>1. b) should be reworded to “Normally there is power flow only into the LN: The LN is not normally used to transfer power originating outside of the LN for delivery through the LN.” There could be conditions inside the LN, such as large loads shut down for maintenance, which would allow the parallel transmission Elements to allow power to flow through the LN. Those conditions would have no negative or adverse effect on the BES.2. Capitalize “Network” at the beginning of the Exclusion.</p>
<p>Response: The SDT considered the addition of the phrase “under normal operating conditions”, as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made.</p> <p>The word “network” as used in “local network” is not intended as a defined term; therefore, it is not capitalized. When expressed in abbreviation, “LN” is properly capitalized. No change made.</p>		
<p>MRO NERC Standards Review Forum (NSRF)</p>	<p>No</p>	<p>THE NSRF suggestion considering a different approach for the power flow criteria in [E]3b. [E]3b: No [Firm] Power Transfers are scheduled out of, or [through], the LN in the operating horizon [for BES designations applicable to the operating horizon] and [no] Firm Power Transfers are reserved to flow out of, or through, the LN in the planning horizon [for BES designations applicable to the planning horizon].</p>

Organization	Yes or No	Question 9 Comment
<p>Response: The SDT believes it is vital to ensure both that power flow is always in the direction from the BES toward the LN at all points of connection, and that the LN facilities not be used for “wheeling” type transactions. The SDT believes the existing language accomplishes this. The suggested language in this comment touches on an important aspect, the scheduled use of the facilities, but the SDT believes that the existing language is more appropriate to express this point. No change made.</p>		
<p>Hydro One Networks Inc.</p>	<p>No</p>	<p>We agree with the exclusion concept of LN. However, the reliability of the interconnected transmission network should not be determined by the amount of installed generation in the local network. We believe that the generation limit is restrictive and has little or no technical basis. It is not the size of a unit in the LN that will determine the reliability impact on the BES but more importantly its location, configuration and system characteristics such as reliability must run unit. We suggest that the SDT should address this in phase 2 to increase the installed generation limit in a LN.</p> <p>We suggest deleting the references to I3 in E1 and E3 because we believe that this reference is in contradiction to I3 and probably an oversight and should be corrected. I3 does not require a path to be BES but it implies here that a radial system cannot be excluded if there is a Blackstart unit on it.</p>
<p>Response: The SDT agrees that the threshold(s) for generation throughout the BES definition should be addressed in Phase 2 of this effort; however, to satisfy the Commission’s directives in Order 743 and 743-A in a timely fashion, it is necessary to use a generation threshold that is consistent with the in-force Statement of Compliance Registry Criteria. No change made.</p> <p>The SDT appreciates the suggestion that the elimination of the inclusion for Cranking Paths, while maintaining the qualifier prohibiting blackstart resources from existing in a qualifying local network could be viewed as an inconsistency. Given that the concept of exclusion of ‘local networks’ is already an issue requiring careful technical justification, the SDT has determined that it should be conservative with regard to allowing such an exclusion for facilities that are depended upon for blackstart functionality, as these will arguably be more important to the reliable operation of the transmission system than equivalent networks without blackstart resources. It is nevertheless possible to achieve exclusion through the Exception Process. No change made.</p>		
<p>Holland Board of Public Works</p>	<p>Yes</p>	<p>Holland BPW supports the exclusion of Local Networks (LN) from the definition of BES. Such systems are generally not necessary for the reliable operation of the interconnected transmission network. However, some revisions are necessary. Holland BPW believes that E3(a) and E3(b) can and should be eliminated, provided E3(c) remains. E3(c) provides that an LN is BES if it is classified as a Flow Gate or Transfer Path. The bases for removing E3(a) and E3(b) are as follows: (1) Provision E3(a) establishes a</p>

Organization	Yes or No	Question 9 Comment
		<p>75 MVA limit on connected generation. This is inconsistent with the concept of a LN and should be removed. If not removed, it should be increased to not less than 300 MVA, consistent with the discussion in response to Q1.</p> <p>If an LN does not accommodate bulk power transfer across the interconnected system, the amount of generation that exists and is distributed within that system is immaterial for purposes of the reliable operation of the interconnected transmission system. During the NERC Webinar, NERC representatives suggested that placing an upper limit on generation within a LN might be desirable based upon an assumption that if that entity’s internal generation is lost, then replacement generation would have to come from the BES, and could therefore affect reliability. This assumption has not been substantiated. In most instances, generation resources are dispersed throughout the LN - it is unlikely an event would result in the loss in the amount of the aggregate generation. Additionally, LNs have local load shedding and system restoration plans for such contingencies.</p> <p>(2) E3(b) is unnecessary and should be removed. The proposed language in E3(b) appears to be concerned with flows originating from outside of the LN, coming into the LN, and then exiting the LN to loads outside of the LN. As noted above, E3(c) appears to address this concern. If E3(b) is maintained, then the introductory clause (“Power flows only into the LN:”) should be deleted, because it is inconsistent with the second clause (“The LN does not transfer energy originating outside the LN for delivery through then LN.”) If E3(b) is retained, Holland BPW supports the second clause (“The LN does not transfer energy originating outside the LN for delivery through then LN”) because it appears to be the portion of the provision that addresses the concern about flows into, through, and then out of, the LN.</p> <p>(3) E3(b) should also be removed or modified because it fails to recognize typical municipal system operations. An LN may have internal generation that is less than its peak load but in excess of off-peak or holiday load levels. The language “Load flows only into the LN” does not recognize this situation and prevents an LN from making the most economic use of surplus generation. There are no reliability reasons to discourage such sales since with or without such transactions, this generation is not necessary for the reliable operation of the interconnected transmission system.</p>

Response: The SDT believes that a limit on the amount of connected (non-retail) generation within the LN is necessary to ensure that

Organization	Yes or No	Question 9 Comment
<p>there is no reliability impact on the interconnected transmission system; however, the threshold of the allowable generation – 75 MVA – was chosen to be consistent with the existing threshold in the NERC Statement of Compliance Registry Criteria, and this threshold is a subject of further review under the Phase 2 development of the BES definition. The SDT believes that Exclusion E3.b continues to be necessary to ensure that qualifying LN’s do not participate in “wheel-through” transactions, and that power always flows in a direction from the BES toward the LN. The SDT has clarified Exclusion E3.b as follows due to your comments and those of others.</p> <p>E3.b: Power flows only into the LN; and the LN does not transfer energy originating outside the LN for delivery through the LN;</p>		
<p>Texas Industrial Energy Consumers</p>	<p>Yes</p>	<p>As noted in response to Question 3, above, subsection (a) of Exclusion E3 would only exclude Local Networks with “aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).” The reference to “non-retail” generation in subsection (a) indicates that the SDT may have intended to preserve the “netting” approach set forth in the Statement of Registry Compliance, but this should be made clearer. The description in subsection (a) should be revised to exclude “Where the radial system serves Load and includes generation resources not identified in Inclusions I2 or I3,” and the remainder of that sentence referencing a 75 MVA gross nameplate rating should be removed. This will provide a reference back to the Statement of Registry Compliance and clarify that only net capacity is considered for customer-owned facilities.</p> <p>TIEC also disagrees with the 300 kV upper limitation on transmission elements within a Local Network. Consistent with TIEC’s comments to FERC, if these facilities are serving a distribution function, their voltage level is irrelevant. The transmission versus distribution distinction should be based on function, not voltage level. The remainder of this exclusion clarifies what constitutes a distribution function, so the 300 kV limit is unnecessary and should be removed.</p>
<p>Response: The SDT evaluated this comment and has concluded that the exclusion must necessarily be based on the gross aggregate nameplate of the generation connected within the candidate systems. The approach that is suggested in your comment could result in significant amounts of generation existing within the excluded area. No change made.</p> <p>The SDT does not agree with the removal of the 300 kV cap that limits the qualification of a group of facilities for local network exclusion. The SDT feels that an upper bound is essential to prevent inappropriate exclusions of facilities that may be important to the reliable operation of the interconnected transmission system. The Exception Process is available for specific circumstances where a 300 kV cap is problematic. No change made.</p>		

Organization	Yes or No	Question 9 Comment
PacifiCorp	Yes	<p>PacifiCorp strongly supports the categorical exclusion of Local Networks (“LNs”) from the BES. PacifiCorp believes the exclusion is necessary to ensure that the BES definition complies with FERC’s statutory jurisdictional requirements. PacifiCorp recommends the following modifications:</p> <ul style="list-style-type: none"> o Change “contiguous transmission Elements” to “contiguous Elements”. o Modify item b to state, “Power flows only into the LN during normal operating conditions: The LN does not transfer energy originating outside the LN for delivery to loads located outside the LN...” o Add an item (may be included in item b) to provide as follows: “The LN is not critical (or is not relied upon) to maintain the reliability of the interconnected system during abnormal operating conditions.”
<p>Response: The SDT considered the disposition of the word “transmission” in Exclusion E3, and determined that retention of this word – in lower-case – is necessary to modify the word “Element”. This is meant to eliminate the generation that would otherwise be included in the term “Element”. No change made.</p> <p>The SDT considered the addition of the phrase “under normal operating conditions”, as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made.</p> <p>The SDT does not believe that the statement “The LN is not critical (or is not relied upon) to maintain the reliability of the interconnected system during abnormal operating conditions” lends itself to determination by inspection; hence, it is not an appropriate “bright-line” characteristic for ExclusionE3. No change made.</p>		
Southern Company	No	<p>We would agree with the exclusion if the wording of the exclusion includes the following phrase (in italics) added at the end of E3 b): “Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN “under normal operating conditions”.</p> <p>What does the term "non-retail generation" mean?</p> <p>Can the term "non-retail generation in E3a be changed to simply "generation"?</p>
<p>Response: The SDT considered the addition of the phrase “under normal operating conditions”, as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition.</p>		

Organization	Yes or No	Question 9 Comment
<p>For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made.</p> <p>Non-retail generation is meant to be the generation on the system (supply) side of the retail meter.</p> <p>The SDT has intentionally utilized the term “non-retail generation” in Exclusion E3.a in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier “non-retail” would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.</p>		
ReliabilityFirst	No	ReliabilityFirst Staff proposes to use the LN exclusion as part of the definition of what elements make up the facilities used in the local “distribution” of electric energy and could be included in the Exception Process as a criterion for exclusion.
<p>Response: The SDT believes that Exclusion E3 has sufficient clarity and that its provisions can be readily demonstrated without the need to be handled through the Exception Process. Therefore, it is more appropriately handled within the definition. No change made.</p>		
Ontario Power Generation Inc.	No	Non-retail generation needs to be properly defined in the text of the exclusion.
Mission Valley Power	No	<p>Mission Valley Power - : We strongly agree that local networks should be excluded, since they act much like the radial systems excluded in E1 while providing a higher level of service to customers. These networks should not be discouraged in the name of reliability.</p> <p>We again object to the introduction of the new confusing term “non-retail generation” with no definition provided.</p>
Tillamook PUD	No	We strongly agree that local networks should be excluded, since they act much like the radial systems excluded in E1 while providing a higher level of service to customers. These networks should not be discouraged in the name of reliability.

Organization	Yes or No	Question 9 Comment
		We again object to the introduction of the new confusing term “non-retail generation” with no definition provided.
Central Lincoln	No	<p>We strongly agree that local networks should be excluded, since they act much like the radial systems excluded in E1 while providing a higher level of service to customers. These networks should not be discouraged in the name of reliability.</p> <p>We again object to the introduction of the new confusing term “non-retail generation” with no definition provided.</p>
Northern Wasco County PUD	No	We strongly agree that local networks should be excluded, since they act much like the radial systems excluded in E1 while providing a higher level of service to customers. These networks should not be discouraged in the name of reliability. We again object to the introduction of the new confusing term “non-retail generation” with no definition provided.
<p>Response: Non-retail generation is meant to be the generation on the system (supply) side of the retail meter.</p>		
Central Hudson Gas and Electric Corporation	No	Under the proposed definition, clause E3.b. stipulates that ‘power only flows into the Local Network (LN): The LN does not transfer energy originating outside the LN for delivery through the LN.’ Clearly, this is a bright line. The Local Network Exclusion document, however, describes that ‘power flow “shifts”’ of ‘negligible fraction’ are acceptable. Further, the document acknowledges that parallel flows through the LN, ‘as governed by the fundamentals of parallel circuits’ will occur. Finally, the document goes on to exhibit that flows through the LN, however minimal, will result from both power transfer distribution factor (PTDF) and line outage distribution factor (LODF) analysis. If this is the case, what bright line criterion should be applied for this Exclusion Principal if no maximum PTDF and/or LODF are specified?
<p>Response: Exclusion E3.b does in fact prohibit power flow at the BES interface points of the LN from entering the BES. The accompanying technical justification document merely addresses the insignificance of the power flow shifts that will occur in an example system. Clearly, in the example system of the technical justification document, power flow is shown to always be in a direction from the BES toward the LN, albeit with only a slight magnitude shift in the PTDF and LODF analyses. The technical justification document does not attempt to set any threshold on the magnitude of this shift; it merely is a demonstration on a sample</p>		

Organization	Yes or No	Question 9 Comment
system. The only bright-line criterion that is applicable to this question is that power flow shall always be from the BES toward the LN.		
City of Anaheim	No	Again, 75 MVA should be increased to 300 MVA in E2 for the reasons stated in response to Question 7.
<p>Response: The SDT has determined that it must retain the 75 MVA threshold on generation allowed within a qualifying LN in order to remain consistent with the existing ERO Statement of Compliance Registry Criteria. There has not been sufficient technical justification to this point that would support a change from this threshold; however, such threshold will be considered in Phase 2 of this Project 2010-17. No change made.</p>		
Consumers Energy	No	In general we agree, but believe the word "transmission" should be removed from "A group of contiguous transmission Elements..."
<p>Response: The SDT considered the disposition of the word “transmission” in Exclusion E3, and determined that retention of this word – in lower-case – is necessary to modify the word “Element”. This is meant to eliminate the generation that would otherwise be included in the term “Element”. No change made.</p>		
Manitoba Hydro	No	Manitoba Hydro agrees with the Local Network Exclusion but disagrees with the drafting team’s removal of the requirement to have protective devices protecting the BES from the LN. We suggest that the following requirement is re-inserted into E3 to meet the LN Exclusion:”a) Wherever connected to the BES, the LN must be connected with a Protection System.”
<p>Response: The SDT considered the suggested requirement for separation of the LN via automatic fault interrupting devices during the development of the language of the second posting, and determined that, consistent with Order 743 and 743a, such a qualifier could not be enforced for facilities that are not essential for the reliable operation of an interconnected transmission network. No change made.</p>		
Long Island Power Authority	No	Main paragraph and items E3b and E3c adequately define a Local Network. It seems like the intent to exclude non bulk distribution systems would still be included because of E3a. E3a should be eliminated. If not eliminated, need to define the term "underlying Elements".

Organization	Yes or No	Question 9 Comment
<p>Response: The SDT continues to believe that it is necessary to establish a limit on the allowable quantity of generation that may be significant to the reliable operation of the surrounding interconnected transmission system. Please note that the issues surrounding the appropriate generation threshold, among other topics, will be taken up in Phase 2 of this BES definition effort. No change made.</p> <p>The SDT believes that the existing phrase in ExclusionE3.a “and its underlying Elements” has sufficient clarity and meets the intent of the exclusion with brevity. No change made.</p>		
<p>City of St. George</p>	<p>No</p>	<p>The exclusion of Local Networks should be provided, however the generation level limits are too restrictive. As long as the power flow is into the system the generation level of the local network shouldn’t matter as long as it is being used to serve local load.</p> <p>E3a should be deleted from the definition, or at least some higher level of allowed generation should be included. Another possibility would be a ratio of local load to local generation. Areas with local generation serving local load will have similar characteristics or affects to the BES system as were used in the Local Network justification paper (Appendix 1) included with the documents. If some reasonable level of local generation was added to the example system it is unlikely that the affects to the BES flows would change from what was presented in the example.</p>
<p>Response: The SDT has determined that it must retain the 75 MVA threshold on generation allowed within a qualifying LN in order to remain consistent with the existing ERO Statement of Compliance Registry Criteria. There has not been sufficient technical justification to this point that would support a change from this threshold; however, such threshold will be considered in Phase 2 of this Project 2010-17.</p> <p>The SDT continues to believe that it is necessary to establish an upper limit on the allowable quantity of generation that may be included in the local network since generation in a local network may be significant to the reliable operation of the surrounding interconnected transmission system. Please note that the issues surrounding the appropriate generation threshold, among other topics, will be taken up in Phase 2 of this BES definition effort.</p>		
<p>Orange and Rockland Utilities, Inc.</p>	<p>No</p>	<p>We know that N-1 is assumed when power-flow study is performed, however, N-1 should be mentioned here for clarification.</p>

Organization	Yes or No	Question 9 Comment
<p>Response: The SDT understands this comment to be in reference to the technical justification document that accompanied the definition in its second posting. This technical justification document was merely intended to be illustrative of the insignificance of the interaction of a sample local network on its surrounding interconnected transmission system. The “LODF” values were for a single element taken out of service. No change made.</p>		
<p>ISO New England Inc</p>	<p>No</p>	<p>E3 could result in many large load pockets being excluded from the BES definition and should be deleted. Assuming that it is retained, we offer the following additional comments.</p> <p>The term “a group of contiguous transmission elements” is ambiguous and needs to be clarified.</p> <p>Please clarify in the exclusion if the flows into the LN as described in E3.b) are pre-contingency flows only.</p> <p>Please clarify the system conditions (time of year, peak or off-peak) that should be considered in determining of flow is only into the LN.</p> <p>The “Non-retail” qualifier in E3.a) should be deleted.</p>
<p>Response: The SDT appreciates your concern about the possible exclusion of large metropolitan load centers through the exclusion for local networks in Exclusion E3. However, the SDT feels that it has accurately captured the characteristics of facilities that are used in the local distribution of electric energy within Exclusion E3 (and Exclusion E1), which the Commission’s Order specifically targeted for exclusion. No change made.</p> <p>The SDT considered the disposition of the word “transmission” in Exclusion E3, and determined that retention of this word – in lower-case – is necessary to modify the word “Element”. This is meant to eliminate the generation that would otherwise be included in the term “Element”. No change made.</p> <p>The SDT considered the addition of the phrase “under normal operating conditions”, as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made.</p> <p>There are no specified conditions applicable to item Exclusion E3.b. In order to qualify for exclusion under this item, this characteristic must be demonstrated under all conditions. This exclusion has been re-stated as follows for additional clarity:</p>		

Organization	Yes or No	Question 9 Comment
<p>E3.b: Power flows only into the LN; and the LN does not transfer energy originating outside the LN for delivery through the LN; The SDT has intentionally utilized the term “non-retail generation” in Exclusion E3.a in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier “non-retail” would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.</p>		
Texas Reliability Entity	No	There should be language that includes UFLS, UVLS, or load fully removable for Reserves even in a local network to avoid a lapse in reliability in operation of the BES. Even if it is to be included in any Phase 2 work, it should be mentioned here to avoid gaps.
<p>Response: The SDT is uncertain whether this comment suggests that facilities used in UFLS, UVLS, or as interruptible load for reserve, should be prohibited from exclusion from the BES under Exclusion E3. At any rate, even a facility that is excluded under Exclusion E3 may continue to have obligations under the reliability standards for UFLS, UVLS or other load shedding requirements.</p>		
Independent Electricity System Operator	No	Consistent with our comments in response to Q7, we propose removing E3 (a) since, as explicitly described in E3 (b), one of the characteristic of the LN is that power flows only into the LN. The level of generation contained within the LN is therefore immaterial, particularly where the most onerous contingency or system operating condition occurring within the LN, results in acceptable BES performance as defined by the applicable criteria of the NERC transmission planning standards. The generation connected within the LN that meets the registry criteria would already be captured within the definition of the BES as provided for in Inclusion I2.
<p>Response: The SDT continues to believe that it is necessary to establish a limit on the allowable quantity of generation that may be significant to the reliable operation of the surrounding interconnected transmission system. Please note that the issues surrounding the appropriate generation threshold, among other topics, will be taken up in Phase 2 of this BES definition effort. No change made.</p>		
Rochester Gas and Electric and New York State Electric and Gas	No	<p>“Local Network” is capitalized (network not capitalized at the beginning of E3) throughout E3, yet it is not defined in the NERC Glossary.</p> <p>This exclusion is vague. This exclusion applies to a network with “multiple points of connection” with the purpose “to improve the level of service to retail customer load” - this phrase is intent-based and not reliability-based - most/all transmission “improves service” compared to it not being there. In</p>

Organization	Yes or No	Question 9 Comment
Central Maine Power Company		<p>essence, this exclusion can be obtained if a portion of the network:1. Doesn't have significant generation (again, "non-retail" phrase is unclear)2. Power only flows "into" this portion of the network, and not (ever? Even under any TPL design contingencies?) "out." Is this considering only pre-contingency steady state conditions? During contingency conditions and for the period following a contingency the LN could supply power to other parts of the network depending on the nature of the contingency. The conditions under which direction of flow is assessed are critical, but E3(b) is silent on this.3. This portion of the network is not part of a monitored transmission interfaceThis "Local Network Exclusion" is supported by a technical analysis which relied on transfer distribution factors (see http://www.nerc.com/docs/standards/sar/bes_definition_technical_justification_local_network_20110819.pdf on the NERC BES Definition standard page http://www.nerc.com/filez/standards/Project2010-17_BES.html). This transfer distribution factor (TDF) method was rejected by FERC in Order 743. Paragraph 85 of the Order states: "Given the questionable and inconsistent exclusions of facilities from the bulk electric system by the material impact assessment and the variable results of the Transmission Distribution Factor test proposed in NPCC's compliance filing in Docket No. RC09-3, there are no grounds on which to reasonably assume that the results of the material impact assessment are accurate, consistent, and comprehensive.93 Additionally, we have noted how the results of multiple material impact tests can vary depending on how the test is implemented."Unless E3 is made more specific and clear, it should be stricken.</p>
<p>Response: The term "local network" is not capitalized anywhere in the Exclusion E3 section of the definition except where it is placed as a section title, and when abbreviated. The SDT understands that "local network" is not a NERC Glossary term. No change made.</p> <p>The SDT considered the addition of the phrase "under normal operating conditions", as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made.</p> <p>The SDT recognizes that the TDF methodology suggested by various entities as a threshold for determining inclusion in the BES was not favored by the Commission. However, as used in the technical justification document, the transfer distribution factors for power flow transfer as well as line outage factors are merely illustrative of the de minimis impact that a sample local network has on its</p>		

Organization	Yes or No	Question 9 Comment
<p>surrounding interconnected transmission system. The SDT does not propose the use of TDF as a threshold for determination of BES.</p>		
<p>Kansas City Power and Light Company</p>	<p>No</p>	<p>Although the Technical Justification Local Network guidance document is helpful in explaining the principles and concepts involved with determination of what constitutes a Local Network, criteria needs to be established regarding the impacts of LODF and PTDF that will clearly define what constitutes a Local Network to avoid debate and controversy.</p>
<p>Response: As used in the technical justification document, the transfer distribution factors for power flow transfer as well as line outage factors are merely illustrative of the de minimis impact that a sample local network has on its surrounding interconnected transmission system. The SDT does not propose the use of TDF as a threshold for determination of BES. No change made.</p>		
<p>Nebraska Public Power District</p>	<p>No</p>	<p>In E3 (a): please define “non-retail generation” as used in E3(a). Also, what is the criterion that makes this generation BES generation? The MVA rating only, or is there other criteria? A generator may have a 75 MVA gross nameplate rating, but may be limited physically or electrically to below the 75 MVA. Is this a basis for exclusion for this generator?</p>
<p>Response: Non-retail generation is meant to be the generation on the system (supply) side of the retail meter. Consistent with the ERO Statement of Compliance Registry Criteria, the SDT has used language in describing generation thresholds in Exclusion E3.a as being gross aggregate nameplate ratings.</p>		
<p>Ameren</p>	<p>No</p>	<p>a) The exclusion should also be extended to reactive resources needed to support the local area network (see response to Q10). It is also suggested that “local network” be renamed to “local area network” to better describe or distinguish itself from a wide-area network such as the BES.</p> <p>b) We would agree with the exclusion if the wording of the exclusion includes the following phrase (in italics) added at the end of E3 b): <i>Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN “under normal operating conditions”.</i></p>

Organization	Yes or No	Question 9 Comment
<p>Response: If a candidate local network is granted exclusion under Exclusion E3, the exclusion would apply to the reactive resources within that network as well. No change made.</p> <p>The SDT believes that renaming the local network to “local area network” (LAN) will lead to industry confusion with the identical term used to refer to communications infrastructure. No change made.</p> <p>The SDT considered the addition of the phrase “under normal operating conditions”, as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made.</p>		
<p>Georgia System Operations Corporation</p>	<p>No</p>	<p>Item (b) is unclear: Although the first sentence says “Power flows only into the LN,” which suggests there will be no exports, the second sentence says “The LN does not transfer energy originating outside the LN for delivery through the LN,” which suggests it could deliver power originating within the LN. This would seem to be reasonable by comparison to E-2, so long as no more than 75 MVA is exported (which is indeed the limitation on the quantity of “non-retail generation” in the LN).</p> <p>On a related point, if the limit on connected generation is not intended to be a limit on possible exports, and therefore any power from interconnected non-retail generation must be sold within the LN, why does the limit need to be so low; why should the aggregate quantity of such internally-consumed generation be an issue?</p> <p>Also, is the “non-retail” designation intended to exclude customer-owned generation from the 75 MVA calculation?</p>
<p>Response: The SDT has re-stated item Exclusion E3.b for additional clarity.</p> <p>E3.b: Power flows only into the LN; and the LN does not transfer energy originating outside the LN for delivery through the LN; The limit placed on the aggregate generation within the local network only applies to non-retail generation. To clarify, in order to qualify under Exclusion E3, exports are not permissible from the local network.</p> <p>Non-retail generation is meant to be the generation on the system (supply) side of the retail meter.</p>		

Organization	Yes or No	Question 9 Comment
ATC LLC	No	<p>ATC agrees in general with the exclusions for E3 pending the following changes: Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN under normal operating conditions (n-0 contingency); and</p> <p>ATC suggests considering a different approach for the power flow criteria in Exclusion E3b: Inclusion E3b - No Firm Power Transfers are scheduled to flow out of, or through, the LN in the operating horizon [for BES designations applicable to the operating horizon] and no Firm Power Transfers are reserved to flow out of, or through, the LN in the planning horizon [for BES designations applicable to the planning horizon).</p>
<p>Response: The SDT considered the addition of the phrase “under normal operating conditions”, as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made.</p> <p>The SDT believes it is vital to ensure both that power flow is always in the direction from the BES toward the LN at all points of connection, and that the LN facilities not be used for “wheeling” type transactions. The SDT believes the existing language accomplishes this. This suggested language in this comment touches on an important aspect, the scheduled use of the facilities, but the SDT believes that the existing language is more appropriate to express this point. No change made.</p>		
Tacoma Power	No	<p>Tacoma Power does not support the Exclusion E3 as currently written. We strongly believe that Section c) of E3 must replace the term “transfer path” with “Major Transfer Path” to distinguish these paths from any common ATC path. This revision is consistent with the existing language used in the form, Detailed Information to Support an Exception Request.</p> <p>Additionally, we believe it is not appropriate for E3 to state an MVA threshold in Section a) when determining such thresholds is the purpose for Phase 2. We urge the SDT to defer the determination of a MVA threshold in E3 to Phase 2.</p> <p>Finally, the term “non-retail generation” is not a universally understood term in the industry. We suggest that the SDT replace the phrase “non-retail generation” with “generation located on the retail</p>

Organization	Yes or No	Question 9 Comment
		customer’s side of the meter.”
<p>Response: The existing language posted in the second draft of the BES definition does include the word “major” as a modifier of transfer paths in the Western Interconnection. The definition cannot have this word “major” capitalized, as it is not part of the NERC Glossary of Terms. Accordingly, the SDT believes that there is no need to make the suggested change to Exclusion E3.c.</p> <p>The SDT agrees that the threshold(s) for generation throughout the BES definition should be addressed in Phase 2 of this effort; however, to satisfy the Commission’s directives in Order 743 and 743-A in a timely fashion, it is necessary to use a generation threshold that is consistent with the in-force Statement of Compliance Registry Criteria. No change made.</p> <p>Non-retail generation is meant to be the generation on the system (supply) side of the retail meter. The exclusion language of Exclusion E3.a intends to consider only the non-retail (supply side) generation; whereas your comment suggests that the generation to be counted is on the retail side of the meter. With the clarification of the use of the term “non-retail generation”, the SDT believes that Exclusion E3.c is appropriate. No change made.</p>		
MEAN	No	<p>MEAN does not agree with the language of E3, b). This language is arbitrary and could be represented in several ways, dependent on the entity making their case. As we all know, electricity doesn’t always take the shortest path. MEAN would recommend eliminating E3, b) due to its subjective language and rely on the current E3, c) to evaluate reliability and system impacts. If the language does not change, MEAN would argue to any applicable RE that the language intent was to address facilities that have documentation stating that the facilities are used for transferring energy across (e.g. joint ownership, contribution in aid of construction, etc.) and have an E3 exception denied based on power flow models or other transmission modeling.</p>
<p>Response: The SDT has reviewed the language of Exclusion E3.b, and does not find it to be subjective or arbitrary. However, the SDT does propose a minor revision to re-state E3.b for additional clarity:</p> <p>E3.b: Power flows only into the LN; and if the LN does not transfer energy originating outside the LN for delivery through the LN;</p>		
South Houston Green Power, LLC		<p>SHGP would like to broaden the scope of Local Networks. If a Local Network does not allow transfer of Bulk Power across the Interconnected System, then the Local Network should be excluded regardless of the amount of generation behind the meter. Often, large industrial sites install large combined Heat and Power cogeneration units due to a hefty steam load. Subjecting industrial facilities to additional reporting and coordination efforts [other than those already required by the TO</p>

Organization	Yes or No	Question 9 Comment
		and RTO] may have little, if any, increase in grid reliability. The 75 MVA (gross nameplate rating) needs to be eliminated. To date, none of the Regional Entities has suggested that SHGP or its affiliates register as a Transmission Owner or Transmission Operator with respect to any SHGP or affiliated delivery facilities.
<p>Response: The SDT has determined that it must retain the 75 MVA threshold on generation allowed within a qualifying LN in order to remain consistent with the existing ERO Statement of Compliance Registry Criteria. There has not been sufficient technical justification to this point that would support a change from this threshold; however, such threshold will be considered in Phase 2 of this Project 2010-17. No change made.</p>		
Hydro-Quebec TransEnergie		Same comment than Q7.
<p>Response: See response to Q7.</p>		
ExxonMobil Research and Engineering	Yes	Exclusion E1 and E3 aid in the delineation of distribution and transmission facilities. However, we request that the BES SDT review paragraphs 108 and 109 of FERC Order 743. In order to meet reliability target requirements to safely and economically operate manufacturing and production facilities, many industrial facilities are fed by two or more utility transmission lines that originate at independently fed utility substations. Due to the magnitude of an industrial site’s load, these transmission lines are typically designed to operate at levels in excess of 100 kV at the request of the utility company. These transmission lines typically terminate into an interconnection facility, owned by the industrial facility, that spot networks the transmission lines via a ring buss or breaker and a half substation within the industrial facility’s private use network in order to serve the load of the facility’s private use network. These private use networks typically satisfy the requirements set forth in the definition of a Local Network (power flows in, not a flowgate, etc.); however, the term “non-retail generation” is not a term that is implicitly defined or consistent with this documents use of “net capacity provided...” phrasing in similar exclusions.
<p>Response: Non-retail generation is meant to be the generation on the system (supply) side of the retail meter.</p>		

Organization	Yes or No	Question 9 Comment
Sacramento Municipal Utility District	Yes	<p>It is preferred to hold reference to gross nameplate rating/threshold values until generation technical justification is completed as part of Phase 2; these studies should apply to any real or reactive power threshold reference.</p> <p>For Exclusion E3-b using the phrase “[p]ower flows only into the LN” is too restrictive. An allowable MW threshold of LN power producing resources should be deferred to the Phase 2 BES technical analysis. Where no generation is present in the LN, it is recommended that an allowance for residual flow through the LN.</p>
City of Austin dba Austin Energy	Yes	<p>We prefer to hold reference to gross nameplate rating/threshold values until generation technical justification is completed as part of Phase 2; these studies should apply to any real or reactive power threshold reference.</p> <p>For Exclusion E3-b using the phrase “[p]ower flows only into the Local Network” is too restrictive. An allowable MW threshold of Local Network power producing resources should be deferred to the Phase 2 BES technical analysis. Where no generation is present in the Local Network, it is recommended that an allowance for residual flow through the Local Network.</p>
<p>Response: The SDT agrees that the threshold(s) for generation throughout the BES definition should be addressed in Phase 2 of this effort; however, to satisfy the Commission’s directives in Order 743 and 743-A in a timely fashion, it is necessary to use a generation threshold that is consistent with the in-force Statement of Compliance Registry Criteria. No change made.</p> <p>The SDT feels strongly that in order for a network to qualify for exclusion under the Exclusion E3 section of the definition, there must be strict bounds and limits placed on the characteristics of the candidate facilities. Allowances for minor “out-flow” from the local network, or “minimal” flow, as suggested in this comment, will lead to an inconsistent application of the definition and therefore, a lack of bright-line quality in the definition. Situations such as what is proposed in this comment can be referred to the Exception Process for possible exclusion from the BES. No change made.</p>		
Portland General Electric Company	Yes	<p>PGE agrees with Exclusion E3, but believes additional clarification is necessary to facilitate a complete understanding and application of the exclusion criteria. First, there is no specific definition of “non-retail” generation provided.</p> <p>Additionally, E3 b) states “Power flows only into the LN: The LN does not transfer energy originating</p>

Organization	Yes or No	Question 9 Comment
		<p>outside the LN for delivery through the LN.” PGE believes that a local network should still qualify for the LN exclusion if power may flow out of the LN at a discrete point or certain discrete points during abnormal operating conditions, but power still flows into the LN on an aggregate basis during all operating conditions, and power flows only into the LN at all discrete points during normal operating conditions.</p>
<p>Response: Non-retail generation is meant to be the generation on the system (supply) side of the retail meter.</p> <p>The SDT considered the addition of the phrase “under normal operating conditions”, as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made.</p>		
<p>Cowlitz County PUD</p>	<p>Yes</p>	<p>Cowlitz strongly supports the categorical exclusion of Local Networks (“LNs”) from the BES. This exclusion will allow conversion of radial systems to LNs without compliance impact, and should be encouraged rather than discouraged as networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. The decision of whether to network radial systems should be made on the basis of costs and benefits to the retail customers served by those radials, and not on the basis of disparate regulatory treatment. Consumers will ultimately benefit from the path chosen by the SDT.</p> <p>Cowlitz believes that the word “transmission” does not add clarity to the Exclusion; simply stating “Elements” is sufficient. This will allow for a gradual acceptance that transmission is not defined by a certain voltage, but more a medium in which electrical power is efficiently transported from power resources to load centers where it is distributed. The old convention of transmission versus distribution no longer fits in the current regulatory environment, and as such should be retired.</p> <p>Cowlitz also believes that subparagraphs (a) and (b) are redundant; subparagraph (a) is duplicated by the limit in subparagraph (b) requiring no flow out of the LN. However, Cowlitz also believes that removing (a) will complicate FERC’s acceptance of this exclusion. Therefore this should be addressed in Phase 2.</p> <p>Cowlitz is confused by the use of the term “non-retail generation” in subparagraph (a). From context,</p>

Organization	Yes or No	Question 9 Comment
		<p>we believe the SDT considers “non-retail generation” to mean generation that is not connected through a dedicated step-up transformer to voltages at or above 100 kV, is consumed by the retail customer’s load, or consumed within the LN rather than being physically exported and sold to markets outside the LN.</p> <p>Cowlitz suggests that the SDT rewrite subparagraph (a) to read “Limits on connected generation: The LN and its underlying Elements do not include generation resources identified in Inclusion I3 and does not have any generation net power flow greater than 75 MVA across any single retail revenue metering point into an Element operated at or greater than 100 kV.”</p>
<p>Response: The SDT considered the disposition of the word “transmission” in Exclusion E3, and determined that retention of this word – in lower-case – is necessary to modify the word “Element”. This is meant to eliminate the generation that would otherwise be included in the term “Element”.</p> <p>The SDT agrees that the threshold(s) for generation throughout the BES definition should be addressed in Phase 2 of this effort; however, to satisfy the Commission’s directives in Order 743 and 743-A in a timely fashion, it is necessary to use a generation threshold that is consistent with the in-force Statement of Compliance Registry Criteria. No change made.</p> <p>Non-retail generation is meant to be the generation on the system (supply) side of the retail meter.</p> <p>The SDT appreciates the suggested language change for item Exclusion E3.a. The SDT considered this language, and has determined that retention of the existing (non-retail) generation limit of 75 MVA is essential to meet the Commission’s order in the first phase of Project 2010-17. No change made.</p>		
National Grid	Yes	<p>We agree with Exclusion E3 on local networks, however we suggest this clarification to the first sentence: A group of contiguous transmission Elements operated at or above 100kV but less than 300kV that distribute power to Load rather than transfer bulk power across the interconnected system under normal (“all-lines-in”) configuration and conditions.</p> <p>We also suggest the following clarification to part c, so that the IROLs don’t get overlooked: Not part of Flowgate, transfer path, or an Interconnected Reliability Operating Limit (IROL). The LN does not contain a monitored Facility of a permanent Flowgate in the Easter Interconnection, a major transfer path within the Western Interconnection, or a comparable monitored Facility in the ERCOT or Quebec</p>

Organization	Yes or No	Question 9 Comment
		Interconnection, and is not a monitored Facility included in an IROL.
<p>Response: The SDT considered the addition of the phrase “under normal operating conditions”, as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made.</p> <p>The SDT believes it has adequately and concisely addressed the IROL characteristic with Exclusion E3.c. No change made.</p>		
Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) West Oregon Electric Cooperative Blachly-Lane Electric Cooperative (BLEC) Coos-Curry Electric Cooperative	Yes	<p>PNGC strongly supports the exclusion of Local Networks (“LNs”) from the BES. The conversion of radial systems to local networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. If the BES definition were to provide an exclusion for radials without providing a similar exclusion for LNs, however, it would discourage networking local distribution systems because of the significantly increased regulatory burdens faced by the local distribution utility if it elected to network its radial facilities. By placing radial systems and LNs on the same regulatory footing, the proposed definition will ensure that decisions about whether to network radial systems are made on the basis of costs and benefits to the retail customers served by those radials, and not on the basis of disparate regulatory treatment. Consumers would ultimately benefit. PNGC also supports specific refinements made to the LN exclusion by the SDT in the current draft of the BES definition. In particular, PNGC supports the clarification of the purposes of a LN. The current draft states that LNs connect at multiple points to “improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system.” PNGC supports this change in language because it reflects the fundamental purposes of a LN and emphasizes one of the key distinctions between LNs and bulk transmission facilities, namely, that LNs are designed primarily to serve local retail load while bulk transmission facilities are designed primarily to move bulk power from a bulk source (generally either the point of interconnection of a wholesale generator or a the point of interconnection with another bulk transmission system) to one or more wholesale purchasers.</p> <p>PNGC believes further improvement of the language could be achieved with additional modifications and clarifications. With respect to the core language of Exclusion 3, we believe the language making</p>

Organization	Yes or No	Question 9 Comment
(CCEC) Central Electric Cooperative (CEC) Clearwater Power Company (CPC) Consumer's Power Inc. Douglas Electric Cooperative (DEC) Fall River Rural Electric Cooperative (FALL) Lane Electric Cooperative (LEC) Lincoln Electric Cooperative (LEC) Northern		<p>a “group of contiguous transmission Elements operated at or above 100kV” the starting point for identifying a LN would be improved by deleting the term “transmission” from this phrase. This is so because LNs are not used for transmission and the use of the term “transmission Elements” is therefore both confusing and unnecessary. There would be no room for argument about what the SDT intended by including the word “transmission” if the word is deleted and the Exclusion applies to any “group of Elements operated at 100kV or above” that meets the remaining requirement of the Exclusion. Further, any definitional value that is added by using the term “transmission Elements” is accomplished by using that term in the core definition, and there is no reason to carry the term through in the Exclusions.</p> <p>PNGC also believes that subparagraphs (a) and (b) are redundant, because whatever protection is offered by the generation limit in subparagraph (a) is duplicated by the limit in subparagraph (b) requiring no flow out of the LN. We believe the SDT can eliminate subparagraph (a) of Exclusion 3 and simply rely on subparagraph (b) because if power only flows into the LN even if it interconnects more than 75 MVA of generation, the interconnected generation interconnected will have no significant interaction with the interconnected bulk transmission system. It will only interact with the LN. And, with the advent of distributed generation, it is easy to foresee a situation in which a large number of very small distributed generators are interconnected into a LN, so that the aggregate capacity of these generators exceeds 75 MVA. However, because the generators are small and dispersed and, under the criterion in subparagraph (b), would be wholly absorbed within the LN rather than transmitting power onto the interconnected grid, those generators would not have a material impact on the grid.</p> <p>We also suggest that subparagraph (b) of Exclusion 3 could be more clearly drafted. Subparagraph (b), as part of the requirement that power flow into a LN rather than out of it, includes this description: “The LN does not transfer energy originating outside the LN for delivery through the LN.” We understand this language is intended to distinguish a LN from a link in the transmission system - power on a transmission link passes through the transmission link to a load located elsewhere, while power in a LN enters the LN and is consumed by retail load within the LN. While we agree with the concept proposed by the SDT, we believe the language would be clearer if it read: “The LN does not transfer energy originating outside the LN for delivery through the LN to loads located outside the LN.” We believe the italicized language is necessary to distinguish between a transmission system, where power that originates outside a system is delivered through the system and passes through the</p>

Organization	Yes or No	Question 9 Comment
<p>Lights Inc. (NLI)</p> <p>Okanogan County Electric Cooperative (OCEC)</p> <p>Umatilla Electric Cooperative (UEC)</p>		<p>system to a sink located somewhere outside the system, from a LN, in which power originating outside the LN passes through the LN and is delivered to retail load within the LN. To put it another way, the italicized language helps distinguish a transmission system from an LN, in which the LN “transfers energy originating outside the LN for delivery through the LN to loads located within the LN.”</p> <p>We also believe the language of subparagraph (a) of Exclusion 3 could be improved. Subparagraph (d) would make LNs part of the BES if they interconnect “non-retail generation greater than 75 MVA (gross nameplate rating).” For the reasons stated in our responses to Questions 3, 5 and 7, we urge the SDT to replace the reference to a hard 75 MVA threshold with the defined term “Qualifying Aggregate Generation Resources” or some equivalent.</p> <p>We are also uncertain what is meant by the use of the term “non-retail generation” in subparagraph (a). From context, we believe the SDT considers “non-retail generation” to be the equivalent of generation that is located behind the retail meter, usually but not always owned by the customer and used to serve the customer’s own load. We therefore suggest that the SDT replace the term “non-retail generation” with “generation located behind the retail customer’s meter.”</p> <p>Similarly, we are unsure what is meant by the phrase “the LN and its underlying Elements.” We believe the phrase “and its underlying Elements” could simply be deleted from the definition without loss of meaning. In the alternative, the SDT might consider using the phrase “the LN, including all Elements located on the distribution side of any Automatic Fault Interrupting Devices (or other points of demarcation) separating the LN from the bulk interstate transmission system.” We believe this phrase more accurately reflects the SDT’s intent, which appears to be that generation exceeding 75 MVA in aggregate capacity interconnected anywhere within the LN disqualifies that LN from being excluded from the BES under Exclusion 3.</p> <p>PNGC also believes that both subparagraphs (a) and (b) of Exclusion 3 could be safely eliminated as long as subparagraph (c) is retained. Subparagraph (c) makes a LN part of the BES if it is classified as a Flow Gate or Transfer Path. Flow Gates and Transfer Paths are, by definition, the key facilities that allow reliable transmission of bulk electric power on the interconnected grid. If a LN has not been identified as either a Flow Gate or a Transfer Path, it is unlikely the LN is necessary for the reliable</p>

Organization	Yes or No	Question 9 Comment
		<p>transmission of electricity on the interconnected bulk system.</p> <p>Apart from these specific improvements that we believe could be achieved by modifying the language of Exclusion 3, we believe the SDT may need to re-examine certain assumptions that appear to underlie the current draft. Specifically, subparagraph (a) suggests that if BES generation is embedded within a LN, the LN itself must also be BES. But two NERC bodies have already addressed similar questions and concluded there is no technical basis for such concerns. NERC’s Standards Drafting Team for Project 2010-07 and its predecessor, the “GO-TO Task Force” were formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. The GO-TO Team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. Therefore, there is no reason, according to the GO-TO Team, that dedicated high-voltage interconnection facilities must be treated as “Transmission” and classified as part of the BES in order to make reliability standards effective. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the GO-TO Task Force). Similarly, the Project 2010-07 Team observed that interconnection facilities “are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system.” White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators “would do little, if anything, to improve the reliability of the Bulk Electric System,” especially “when compared to the operation of the equipment that actually produces electricity - the generation equipment itself.” Id. We believe that interconnection of BES generators within a LN is analogous and that, based on the findings of the Project 2010-07 and GO-TO Teams, automatically classifying a LN as “BES” simply because a large generator is embedded in the LN will result in substantial overregulation and unnecessary expense with little gain for bulk system reliability. If anything, generation interconnected through a LN is less likely to produce material impacts on the interconnected bulk transmission system than the equivalent generator interconnected through a single dedicated line because an LN is</p>

Organization	Yes or No	Question 9 Comment
		<p>interconnected to the bulk system at several points, so that if one interconnection goes down, power can still flow from the BES generator to the bulk system on other interconnection points. Where a dedicated interconnection facility is involved, by contrast, if the interconnection line fails, the generator is unavailable to the interconnected bulk system. Similarly, we suggest that the SDT re-examine the assumptions underlying subparagraph (b), which seems to suggest that a local distribution system cannot be classified as a Local Network if power flows out of that system at any time, even if the amount is de minimis, the outward flow is only for a few hours, a year, or the outward flow occurs only in an extreme contingency. Accordingly, we suggest that the initial clause of subparagraph (b) be revised to read: “Except in unusual circumstances, power flows only into the LN.”</p> <p>Finally, we note that the LN exclusion must not operate in any way as a substitution for the statutory prohibition on including “facilities used in the local distribution of electric energy” in the BES. Therefore, even with the LN exclusion, the SDT must retain this statutory language in the core definition of the BES, as discussed in our answer to Question One. If a certain piece of equipment is a “facility used in the local distribution of electric energy,” then it is not part of the BES in the first instance, and so consideration of the LN Exclusion, or of any other Exclusion, any Inclusion, or any Exception, would be both unnecessary and uncalled for.</p>
<p>Response: The SDT considered the disposition of the word “transmission” in Exclusion E3, and determined that retention of this word – in lower-case – is necessary to modify the word “Element”. This is meant to eliminate the generation that would otherwise be included in the term “Element”.</p> <p>The SDT continues to believe that it is necessary to establish a limit on the allowable quantity of generation that may be significant to the reliable operation of the surrounding interconnected transmission system. Please note that the issues surrounding the appropriate generation threshold, among other topics, will be taken up in Phase 2 of this BES definition effort. No change made.</p> <p>The intent of the SDT in structuring the language of Exclusion E3.b was to ensure two things: first that power flow is always in the direction from the BES toward the LN, and second that the LN is not used for “wheel-through” transactions. The suggestion in your comment places an unnecessary qualifier on the “wheel-through” whereby it would only apply if the transaction were serving “loads”. The SDT believes this qualifier would inadvertently allow a wholesale transaction to be scheduled through the subject facilities, and this is contrary to the intent of the exclusion provision of Exclusion E3.b. Given the high degree of certainty and assurances regarding the high priority of the Phase 2 efforts on this Project 2010-17, for the purpose of completing the posting of the definition in the first</p>		

Organization	Yes or No	Question 9 Comment
<p>phase of the Project, the SDT believes that it is preferable to continue to use the specific value of 75 MVA within item Exclusion E3.a. No change made.</p> <p>Non-retail generation is meant to be the generation on the system (supply) side of the retail meter.</p> <p>The SDT believes that the existing phrase in Exclusion E3.a “and its underlying Elements” has sufficient clarity and meets the intent of the exclusion with brevity. No change made.</p> <p>The SDT acknowledges the work of Project 2010-07 “GO-TO” task force in identification of various NERC Standard requirements that would promote reliability of the generator-to-transmission interface. This Project 2010-17 SDT believes that the body of work in Project 2010-07 is most pertinent to generator lead-line facilities, rather than the looped and parallel-operated facilities contemplated in Exclusion E3, and therefore, the SDT finds it necessary to continue to require all of the characteristics of Exclusion E3 to be met in order to qualify for exclusion from the BES. No change made.</p> <p>The SDT considered the addition of the phrase “under normal operating conditions”, as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made.</p> <p>The SDT has retained the statutory language “facilities used in the local distribution of electric energy” in the core definition section.</p>		
<p>Massachusetts Department of Public Utilities</p>	<p>Yes</p>	<p>The MA DPU generally supports this exclusion but believes it is too narrow. As noted in the response to question 7, Exclusion E3 should likely allow a higher level of aggregate generation MVA on a Local Network.</p> <p>In addition, local networks should not necessarily be ineligible for Exclusion E3 simply because an amount of power may transfer out of the network at times. NERC’s draft technical network exclusions document should be amended such that local networks would be permitted to qualify for network exclusions under E3 if power flowing out of the network is minimal and would not likely adversely impact the BES.</p>
<p>Response: The SDT has determined that it must retain the 75 MVA threshold on generation allowed within a qualifying LN in order to remain consistent with the existing ERO Statement of Compliance Registry Criteria. There has not been sufficient technical justification to this point that would support a change from this threshold; however, such threshold will be considered in Phase 2 of</p>		

Organization	Yes or No	Question 9 Comment
<p>this Project 2010-17. No change made.</p> <p>The SDT feels strongly that in order for a network to qualify for exclusion under the Exclusion E3 section of the definition, there must be strict bounds and limits placed on the characteristics of the candidate facilities. Allowances for minor “out-flow” from the local network, or “minimal” flow, as suggested in this comment, will lead to an inconsistent application of the definition and therefore, a lack of bright-line quality in the definition. Situations such as what is proposed in this comment can be referred to the Exception Process for possible exclusion from the BES. No change made.</p>		
<p>The Dow Chemical Company</p>	<p>Yes</p>	<p>Dow is uncertain whether end user-owned, behind-the-meter delivery facilities of the sort it has described above would fall within the scope of the core BES definition proposed by NERC. To date, none of the Regional Entities has suggested that Dow should register as a Transmission Owner or Transmission Operator with respect to any of these Dow-owned delivery facilities. If a literal application of the proposed BES Definition would, because of their voltage level or for any other reason, include such facilities, then Dow has an interest in assuring that the E3 exclusion for "local network" facilities is structured to embrace them. To that end, Dow would propose, first, the elimination of the 300 Kv cap for these facilities. Dow has systems that operate above 300 Kv due solely to the capacity of the lines to supply power over the distance required at our large manufacturing sites.</p> <p>Second, for the same reasons discussed above (in response to question #7), the phrase “do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating)” in “a)” should be changed to “the net capacity provided to the transmission grid does not exceed 75 MVA.”</p> <p>Third, the introductory phrase in “b)” -- “Power flows only into the LN” -- is inconsistent with the recognition in “a)” (as amended pursuant to Dow’s above suggestion) that power may flow out of an LN and into the transmission grid if there is generation connected to the LN and the 75 MVA limit is observed. Dow recommends either deleting the introductory clause or correcting it to read “Power is not transferred through the LN.”</p>
<p>Response: The SDT does not agree with the removal of the 300 kV cap that limits the qualification of a group of facilities for local network exclusion. The SDT feels that an upper bound is essential to prevent inappropriate exclusions of facilities that may be important to the reliable operation of the interconnected transmission system. The Exception Process is available for specific</p>		

Organization	Yes or No	Question 9 Comment
<p>circumstances where a 300kV cap is problematic.</p> <p>The SDT evaluated your comment in regard to Question 7 (Radial) as well as to the local network exclusion, and has concluded that both exclusions must necessarily be based on the gross aggregate nameplate of the generation connected within the candidate systems. The approach that is suggested in your comment could result in significant amounts of generation existing within the excluded area.</p> <p>It remains the intent of the SDT to uphold a 75 MVA limit on the connected (non-retail) generation within a qualifying LN and, at the same time, reinforcing that power flow is always from the BES toward the LN at all points of connection. We believe these characteristics are essential in order to ensure that qualifying LN facilities are not being relied upon for reliable operation of the interconnected transmission system.</p>		
Springfield Utility Board	Yes	<p>SUB strongly supports the exclusion of Local Networks from the BES. SUB particularly agrees with the addition of, “LN’s emanate from multiple points of connection at 100 kV or higher to improve the level of service to customer Load and not to accommodate bulk power transfer across the interconnected system.” language to the draft E3 Exclusion, as well as the LN characterization being more clearly defined. SUB is concerned that the E3 Exclusion does not specify that these power flows would be “under normal operating conditions” and specify if all power flow is considered.</p> <p>SUB recommends that unscheduled power flow should not be considered, but that it is applicable only to scheduled power flow.</p> <p>While SUB supports the exclusion of LNs from the BES, we believe there is additional work that needs to be done regarding the Local Network Exclusion Technical Justification. Without specific parameters, determining inclusions and exclusions will be left to the discretion of too many. This will create ambiguity and inconsistency of application.</p>
<p>Response: The SDT considered the addition of the phrase “under normal operating conditions”, as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made.</p> <p>The suggestion that only the “scheduled” portion of flow be considered under Exclusion E3.b would ignore the physical impact that the</p>		

Organization	Yes or No	Question 9 Comment
<p>candidate network has on the surrounding interconnected transmission system; therefore, the SDT must retain the provisions of Exclusion E3.b. However, the SDT has made a clarifying change to the exclusion language to address various comments that were received.</p> <p>E3.b: Power flows only into the LN; and if the LN does not transfer energy originating outside the LN for delivery through the LN; The SDT does not intend to perform additional work on the technical justification document at this time. It was not intended to have any specific thresholds or parameters from which exclusions would be granted; it merely illustrates the negligible effects that a sample local network has upon the flows in the surrounding transmission network. No change made.</p>		
<p>Michigan Public Power Agency Clallam County PUD No.1 Snohomish County PUD Kootenai Electric Cooperative</p>	<p>Yes</p>	<p>MPPA and its members strongly supports the categorical exclusion of Local Networks (“LNs”) from the BES. We believe the exclusion is necessary to ensure that the BES definition complies with the statutory requirement, discussed in our response to Question 1, to exclude all facilities used in the local distribution of electric power. LNs are, of course, probably the most common form of local distribution facility. Further, the conversion of radial systems to local distribution networks should be encouraged because networked systems generally reduce losses, increase system efficiency, and increase the level of service to retail customers. If the BES definition were to provide an exclusion for radials without providing a similar exclusion for LNs, however, it would discourage networking local distribution systems because of the significantly increased regulatory burdens faced by the local distribution utility if it elected to network its radial facilities. By placing radial systems and LNs on the same regulatory footing, the proposed definition will ensure that decisions about whether to network radial systems are made on the basis of costs and benefits to the retail customers served by those radials, and not on the basis of disparate regulatory treatment. Consumers will ultimately benefit from the path chosen by the SDT. MPPA and its members also support specific refinements made to the LN exclusion by the SDT in the current draft of the BES definition. In particular, MPPA supports the clarification of the purposes of a LN. The current draft states that LNs connect at multiple points to “improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system.” Snohomish supports this change in language because it reflects the fundamental purposes of a LN and emphasizes one of the key distinctions between LNs and bulk transmission facilities, namely, that LNs are designed primarily to serve local retail load while bulk transmission facilities are designed primarily to move bulk power from a bulk source (generally either</p>

Organization	Yes or No	Question 9 Comment
		<p>the point of interconnection of a wholesale generator or a the point of interconnection with another bulk transmission system) to one or more wholesale purchasers.</p> <p>MPPA believes further improvement of the language could be achieved with additional modifications and clarifications. With respect to the core language of Exclusion 3, we believe the language making a “group of contiguous transmission Elements operated at or above 100 kV” the starting point for identifying a LN would be improved by deleting the term “transmission” from this phrase. This is so because LNs are not used for transmission and the use of the term “transmission Elements” is therefore both confusing and unnecessary. There would be no room for argument about what the SDT intended by including the word “transmission” if the word is deleted and the Exclusion applies to any “group of Elements operated at 100 kV or above” that meets the remaining requirement of the Exclusion. Further, any definitional value that is added by using the term “transmission Elements” is accomplished by using that term in the core definition, and there is no reason to carry the term through in the Exclusions.</p> <p>MPPA also believes that subparagraphs (a) and (b) are redundant in the sense that whatever protection is offered by the generation limit in subparagraph (a) is duplicated by the limit in subparagraph (b) requiring no flow out of the LN. We believe the SDT can eliminate subparagraph (a) of Exclusion 3 and simply rely on subparagraph (b) because if power only flows into the LN even if it interconnects more than 75 MVA of generation, the interconnected generation interconnected will have no significant interaction with the interconnected bulk transmission system. It will only interact with the LN. And, with the advent of distributed generation, it is easy to foresee a situation in which a large number of very small distributed generators are interconnected into a LDN, so that the aggregate capacity of these generators exceeds 75 MVA. However, because the generators are small and dispersed and, under the criterion in subparagraph (b), would be wholly absorbed within the LN rather than transmitting power onto the interconnected grid, those generators would not have a material impact on the grid. We also suggest that subparagraph (b) of Exclusion 3 could be more clearly drafted. Subparagraph (b), as part of the requirement that power flow into a LN rather than out of it, includes this description: “The LN does not transfer energy originating outside the LN for delivery through the LN.” We understand this language is intended to distinguish a LN from a link in the transmission system - power on a transmission link passes through the transmission link to a load located elsewhere, while power in a LN enters the LN and is consumed by retail load within the LN.</p>

Organization	Yes or No	Question 9 Comment
		<p>While we agree with the concept proposed by the SDT, we believe the language would be clearer if it read: “The LN does not transfer energy originating outside the LN for delivery through the LN to loads located outside the LN.” We believe the italicized language is necessary to distinguish between a transmission system, where power that originates outside a system is delivered through the system and passes through the system to a sink located somewhere outside the system, from a LN, in which power originating outside the LN passes through the LN and is delivered to retail load within the LN. To put it another way, the italicized language helps distinguish a transmission system from an LN, in which the LN “transfers energy originating outside the LN for delivery through the LN to loads located within the LN.”</p> <p>We also believe the language of subparagraph (a) of Exclusion 3 could be improved. Subparagraph (d) would make LNs part of the BES if they interconnect “non-retail generation greater than 75 MVA (gross nameplate rating).” For the reasons stated in our responses to Questions 3, 5 and 7, we urge the SDT to replace the reference to a hard 75 MVA threshold with the defined term “Qualifying Aggregate Generation Resources” or some equivalent.</p> <p>We are also uncertain what is meant by the use of the term “non-retail generation” in subparagraph (a). From context, we believe the SDT considers “non-retail generation” to mean generation that is used by retail customers located within a LN rather than being exported and sold on wholesale markets outside the LN. We therefore suggest that the SDT replace the phrase “non-retail generation” with the phrase “generation sold in wholesale markets and transmitted outside the LN.”</p> <p>Similarly, we are unsure what is meant by the phrase “the LN and its underlying Elements.” We believe the phrase “and its underlying Elements” could simply be deleted from the definition without loss of meaning. In the alternative, the SDT might consider using the phrase “the LN, including all Elements located on the distribution side of any Automatic Fault Interrupting Devices (or other points of demarcation) separating the LN from the bulk interstate transmission system.” We believe this phrase more accurately reflects the SDT’s intent, which appears to be that generation exceeding 75 MVA in aggregate capacity interconnected anywhere within the LN disqualifies that LN from being excluded from the BES under Exclusion 3. Finally, MPPA believes that both subparagraphs (a) and (b) of Exclusion 3 could be safely eliminated as long as subparagraph (c) is retained. Subparagraph (c) makes a LN part of the BES if it is classified as a Flow Gate or Transfer Path. Flow Gates and Transfer</p>

Organization	Yes or No	Question 9 Comment
		<p>Paths are, by definition, the key facilities that allow reliable transmission of bulk electric power on the interconnected grid. If a LN has not been identified as either a Flow Gate or a Transfer Path, it is unlikely the LN is necessary for the reliable transmission of electricity on the interconnected bulk system.</p> <p>Apart from these specific improvements that we believe could be achieved by modifying the language of Exclusion 3, we believe the SDT may need to re-examine certain assumptions that appear to underlie the current draft. Specifically, subparagraph (a) suggests that if BES generation is embedded within a LN, the LN itself must also be BES. But two NERC bodies have already addressed similar questions and concluded there is no technical basis for such concerns. NERC’s Standards Drafting Team for Project 2010-07 and its predecessor, the “GO-TO Task Force” were formed to address how the dedicated interconnection facilities linking a BES generator to high-voltage transmission facilities should be treated under the NERC standards. The GO-TO Team concluded that by complying with a handful of reliability standards, primarily related to vegetation management, reliable operation of the bulk interconnected system could be protected without unduly burdening the owners of such interconnection systems. Therefore, there is no reason, according to the GO-TO Team, that dedicated high-voltage interconnection facilities must be treated as “Transmission” and classified as part of the BES in order to make reliability standards effective. See Final Report from the NERC Ad Hoc Group for Generator Requirements at the Transmission Interface (Nov. 16, 2009) (paper written by the GO-TO Task Force). Similarly, the Project 2010-07 Team observed that interconnection facilities “are most often not part of the integrated bulk power system, and as such should not be subject to the same level of standards applicable to Transmission Owners and Transmission Operators who own and operate transmission Facilities and Elements that are part of the integrated bulk power system.” White Paper Proposal for Information Comment, NERC Project 2010-07: Generator Requirements at the Transmission Interface, at 3 (March 2011). Requiring Generation Owners and Operators to comply with the same standards as BES Transmission Owners and Operators “would do little, if anything, to improve the reliability of the Bulk Electric System,” especially “when compared to the operation of the equipment that actually produces electricity - the generation equipment itself.” Id. We believe that interconnection of BES generators within a LN is analogous and that, based on the findings of the Project 2010-07 and GO-TO Teams, automatically classifying a LN as “BES” simply because a large generator is embedded in the LN will result in substantial overregulation and</p>

Organization	Yes or No	Question 9 Comment
		<p>unnecessary expense with little gain for bulk system reliability. If anything, generation interconnected through a LN is less likely to produce material impacts on the interconnected bulk transmission system than the equivalent generator interconnected through a single dedicated line because an LN is interconnected to the bulk system at several points, so that if one interconnection goes down, power can still flow from the BES generator to the bulk system on other interconnection points. Where a dedicated interconnection facility is involved, by contrast, if the interconnection line fails, the generator is unavailable to the interconnected bulk system.</p> <p>Similarly, we suggest that the SDT re-examine the assumptions underlying subparagraph (b), which seems to suggest that a local distribution system cannot be classified as a Local Network if power flows out of that system at any time, even if the amount is de minimis, the outward flow is only for a few hours a year, or the outward flow occurs only in an extreme contingency. Accordingly, we suggest that the initial clause of subparagraph (b) be revised to read: “Except in unusual circumstances, power flows only into the LN.”</p>
<p>Response: The SDT considered the disposition of the word “transmission” in Exclusion E3, and determined that retention of this word – in lower-case – is necessary to modify the word “Element”. This is meant to eliminate the generation that would otherwise be included in the term “Element”.</p> <p>The SDT continues to believe that it is necessary to establish a limit on the allowable quantity of generation that may be significant to the reliable operation of the surrounding interconnected transmission system. Please note that the issues surrounding the appropriate generation threshold, among other topics, will be taken up in Phase 2 of this BES definition effort. No change made.</p> <p>The intent of the SDT in structuring the language of Exclusion E3.b was to ensure two things: first that power flow is always in the direction from the BES toward the LN, and second that the LN is not used for “wheel-through” transactions. The suggestion in your comment places an unnecessary qualifier on the “wheel-through” whereby it would only apply if the transaction were serving “loads”. The SDT believes this qualifier would inadvertently allow a wholesale transaction to be scheduled through the subject facilities, and this is contrary to the intent of Exclusion E3.b. Given the high degree of certainty and assurances regarding the high priority of the Phase 2 efforts on Project 2010-17, for the purpose of completing the posting of the definition in the first phase of the Project, the SDT believes that it is preferable to continue to use the specific value of 75 MVA within ExclusionE3.a. No change made.</p> <p>Non-retail generation is meant to be the generation on the system (supply) side of the retail meter.</p> <p>The SDT believes that the existing phrase in ExclusionE3.a “and its underlying Elements” has sufficient clarity and meets the intent of</p>		

Organization	Yes or No	Question 9 Comment
<p>the exclusion with brevity. No change made.</p> <p>The SDT acknowledges the work of the Project 2010-07 “GO-TO” task force in identification of various NERC Reliability Standard requirements that would promote reliability of the generator-to-transmission interface. The Project 2010-17 SDT believes that the body of work in Project 2010-07 is most pertinent to generator lead-line facilities, rather than the looped and parallel-operated facilities contemplated in the Exclusion E3, and therefore, the SDT finds it necessary to continue to require all of the characteristics of Exclusion E3 to be met in order to qualify for exclusion from the BES. No change made.</p> <p>The SDT considered the addition of the phrase “under normal operating conditions”, as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made.</p>		
<p>NESCOE</p>	<p>Yes</p>	<p>NESCOE generally supports this exclusion but believes it is too narrow. As noted in the response to question 7, Exclusion E3 should allow a higher level of aggregate generation MVA on a Local Network (at least 300 MVA). In addition, NESCOE believes that local networks should not necessarily be ineligible for Exclusion E3 simply because an amount of power may transfer out of the network at times. NERC’s draft technical network exclusions document should be amended such that local networks would be permitted to qualify for network exclusions under E3 if power flowing out of the network is minimal and would not likely adversely impact the BES. For example, transfers of less than or equal to 100 MVA should not have any adverse impact on the BES. The draft technical network exclusions document should be amended to state that transfers of 100 MVA MVA into the BES from the local distribution network are acceptable. The 100 MVA limit suggested here represents 25% of the rated value of a typical 345/115 substation (typically on the order of 400 MVA). Rarely does more than a fraction of the rated MVA flow from the low voltage side to the high voltage side. An allowance of 100 MVA represents a flow level will have no significant impact to the interconnected bulk power network.</p>
<p>Response: The SDT feels strongly that in order for a network to qualify for exclusion under the Exclusion E3 section of the definition, there must be strict bounds and limits placed on the characteristics of the candidate facilities. Allowances for minor “out-flow” from the local network, or “minimal” flow, as suggested in this comment, will lead to an inconsistent application of the definition and therefore, a lack of bright-line quality in the definition. Situations such as what is proposed in this comment can be referred to the</p>		

Organization	Yes or No	Question 9 Comment
Exception Process for possible exclusion from the BES. No change made.		
AECl and member GandTs, Central Electric Power Cooperative, KAMO Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power Cooperative	Yes	<p>We would agree in principle with the LN exclusion if the wording of the exclusion includes the following phrase (in italics) added at the end of E3 b): Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN “under normal operating conditions”.</p> <p>Also, the correct BES threshold level should be 200 kV rather than 100 kV.</p> <p>Finally, the nomenclature of Flowgate (FG) components appears to be confused. AECl believes E3 c) should be changed to read “contingent Facility” rather than “monitored Facility”. Although unspecified within the NERC Glossary, we believe FG monitored Facilities are typically the impacted facilities in danger of overload, while the contingent facilities are those which, if lost, would cause the monitored Facility to become overloaded. As currently written, a formerly qualified LN could later become disqualified due to an external entity’s ill-designing a parallel EHV line, thereby causing one or more potential (N-1) overloaded Facility within that LN. Further, operational FG loading conditions are often relieved by opening-up LN elements near the monitored Facility, with little impact upon BES reliability, yet with lesser reliability to the underlying LN loads. This implies that the monitored elements of Flowgates are typically non-essential to the BES reliability. AECl can support “contingent” FG Facilities disqualifying a LN claim, but it cannot support “monitored” Facilities as disqualifying factors for rejecting a LN claim.</p>
<p>Response: The SDT considered the addition of the phrase “under normal operating conditions”, as a qualifier to Exclusion E3.b, and determined that such a qualifier is not consistent with the intent to develop a set of bright line characteristics in the BES definition. For those circumstances where a network is unable to utilize the LN exclusion solely due to an abnormal situation that causes power to flow out of the network, that network would be a suitable candidate to apply for exclusion under the Exception Process. No change made.</p> <p>The SDT appreciates the suggestion of an alternate BES threshold level of 200 kV rather than 100 kV; however, in the absence of a strong technical justification, the SDT must retain the 100 kV threshold in the core definition. No change is being made at this time</p>		

Organization	Yes or No	Question 9 Comment
<p>but all threshold values will be examined in Phase 2.</p> <p>The SDT continues to believe that “monitored” is the most appropriate modifier of “Flowgate” in the text of Exclusion E3.c. Exclusion E3.c is intended to identify the elements that are part of these Flowgates, not necessarily those whose contingency can affect the Flowgate. The elements comprising Flowgates (and major transfer paths in the West) must continue to be prohibited from exclusion via Exclusion E3.c, since these facilities are more likely to be used in the transfer of bulk power than not; therefore, they are more characteristic of serving an interconnected transmission function than distribution. No change made.</p>		
<p>Southern Company Generation</p>	<p>Yes</p>	<p>What does the term "non-retail generation" mean? Can the term "non-retail generation" in E3a be changed to simply "generation."</p>
<p>Response: Non-retail generation is meant to be the generation on the system (supply) side of the retail meter.</p> <p>The SDT has intentionally utilized the term “non-retail generation” in Exclusion E3.a in order to specifically isolate that generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier “non-retail” would cause candidate local networks with retail generation to be unfairly biased against obtaining this exclusion. No change made.</p>		
<p>Electricity Consumers Resource Council (ELCON)</p>	<p>Yes</p>	<p>This Exclusion and Exclusion E1 aid in the delineation of local distribution versus transmission. We suggest three clarifying revisions. First, the phrase “but less than 300 kV” should be deleted. Many large industrial facilities have on-site distribution systems that operate above 300 kV due solely to the capacity of the lines to supply power over the distance required at the manufacturing sites.</p> <p>Second, for the same reasons discussed above (in response to question #7), the phrase “do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating)” in “a)” should be changed to “the net capacity provided to the transmission grid does not exceed 75 MVA.”</p> <p>Third, the introductory phrase in “b)” -- “Power flows only into the LN” -- is inconsistent with the recognition in “a)” that power may flow out of an LN and into the transmission grid if there is generation connected to the LN and the 75 MVA limit is observed. We recommend either deleting the introductory clause or correcting it to read “Power is not transferred through the LN.”</p>
<p>Response: The SDT does not agree with the removal of the 300 kV cap that limits the qualification of a group of facilities for local</p>		

Organization	Yes or No	Question 9 Comment
		<p>network exclusion. The SDT feels that an upper bound is essential to prevent inappropriate exclusions of facilities that may be important to the reliable operation of the interconnected transmission system. The Exception Process is available for specific circumstances where a 300 kV cap is problematic. No change made.</p> <p>The SDT evaluated your comment in regard to Question 7 as well as to the local network exclusion, and has concluded that both exclusions must necessarily be based on the gross aggregate nameplate of the generation connected within the candidate systems. The approach that is suggested in your comment could result in significant amounts of generation existing within the excluded area. No change made.</p> <p>It remains the intent of the SDT to uphold a 75 MVA limit on the connected (non-retail) generation within a qualifying LN and, at the same time, reinforcing that power flow is always from the BES toward the LN at all points of connection. The SDT believes these characteristics are essential in order to ensure that qualifying LN facilities are not being relied upon for reliable operation of the interconnected transmission system. However, the SDT has clarified Exclusion E3.b in response to industry comments:</p> <p>E3.b: Power flows only into the LN: and the LN does not transfer energy originating outside the LN for delivery through the LN;</p>
Transmission Access Policy Study Group	Yes	<p>TAPS supports the exclusion of Local Networks from the BES. Such systems are generally not “necessary for operating an interconnected electric transmission network,” the standard in Orders 743 and 743-A. We have several suggestions to clarify the proposed language for this Exclusion. TAPS’ comments in response to Question 7 above regarding “points of connection at 100kV or higher” and “non-retail generation” are applicable to Exclusion E3 as well.</p> <p>The term “bulk power,” which occurs twice in Exclusion E3, is vague and could be read incorrectly as a reference to the statutorily-defined “bulk-power system,” which is not, we think, the SDT’s intent. The word “bulk” should be deleted, so that the Exclusion simply refers to transferring “power” across the interconnected system. TAPS raised this concern in response to the last posting of the BES Definition. In response, the SDT removed some instances of “bulk power” but left the remaining two, stating that “the SDT believes it provides conceptual value to the exclusion principle.” The SDT does not state what conceptual value the term is intended to provide; on the assumption that it relates to a distinction between transferring power from local generation to serve local load, and transferring power over longer distances, TAPS suggests, as an alternative to simply deleting the word “bulk,” that the Exclusion be revised to refer to “transfers of power from non-LN generation to non-LN load.” Exclusion E3(c) states: “Power flows only into the LN: The LN does not transfer energy</p>

Organization	Yes or No	Question 9 Comment
		<p>originating outside the LN for delivery through the LN.” This statement is unclear because the two parts mean different things. TAPS proposes rewriting this sentence to state: “Power flows only into the LN, that is, at each individual connection at 100 kV or higher, the pre-contingency flow of power is from outside the LN into the LN for all hours of the previous 2 years” to help clarify the intent. Two years is suggested because it is the time period set out in the draft exception application form for which an applicant should state whether power flows through an Element to the BES.</p>
<p>Response: See response to Q7.</p> <p>The SDT prefers to continue the use of the word “bulk” in the core paragraph of Exclusion E3. The SDT believes this clarifies an important conceptual idea to the industry, and the term “bulk” is not intended to be definitional in this context. This paragraph merely provides an introduction to the concept of the local network, and retaining the term “bulk” conveys the concept effectively. The lettered sub-items under the core paragraph are the prescriptive and precise characteristics that the industry will use to determine qualification for exclusion under Exclusion E3. No change made.</p> <p>The SDT prefers not to add demonstration criteria, such as the suggestion to provide a minimum of 2 years worth of data, within the text of the BES definition. The SDT believes the language, particularly the word “always” adds sufficient clarity. No change made.</p>		
<p>Florida Municipal Power Agency</p>	<p>Yes</p>	<p>: FMPA supports the exclusion of Local Networks from the BES. Such systems are generally not “necessary for operating an interconnected electric transmission network,” the standard in Orders 743 and 743-A. However, we have several suggestions to clarify the proposed language for this Exclusion. Exclusion E3(c) states: “Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN.” This statement is unclear because the two parts mean different things. FMPA proposes rewriting this sentence to state: “Power flows only into the LN, that is, at each individual connection at 100 kV or higher, the pre-contingency flow of power is from outside the LN into the LN for all hours of the previous 2 years” to help clarify the intent. Two years is suggested because it is the time period set out in the draft exception application form for which an applicant should state whether power flows through an Element to the BES.</p> <p>FMPA’ comments in response to Question 7 above regarding “points of connection at 100kV or higher” and “non-retail generation” are applicable to Exclusion E3 as well.</p> <p>The term “bulk power,” which occurs twice in Exclusion E3, is vague and could be read incorrectly as a</p>

Organization	Yes or No	Question 9 Comment
		<p>reference to the statutorily-defined “bulk-power system,” which is not, we think, the SDT’s intent. The word “bulk” should be deleted, so that the Exclusion simply refers to transferring “power” across the interconnected system. FMPA raised this concern in response to the last posting of the BES Definition. In response, the SDT removed some instances of “bulk power” but left the remaining two, stating that “the SDT believes it provides conceptual value to the exclusion principle.” The SDT does not state what conceptual value the term is intended to provide; on the assumption that it relates to a distinction between transferring power from local generation to serve local load, and transferring power over longer distances, FMPA suggests, as an alternative to simply deleting the word “bulk,” that the Exclusion be revised to refer to “transfers of power from non-LN generation to non-LN load.”</p>
<p>Response: Exclusion E3.b was intended to be a combination of two similar properties when it was drafted for the second posting of the BES definition. The SDT has received a number of comments indicating that these are two separate and distinct concepts, and has revised Exclusion E3.b to provide more clarity.</p> <p>E3.b: Power flows only into the LN; and the LN does not transfer energy originating outside the LN for delivery through the LN;</p> <p>The SDT prefers not to add demonstration criteria, such as the suggestion to provide a minimum of 2 years worth of data, within the text of the BES definition. The SDT believes the language, particularly the word “always” adds sufficient clarity. No change made.</p> <p>See response to Q7.</p> <p>The SDT prefers to continue the use of the word “bulk” in the core paragraph of Exclusion E3. The SDT believes this clarifies an important conceptual idea to the industry, and the term “bulk” is not intended to be definitional in this context. This paragraph merely provides an introduction to the concept of the local network, and retaining the term “bulk” conveys the concept effectively. The lettered sub-items under the core paragraph are the prescriptive and precise characteristics that the industry will use to determine qualification for exclusion under Exclusion E3. No change made.</p>		
SERC Planning Standards Subcommittee	Yes	The term "non-retail generation" in E3a should be changed to simply "generation."
<p>Response: The SDT has intentionally utilized the term “non-retail generation” in Exclusion E3.a in order to specifically isolate that</p>		

Organization	Yes or No	Question 9 Comment
<p>generation which is not situated behind the retail meter. It is important to retain this concept, since removal of the clarifier “non-retail” would cause candidate local networks with retail generation from obtaining this exclusion. No change made.</p>		
<p>Balancing Authority Northern California</p>	<p>Yes</p>	<p>It is preferred to hold reference to gross nameplate rating/threshold values until generation technical justification is completed as part of Phase 2; these studies should apply to any real or reactive power threshold reference.</p> <p>For Exclusion E3-b using the phrase “[p]ower flows only into the LN” is too restrictive. An allowable MW threshold of LN power producing resources should be deferred to the Phase 2 BES technical analysis. Where no generation is present in the LN, it is recommended that an allowance for residual flow through the LN.</p>
<p>Response: The SDT agrees that the threshold(s) for generation throughout the BES definition should be addressed in Phase 2 of this effort; however, to satisfy the Commission’s directives in Order 743 and 743-A in a timely fashion, it is necessary to use a generation threshold that is consistent with the in-force Statement of Compliance Registry Criteria. No change made.</p> <p>The SDT feels strongly that in order for a local network to qualify for exclusion under the Exclusion E3 section of the definition, there must be strict bounds and limits placed on the characteristics of the candidate facilities. Allowances for minor “out-flow” from the local network, or “minimal” flow, as suggested in this comment, will lead to an inconsistent application of the definition and therefore, a lack of bright-line quality in the definition. Situations such as what is proposed in this comment can be referred to the Exception Process for possible exclusion from the BES. No change made.</p>		
<p>Westar Energy</p>	<p>Yes</p>	
<p>Redding Electric Utility</p>	<p>Yes</p>	
<p>City of Redding</p>	<p>Yes</p>	
<p>Farmington Electric Utility</p>	<p>Yes</p>	

Organization	Yes or No	Question 9 Comment
System		
Oncor Electric Delivery Company LLC	Yes	
Utility Services, Inc.	Yes	
LCRA Transmission Services Corporation	Yes	
Memphis Light, Gas and Water Division	Yes	
Harney Electric Cooperative, Inc.	Yes	HEC believes that local networks should be excluded from the BES and agrees with exclusions to the definition.
PSEG Services Corp	Yes	
Puget Sound Energy	Yes	
American Electric Power	Yes	

Organization	Yes or No	Question 9 Comment
NV Energy	Yes	
Oregon Public Utility Commission Staff	Yes	
Z Global Engineering and Energy Solutions	Yes	
Chevron U.S.A. Inc.	Yes	This provision complements E1 in defining the difference between distribution and transmission
Metropolitan Water District of Southern California	Yes	
Duke Energy	Yes	
Idaho Falls Power	Yes	We support the exclusion as drafted.
FirstEnergy Corp.	Yes	
Exelon	Yes	
Western Area	Yes	

Organization	Yes or No	Question 9 Comment
Power Administration		
IRC Standards Review Committee	Yes	
Texas RE NERC Standards Subcommittee	Yes	This Exclusion and Exclusion E1 aid in the delineation of distribution versus transmission.
WECC Staff	Yes	
Southwest Power Pool Standards Review Team	Yes	
BGE	Yes	No comment.
<p>Response: Thank you for your support.</p>		

10. The SDT has added specific exclusions to the core definition in response to industry comments. Do you agree with Exclusion E4 (reactive resources)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration: Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices. The comments received identified overwhelming support of Exclusion E4 as written.

Some commenters questioned the use of the word ‘retail’ in Exclusion E4. The SDT determined that retention of this word is important and correct. This is meant to eliminate non-generator Reactive Power devices that (are owned and operated on the Load side of a customer meter) and would otherwise be included via the core definition and/or Inclusion I5.

Other commenters proposed adding the same threshold qualification language contained in other exclusions. Using a threshold for inclusion of non-generator Reactive Power resource devices in the BES will be considered in Phase 2 of this effort. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

No changes were made to the definition as a result of these comments.

Organization	Yes or No	Question 10 Comment
Westar Energy	No	This particular Exclusion doesn't address the qualifier as to the impact to the BES. We believe the qualification language in E2, in regards to behind the meter generation, should also be included in Exclusion E4 for clarification purposes.

Organization	Yes or No	Question 10 Comment
Southwest Power Pool Standards Review Team	No	This particular Exclusion doesn't address the qualifier as to the impact to the BES. We request that it emulate the language provided for E2 (behind the meter gen) and classified for this specific exclusion.
<p>Response: Using a threshold for inclusion of non-generator Reactive Power resource devices in the BES will be considered in Phase 2 of this effort. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.</p>		
ISO New England Inc	No	<p>The term "retail customer" is unclear and will lead to confusion.</p> <p>This exclusion should be removed as there are many instances where a generator may be using the reactive power device to meet other interconnection requirements and the reactive device should be held to the same BES requirements as the generator.</p>
<p>Response: The SDT team considered the disposition of the word "retail" in the context of E4, and determined that retention of this word is important and correct. This is meant to eliminate non-generator Reactive Power devices that (are owned and operated on the load side of a customer meter). No change made.</p> <p>Exclusion E4 is meant to eliminate non-generator Reactive Power devices that (are owned and operated on the load side of a customer meter) and would otherwise be included via the core definition and/or Inclusion I5. No change made.</p>		
Central Maine Power Company	No	Consider using other wording to replace "retail"

Organization	Yes or No	Question 10 Comment
<p>Response: The SDT team considered the disposition of the word “retail” in the context of E4, and determined that retention of this word is important and correct. This is meant to eliminate non-generator Reactive Power devices that (are owned and operated on the load side of a customer meter). No change made.</p>		
<p>Metropolitan Water District of Southern California</p>	<p>No</p>	<p>Exclusion 4 appears to limit the devices just to retail customers. However, any end-user load, including wholesale or retail, should be included. NERC's Glossary of Terms uses the phrase "end-use customer", not retail customers to describe loads. MWDC recommends that Exclusion 4 be changed as follows: E4 - Reactive Power devices owned and operated by an end-use customer solely for its own use.</p>
<p>Response: The SDT team considered the disposition of the word “retail” in the context of E4, and determined that retention of this word is important and correct. This is meant to eliminate non-generator Reactive Power devices that (are owned and operated on the load side of a customer meter). No change made.</p>		
<p>The Dow Chemical Company</p>	<p>No</p>	<p>The term “solely” should be replaced by the term “primarily”. All devices to control Reactive power behind-the-meter arguably provide some benefit to the transmission grid.</p>
<p>Response: The SDT does not believe these changes provide additional clarity. No change made.</p>		
<p>LCRA Transmission Services Corporation</p>	<p>No</p>	<p>This exclusion conflicts with inclusion item I5. Which one takes priority?</p>
<p>Response: The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.</p> <p>Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:</p> <p>“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit</p>		

Organization	Yes or No	Question 10 Comment
<p>breaker, bus section, or transmission line. An element may be comprised of one or more components. “</p> <p>Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.</p> <p>Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.</p> <p>Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.</p> <p>Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.</p> <p>Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2.</p> <p>Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.</p> <p>In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.</p>		
Ameren	No	a)Reactive Power devices connected 100 kV and above applied for the purpose of voltage support to local load and/or local area network should also be excluded.
<p>Response: Reactive Power devices connected at 100kV and above are included in the core definition. Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner.</p>		

Organization	Yes or No	Question 10 Comment
		<p>The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.</p> <p>Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element as defined in the NERC Glossary of Terms as:</p> <p>“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. “</p> <p>Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.</p> <p>Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.</p> <p>Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.</p> <p>Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.</p> <p>Exclusion E2 provides for the exclusion of the Real Power resources that reside behind-the-retail meter (on the customer's side) and supersedes inclusion I2.</p> <p>Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.</p> <p>In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.</p>

Organization	Yes or No	Question 10 Comment
An entity can always request an exception through the Exception Process. No change made.		
Tillamook PUD	No	Any device that might be excluded under E4 has already been included per I5. Unless I5 is removed, or rewritten as suggested above; this exclusion will exclude nothing.
Central Lincoln	No	Please see Central Lincoln’s answers to Q1 and Q6. Any device that might be excluded under E4 has already been included per I5. Unless I5 is removed, or rewritten as suggested above; this exclusion will exclude nothing.
Northern Wasco County PUD	No	Please see Northern Wasco County PUD’s answers to Q1 and Q6. Any device that might be excluded under E4 has already been included per I5. Unless I5 is removed, or rewritten as suggested above; this exclusion will exclude nothing.
<p>Response: Please see responses to Q1 and Q6.</p> <p>The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.</p> <p>Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. Element as defined in the NERC Glossary of Terms as:</p> <p>“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. “</p> <p>Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.</p> <p>Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.</p> <p>Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion</p>		

Organization	Yes or No	Question 10 Comment
<p>language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.</p> <p>Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.</p> <p>Exclusion E2 provides for the exclusion of the Real Power resources that reside behind-the-retail meter (on the customer’s side) and supersedes inclusion I2.</p> <p>Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.</p> <p>In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.</p> <p>Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices. No change made.</p>		
<p>Northeast Power Coordinating Council</p>	<p>No</p>	<p>Consider using other wording to replace “retail”. The statement “owned or operated by the retail customer” is confusing and arguably inaccurate and should be revised. Refer to comments related to reactive resources for Question 6 regarding Inclusion I5.</p> <p>Retail and non-retail generation should be defined.</p>
<p>Response: The SDT team considered the disposition of the word “retail” in the context of E4, and determined that retention of this word is important and correct. This is meant to eliminate non-generator Reactive Power devices that (are owned and operated on the load side of a customer meter). No change made.</p> <p>Non-retail generation is meant to be the generation on the system (supply) side of the retail meter.</p>		
<p>American Electric Power</p>	<p>No</p>	<p>Does this refer to distribution level or reactive power resources? If so, it would appear these are not included as part of I5. Or instead, does this refer to customer equipment at BES voltages? If it is the latter, we recommend E4 be reworded to state “Reactive</p>

Organization	Yes or No	Question 10 Comment
		Power devices that meet the Inclusion criteria of I5 that are owned and operated by the retail customer solely for its own use...”
<p>Response: Distribution devices are not included.</p> <p>The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.</p> <p>Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:</p> <p>“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. “</p> <p>Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.</p> <p>Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.</p> <p>Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.</p> <p>Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.</p> <p>Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2.</p> <p>Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.</p> <p>In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the</p>		

Organization	Yes or No	Question 10 Comment
interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.		
AECI and member GandTs, Central Electric Power Cooperative, KAMO Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power Cooperative	Yes	Ownership is irrelevant, so “owned and operated by the retail customer solely for its own use”, should be replaced by “owned and operated solely in conjunction with specific industrial customer loads.”
Response: The SDT does not believe this change provides additional clarity. No change made.		
NESCOE	Yes	While we are generally supportive of this exclusion, the term “retail” needs to be clarified (i.e., are retail customers of all sizes intended to be excluded?).
Massachusetts Department of Public Utilities	Yes	While we are generally supportive of this exclusion, the term “retail” needs to be clarified (i.e., are retail customers of all sizes intended to be excluded?).
Response: The SDT reviewed your comment and believes that ‘retail’ is the correct terminology. This is meant to eliminate non-generator Reactive Power devices that (are owned and operated on the load side of a customer meter. No change made. Using a threshold for non-generator Reactive Power resource devices in the BES will be considered in Phase 2 of this effort.		
Long Island Power Authority	Yes	Exclusion should identify a maximum value.
Response: Using a threshold for non-generator Reactive Power resource devices in the BES will be considered in Phase 2 of this effort. No change made.		

Organization	Yes or No	Question 10 Comment
ExxonMobil Research and Engineering	Yes	The BES SDT should work on clarifying the differences between Inclusion I5 and Exclusion E4. The phrase “solely for its own use” in Exclusion E4 is vague and open to interpretation. It is unclear whether equipment, such as power factor correction facilities, surge capacitors located in motor terminal boxes and excitation capacitors installed for use by a motor located on the low side of a 138 kV primary transformer would be excluded from the BES.
<p>Response: It is the intent of the SDT that distribution devices are not included in the BES.</p> <p>The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.</p> <p>Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. Element as defined in the NERC Glossary of Terms as:</p> <p>“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. “</p> <p>Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.</p> <p>Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.</p> <p>Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.</p> <p>Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion</p>		

Organization	Yes or No	Question 10 Comment
		<p>I1.</p> <p>Exclusion E2 provides for the exclusion of the Real Power resources that reside behind-the-retail meter (on the customer’s side) and supersedes inclusion I2.</p> <p>Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.</p> <p>In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.</p> <p>No change made.</p>
Springfield Utility Board	Yes	<p>Reactive power devices used to serve radial networks or Local Networks are often owned and operated by the registered entity (not the “retail customer”) to address Area Network - wide reactive power issues. This language should read:”E4. Reactive power devices that are within a radial system excluded under E1 or within a local network excluded under E3” If the current draft language is left as it is, there will likely be a lot of unnecessary paperwork to exclude reactive power devices within radial system or local networks from the BES through the exclusion process. SUB suggests that the language in the E4 Exclusion be consistent with that in the I5 Inclusion.</p>
<p>Response: The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.</p> <p>Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:</p> <p>“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. “</p>		

Organization	Yes or No	Question 10 Comment
<p>Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.</p> <p>Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.</p> <p>Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.</p> <p>Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.</p> <p>Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2.</p> <p>Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.</p> <p>In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.</p>		
SERC OC Standards Review Group	Yes	
NERC Staff Technical Review	Yes	
SERC Planning Standards Subcommittee	Yes	
Florida Municipal Power	Yes	

Organization	Yes or No	Question 10 Comment
Agency		
WECC Staff	Yes	
Bonneville Power Administration	Yes	
Texas RE NERC Standards Subcommittee	Yes	This is a needed exception to Inclusion I5 as these reactive power resources are used by retail customers for power factor correction at their own facilities in order avoid imposed power factor penalties.
Balancing Authority Northern California	Yes	
ACES Power Marketing Standards Collaborators	Yes	
Dominion	Yes	
Pepco Holdings Inc and Affiliates	Yes	
Transmission Access Policy Study Group	Yes	
Electricity Consumers Resource Council (ELCON)	Yes	This is a needed exception to Inclusion I5 as these reactive power resources are used by retail customers for power factor correction at their own facilities in order avoid imposed power factor penalties.
Southern Company Generation	Yes	

Organization	Yes or No	Question 10 Comment
Tri-State Generation and Transmission Assn., Inc. Energy Management	Yes	
MRO NERC Standards Review Forum (NSRF)	Yes	
IRC Standards Review Committee	Yes	
Tennessee Valley Authority	Yes	
Hydro One Networks Inc.	Yes	
Tri-State GandT	Yes	
Western Area Power Administration	Yes	
Texas Industrial Energy Consumers	Yes	
PacifiCorp	Yes	
Southern Company	Yes	
FirstEnergy Corp.	Yes	
Exelon	Yes	
Michigan Public Power Agency	Yes	Yes, MPPA and its members support the revised language because retail reactive

Organization	Yes or No	Question 10 Comment
		devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Idaho Falls Power	Yes	We have no comments.
ReliabilityFirst	Yes	
Ontario Power Generation Inc.	Yes	
Central Hudson Gas and Electric Corporation	Yes	
City of Anaheim	Yes	
Chevron U.S.A. Inc.	Yes	
Duke Energy	Yes	
Clallam County PUD No.1	Yes	Yes, CLPD supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
NV Energy	Yes	
Z Global Engineering and Energy Solutions	Yes	
Consumers Energy	Yes	

Organization	Yes or No	Question 10 Comment
Puget Sound Energy	Yes	
Manitoba Hydro	Yes	
City of St. George	Yes	
Orange and Rockland Utilities, Inc.	Yes	
Blachly-Lane Electric Cooperative (BLEC)	Yes	BLEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Coos-Curry Electric Cooperative (CCEC)	Yes	CCEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Central Electric Cooperative (CEC)	Yes	CEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Clearwater Power Company (CPC)	Yes	CPC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Snohomish County PUD	Yes	Yes, SNPD supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the

Organization	Yes or No	Question 10 Comment
		interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Consumer's Power Inc.	Yes	CPI supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Douglas Electric Cooperative (DEC)	Yes	DEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Fall River Rural Electric Cooperative (FALL)	Yes	FALL supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Lane Electric Cooperative (LEC)	Yes	LEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Lincoln Electric Cooperative (LEC)	Yes	LEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Northern Lights Inc. (NLI)	Yes	NLI supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from

Organization	Yes or No	Question 10 Comment
		the BES definition.
Okanogan County Electric Cooperative (OCEC)	Yes	OCEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Pacific Northwest Generating Cooperative (PNGC)	Yes	PNGC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Raft River Rural Electric Cooperative (RAFT)	Yes	RAFT supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
West Oregon Electric Cooperative	Yes	WOEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
PSEG Services Corp	Yes	
Hydro-Quebec TransEnergie	Yes	
Independent Electricity System Operator	Yes	
Umatilla Electric Cooperative (UEC)	Yes	UEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the

Organization	Yes or No	Question 10 Comment
		interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
Memphis Light, Gas and Water Division	Yes	
Harney Electric Cooperative, Inc.	Yes	HEC agrees with E4.
Cowlitz County PUD	Yes	
Utility Services, Inc.	Yes	
National Grid	Yes	
Kansas City Power and Light Company	Yes	
Oncor Electric Delivery Company LLC	Yes	
Sacramento Municipal Utility District	Yes	
Georgia System Operations Corporation	Yes	
MEAG Power	Yes	
Farmington Electric Utility System	Yes	

Organization	Yes or No	Question 10 Comment
South Houston Green Power, LLC	Yes	
Portland General Electric Company	Yes	
City of Austin dba Austin Energy	Yes	
Kootenai Electric Cooperative	Yes	KEC supports the revised language because retail reactive devices are used to address local customer or retail voltage issues, rather than voltage issues on the interconnected bulk grid, and such local devices should therefore be excluded from the BES definition.
ATC LLC	Yes	
Redding Electric Utility	Yes	
City of Redding	Yes	
Tacoma Power	Yes	Tacoma Power supports the Exclusion E4 as currently written.
BGE	Yes	No comment.
Response: Thank you for your support.		

11. Are there any other concerns with this definition that haven't been covered in previous questions and comments remembering that the exception criteria are posted separately for comment?

Summary Consideration: Comments received for Question 11 were mostly re-statements of comments expressed in the previous questions. No changes were made to the core definition or Inclusions or Exclusions based solely on question 11 comments. However, changes were made to the Implementation Plan to clarify the compliance obligation date of the revised definition as shown below.

Some commenters have expressed frustration over the lack of high level guidance for the exception process. The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.

There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn't been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel's findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren't shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn't been handled before by

either party and there is a great deal of professional experience involved on both the submitter's and the Regional Entity's side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication.

Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal.

Some commenters have asked whether a single 'yes' or 'no' response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states "No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or disapproved."

The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals.

Finally, the SDT would point to the draft SAR for Phase 2 of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase 1 of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.

Some comments were received about the lack of a cost benefit analysis with regard to revision to the definition. The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission.

Several comments were received questioning how to apply the definition with the inclusions and exclusions. The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.

Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:

"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "

Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.

Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.

Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.

Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.

Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer's side) and supersedes inclusion I2.

Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.

In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.

Finally, there were comments on the lack of a technical basis for the threshold values employed in the definition. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.

Implementation Plan - Compliance obligations for all newly identified Elements included by the definition shall begin 24 months after the applicable effective date of the definition.

Organization	Yes or No	Question 11 Comment
SERC OC Standards Review Group	Yes	<p>The definition of the BES is referenced in several existing standards and the Statement of Compliance Registry Criteria. The SERC OC standards Review Group is concerned how this revised definition will impact entity registration, i.e., how will the revised definition be integrated into the Compliance Registry Criteria. The implementation plan should include how the integration is going to occur.</p> <p>The Rules of Procedure exception process should be further defined or referenced in this definition.”The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Standards Review Group only and should not be construed as the position of SERC Reliability Corporation, its board or its officers.”</p>
Southern Company	Yes	<p>The definition of the BES is referenced in several existing standards and the Statement of Compliance Registry Criteria. Southern Companies are concerned how this revised definition will impact entity registration, i.e., how will the revised definition be integrated into the Compliance Registry Criteria. The implementation plan should include how the integration is going to occur.</p> <p>The Rules of Procedure exception process should be further defined or referenced in this definition.</p>
<p>Response: The revised definition of Bulk Electric System will be applied in the same manner as it is today. This is based on language contained in FERC Order No. 693, which states: “...the Commission will rely on the NERC definition of bulk electric system and NERC’s registration process to provide as much certainty as possible regarding the applicability to and the responsibility of specific entities to comply with the Reliability Standards in the start-up phase of a mandatory Reliability Standard regime”. As the SDT progresses through Phase 2 of the project, it is envisioned that the technical aspects contained in the definition and in the ERO Statement of Compliance Registry will be merged and ultimately incorporated into the definition of the Bulk Electric System. At that time the ERO Statement of Compliance Registry Criteria will be revised to point to the BES definition for the technical aspects in regards to BES Elements. No change made.</p> <p>The Rules of Procedure exception process is referenced in the current draft version of the BES definition in a note which states: “Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process”. No change made.</p>		

Organization	Yes or No	Question 11 Comment
<p>Northeast Power Coordinating Council</p>	<p>Yes</p>	<p>Technical bases have not been provided for the proposed definition of the BES. Additionally, the cost impacts have not been assessed and weighed against the potential benefits of this proposal.</p> <p>There is confusion arising from the construction and interactions of the Inclusion, and Exclusion sections.</p> <p>System diagrams, put in a separate guidance document, would help in understanding.</p> <p>The situation of using Exceptions to understand Exclusions must be avoided. Suggest consider incorporating Inclusions directly, and leave the Exclusions as is format wise.</p> <p>The Implementation period discusses a 24 month timeframe (the Order suggests 18) from when the standard becomes effective to begin Compliance obligations. If construction is required to become compliant or meet performance requirements with standards, or CIP Version 5 standards increase the amount of BES assets this will be insufficient when considering budgeting, designing, siting requirements, and permitting.</p> <p>Concern exists over the paradigm that the definition should “mirror” the NERC Compliance Registry Criteria regarding who is registered. Some RSC members believe the definition should drive any changes to the registry criteria and not the criteria perpetuating the thresholds in the definition. However, there is a need to confirm that Phase 2 of this project will address this.</p> <p>The Inclusions and Exclusions listed need clarifications and perhaps diagrams and accompanying guidelines to clarify and explain the intent.</p>
<p>Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These</p>		

Organization	Yes or No	Question 11 Comment
		<p>and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.</p> <p>The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT’s efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission’s concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. The technical aspects of the definition have remained identical to the current definition and identical to the application of the ERO Statement of Compliance Registry Criteria and therefore do not require a technical justification to support maintaining the status-quo.</p> <p>The SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission.</p> <p>The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.</p> <p>Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:</p> <p>“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit</p>

Organization	Yes or No	Question 11 Comment
		<p>breaker, bus section, or transmission line. An element may be comprised of one or more components. “</p> <p>Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.</p> <p>Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.</p> <p>Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.</p> <p>Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.</p> <p>Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2.</p> <p>Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.</p> <p>In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.</p> <p>The development of a guidance document which contains generic diagrams is a portion of the overall project that the SDT feels is necessary to ensure the consistent application of the BES definition going forward. Therefore the SDT has determined that such a document will be developed during Phase 2 of the project.</p> <p>The SDT agrees that a potential reformatting of the definition (core, Inclusions and Exclusions) would improve the understanding of the application of the definition. However, these types of changes would require a significant amount of revisions to the current draft and could be seen as substantive in nature and prevent the SDT from moving forward with a recirculation ballot. This scenario would require a successive ballot which would place the project schedule in jeopardy of achieving a successful filing by January 25, 2012. The</p>

Organization	Yes or No	Question 11 Comment
<p>SDT will be exploring the reformatting of the definition (core, Inclusions and Exclusions) during Phase 2 of the project.</p> <p>In proposing a 24 month period in the Implementation Plan before the definition is applied in assessing compliance obligations, the SDT considered several activities that may require additional time to complete for an entity to become fully compliant. One of these activities is the development of transition plans in cases where significant issues may have been identified as potentially preventing an entity from meeting the compliance obligations within the 24 month period. These transition plans are to be developed by the Regional Entity and the Registered Entity in a cooperative manner to best address the identified concerns and establish an agreed to mitigation plan which results in full compliance by the Registered Entity.</p> <p>Phase 1 of the project, as explained above, is addressing Commission directives established in Order No. 743 within a relatively short time period. The SDT has decided to maintain the status quo with respect to applicability and the technical aspects contained in the ERO Statement of Compliance Registry Criteria as the prudent path to take to ensure a successful conclusion to Phase 1 of the project. The status quo was established in FERC Order No. 693, which states: "...the Commission will rely on the NERC definition of bulk electric system and NERC's registration process to provide as much certainty as possible regarding the applicability to and the responsibility of specific entities to comply with the Reliability Standards in the start-up phase of a mandatory Reliability Standard regime". As the SDT progresses through Phase 2 of the project, it is envisioned that the technical aspects contained in the definition and in the ERO Statement of Compliance Registry will be merged and ultimately incorporated into the definition of the Bulk Electric System. At which time the ERO Statement of Compliance Registry Criteria will be revised to point to the BES definition for the technical aspects in regards to BES Elements.</p>		
Westar Energy	Yes	We believe a reference should be made to the ROP changes which also provide a mechanism whereby Elements may be excluded or included in the BES. Without that reference, the proposed definition is not all inclusive of all means for exclusions or inclusions. We would suggest the definition be expanded to say "Unless modified by the lists shown below or as provided by Appendix 5C of the NERC Rules of Procedure, all Transmission..." This comment was submitted in response to the original posting and the response received was that it was inadvertently left out and that it would be placed back in, but we don't see the reference in this draft of the definition.
Southwest Power Pool Standards Review Team	Yes	A reference needs to be made to the ROP changes which also provide a mechanism whereby Elements may be excluded/included in the BES. Without that reference the proposed definition does not completely include all means for exceptions/inclusions.

Organization	Yes or No	Question 11 Comment
		<p>We would suggest the definition be expanded to say ‘...modified by the list shown below or as provided by Appendix 5C of the NERC Rules of Procedure. We submitted this in the original posting and the response received was that it was inadvertently left out and that it would be placed back in. We don’t see the reference in this draft of the definition.</p>
<p>Response: The Rules of Procedure exception process is referenced in the current draft version of the BES definition in a note which states: “Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process”. No change made.</p>		
WECC Staff	Yes	<p>Following are additional comments not covered in previous questions:</p> <ul style="list-style-type: none"> o Under the section “Effective Dates”: There may be confusion with the statement “Compliance Obligations for Elements included by definition shall begin 24 months after the applicable effective data of the definition.” The phrase “included by definition” can be interpreted broadly. o WECC notes that a generation threshold of 75MVA is specified in Exclusions E1, E2, and E3. WECC believes that generation thresholds for Exclusions should be addressed in Phase 2 when generation thresholds for Inclusions are being considered.
<p>Response: The complete statement from the Implementation Plan states: “Compliance obligations for all newly identified Elements included by the definition shall begin 24 months after the applicable effective date of the definition.” The SDT’s intent with this language is to identify newly identified BES Elements based on the revised definition. In other words, Elements that were not considered to be BES Elements based on the exiting definition of BES in the NERC Glossary of Terms, but are now included as a result of revising the exiting definition. The Implementation Plan has been clarified as shown:</p> <p>Implementation Plan - Compliance obligations for <u>all newly identified</u> Elements included by the definition shall begin 24 months after the applicable effective date of the definition.</p> <p>The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a</p>		

Organization	Yes or No	Question 11 Comment
<p>change from the current values that exist through the application of the definition today. Phase 1 of the project is addressing Commission directives established in Order No. 743 within a relatively short time period. Therefore the decision to maintain the status quo as far as application of the definition and the technical aspects contained in the ERO Statement of Compliance Registry Criteria is the prudent path to take to ensure a successful conclusion to Phase 1 of the project. The status quo was established in FERC Order No. 693, which states: "...the Commission will rely on the NERC definition of bulk electric system and NERC's registration process to provide as much certainty as possible regarding the applicability to and the responsibility of specific entities to comply with the Reliability Standards in the start-up phase of a mandatory Reliability Standard regime". These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.</p>		
ExxonMobil Research and Engineering	Yes	It would be worthwhile to explain the relationship (timeline) between the BES Definition implementation plan and the compliance implementation plan proposed in the BES RoP team's new Appendix 5C for the NERC Rules of Procedure.
Texas RE NERC Standards Subcommittee	Yes	It might be worthwhile to explain the relationship (timeline) between the BES Definition implementation plan and the compliance implementation plan proposed in the BES RoP team's new Appendix 5C for the NERC Rules of Procedure.
<p>Response: For a newly identified Element(s) under the revised BES definition, the time period to be in full compliance with all applicable Reliability Standards is 24 months from the effective date of the definition. If the entity wishes to file for an exception of a newly identified Element(s) under the revised BES definition through the Rules of Procedure Exception Process, the entity will have 12 months from the effective date of the revised BES definition in which to file such a request. If the exception request is rejected or disapproved and the classification of the Element(s) remains as a BES Element, the Regional Entity and the owner of such a BES Element(s) shall agree to an Implementation Plan for full compliance obligations, which will establish an implementation date no earlier than the date established by the definition Implementation Plan (24 months from the effective date of the definition).</p>		
Dominion	Yes	As a general policy, Dominion believes that attempting to precisely refine the definition of the BES may not be the best way to insure BES reliability. Instead,

Organization	Yes or No	Question 11 Comment
		<p>industry effort should be focused on developing specific reliability standard requirements targeted toward solving problems that need to be addressed. Stated differently, every Element that could have an impact on the BES does not need to be included in the definition of the BES. NERC’s Functional Model addresses the broad range of functions performed by the electric utility industry. When reliability concerns are identified and can best be addressed via a standard, modifying the requirements in that standard as applicable to that functional model should occur rather than attempting to modify the BES definition. Effort spent on developing specific reliability standard requirements mentioned above is superior to the industry engaging in definitional debates that do not address to the underlying reliability drivers. It is not essential that each reliability standard explicitly apply to each registered entity. The existing reliability requirements, as applied to the various functional entities require communication of information necessary to insure there are no reliability gaps, either directly or indirectly among the various entities. The existing standards typically have a hierarchy wherein:</p> <ul style="list-style-type: none"> o Planners (PA, TP) receive information predominately from the owners (GO, DP, TO) and those that represent end-use customers (LSE and PSE); o Reliability entities (BA, RC and TOP) receive information predominately from operating entities (GOP, TOP) and those that represent end-use customers (LSE and PSE); o Planners provide reliability assessments to Reliability entities (BA, RC and TOP) and receive feedback on these reliability assessments (including validity of assumptions and result); and o Reliability entities (BA, RC and TOP) give instructions (including when necessary directives) to operating entities (GOP, TOP) and those that represent end-use customers (LSE and PSE). This is how the industry has historically operated, how it operates today and why the standards in place today are structured as they are. Reliability is best served when the standards themselves contain the appropriate requirements and are applied to either an Element or Facility or to the appropriate functional entity (DP, GO, GOP, LSE, TO, TOP, etc.). Definitional boundaries can create the potential for false positives in reliability and, in fact, may be detrimental to reliability in the longer term if they impose additional compliance burdens without closing a reliability gap.

Organization	Yes or No	Question 11 Comment
<p>Response: The SDT acknowledges and appreciates the comments and recommendations associated with concepts for alternatives to the revision of the exiting definition of BES. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, and is bound to answering those directives in a manner that achieves industry consensus while remaining responsive to the language contained in the Orders. No change made.</p>		
<p>Pepco Holdings Inc and Affiliates</p>	<p>Yes</p>	<p>1) From the proposed BES definition and Exclusion E1 it is very clear that a 138-12kV distribution transformer serving radial load would not be considered part of the BES. However, suppose this transformer was connected to a position in a ring-bus or a breaker-and-a-half arrangement. Would the physical bus between the transformer high side terminals and the two breakers in the ring-bus, or breaker-and-a-half-bus, be considered part of the BES? They would be contiguous transmission elements (bus) operating at 138kV and supplying a radial distribution transformer. Also, tripping of this “radial” bus section would not interrupt any BES facilities, due to the station bus arrangement. As such, by definition and Exclusion E1 this 138kV bus section (element) would not be part of the BES, and no special exclusion filing would be required. Is this correct? However, take the same 138-12kV transformer but this time connected in a typical line-bus arrangement. The transformer by definition is not a BES element. As was the case above, the bus section between the transformer and the two breakers in the line-bus would be contiguous elements (bus) operating at 138kV and supplying a radial distribution transformer. Again, by definition and Exclusion E1 this bus section (element) would not be part of the BES. However, in this case tripping of the “radial” bus section would result in an interruption to the through path of the station, and could therefore interrupt the through flow on BES facilities. Does this make either the transformer, or its associated bus section, or both part of the BES? Based on the above examples, if the type of bus connection could influence whether an element is included in the BES or not, then additional language needs to be added to the definition (either as an Inclusion or Exclusion) to make this point clear. The BES definition needs to be specific enough to eliminate any confusion as to what is included, and what is not included, and thereby greatly minimize, if not eliminate, the need to request interpretations. A sample FAQ document, with examples, would be</p>

Organization	Yes or No	Question 11 Comment
		<p>extremely helpful, but should not be a substitute for a BES description which leaves little room for interpretation.</p> <p>2) As seen from the above attempt to describe issues that need clarification, without a diagram to show specific situations, it is difficult to fully explain the concerns on ensuring that the BES definition stands on its own. Since the commenting process does not accommodate diagrams, PHI is sending separately a white paper with diagrams in an attempt to clarify the definition and make it as unambiguous as possible, leaving little room for interpretation. This paper may be helpful in developing a FAQ document.</p> <p>3) The definition should state that it applies to a system “normal” configuration. It does not include maintenance or N-1 or any abnormal configurations.</p> <p>4) There was no place on the comment forms to comment on the proposed Implementation Plan for the BES definition. So comments are included here. The proposed plan states “compliance obligations for Elements included by the definition shall begin 24 months after the applicable effective date of the definition.” This is fine for most applications; however, there is an effect with PRC-005 compliance. PRC-005 (Protection System Maintenance Standard) requires that evidence for the last two maintenance intervals, in order to demonstrate that you are following the prescribed intervals in your maintenance plan. If additional facilities are brought into scope by the new BES definition, and the protection systems associated with these facilities were not previously maintained on the same interval as other BES facilities, then it may not be possible within the allotted 24 months to demonstrate the facilities were maintained within the prescribed intervals for BES facilities. An implementation plan at least as long as one full maintenance cycle would be required to assure compliance. This issue needs to be addressed or coordinated with PRC-005.</p>
<p>Response: 1) Exclusion E1 identifies a Radial system as “a group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher” (with additional criteria identified in parts E1a, b and c). The SDT interprets the language ‘single point of connection’ as a tapped point where the radial system originates. Therefore in a ring-bus, a breaker-and-a-half or a</p>		

Organization	Yes or No	Question 11 Comment
		<p>typical line bus arrangement, the bus between the breakers and the breakers themselves are considered to be BES Elements. Under these circumstances the bus position is the 'single point of connection', not a contiguous group of Elements as suggested in the comment.</p> <p>2) The development of a guidance document which contains generic diagrams is a portion of the overall project that the SDT feels is necessary to ensure the consistent application of the BES definition going forward. Therefore the SDT has determined that such a document will developed during Phase 2 of the project.</p> <p>3) The SDT does not believe that system state affects the definition and therefore there is no need to declare that the definition only applies to normal state. No change made.</p> <p>4) The BES definition Implementation Plan addresses the implementation of the revised definition. The SDT is not in a position to comment on compliance obligations associated with the Reliability Standards. However, in circumstances where data may not be available due to the revised definition requirements, the SDT expects an entity to work with its Regional Entity to come up with a plan to satisfy the obligation.</p>
<p>Southern Company Generation</p>	<p>Yes</p>	<p>1) On page 1, the year of the anticipated date for the BOT adoption is correctly 2012.</p> <p>2) We believe that the last two sentences of the first paragraph of the Background Information section of the 2nd draft of the definition document is incorrect. The statements read: " It should be noted that the revised definition does not address functional entity registration or standards requirements applicability. Those are separate issues." The definition of the BES that is approved will govern the scope of the equipment that is relevant to many of the reliability standards. This issue cannot be separated from the applicability of the requirements of the reliability standards. What is the purpose of creating a continent wide definition of the BES if is is not to provide instruction the enetties subject to the requirements of the standards? Refer to these sample standard requirements to see that this definition already plays a major part in the applicability of the requirements: EOP-005-2 R1, R4; EOP-006-2 R1; EOP-008-1 R1; FAC-008-1 R1.2; and PRC-005-1a for example - there are many others.</p>
<p>Response: 1) The SDT has made the revision to the BOT adoption date to correctly identify the year as 2012.</p>		

Organization	Yes or No	Question 11 Comment
<p>2) The SDT acknowledges that the linkage between the BES definition and the Reliability Standards may have been understated in the <i>Background Information</i> contained in the comment form. However, the goal of the SDT in addressing the Commission directives is to develop modifications to the definition in response to the directives without significantly expanding or contracting the scope of the BES and not drive registration changes in the industry. The SDT believes that they have met these goals, as evidenced by a detailed review of the NERC Reliability Standards. The SDT determined that potentially the scope of applicability of certain requirements may change due to the establishment of a bright-line definition. However, this potential change did not dictate a need for modification of the language contained in the requirements.</p>		
<p>AECI and member GandTs, Central Electric Power Cooperative, KAMO Power, MandA Electric Power Cooperative, Northeast Missouri Electric Power Cooperative, NW Electric Power Cooperative Sho-Me Power Electric Power Cooperative</p>	<p>Yes</p>	<p>: AECI supports the bright-line concept, but believes the SDT should adopt a core voltage threshold of “200 kV or higher”, and MVA capacity of “150 MVA or greater”. A proper threshold is critical, because an inappropriately low threshold will divert significant industry attention and resource away from what truly benefits the BES reliability. (The number of facilities tend to rise more geometrically than linearly as the voltage threshold drops.)We believe that an evaluation of the transmission-line Surge Impedance Loading (SIL), at various kV levels, could provide technical insight as to why many industry planning engineers believe sub-230kV Facilities, in general do not belong within the BES. AECI suggests that the SDT consider a more consistent bright-line facility threshold of 150 MVA capability for all equipment. This would include transmission lines as well, where an Surge Impedance Loading analysis demonstrates that lines below 230 kV, can support 150 MVA flow up to 280 miles (applying 1.1 p.u. line-loadability of SIL, IEEE Transactions on Power Apparatus and Systems, Vol.PAS-98, No.2 March/April 1979, p 609, Figure 7),without additional reactive compensation. In comparison, single-conductor 138 kV lines, in same table, can support 150 MVA transfers no more than 50 miles, while 345 kV lines are capable of supporting 150 MVA transfers well over 600 miles.</p>
<p>Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These</p>		

Organization	Yes or No	Question 11 Comment
<p>and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values. No change made.</p>		
<p>MRO NERC Standards Review Forum (NSRF)</p>	<p>Yes</p>	<p>NSRF recommends that the following statement be added after I5. If an element is not included based upon the core definition or I1 - I5, the elements is not consider to be a part of the BES.</p>
<p>Response: The SDT is attempting through the BES definition to identify facilities that should be classified as BES Elements. Adding a statement that emphasizes the opposite of what the definition is intending to accomplish would be redundant and would negate the efforts of the SDT to improve clarity and remove the ambiguity that currently exists the definition today. No change made.</p>		
<p>IRC Standards Review Committee</p>	<p>Yes</p>	<p>(1) We support a phased approach proposed in the draft supplemental SAR. Development of the revised BES definition is an important and complex undertaking. The product of this work is fundamental to establishing the applicability of NERC Reliability Standards. The issues identified for attention in Phase 2 of this project warrant careful investigation and as such allowing additional time to properly research and provide for stakeholders to vett them is justified. Specific to the assessment of raising the generator rating threshold from 20 MVA to 75 MVA per unit, we would point out that this needs to be looked at from a different perspective. Industry debates so far have been on the apparent lack of reliability contribution and economic benefits for keeping the threshold at 20 MVA. The former point implies that any negative reliability impact that could be contributed by a generator higher than 20 MVA but lower than 75 MVA could be negligible. Some examples of the standards that the 20-75 MVA units may need to comply with to ensure reliability are:</p> <ul style="list-style-type: none"> o Voltage and frequency ride through capability o Voltage control (AVR, etc.) o Underfrequency trip setting o Protection relay setting coordination o Data submission for modeling; <p>verification of capability and model A Venn diagram developed by an industry group shows that generators at 20 to 74.99 MVA account for about 13.8% of the total</p>

Organization	Yes or No	Question 11 Comment
		<p>installed capacity in the US. Out of this, 3.0% are currently deemed non-BES whereas the other 10.8% are BES. We do not know how the BES reliability may be affected if these 10.8% generators are no longer deemed BES facilities (after an increase of threshold to 75 MVA) and subject to compliance with NERC standards, including those mentioned above. An assessment from both a positive contribution and a negative impact viewpoints are thus required to aid the determination of the merit of raising the rating threshold.</p> <p>(2) The draft Implementation Plan for the BES definition states “Compliance obligations for Elements included by the definition shall begin 24 months after the applicable effective date of the definition.” We are concerned that the stated implementation period may be insufficient time to complete transition plans for newly identified BES Elements and Facilities, where those plans require procurement, installation and commissioning of additional equipment. We believe a period of 24 months may be more appropriate.</p>
<p>Response: 1) The SDT agrees with the commenter that the best opportunity to address the industry concerns associated with the technical aspects of the definition is through Phase 2 of the project. The SDT also agrees with the commenter in that any assessment utilized to determine the correct threshold for generating resources should be accomplished without any preconceived threshold value as a target for justification. The full scope of the assessments will be determined through a joint effort between the SDT and the appropriate NERC Technical Committee.</p> <p>2) In proposing a 24 month period in the Implementation Plan before the definition is applied in assessing compliance obligations, the SDT considered several activities that may require additional time to complete for an entity to become fully compliant. One of these activities is the development of transition plans in cases where significant issues may have been identified as potentially preventing an entity from meeting the compliance obligations within the 24 month period. These transition plans are to be developed by the Regional Entity and the Registered Entity in a cooperative manner to best address the identified concerns and establish an agreed to mitigation plan which results in full compliance by the Registered Entity.</p>		
Tennessee Valley Authority	Yes	The definition of the BES is referenced in several existing standards and the Statement of Compliance Registry Criteria. TVA is concerned with this revised definition’s impact on entity registrations, i.e., how will the revised definition be integrated into the

Organization	Yes or No	Question 11 Comment
		<p>Compliance Registry Criteria.</p> <p>The implementation plan should include how the integration is going to occur. The 24 month period for new facilities that are to become BES elements as a result of this definition is very important to successful implementation of the definition. An period shorter that 24 months would be very problematic for the industry.</p>
<p>Response: Phase 1 of the project, as explained above, is addressing Commission directives established in Order No. 743 within a relatively short time period. The SDT has decided to maintain the status quo with respect to applicability and the technical aspects contained in the ERO Statement of Compliance Registry Criteria as the prudent path to take to ensure a successful conclusion to Phase 1 of the project. The status quo was established in FERC Order No. 693, which states: “...the Commission will rely on the NERC definition of bulk electric system and NERC’s registration process to provide as much certainty as possible regarding the applicability to and the responsibility of specific entities to comply with the Reliability Standards in the start-up phase of a mandatory Reliability Standard regime”. As the SDT progresses through Phase 2 of the project, it is envisioned that the technical aspects contained in the definition and in the ERO Statement of Compliance Registry will be merged and ultimately incorporated into the definition of the Bulk Electric System. At which time the ERO Statement of Compliance Registry Criteria will be revised to point to the BES definition for the technical aspects in regards to BES Elements.</p> <p>The SDT agrees with the commenter in regards to the implementation time period of 24 months. In proposing a 24 month period in the Implementation Plan before the definition is applied in assessing compliance obligations, the SDT considered several activities that may require additional time to complete for an entity to become fully compliant. One of these activities is the development of transition plans in cases where significant issues may have been identified as potentially preventing an entity from meeting the compliance obligations within the 24 month period. These transition plans are to be developed by the Regional Entity and the Registered Entity in a cooperative manner to best address the identified concerns and establish an agreed to mitigation plan which results in full compliance by the Registered Entity.</p>		
Hydro One Networks Inc.	Yes	<ul style="list-style-type: none"> o The definition of the Bulk Electric System (BES) is a foundational construct for the North American Electric Reliability Corporation (NERC). FERC Orders 743 and 743-A do not mandate a 100 kV approach. Instead, it states that a 100 kV bright line threshold is one approach to defining the BES. It further states that only “some” 115/138 kV facilities are necessary for the reliable operation of the bulk system. We believe that if one subset issue (such as 20 MVA vs. 75 MVA) of the entire definition, requires more

Organization	Yes or No	Question 11 Comment
		<p>time and resources to arrive at the correct answer, the much larger and more fundamental issue of how to define BES should not have been dismissed without the appropriate analysis before another definition is proposed to be adopted by the ERO.</p> <ul style="list-style-type: none"> o The proposed definition, in combination with other new and/or modified Reliability Standards such as newly modified and approved TPL Standards will require significant system upgrades with high dollar investments. We are deeply concerned that a) no such assessment has been undertaken by the SDT and/or the ERO and b) the proposed definition of the BES is not based on a technical analysis that will enhance the reliability of the interconnected transmission network. o The NERC as the ERO should at least undertake a cost and incremental reliability benefit analysis for its proposed definition of BES. Furthermore, cost impacts and reliability benefit assessments of the BES definition coupled with other new and modified reliability standards (such as the TPL Standards) must also be undertaken and weighed against the potential benefits, if any, of this or any proposal. Not providing such an assessment but using the 100 kV level as a starting point for the BES definition, gives no assurances of benefits for any stakeholder including respective governmental and regulatory authorities and rate payers in Canada or the USA. o The proposed definition would significantly increase the population of BES elements. Many of the standards requirements for these new elements will introduce administrative burden and operating expenses. This would impose significant costs, costs that ratepayers will have to bear, with little or no gain in reliability benefits for the interconnected transmission system. We suggest that the resulting BES definition must identify incremental reliability benefits by the ERO for the interconnected transmission network based on sound technical analysis to justify the change to those who will pay for any required system upgrades - the ratepayer. o The draft Implementation Plan for the BES definition states “Compliance obligations for Elements included by the definition shall begin 24 months after the applicable effective date of the definition.” We are concerned that the stated implementation period will give insufficient time to complete transition plans for newly identified BES

Organization	Yes or No	Question 11 Comment
		<p>Elements and Facilities, where those plans require approval, procurement, installation and commissioning of additional equipment. We believe a period of 60 months at a minimum is more appropriate.</p> <p>Finally, we believe that the SDT proposed approach for exception criteria is reasonable recognizing that one method/criteria can not be applicable to everyone and every situation within the ERO footprint. However, we believe that there is a huge gap and lack of any transparency on how the exception application will be evaluated and processed. We strongly suggest that the SDT develop a reference or a guidance document as part of the RoP that should provide guidance to Registered Entities, Regional Entities and the ERO on how an exception application should be processed. Else, (a) it will pose a challenge for each of the entities including ERO, and (b) may introduce Regional discretion and be perceived as having no transparency for the registered entities.</p>
<p>Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System including the 100 kV bright-line level. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.</p> <p>Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission.</p> <p>The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to</p>		

Organization	Yes or No	Question 11 Comment
		<p>improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT’s efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission’s concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. The technical aspects of the definition have remained identical to the current definition and identical to the application of the ERO Statement of Compliance Registry Criteria and therefore do not require a technical justification to support maintaining the status-quo.</p> <p>In proposing a 24 month period in the Implementation Plan before the definition is applied in assessing compliance obligations, the SDT considered several activities that may require additional time to complete for an entity to become fully compliant. One of these activities is the development of transition plans in cases where significant issues may have been identified as potentially preventing an entity from meeting the compliance obligations within the 24 month period. These transition plans are to be developed by the Regional Entity and the Registered Entity in a cooperative manner to best address the identified concerns and establish an agreed to mitigation plan which results in full compliance by the Registered Entity.</p> <p>The SDT understands the concerns raised by the commenters in not receiving hard and fast guidance on this issue. The SDT would like nothing better than to be able to provide a simple continent-wide resolution to this matter. However, after many hours of discussion and an initial attempt at doing so, it has become obvious to the SDT that the simple answer that so many desire is not achievable. If the SDT could have come up with the simple answer, it would have been supplied within the bright-line. The SDT would also like to point out to the commenters that it directly solicited assistance in this matter in the first posting of the criteria and received very little in the form of substantive comments.</p> <p>There are so many individual variables that will apply to specific cases that there is no way to cover everything up front. There are always going to be extenuating circumstances that will influence decisions on individual cases. One could take this statement to say that the regional discretion hasn’t been removed from the process as dictated in the Order. However, the SDT disagrees with this position. The exception request form has to be taken in concert with the changes to the ERO Rules of Procedure and looked at as a single package. When one looks at the rules being formulated for the exception process, it becomes clear that the role of the Regional Entity has been drastically reduced in the proposed revision. The role of the Regional Entity is now one of reviewing the submittal for completion and making a recommendation to the ERO Panel, not to make the final determination. The Regional Entity plays no role in actually approving or rejecting the submittal. It simply acts as an intermediary. One can counter that this places the Regional Entity in a position to effectively block a submittal by being arbitrary as to what information needs to be supplied. In addition, the SDT believes that the visibility of the process would belie such an action by the Regional Entity and also believes that one</p>

Organization	Yes or No	Question 11 Comment
		<p>has to have faith in the integrity of the Regional Entity in such a process. Moreover, Appendix 5C of the proposed NERC Rules of Procedure, Sections 5.1.5, 5.3, and 5.2.4, provide an added level of protection requiring an independent Technical Review Panel assessment where a Regional Entity decides to reject or disapprove an exception request. This panel’s findings become part of the exception request record submitted to NERC. Appendix 5C of the proposed NERC Rules of Procedure, Section 7.0, provides NERC the option to remand the request to the Regional Entity with the mandate to process the exception if it finds the Regional Entity erred in rejecting or disapproving the exception request. On the other side of this equation, one could make an argument that the Regional Entity has no basis for what constitutes an acceptable submittal. Commenters point out that the explicit types of studies to be provided and how to interpret the information aren’t shown in the request process. The SDT again points to the variations that will abound in the requests as negating any hard and fast rules in this regard. However, one is not dealing with amateurs here. This is not something that hasn’t been handled before by either party and there is a great deal of professional experience involved on both the submitter’s and the Regional Entity’s side of this equation. Having viewed the request details, the SDT believes that both sides can quickly arrive at a resolution as to what information needs to be supplied for the submittal to travel upward to the ERO Panel for adjudication.</p> <p>Now, the commenters could point to lack of direction being supplied to the ERO Panel as to specific guidelines for them to follow in making their decision. The SDT re-iterates the problem with providing such hard and fast rules. There are just too many variables to take into account. Providing concrete guidelines is going to tie the hands of the ERO Panel and inevitably result in bad decisions being made. The SDT also refers the commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.1 where the basic premise on evaluating an exception request must be based on whether the Elements are necessary for the reliable operation of the interconnected transmission system. Further, reliable operation is defined in the Rules of Procedure as operating the elements of the bulk power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cyber security incident, or unanticipated failure of system elements. The SDT firmly believes that the technical prowess of the ERO Panel, the visibility of the process, and the experience gained by having this same panel review multiple requests will result in an equitable, transparent, and consistent approach to the problem. The SDT would also point out that there are options for a submitting entity to pursue that are outlined in the proposed ERO Rules of Procedure changes if they feel that an improper decision has been made on their submittal.</p> <p>Some commenters have asked whether a single ‘yes’ or ‘no’ response to an item on the exception request form will mandate a negative response to the request. To that item, the SDT refers commenters to Appendix 5C of the proposed NERC Rules of Procedure, Section 3.2 of the proposed Rules of Procedure that states “No single piece of evidence provided as part of an Exception Request or response to a question will be solely dispositive in the determination of whether an Exception Request shall be approved or</p>

Organization	Yes or No	Question 11 Comment
		<p>disapproved.”</p> <p>The SDT would like to point out several changes made to the specific items in the form that were made in response to industry comments. The SDT believes that these clarifications will make the process tighter and easier to follow and improve the quality of the submittals.</p> <p>Finally, the SDT would point to the draft SAR for Phase 2 of this project that calls for a review of the process after 12 months of experience. The SDT believes that this time period will allow industry to see if the process is working correctly and to suggest changes to the process based on actual real-world experience and not just on suppositions of what may occur in the future. Given the complexity of the technical aspects of this problem and the filing deadline that the SDT is working under for Phase 1 of this project, the SDT believes that it has developed a fair and equitable method of approaching this difficult problem. The SDT asks the commenter to consider all of these facts in making your decision and casting your ballot and hopes that these changes will result in a favorable outcome.</p>
Western Area Power Administration	Yes	<p>Yes, the definition should also provide clarification on mobile equipment installed to support maintenance or equipment failures. Adding mobile equipment is a common practice for our industry and should be addressed in the definition to bring a general awareness and common understanding of the practice regarding the NERC standards. Recommendation: Add the following Exclusion to BES definition for mobile equipment. Exclude all mobile equipment on stand-by that has not been placed into service as well as all components of mobile equipment that does not meet the inclusion criteria for the primary function of the device being installed (e.g. ,battery bank on mobile transformer installed on radial feed would also be excluded)</p>
<p>Response: The SDT acknowledges the commenter’s concern and has determined that the need for an exclusion identifying mobile equipment is not appropriate. The SDT believes that the BES definition is identifying Elements that support the reliable operation of the interconnected transmission grid. This premise implies that the Element is electrically connected to the system and is performing a reliability related service. The SDT believes that the time the mobile equipment is placed in service is when the equipment would be classified as a BES Element and subject to compliance obligations. No change made.</p>		
NESCOE	Yes	<p>NESCOE offers the following additional comments: 1) Phased Approach. While well-intentioned, separating the BES definition project into two separate phases is</p>

Organization	Yes or No	Question 11 Comment
		<p>problematic from both a procedural and substantive perspective. While we recognize that the filing due date is rapidly approaching, the BES definition cannot be considered in a vacuum, divorced from the concerns raised by a number of parties in response to past postings of the BES definition. The issues NERC has identified for consideration during the proposed “Phase 2” are inseparable from the development of the BES definition and should be squarely addressed before a definition is adopted. In particular, the development of criteria for determining what facilities are “necessary for the reliable operation” of the interconnected system cannot be put off for a second phase. Contrary to FERC’s direction, NERC’s proposal will force ratepayers to incur costs related to compliance with mandates that may or may not be revised through the second phase of the project. The importance of considering and resolving such concerns before adopting a definition is heightened by the proposed two-year implementation requirement. This short implementation period almost guarantees that entities will commit resources shortly after adoption of the definition to ensure compliance within the mandated period. In other words, ratepayers will bear costs related to compliance irrespective of any change resulting from the Phase 2 process or the exception process. Expediency, while understandable given the filing deadline, must be balanced against the risk that a multi-phased approach could lead to significant consumer costs without attendant meaningful reliability benefits.</p> <p>2) Cost-Benefit Analysis. A cost impact analysis should be performed as part of developing any reliability standard. However, the development of the BES definition has failed to consider the cost impacts of the definition (and its inclusions and exclusions) and weigh these impacts against identified benefits that the definition would achieve. NESCOE stated in its May 21, 2011 comments on the last posting of the BES definition that “any new costs a revised definition imposes - which fall ultimately on consumers - should provide meaningful reliability benefits.” A cost-benefit analysis should be integral to the development of a BES definition and, indeed, any reliability standard. This analysis should include a probabilistic risk assessment examining the likelihood of an event and the costs and risks resulting from such event, which should be weighed against the costs of complying with the proposed reliability</p>

Organization	Yes or No	Question 11 Comment
		<p>measures.</p> <p>3) Technical Justification. In addition to performing a cost-benefit analysis, a technical basis must be provided to justify a proposed reliability standard. However, as we state above, the proposed BES definition does not provide a technical justification for the 100 kV threshold. Nor does it provide a technical justification for the threshold for generation resources or other elements of the definition. As stated above, while well-intentioned and understandable, deferring this technical justification to a later and separate phase of the project is a flawed and potentially costly approach. Providing a technical justification for a reliability standard is a core function of standards development and should be addressed at the forefront of the process rather than relegated to a separate phase largely undertaken after a standard is filed.</p>
<p>Response: 1) The SDT acknowledges the commenter’s concerns; however the SDT (and the ERO) has an obligation to respond to the Commission directives established in Order No. 743 within the time frame allotted by the Order. The narrow scope of the directives and the limited timeframe for project completion has prevented the SDT from fully vetting the concerns of the industry as expressed through the development process. To best address the Commission directives and stakeholder concerns, the SDT has opted to separate the project into phases. The revised project plan has been fully endorsed by the NERC Members Representative Committee and the Board of Trustees. Additionally the NERC Standards Committee has committed to the continued development of a revised definition by retaining the project as a high priority project and by dedicating the resources necessary to fully vet the issues raised by stakeholders.</p> <p>2) The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT’s efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission’s concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition</p>		

Organization	Yes or No	Question 11 Comment
<p>any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission.</p> <p>3) The SDT’s efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission’s concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. The technical aspects of the definition have remained identical to the current definition and identical to the application of the ERO Statement of Compliance Registry Criteria and therefore do not require a technical justification to support maintaining the status-quo.</p>		
ReliabilityFirst	Yes	<p>This definition needs to be clear and easy enough for anyone to pickup, read, understand, apply and arrive at the same conclusion on whether the facility or element is included or excluded. This definition leaves room for continued debate and interpretation. To help make this definition clearer, ReliabilityFirst Staff has provided a redline version of the core definition under a separate cover (file titled “Bulk Electric System definition by RFC Staff 10-4-2011”).</p>
<p>Response: The SDT believes that the revised definition of the BES has provided the necessary clarity to allow for consistent application on a continent-wide basis. The issues identified in the commenter’s redline (provided following the responses to question 11) have been fully vetted by the SDT and addressed in the responses to the comments for the applicable question related to the specific issue.</p>		
Ontario Power Generation Inc.	Yes	<p>Further to comments submitted in Question #1, OPG disagrees in general with proceeding to implement a 100 kV brightline definition in the absence of a properly quantified cost/benefit analysis. Entities are being asked to incur a high cost for no demonstrated benefit in wide-area reliability.</p>
<p>Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT’s efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission’s concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has</p>		

Organization	Yes or No	Question 11 Comment
<p>pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission.</p>		
<p>Central Hudson Gas and Electric Corporation</p>	<p>Yes</p>	<p>Due to the movement to a phased BES definition development process and assuming the definition is approved as proposed, there is an urgent need for NERC to provide clear guidance to Registered Entities regarding how to proceed with facilities and address changes to the NERC Compliance Registry registration obligations brought in/on by the application of the new definition. The problem stems from a likely scenario whereby the affected Registered Entities may be faced with an Implementation Plan and an Exception Request Procedure which must be completed prior to the completion of the Phase 2 definition development process. If that is the case, many Registered Entities will be confronted with either (1) spending large amounts of human and financial resources, not yet acquired, to address facilities/procedures necessary to address possible new compliance obligations only to find their efforts rendered unnecessary by the results produced in Phase 2 or, (2) waiting until the results of Phase 2 are provided and risking being found non-compliant and subject to substantial penalties in the future. Neither option can be viewed as a desirable, or for that matter, an acceptable position to be placed in.</p>
<p>Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has</p>		

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<p>pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Therefore, the SDT believes that best opportunity to address cost and resources issues will be through the development of Regional transition plans once the definition has been approved by the Commission. The SDT recommends that the commenter pursue achieving full compliance with the revised definition in the appropriate time period (see Implementation Plan) while utilizing the Rules of Procedure exception process to specific exceptions from the BES definition.</p>		
Springfield Utility Board	Yes	<p>When submitting BES Definition comments, SUB would suggest a “not-applicable”, “no-impact” or “abstain” option in addition to “yes” or “no”. In some cases, the draft language has no impact on an entity’s system, yet that entity’s selection of “yes” or “no” may imply agreement or disagreement rather than expressing lack of applicability. This could skew the perception of agreement or disagreement, and create a potential issue for those who are directly impacted by the changes.</p>
<p>Response: The SDT understands the commenter’s concern; however the formatting of the comment form (including the electronic version) is governed by the ERO and beyond the control of the SDT. Your comment will be forwarded to the NERC Standards staff for consideration.</p>		
Mission Valley Power	Yes	<p>Mission Valley Power - In order to help meet the fast approaching target date, Mission Valley Power will be voting affirmative in this ballot, with the hope these comments will be addressed in Phase 2. If the ballot should fail, please address these comments in this phase. Thanks to the team for their good work.</p>
<p>Response: The SDT acknowledges and appreciates the continued support of the project. The SDT will consider all recommendations for modifications to the technical aspects of the definition for project inclusion at the appropriate time during Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing</p>		

Organization	Yes or No	Question 11 Comment
values.		
Consolidated Edison Co. of NY, Inc.	Yes	<p>Con Edison shares the concerns raised by the State of New York Department of Public Service (NYPSC) in its September 12, 2011 letter to NERC Chairman Anderson. The NYPSC expressed concern that the proposed BES Definition “would impose significant costs, costs that New York ratepayers will be expected to bear, with little or no increase in reliability benefits.” The BES definition is being revised without an assessment of costs or benefits. The SDT is encouraged to work with NERC Staff to perform such an assessment prior to providing the revised BES definition to the NERC Board. Regional Entities share this concern with cost effectiveness. In NPCC, the Board of Directors directed NPCC Staff to develop a methodology to assess the cost and benefit of Standards. This NPCC Cost Effectiveness Analysis Procedure (CEAP) establishes a process to address those concerns. The CEAP introduces two assessments of the estimated industry-wide costs of requirements into that Standard’s development process. The procedure adds supporting information and background for the NPCC stakeholders, ballot body and the NPCC Board of Directors. Moreover, during a 2010 FERC technical conference the Commission recognized that “reliability does not come without cost.” As a result, significant interest was expressed in development of a process to identify the costs for draft reliability Standards and the ability of the proposed standards to achieve the reliability objective(s) sought in a cost effective manner. We understand that it is a NERC priority to define adequate level of reliability and use it as the basis for determining the cost effectiveness of a proposed rule. While this has not yet been finalized, NERC could use this proposed standard as a test case for determining the relationship between costs and benefits.</p>
<p>Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT’s efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission’s concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES</p>		

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<p>definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission.</p>		
Northern Wasco County PUD	Yes	<p>In order to help meet the fast approaching target date, Northern Wasco County PUD will be voting affirmative in this ballot, with the hope these comments will be addressed in Phase 2. If the ballot should fail, please address these comments in this phase. Thanks to the team for their good work.</p>
Tillamook PUD	Yes	<p>If Tillamook PUD had signed up to ballot in time, we would be voting yes with the hope that these comments would be addressed in Phase 2. If the ballot fails, please address these comments in this phase.</p>
<p>Response: The SDT acknowledges and appreciates the continued support of the project. The SDT will consider all recommendations for modifications to the technical aspects of the definition for project inclusion at the appropriate time during Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.</p>		
American Electric Power	Yes	<p>There needs to be some clarification regarding the default status of an asset, as well as the order and priority of the inclusion and exclusion classifications within the definition. First, prior to any evaluation by virtue of the definition, is an asset by default excluded from the BES, or rather, it is included? In addition, once the definition is used to evaluate an asset which has both inclusion attributes and exclusion attributes, which of the two classifications has greater weight? For example, if an asset is first included by the BES definition inclusion criteria can it then be excluded by BES</p>

Organization	Yes or No	Question 11 Comment
		<p>definition exclusion criteria? Or instead, if an asset is first excluded by BES definition exclusion criteria can it then be included by the BES definition inclusion criteria? AEP's recommendation is that an asset, by default, not be considered part of the BES. Next, the asset would be evaluated by the inclusion criteria as specified within the definition. Next, any asset explicitly included by the inclusion criteria is then evaluated using the exclusion criteria. Once the entity has made their determination based on the definition, exception requests could then be made to include or exclude assets as appropriate. We believe our interpretation is what is implied by the draft definition, however, this needs to be explicitly communicated within the definition itself.</p>
<p>Response: The application of the draft 'bright-line' BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.</p> <p>Initially, the BES 'core' definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the 'core' definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the 'core' definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:</p> <p>"Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. "</p> <p>Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.</p> <p>Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the 'core' definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.</p> <p>Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.</p> <p>Exclusion E1 provides for the exclusion of 'transmission Elements' from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be</p>		

Organization	Yes or No	Question 11 Comment
<p>applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.</p> <p>Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2.</p> <p>Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.</p> <p>In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.</p>		
<p>City of St. George</p>	<p>Yes</p>	<p>The small utility exclusion issues discussed in the first draft of the documents are not included (draft 1 proposed E4) nor addressed in the draft 2 documentation. Under the present definition many small utilities with local generation to serve its own local load will be required to register for additional functions, or at a minimum go through a long, expensive, time consuming process to get an individual exclusion from the BES. The topics that have been postponed to Phase 2 of the project are critical to and will have a direct impact to many utilities. Phase 2 needs to have specific shorter than normal timelines established, similar to what Phase 1 has had. The present definition and standards in general makes little or no consideration for the actual impact of an entity or facility on the bulk system. As such small utilities with a few miles of 115 kV or 138 kV lines and some generation are required to meet the same requirements as large utilities with 100’s or 1,000’s of miles of 345 kV or 500 kV lines and that operate very large generation plants of several hundred MVA of capacity. All utilities support reliability improvement, but the requirements and associated costs need to match their actual impact to the overall system.</p>
<p>Response: The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., potential small utility exclusion) of the BES definition. However, it is important to emphasize the fact that the SDT is developing a definition to identify the Elements that support the reliable operation of the interconnected transmission network regardless of ownership or operational responsibility. Small utility issues are very similar to the issues raised through the GOTO project and are best addressed through the applicability of the individual reliability standards, not through the definition of the BES.</p>		

Organization	Yes or No	Question 11 Comment
No change made.		
ISO New England Inc	Yes	<p>There are a number of possible scenarios where an element falls under both an inclusion and exclusion. The definition is unclear as to whether or not this would have the element be BES or not. During the webinar an example was given about a static shunt device meeting the requirements of I5, but is part of a radial network. The response during the webinar was that this would be excluded. If this is correct, it means that an exclusion takes precedence over an inclusion. Is this always the case? This needs to be clarified and stated somewhere in this document.</p> <p>To be consistent with regard to the terms “Operated at 100 kV” and “Connected at 100 kV”, we suggest that reference to generators should state, “Connected at a transmission element operated at 100 kV”. This will avoid confusion in cases where a generator is connected to a transmission element rated at 100 kV but operated at a lower voltage.</p>
<p>Response: The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.</p> <p>Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:</p> <p>“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. “</p> <p>Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.</p> <p>Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.</p>		

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<p>Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.</p> <p>Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.</p> <p>Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2.</p> <p>Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.</p> <p>In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.</p> <p>The BES definition refers to operating voltage (as emphasized in FERC Order No. 743-A) and the SDT does not feel that the language “connected at a voltage of 100kV or above” creates any confusion on the intent of the Inclusion. No change made.</p>		
NBPT	Yes	<ul style="list-style-type: none"> o When an exclusion and inclusion principles overlap which takes precedence? For example I5 may be excluded if in a LN (E3) o The Local Network Exclusion criterion does not appear to consider voltage support and the effects of shifting of load or impacts due to a loss of load. The 75 MW generation threshold has no technical basis. The LN exclusion should allow for studies demonstrating no through flow benefit regardless if there is. o 75 MW Generation has no technical justification. o Black Start resources should not be included in all GO/GOP standards except for those standards specific to black start units.
<p>Response: The application of the draft ‘bright-line’ BES definition is a three (3) step process that when appropriately applied will</p>		

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		<p>identify the vast majority of BES Elements in a consistent manner that can be applied on a continent-wide basis.</p> <p>Initially, the BES ‘core’ definition is used to establish the bright-line of 100 kV, which is the overall demarcation point between BES and non-BES Elements. Additionally, the ‘core’ definition identifies the Real Power and Reactive Power resources connected at 100 kV or higher as included in the BES. To fully appreciate the scope of the ‘core’ definition an understanding of the term Element is needed. Element is defined in the NERC Glossary of Terms as:</p> <p>“Any electrical device with terminals that may be connected to other electrical devices such as a generator, transformer, circuit breaker, bus section, or transmission line. An element may be comprised of one or more components. “</p> <p>Element is basically any electrical device that is associated with the transmission or the generation (generating resources) of electric energy.</p> <p>Step two (2) provides additional clarification for the purposes of identifying specific Elements that are included through the application of the ‘core’ definition. The Inclusions address transmission Elements and Real Power and Reactive Power resources with specific criteria to provide for a consistent determination of whether an Element is classified as BES or non-BES.</p> <p>Step three (3) is to evaluate specific situations for potential exclusion from the BES (classification as non-BES Elements). The exclusion language is written to specifically identify Elements or groups of Elements for potential exclusion from the BES.</p> <p>Exclusion E1 provides for the exclusion of ‘transmission Elements’ from radial systems that meet the specific criteria identified in the exclusion language. This does not include the exclusion of Real Power and Reactive Power resources captured by Inclusions I2 – I5. The exclusion (E1) only speaks to the transmission component of the radial system. Similarly, Exclusion E3 (local networks) should be applied in the same manner. Therefore, the only inclusion that Exclusions E1 and E3 supersede is Inclusion I1.</p> <p>Exclusion E2 provides for the exclusion of the Real Power resources that reside behind the retail meter (on the customer’s side) and supersedes inclusion I2.</p> <p>Exclusion E4 provides for the exclusion of retail customer owned and operated Reactive Power devices and supersedes Inclusion I5.</p> <p>In the event that the BES definition incorrectly designates an Element as BES that is not necessary for the reliable operation of the interconnected transmission network or an Element as non-BES that is necessary for the reliable operation of the interconnected transmission network, the Rules of Procedure exception process may be utilized on a case-by-case basis to either include or exclude an Element.</p> <p>The local network exclusion has established a bright-line with specific characteristics that must be met to be eligible for exclusion.</p>

Organization	Yes or No	Question 11 Comment
		<p>Exclusion E3b states: “Power flows only into the LN and the LN does not transfer energy originating outside the LN for delivery through the LN”. This characteristic applies under all operating conditions including any variations in network load. It is not clear to the SDT what the commenter is referring to in regards to voltage support. Exclusion E3 addresses transmission Elements and does not exclude Real Power or Reactive Power resources from the BES.</p> <p>The concept of the 75 MVA threshold is based on the generation inclusion criteria for plant/facility arrangements by carrying through the concept of the reliability impact that the aggregated loss of 75 MVA or greater would have on the overall reliability of the interconnected transmission grid. The SDT acknowledges and appreciates the comments and recommendations associated with modifications to the technical aspects (i.e., the bright-line and component thresholds) of the BES definition. However, the SDT has responsibilities associated with being responsive to the directives established in Orders No. 743 and 743-A, particularly in regards to the filing deadline of January 25, 2012, and this has not afforded the SDT with sufficient time for the development of strong technical justifications that would warrant a change from the current values that exist through the application of the definition today. These and similar issues have prompted the SDT to separate the project into phases which will enable the SDT to address the concerns of industry stakeholders and regulatory authorities. Therefore, the SDT will consider all recommendations for modifications to the technical aspects of the definition for inclusion in Phase 2 of Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.</p> <p>The SDT has determined that Blackstart Resources serve a reliability benefit to the interconnected transmission grid and therefore have been included in the scope of the BES. This is consistent with current practice and specifically with the registration requirements that identify the owner, operators, and users of Blackstart Resources be registered as Generator Owner/Generator Operator. Specific concerns with the applicability of individual standards should be addressed through the Standard Development Process for the individual Reliability Standards in question.</p>
Texas Reliability Entity	Yes	<p>(1) It is unclear exactly what is intended by “non-retail generation” in Exclusion E1(c). We suggest that the term be explained or defined in the BES definition or in a collateral document. This term does not have a commonly understood unambiguous meaning in our Region.</p> <p>(2) Phase 2 has to be completed or explicitly defined/scoped to fully capture all of the components necessary for reliable operation of the BES.</p>

Organization	Yes or No	Question 11 Comment
<p>Response: (1) Non-retail generation is the generation on the system (supply) side of the retail meter.</p> <p>(2) The supplemental SAR for Phase 2 of the project will be posted for industry comment at which time the SDT will be accepting recommendations for specific issues to be addressed by the SDT during phase 2 of the project.</p>		
<p>New York State Dept of Public Service</p>	<p>Yes</p>	<ul style="list-style-type: none"> o Per NERC’s obligations under the Energy Power Act of 2005 to provide FERC technical advice, no technical justification has been provided for basing the BES definition on the 100 kV and MVA thresholds. o No cost analysis on either the reliability benefits of the overall definition or on the implementation plan has been performed to determine whether the likely high cost of the definition to ratepayers is justified. o The definition of the BES should be the driver for the application of all other NERC reliability standards and criteria. The definition uses the Statement of Compliance Registry Criteria as a driver of the definition when the reverse should be taking place; contents of the Statement should be driven by the BES definition.
<p>Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT’s efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission’s concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the definition has not been altered in regards to the bright-line or the generation thresholds and therefore does not require the development of technical justification to maintain the status quo.</p> <p>SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. Without an approved BES definition any assumptions utilized in a cost benefit analysis would be purely speculative and the results would have little meaning in regards to potential improvements in the reliable operation of the interconnected transmission</p>		

Organization	Yes or No	Question 11 Comment
<p>grid on a continent-wide basis. Therefore, the SDT believes that best opportunity to address cost concerns will be through the development of Regional transition plans once the definition has been approved by the Commission.</p> <p>The SDT has revised the language in Inclusion I2 to eliminate the circular reference to the ERO Statement of Compliance Registry Criteria. Inclusion I2 has been revised to read:</p> <p>I2 - Generating resource(s) (with gross individual <u>nameplate rating greater than 20 MVA</u> or gross <u>plant/facility</u> aggregate nameplate rating <u>greater than 75 MVA per the ERO Statement of Compliance Registry Criteria</u>) including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.</p>		
Hydro-Quebec TransEnergie	Yes	<p>In the Implementation plan, it is given only 24 months for compliance after applicable regulatory approval. Considering the possibility that a proposed transition plan may involve commissioning of long term projects, a provision for such situation should be made with longer delay.</p>
<p>Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT’s efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission’s concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. With that being said, the SDT believes that an implementation time period of 24 months is sufficient time to address the development of regional transition plans, address any necessary registration changes, file for exceptions through the Rules of Procedure exception process and address any required training. The SDT also acknowledges that the potential exists for extenuating circumstances that will need to be addressed through the regional transition plans.</p>		
Independent Electricity System Operator	Yes	<p>We wish to also express our support for phased approach proposed in the draft supplemental SAR. Development of the revised BES definition is an important and</p>

Organization	Yes or No	Question 11 Comment
		<p>complex undertaking. The product of this work is fundamental to establishing the applicability of NERC Reliability Standards. The issues identified for attention in Phase 2 of this project warrant careful investigation and as such allowing additional time to properly research and stakeholder them is justified. The draft Implementation Plan for the BES definition states “Compliance obligations for Elements included by the definition shall begin 24 months after the applicable effective date of the definition.” We are concerned that the stated implementation period may be insufficient time to (1) prepare and file exception requests and have these assessed; and (2) in cases where these exception requests are not approved, to develop and complete transition plans for newly identified BES Elements and Facilities, particularly where those plans require major investments for the procurement, installation and commissioning of additional equipment. We therefore propose the following alternative wording for the Implementation Plan: “Compliance obligations for elements included by the definition shall be evaluated and an implementation schedule established within 24 months.”</p> <p>Throughout the document various phrases are used to describe generating units/resource, viz. “generation resources”, “generating resources”, “generating unit” and “power producing resources”. Please review these to identify and address any possible inconsistencies.</p>
<p>Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT’s efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission’s concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. With that being said, the SDT believes that an implementation time period of 24 months is sufficient time to address the development of regional transition plans,</p>		

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<p>address any necessary registration changes, file for exceptions through the Rules of Procedure exception process and address any required training. The SDT also acknowledges that the potential exists for extenuating circumstances that will need to be addressed through the regional transition plans.</p> <p>The SDT has reviewed the applicable documents for inconsistencies related to the terms generating units/resource, viz. “generation resources”, “generating resources”, “generating unit” and “power producing resources”. The SDT has made the appropriate modifications to address any issues resulting from the inconsistencies.</p>		
Central Lincoln	Yes	<p>We note that the SAR for Phase 2, like that for Phase 1, does not include all entity types. We see no reason to maintain dual definitions for the different entity types, and the resulting confusion.</p> <p>In order to help meet the fast approaching January target date, Central Lincoln will be voting affirmative in this ballot, with the hope these comments will be addressed in Phase 2. If the ballot should fail, please address these comments in this phase. Thanks to the team for their good work.</p>
<p>Response: The draft SAR developed for Phase 2 of Project 2010-17 Definition of the Bulk Electric System, similar to the SAR for Phase 1 has purposefully omitted the Interchange Authority and the Purchase Selling Entity functional entities because these entities do not own or operate BES Elements. This conclusion does not necessitate the need for dual definitions; the definition of the BES does not impact the functional responsibilities of these entities.</p> <p>The SDT acknowledges and appreciates the continued support of the project. The SDT will consider all recommendations for modifications to the technical aspects of the definition for project inclusion at the appropriate time during Project 2010-17 Definition of the Bulk Electric System. This will allow the SDT, in conjunction with the NERC Technical Standing Committees, to develop analyses which will properly assess the threshold values and provide compelling justification for modifications to the existing values.</p>		
Utility Services, Inc.	Yes	<p>Utility Services would like to raise the question of whether SCRC III.3.d (the so-called "Generator Materiality" clause) is incorporated within the BES Inclusion Designations. One theory suggests that given that I2 is designed to deal with III.3.a and III.3.b and I3 reflects the need to incorporate black start generation; then generators under the materiality clause are not identified with the inclusion criteria. However, the second theory suggests that resources identified through I2 reflect the entire III.c.1-4 language</p>

Organization	Yes or No	Question 11 Comment
		of the SCRC, then the generators in the material clause are captured under I2. But if this is the case, then I3 is redundant to I2 and does not need to separately addressed.
<p>Response: The SDT has revised the language in Inclusion I2 to clearly identify the applicability of generating resources. The revised language is as follows:</p> <p>I2 - Generating resource(s) (with gross individual <u>nameplate rating greater than 20 MVA</u> or gross <u>plant/facility</u> aggregate nameplate rating <u>greater than 75 MVA per the ERO Statement of Compliance Registry Criteria</u>) including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.</p>		
FirstEnergy Corp.	Yes	FE supports the SDT's phased project approach which was well articulated in the NERC BES Definition Fact Sheet
LCRA Transmission Services Corporation	Yes	LCRA TSC supports the direction the standards drafting team taking with this project on the BES Definition and encourages further clarification as noted in these comments for proper application.
<p>Response: The SDT acknowledges and appreciates the continued support of the project.</p>		
National Grid	Yes	The proposed implementation period in the draft definition is too short. The new BES definition will likely result in increased operational costs during the implementation period that will ultimately be borne by customers. Implicit in the Commission's directive to change the BES definition is the Commission's determination that the benefits of this change, including consistency among the regions, outweigh the ratepayer impacts. However, National Grid remains concerned that the ratepayer impacts have not been fully taken into account. The implementation period is a tool that can allow NERC to meet the Commission's directive while softening any resulting ratepayer impacts. Implementation can and should be staged in order to mitigate and even out rate increases. National Grid suggests that the implementation period be flexible to allow entities who anticipate that large and/or expensive upgrades to the BES will be necessary to meet compliance can submit an alternate implementation plan to spread compliance and the associated rate changes over a longer period; we

Organization	Yes or No	Question 11 Comment
		<p>would suggest a minimum of 7 years. This time period was also recognized as a reasonable implementation time period in the recent TPL-001-2 for those portions of the standard that would also result in plans that would require siting, permitting and construction activities. This BES definition is likely to have similar impacts for some entities and allowing for an implementation timeline with the definition change enables achievement of the goals while recognizing the realities of constructing facilities in today's environment.</p>
<p>Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT's efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission's concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. With this in mind, the SDT acknowledges that the current BES definition has varying degrees of Regional application and has resulted in different conclusions on what is currently considered to be part of the BES. This inconsistency in the application and subsequent results were also identified by the Commission in Orders No. 743 and 743-A as a significant concern. The SDT acknowledges that by developing a bright-line definition coupled with the inconsistency in application of the current definition there is a potential for varying degrees of impact on Regions. With that being said, the SDT believes that an implementation time period of 24 months is sufficient time to address the development of regional transition plans, address any necessary registration changes, file for exceptions through the Rules of Procedure exception process and address any required training. The SDT also acknowledges that the potential exists for extenuating circumstances that will need to be addressed through the regional transition plans.</p> <p>In proposing a 24 month period in the Implementation Plan before the definition is applied in assessing compliance obligations, the SDT considered several activities that may require additional time to complete for an entity to become fully compliant. One of these activities is the development of transition plans in cases where significant issues may have been identified as potentially preventing an entity from meeting the compliance obligations within the 24 month period. These transition plans are to be developed by the Regional Entity and the Registered Entity in a cooperative manner to best address the identified concerns and establish an agreed to mitigation plan which results in full compliance by the Registered Entity.</p>		
Rochester Gas and Electric	Yes	If the definition and inclusions and exclusions are not sufficiently specific and clear,

Organization	Yes or No	Question 11 Comment
and New York State Electric and Gas		<p>stakeholders will flood NERC and RROs with interpretation requests and/or apply the definition and its inclusions or exclusions incorrectly. Explanatory figures with one-line diagrams should be developed and shared to illustrate the system configurations included and excluded in this BES Definition. This would be very helpful for definition clarity. This should be done as part of an “Application Guide” for the BES Definition - this has precedence in CIP-002 version 5. Attached is a sample set of one-line diagrams with interpretations based upon the inclusions and exclusions developed by Northeast Power Coordinating Council members for discussion purposes as an example, but note that there is not a uniform agreement on these diagrams based on the BES Definition as written, due to lack of clarity.</p>
<p>Response: The development of a guidance document which contains generic diagrams is a portion of the overall project that the SDT feels is necessary to ensure the consistent application of the BES definition going forward. Therefore the SDT has determined that such a document will be developed during Phase 2 of the project. The SDT thanks Rochester for the appended drawings but wishes to point out that the SDT does not agree with some of the depictions shown on the drawings thus pointing out the need for an eventual guidance document.</p>		
Central Maine Power Company	Yes	<p>If the definition and inclusions and exclusions are not sufficiently specific and clear, stakeholders will flood NERC and RROs with interpretation requests and/or apply the definition and its inclusions or exclusions incorrectly. Explanatory figures with one-line diagrams should be developed and shared to illustrate the system configurations included and excluded in a BES Definition. This would be very helpful for definition clarity. This should be done as part of an “Application Guide” for the BES Definition - there is precedence for an “Application Guide” with graphical support in CIP-002 version 5. A sample set of one-line diagrams with interpretations based upon the inclusions and exclusions developed by Northeast Power Coordinating Council members for discussion purposes is available as an example, but note that there is not a uniform agreement on these diagrams based on the BES Definition as written, due to lack of clarity.</p>

Organization	Yes or No	Question 11 Comment
Nebraska Public Power District	Yes	<p>Regarding the Local Network: Can there be some additional technical documents or examples provided for the most common configurations? The LN document is a good document to provide guidance, however the supply of common configuration examples would be very helpful in determining LN applicability. Examples where technical document with examples would be helpful: 1. If a breaker and a half source substation provides two parallel 115 kV lines feeding a load only substation from separate breaker and a half legs at the source substation, would the two parallel lines feeding the load be a LN distribution network feed since they are from the same source substation? 2. if there is a radial feed from a ring bus or a breaker and a half configuration to a radial load on a single line can the portion of the ring bus or breaker and a half bus between the line breakers and the breakers themselves at the source substation be excluded from the BES? 3. Can some legs of a 115kV breaker and a half substation be disgnated BES and the other legs be non BES depending on how the BES lines and loads tie in to the breaker and half legs? 4. In determining if elements are BES is there any consideration to fault locations and if these faults would interrupt BES flow on ring bus or breaker and a half configurations to help determine what is BES? If so, how many contingencies would be considered to interrupt BES flow?</p>
<p>Response: The development of a guidance document which contains generic diagrams is a portion of the overall project that the SDT feels is necessary to ensure the consistent application of the BES definition going forward. Therefore the SDT has determined that such a document will be developed during Phase 2 of the project.</p>		
Ameren	Yes	<p>a) We believe this revised definition is an improvement over the previous posting, a step in the right direction.</p> <p>b) The definition of the BES is referenced in several existing standards and the Statement of Compliance Registry Criteria. Our concern is how this revised definition will impact entity registration, i.e., how will the revised definition be integrated into the Compliance Registry Criteria. The implementation plan should include how the integration is going to occur. The Rules of Procedure exception process should be further defined or referenced in this definition.</p>

Organization	Yes or No	Question 11 Comment
		<p>c) See Question 1 response: The general concept is sound, but the Inclusion and Exclusion sections create so many circular references it is virtually impossible to take a definitive stance on whether an asset is included or excluded to the BES definition. Please revise the inclusion and exclusion criteria to give pinpointed statements that are final and do not reference other criteria, that then again reference other criteria</p>
<p>Response: a) The SDT acknowledges and appreciates the continued support of the project.</p> <p>b) The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT’s efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission’s concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. The BES definition will be utilized in conjunction with the ERO Statement of Compliance Registry Criteria to determine how entities will be registered. As the SDT progresses through phase 2 of the project, consideration will be given to establish a definition that will eventually be the definitive document to determine registration requirements.</p> <p>The Rules of Procedure exception process is referenced in the current draft version of the BES definition in a note which states: “Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process”.</p> <p>c) The SDT has made several revisions that address the clarity issues raised by commenter’s. For a detailed response concerning the specific clarifications made by the SDT, see the individual responses for the appropriate question. The application of the bright-line definition of the BES is explained in the detail in the Summary Consideration at the beginning of this question.</p>		
MEAG Power	Yes	<p>The definition of the BES is referenced in several existing standards and the Statement of Compliance Registry Criteria. We are concerned how this revised definition will impact entity registration, i.e., how will the revised definition be integrated into the Compliance Registry Criteria.</p> <p>The implementation plan should include how the integration is going to occur.</p>

Organization	Yes or No	Question 11 Comment
<p>Response: The responsibilities assigned to the SDT included the revision of the definition of BES contained in the NERC Glossary of Terms to improve clarity, to reduce ambiguity, and to establish consistency across all Regions in distinguishing between BES and non-BES Elements. The SDT’s efforts are directed at fulfilling their responsibilities and developing a definition that addresses the Commission’s concerns as expressed in the directives contained in Orders No. 743 and 743-A. To accomplish these goals, the SDT has pursued a definition that remains as consistent as possible with the existing definition, while not significantly expanding or contracting the current scope of the BES or driving registration or de-registration. The BES definition will be utilized in conjunction with the ERO Statement of Compliance Registry Criteria to determine how entities will be registered. As the SDT progresses through phase 2 of the project, consideration will be given to establish a definition that will eventually be the definitive document to determine registration requirements.</p> <p>The current Implementation Plan is determining the effective dates of the revised definition and the extended time period for meeting compliance obligations. The revised definition and the current ERO Statement of Compliance Registry Criteria will continue to be utilized in the same manner as today for registration determinations. In proposing a 24 month period in the Implementation Plan before the definition is applied in assessing compliance obligations, the SDT considered several activities that may require additional time to complete for an entity to become fully compliant. One of these activities is the development of transition plans in cases where significant issues may have been identified as potentially preventing an entity from meeting the compliance obligations within the 24 month period. These transition plans are to be developed by the Regional Entity and the Registered Entity in a cooperative manner to best address the identified concerns and establish an agreed to mitigation plan which results in full compliance by the Registered Entity.</p>		
Redding Electric Utility	Yes	
City of Redding	Yes	Redding is concerned that phase 2 will not produce significant rules or criteria that further define the BES; the desire to dedicate adequate resources is currently high since FERC has a looming deadline upon NERC, however without deadlines Redding believes that NERC will find it difficult to find the expertise or desire to finish the Project.
<p>Response: The NERC Standards Committee (SC) has approved Phase 2 of Project 2010-17 Definition of the Bulk Electric System as a ‘high priority’ project. Additionally, the SC has retained the existing SDT and committed to providing the necessary resources through the NERC Technical Committees in providing analysis of technical issues to be addressed in Phase 2 of the project. Furthermore, the</p>		

Organization	Yes or No	Question 11 Comment
<p>SDT will be developing a project schedule for Phase 2, subject to approval by the SC, which will identify the appropriate deadlines throughout the project.</p>		
<p>Indeck Energy Services</p>	<p>Yes</p>	<p>As acknowledged in the response to Question 12 comments on the previous BES definition, the BES definition is expansive compared to the definition of the BPS in the FPA Section 215. The inclusion of the limited Exclusions is an attempt to remedy the situation. However, the Exclusions need to include a fifth one that if, based on studies or other assessments, it can be shown that any transmission or generator element otherwise identified as part of the BES is not important to the reliability of the BPS, then that element should be excluded from the mandatory standards program. There has never been a study to show that elements, such as a 20 MW wind farm, 60 MW merchant generator (which operates infrequently in the depressed market) in a large BA (eg NYISO) or a radial transmission line connecting a small generator are important to the reliability of the BPS. They are covered by the mandatory standards program through the registration criteria. The BES Definition is the opportunity to permit an entity to demonstrate that an element is unimportant to reliability of the BPS. The SDT has identified a small subset of elements that it is willing to exclude. By their very nature, these exclusions dim the bright line that is the stated goal of this project. However, the SDT's foresight seems limited in its selections. Analytical studies are used to evaluate contingencies that could lead to the Big Three (cascading outages, instability or voltage collapse). Such a study showing that a transmission or generation element is bounded by the N-1 or N-2 contingency would exclude it from the BES definition. For example, in a BA with a NERC definition Reportable Disturbance of approximately 400 MW (eg NYISO), a 20 MW wind farm, 60 MW merchant generator or numerous other smaller facilities would be bounded by larger contingencies. It would take more than six 60 MW merchant generators with close location and common mode failure to even be a Reportable Disturbance, much less become the N-1 contingency for the Big Three. Exclusion E5 should be "E5 - Any facility that can be demonstrated to the Regional Entity by analytical study or other assessment to be unimportant to the reliability of the BPS (with periodic reports by</p>

Organization	Yes or No	Question 11 Comment
		the Regional Entity to NERC of any such assessments).”
<p>Response: The concerns of the commenter are addressed by the implementation of the Rules of Procedure exception process, which establishes the exclusion methods described by the commenter. The commenter’s suggested language leaves Regional discretion in the process, which is a cited concern requiring elimination by the Commission, in the Orders No. 743 and 743-A. The SDT has provided a reference to the Rules of Procedure exception process in the definition with the following language: “Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.”</p>		
<p>Kootenai Electric Cooperative Michigan Public Power Agency Clallam County PUD No.1 Blachly-Lane Electric Cooperative (BLEC) Coos-Curry Electric Cooperative (CCEC) Central Electric Cooperative (CEC) Clearwater Power Company (CPC) Snohomish County PUD Consumer's Power Inc. Douglas Electric Cooperative (DEC) Fall River Rural Electric Cooperative (FALL) Lane Electric Cooperative</p>	<p>No</p>	<p>KEC extends its thanks to the SDT and to the many industry entities that have actively participating in the Standards Development Process. KEC strongly supports the current draft and believes, with certain refinements discussed in our comments, that the definition will serve the industry and reliability regulators well for many years to come. In addition, as noted earlier, KEC is encouraged that the 20/75 MVA generation thresholds referred to in the NERC Statement of Compliance Registry Criteria, which have been relied upon by the SDT largely as a matter of necessity, will be reviewed and a technical assessment will be performed to identify the appropriate generation unit and plant size threshold to ensure a reliable North America. Finally, we understand that the Rules of Procedure Team will continue to move forward with developing an Exceptions Process that will complement the BES Definition and ensure that, to the extent the BES Definition is over-inclusive, facilities that should not be classified as BES will be excluded from the BES. Because the Exceptions Process is integral to a workable BES Definition, we support the current process for moving forward with the Exceptions Process and the BES Definition on parallel paths. We note that KEC specifically supports the changes made by the SDT in the “Effective Date” provision of the BES Definition, which shortens the effective date of the new definition to the beginning of the first calendar quarter after regulatory approval (as opposed to the first calendar quarter twenty-four months after regulatory approval), with a 24-month transition period. KEC supports this conclusion because it will allow entities seeking deregistration under the terms of the new BES definition to obtain the benefits of the new definition without an unreasonable wait, while allowing any entities that may be newly-classified as BES owners or operators sufficient time to</p>

Organization	Yes or No	Question 11 Comment
(LEC) Lincoln Electric Cooperative (LEC) Northern Lights Inc. (NLI) Okanogan County Electric Cooperative (OCEC) Pacific Northwest Generating Cooperative (PNGC) Raft River Rural Electric Cooperative (RAFT) West Oregon Electric Cooperative Umatilla Electric Cooperative (UEC)		come into compliance with newly-applicable Reliability Standards. KEC also supports the 24-month transition period for the reasons laid out by the SDT.
Response: The SDT acknowledges and appreciates the continued support of the project.		
PacifiCorp	No	It is absolutely imperative that phase II continue as proposed by the STD. If phase II was not proposed PacifiCorp would vote no on this proposal.
Response: Phase 2 will start as soon as Phase 1 is completed and the SDT resources are freed up. .		
Farmington Electric Utility System	No	
Portland General Electric Company	No	

Organization	Yes or No	Question 11 Comment
City of Austin dba Austin Energy	No	
Georgia System Operations Corporation	No	
Kansas City Power and Light Company	No	
Oncor Electric Delivery Company LLC	No	
Memphis Light, Gas and Water Division	No	We appreciate the work the drafting team has done in preparing this document.
Harney Electric Cooperative, Inc.	No	
Cowlitz County PUD	No	Cowlitz appreciates the opportunity to comment, and the hard work of the SDT.
PSEG Services Corp	No	
Massachusetts Department of Public Utilities	No	
Manitoba Hydro	No	
Long Island Power Authority	No	
The Dow Chemical Company	No	

Organization	Yes or No	Question 11 Comment
Puget Sound Energy	No	
NV Energy	No	
Z Global Engineering and Energy Solutions	No	
Consumers Energy	No	
City of Anaheim	No	
Chevron U.S.A. Inc.	No	
Metropolitan Water District of Southern California	No	
Duke Energy	No	
Idaho Falls Power	No	
Exelon	No	
Texas Industrial Energy Consumers	No	
Tri-State GandT	No	
ATC LLC	No	
Tacoma Power	No	Tacoma Power does not have any other concerns at this time. Thank you for consideration of our comments.

Organization	Yes or No	Question 11 Comment
Arizona Public Service Company	No	
Tri-State Generation and Transmission Assn., Inc. Energy Management	No	
Electricity Consumers Resource Council (ELCON)	No	
ACES Power Marketing Standards Collaborators	No	
Bonneville Power Administration	No	
SERC Planning Standards Subcommittee	No	The comments expressed herein represent a consensus of the views of the above-named members of the SERC EC Planning Standards Subcommittee only and should not be construed as the position of SERC Reliability Corporation, its board, or its officers”
NERC Staff Technical Review	No	
BGE	No	No comment.
Response: Thank you for your support.		

RFC Suggested changes to definition:

Bulk Electric System (BES): Unless modified by the lists shown below, all Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher. ~~This does not include facilities used in the local distribution of electric energy.~~ The BES includes:

Inclusions:

- I1 - Transformers with primary and secondary terminals operated at 100 kV or higher, ~~unless excluded under Exclusion E1 or E3 for local distribution or retail customers.~~
- I2 - Generating resources as described in the ERO Statement of Compliance Registry Criteria including the generator terminals through the high-side of the step-up transformer(s), connected at a voltage of 100 kV or above.
- I3 - Blackstart Resources and associated designated blackstart Cranking Paths operated at 100 kV or higher, identified in the Transmission Operator's restoration plan, regardless of voltage level.
- ~~I4 - Dispersed power producing resources as described in the ERO Statement of Compliance Registry Criteria utilizing a system designed primarily for aggregating capacity, connected at common point at a voltage of 100 kV or above.~~
- **I45** - Static or dynamic devices dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in **Inclusion I1**.

This definition does not include facilities used in the local distribution of electric energy or retail customers, which are:-

Exclusions:

- E1 - Radial systems: A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher from a single Transmission source originating with a single automatic interruption device and:
 - a) Only serves Load. Or,
 - b) Only includes generation resources not identified in **Inclusion I3**, with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,
 - c) Where the radial system serves Load and includes generation resources, not identified in **Inclusion I3**, with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

Note - A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.

- **E2** - A generating unit or multiple generating units that serve all or part of retail customer Load with electric energy on the customer's side of the retail meter if:
 - (i) the net capacity provided to the BES does not exceed 75 MVA, and
 - (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority.
- **E3** - Local Network (LN): A group of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the interconnected system. LN's emanate from multiple points of connection at 100 kV or higher to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The LN is characterized by all of the following:
 - a) Limits on connected generation: The LN and its underlying Elements do not include generation resources identified in ~~Inclusion~~-I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating);
 - b) Power flows only into the LN: The LN does not transfer energy originating outside the LN for delivery through the LN; and;
 - c) Not part of a Flowgate or transfer path: The LN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
- **E4** – Reactive Power devices owned and operated by the retail customer solely for its own use.

Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.

Pacificorp additional comments:

5. The SDT has revised the specific inclusions to the core definition in response to industry comments. Do you agree with Inclusion I4 (dispersed power)? If you do not support this change or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

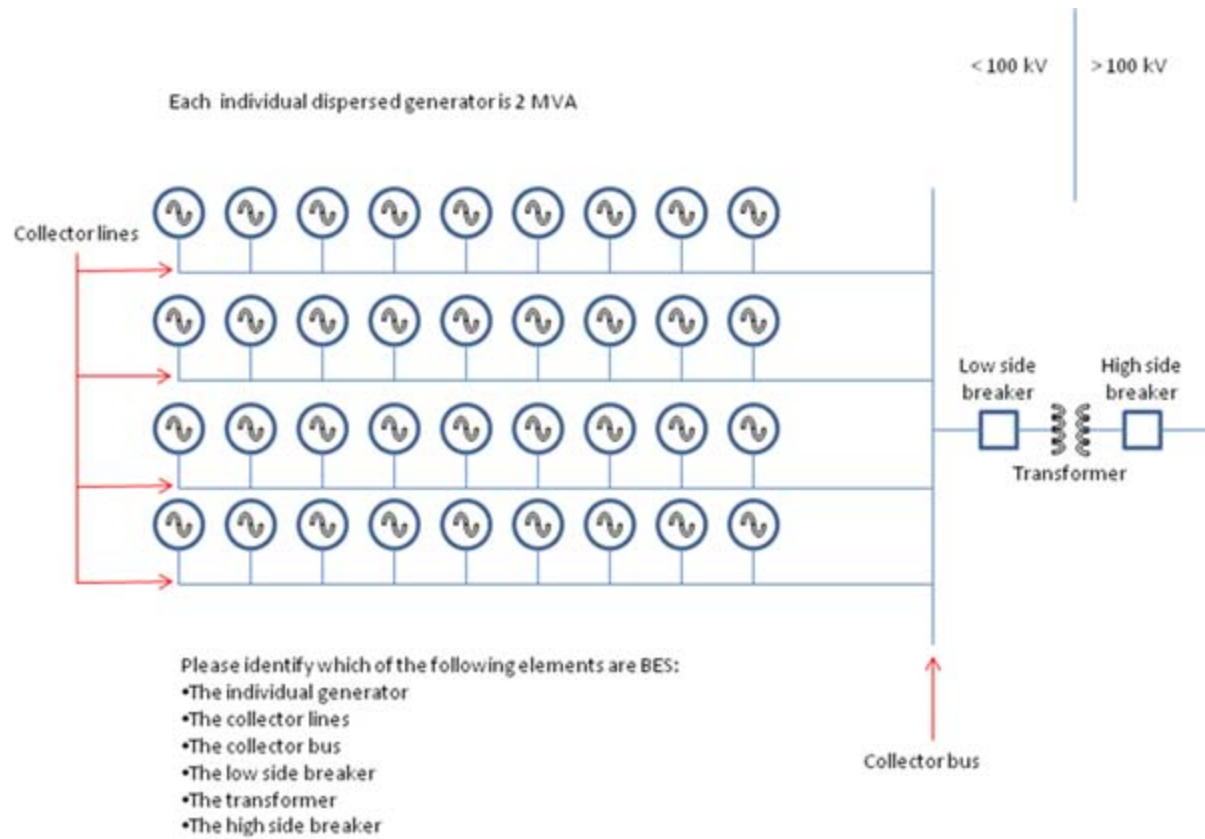
Yes:

No:

Comments: Setting a dispersed power producing resource limit to 75 MVA at a common point discriminates against single generator owners who own generators between 20 MVA and 75 MVA (inclusion I1), typically connected at a common point and requires such owners to be subject to additional standards that dispersed power producing owners are not required.

However, even with this concern, PacifiCorp supports the entire BES definition in its current form based on the timeframe under which the SDT is operating and with an emphasis based on a phase II SAR to address PacifiCorp's objections regarding generation levels.

Under the attached scenario, please identify which elements would be considered BES:



Rochester Diagrams: These diagrams were supplied by Rochester as examples and do not reflect the SDT's opinion of what is and isn't a BES Element.

Figure 1 (Inclusion I1):

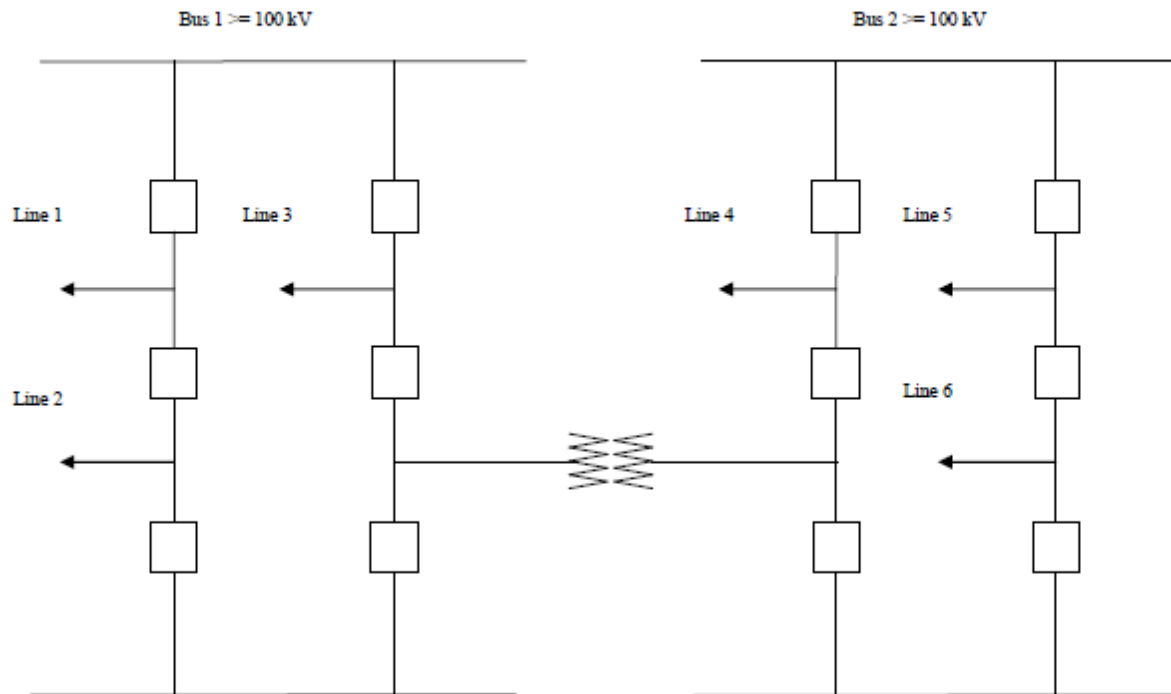


Figure 2 (Inclusion I1): **Non-BES in Red (Exclusions E1a, E1b, E1c)**

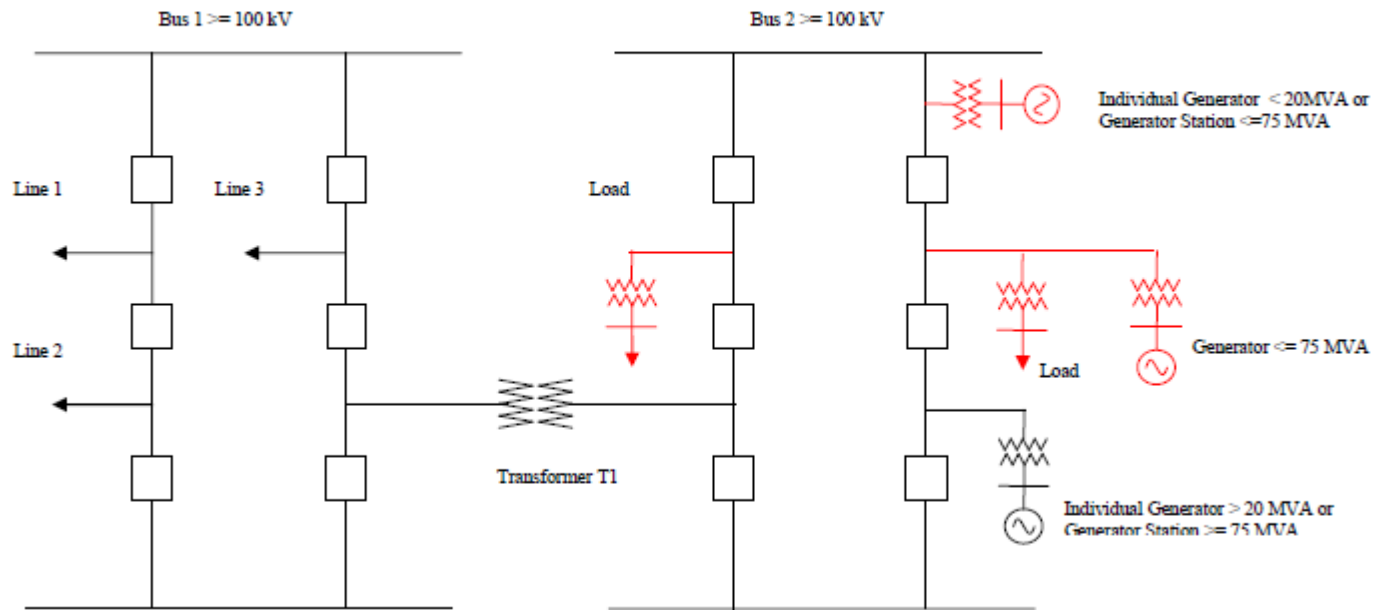


Figure 3 (Inclusion I2): **Non-BES in Red**

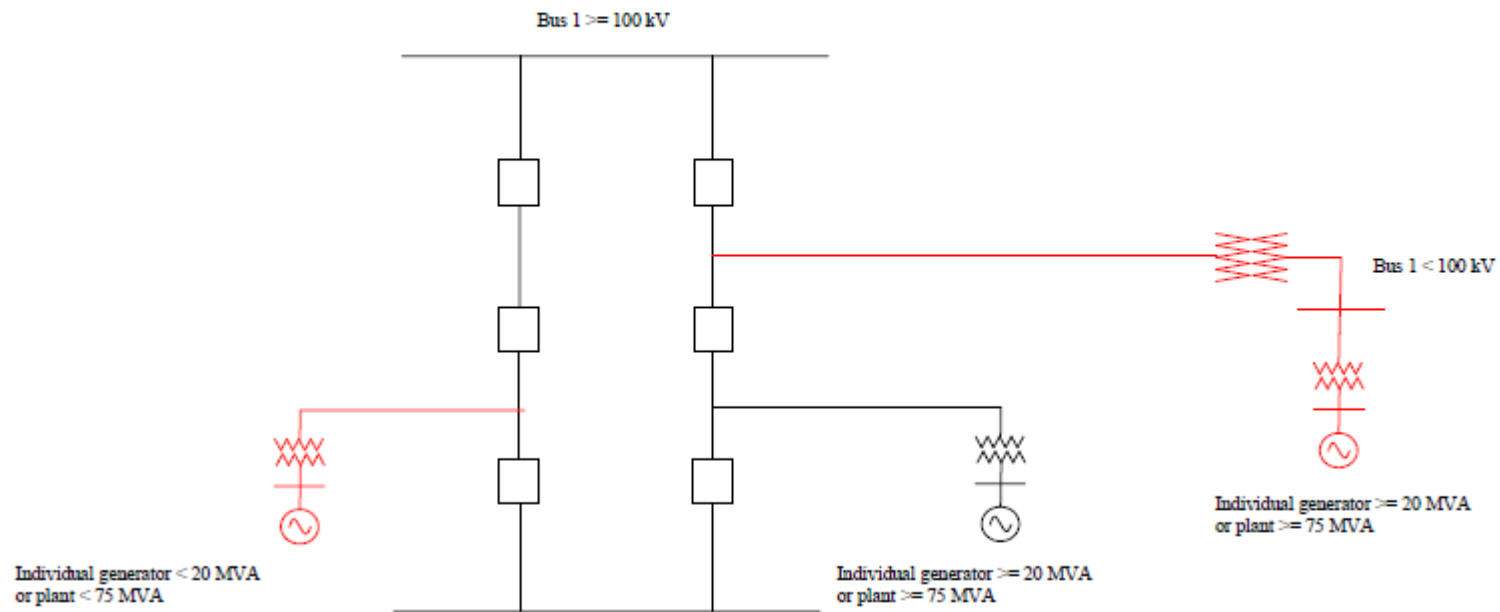


Figure 4 (Inclusion I3): **Non-BES in Red**

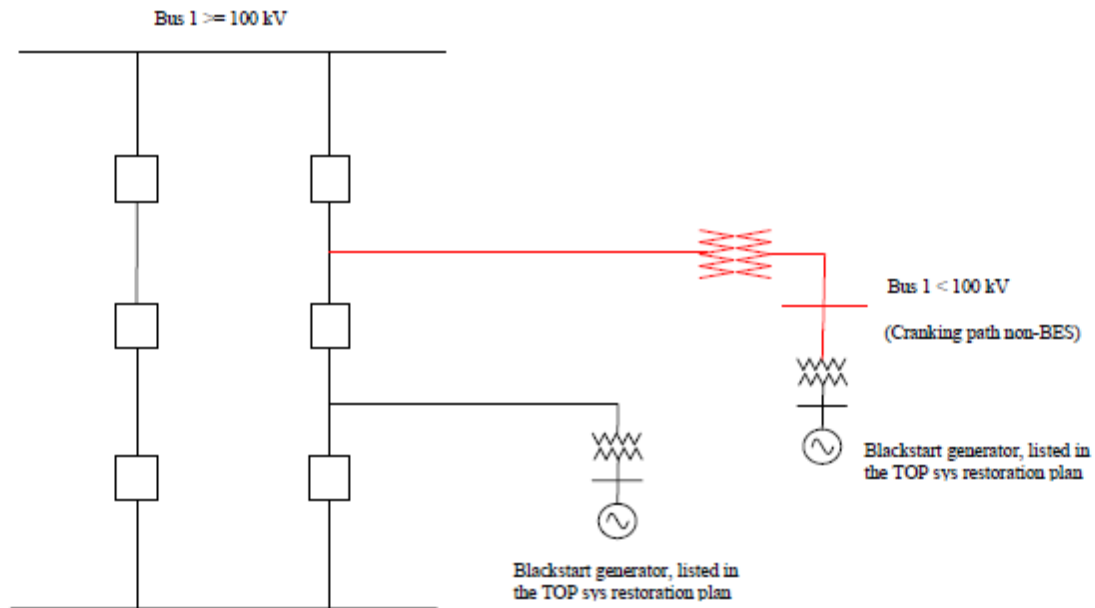


Figure 5 (Inclusion I4): Non-BES in Red

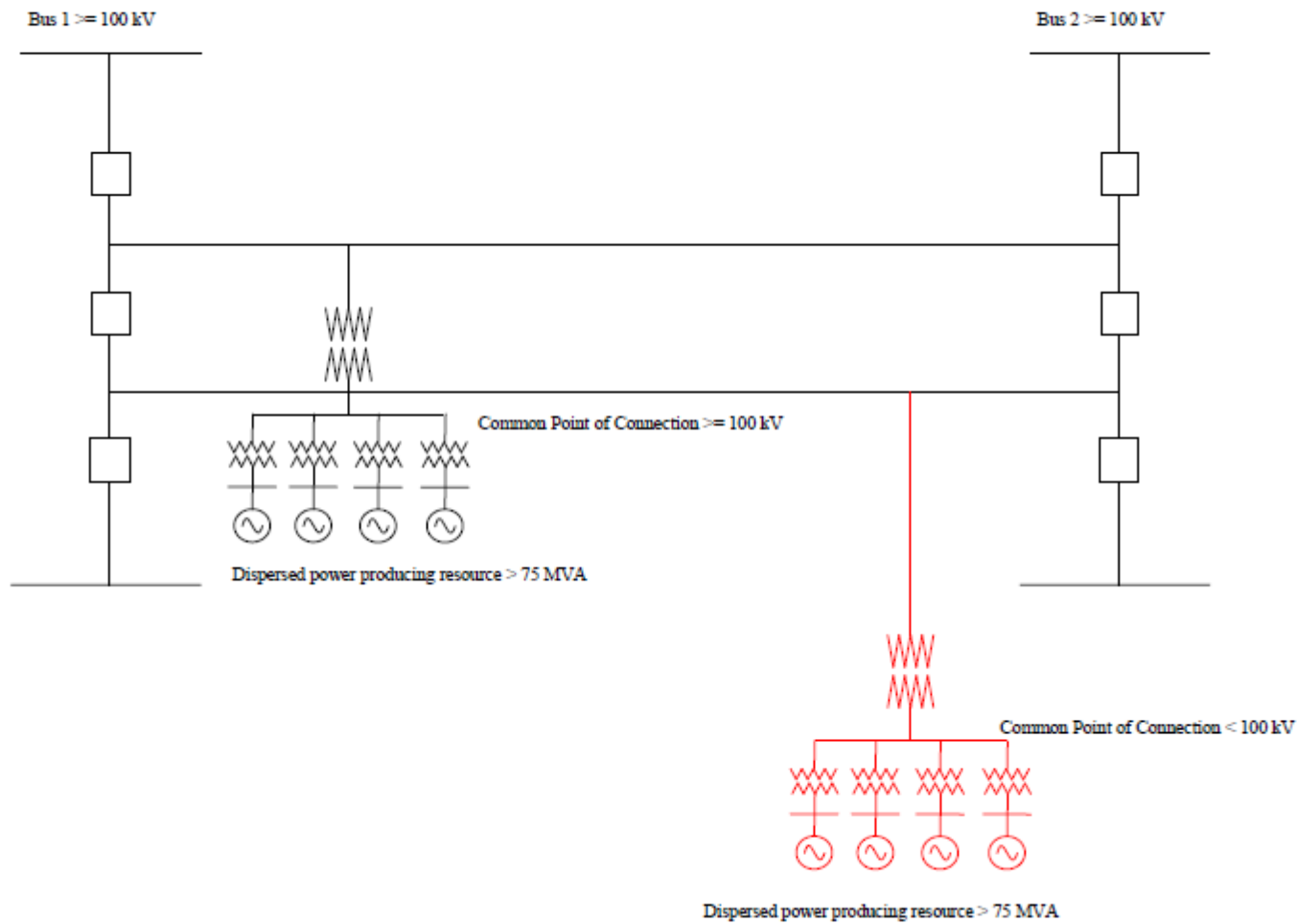


Figure 6 (Inclusion I5): **Non-BES in Red**

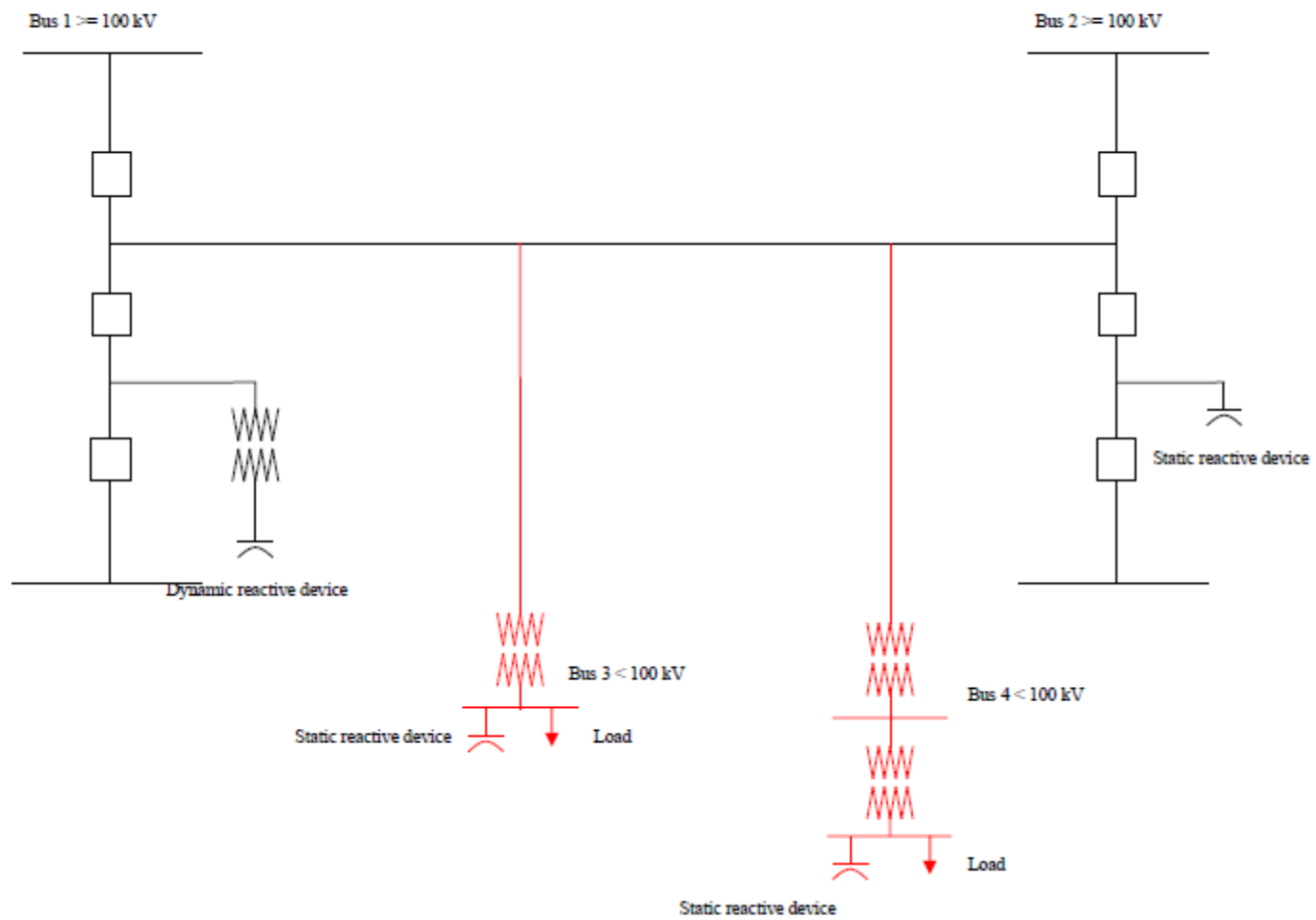


Figure 7 (Exclusion E1): **Non-BES in Red**

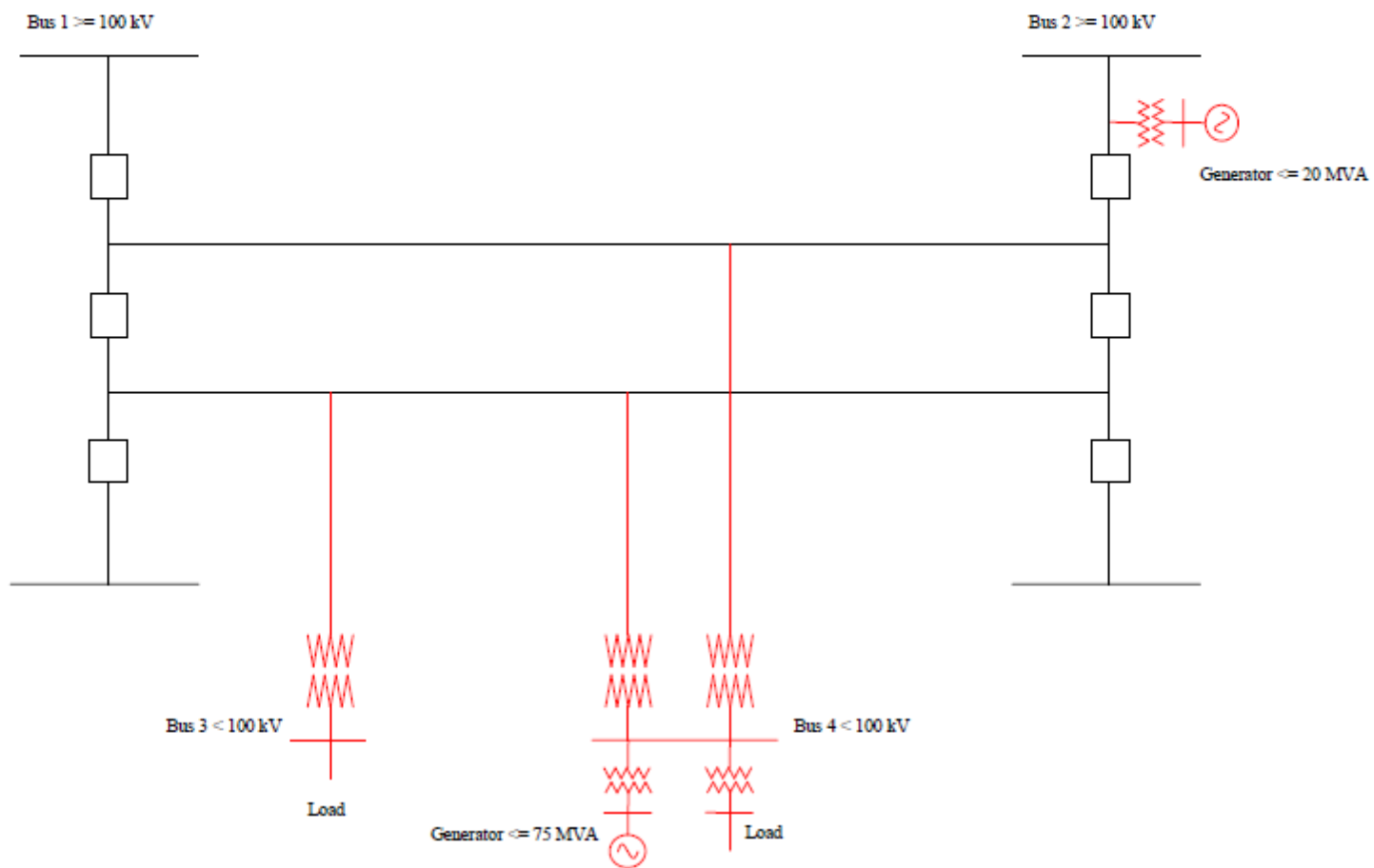


Figure 8b (Exclusion E1):
Single Point of Connection
Non-BES in Red

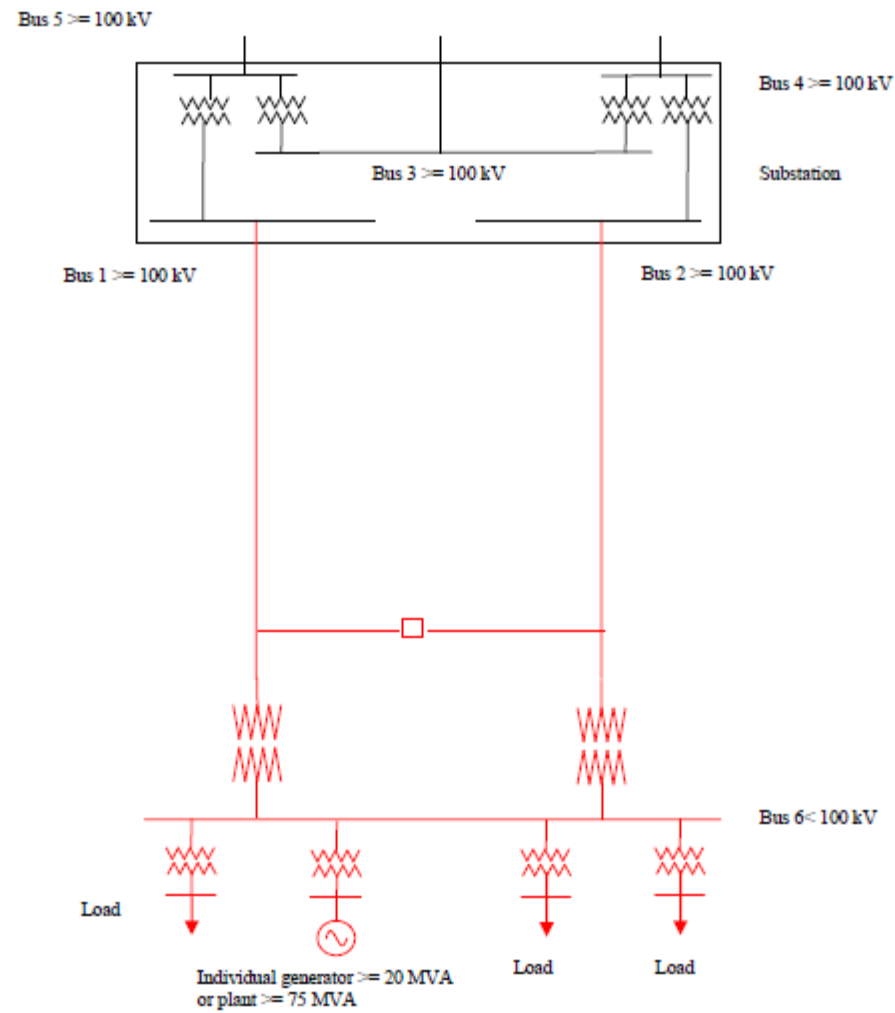


Figure 9 (Exclusion E2): **Non-BES in Red**

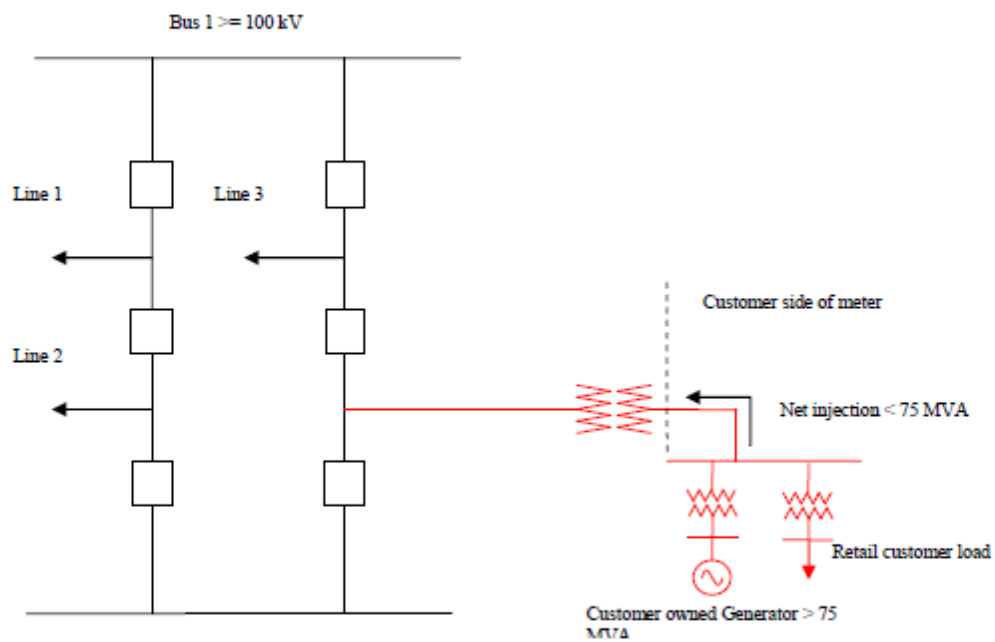


Figure 10 (Exclusion E3): **Non-BES in Red**

