NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Consideration of Comments

Project 2010-17 Definition of Bulk Electric System

The Project 2010-17 Drafting Team thanks all commenters who submitted comments on Draft 2, Phase 2 of the Bulk Electric System definition. The definition was posted for a 30-day formal comment period from August 6, 2013 through September 4, 2013. Stakeholders were asked to provide feedback on the definition and associated documents through a special electronic comment form. There were 65 sets of responses, including comments from approximately 153 different people from approximately 117 companies representing 9 of the 10 Industry Segments as shown in the table on the following pages.

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

Summary Consideration:

Inclusion I4. Based on industry comments, the SDT modified the language of Inclusion I4 to clearly reflect the SDT's intent to include individual dispersed power producing units (such as wind and solar units) that aggregate to greater than 75 MVA , along with the collector system that connects these units, from the point they aggregate to greater than 75 MVA to the point of connection at 100kV or higher. While the SDT recognizes that some stakeholders do not agree with the inclusion of individual dispersed power producing units, FERC Orders 773 and 773-A approved the inclusion of these individual units. No stakeholder has provided a technical rationale to support removal of the individual units from the definition. The SDT believes that stakeholder concerns about inclusion of individual units may be addressed by specifying the Facilities to which an individual standard applies within the Applicability section of that standard.

The revised language for inclusion I4 now reads:

> **I4** - Dispersed power producing resources that aggregate to a total capacity greater than 75 MVA (gross nameplate rating), and that are connected through a system designed primarily for delivering such capacity to a common point of connection at a voltage of 100 kV or above. Thus, the facilities designated as BES are:
>
> a) The individual resources, and
> b) The system designed primarily for delivering capacity from the point where those resources aggregate to greater than 75 MVA to a common point of connection at a voltage of 100 kV or above.

Implementation Plan. The SDT received comments by Canadian entities reflecting the fact that there are varying approaches for making NERC standards effective in North American jurisdictions. NERC Legal has worked with the Canadian Electricity Association to develop effective date language that

provides for the full range of approaches for making standards effective. This language does not change the time frame for implementation from the previous posting; it is simply intended to reflect the differences in regulatory regimes in various jurisdictions. In response to comments and based on the input from NERC legal, the language in the Implementation Plan was clarified as follows.

> This definition shall become effective on the first day of the second calendar quarter after the date that the definition is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the definition shall become effective on the first day of the first calendar quarter after the date the definition is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

White Paper on 50kV threshold: The SDT corrected minor typographical errors in the white paper on the 50 kV threshold.

Minority issues:

1. Several Canadian entities commented that the 50 kV threshold for loop analysis should not be applied to Canadian entities due to provincial regulations and because it is action taken to respond to a FERC directive. The SDT disagrees. Although the project to revise the definition of Bulk Electric System was undertaken in response to a FERC Order, the SDT believes the threshold in question provides an appropriate bright-line that supports continent-wide reliability of the BES based on physical principles, as demonstrated in the technical analysis in the white paper supporting the selection of the 50 kV threshold. Therefore, the SDT sees no reason for a reference to non-US Registered Entities.

2. Some comments suggested deleting Inclusion I4a concerning the inclusion of individual dispersed power producing resources. The proposed definition continues to include, through inclusion I4, individual dispersed power producing resources if those resources aggregate to a total value greater than 75 MVA. This inclusion treats dispersed power producing resources in a manner that is comparable to other non-dispersed power producing resources and is an approach that was accepted and emphasized by the Commission in Orders No. 773 & 773-A. The SDT has explored various options associated with dispersed power producing resources; however, none of the options explored provided an equal and effective approach to address the Commission's reliability concerns with these facilities. The SDT continues to believe that the best resolution to the industry's concerns is through clarification of the applicability of individual Reliability Standards and not a revision to the BES definition. Given these facts, the SDT is retaining Inclusion I4a but has revised the language of inclusion I4, based on industry comments, to provide greater clarity of the SDT's intent.

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission,

you can contact the Vice President and Director of Standards, Mark Lauby, at 404-446-2560 or at mark.lauby@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.[1]

[1] The appeals process is in the Standard Processes Manual: http://www.nerc.com/files/Appendix_3A_StandardsProcessesManual_20120131.pdf

Index to Questions, Comments, and Responses

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	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.	Greg Campoli	New York Independent System Operator	NPCC	2
3.	Sylvain Clermont	Hydro-Quebec TransEnergie	NPCC	1
4.	Ben Wu	Orange and Rockland Utilities	NPCC	1
5.	Gerry Dunbar	Northeast Power Coordinating Council	NPCC	10
6.	Mike Garton	Dominion Resources Services, Inc.	NPCC	5
7.	Michael Lombardi	Northeast Power Coordinating Council	NPCC	10
8.	Michael Jones	National Grid	NPCC	1
9.	Mark Kenny	Northeast Utilities	NPCC	1
10.	David Kiguel	Hydro One Networks Inc.	NPCC	1

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10

11.	Christina Koncz	PSEG Power LLC	NPCC	5
12.	Helen Lainis	Independent Electricity System Operator	NPCC	2
13.	Bruce Metruck	New York Power Authority	NPCC	6
14.	Randy MacDonald	New Brunswick Power Transmission	NPCC	9
15.	Donald Weaver	New Brunswick System Operator	NPCC	2
16.	Lee Pedowicz	Northeast Power Coordinating Council	NPCC	10
17.	Robert Pellegrini	The United Illuminating Company	NPCC	1
18.	Si-Truc Phan	Hydro-Quebec TransEnergie	NPCC	1
19.	David Ramkalawan	Ontario Power Generation, Inc.	NPCC	5
20.	Wayne Sipperly	New York Power Authority	NPCC	5
21.	Brian Robinson	Utility Services	NPCC	8
22.	Brian Shanahan	National Grid	NPCC	1

2.	Group	Louis Slade	Dominion	X		X		X	X			

	Additional Member	Additional Organization	Region	Segment Selection
1.	Connie Lowe	NERC Compliance Policy	RFC	5, 6
2.	Miek Garton	NERC Compliance Policy	NPCC	5, 6
3.	Randi Heise	NERC Compliance Policy	MRO	3
4.	Michael Crowley	Electric Transmission Compliance	SERC	1, 3
5.	William Bigdely	Electric Transmission Planning	SERC	1, 3
6.	Craig Crider	Electric Transmission Planning	SERC	1, 3
7.	Jeff Bailey	Nuclear		5
8.	Chip Humphrey	Power Generation		5

3.	Group	paul haase	seattle city light	X		X	X	X	X			

	Additional Member	Additional Organization	Region	Segment Selection
1.	pawel krupa	seattle city light	WECC	1
2.	dana wheelock	seattle city light	WECC	3
3.	hao li	seattle city light	WECC	4
4.	maike haynes	seattle city light	WECC	5
5.	dennis sismaet	seattle city light	WECC	6

4.	Group	Patrick Brown	NAGF Standards Review Team					X				

Additional Member	Additional Organization	Region	Segment Selection

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10
1. Allen Schriver	NextEra Energy Resources	5										
2. Steve Berger	PPL Susquehanna, LLC	5										
3. Terry Crawley	Southern Company Generation	5										
4. Pamela Dautel	IPR-GDF Suez Generation NA	5										
5. Dan Duff	Liberty Electric Power	5										
6. Katie Legates	American Electric Power	5										
7. Don Lock	PPL Generation, LLC	5										
8. Chris Schaeffer	Duke Energy	5										
9. Dana Showalter	E.ON Climate & Renewables	5										
10. William Shultz	Southern Company	5										
11. Mark Young	Tenaska, Inc	5										
5. Group	Brent Ingebrigtson	PPL NERC Registered Affiliates	X		X		X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Brenda Truhe	PPL Electric Utilities Corporation	RFC	1
2.	Annette Bannon	PPL Susquehanna, LLC	RFC	5
3.		PPL Montana, LLC	WECC	5
4.		PPL Generation, LLC	RFC	5
5.	Elizabeth Davis	PPL EnergyPlus, LLC	MRO	6
6.			NPCC	6
7.			RFC	6
8.			SERC	6
9.			SPP	6
10.			WECC	6

6. Group	Jim Kelley	SERC Planning Standards Subcommittee	X				X					

	Additional Member	Additional Organization	Region	Segment Selection
1.	Philip Kleckey	SCE&G	SERC	1, 3, 5, 6
2.	John Sullivan	Ameren	SERC	1, 3
3.	William Berry	OMU	SERC	3
4.	Bob Thomas	IMEA	SERC	4

7. Group	Robert Rhodes	SPP Standards Review Group		X								

Additional Member	Additional Organization	Region	Segment Selection

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10
1. John Boshears	City Utilities of Springfield	SPP	1, 4									
2. Allan George	Sunflower Electric Power Corporation	SPP	1									
3. Jonathan Hayes	Southwest Power Pool	SPP	2									
4. Tara Lightner	Sunflower Electric Power Corporation	SPP	1									
5. Jerry McVey	Sunflower Electric Power Corporation	SPP	1									
6. James Nail	City of Independence, MO	SPP	3									
7. Kevin Nincehelser	Westar Energy	SPP	1, 3, 5, 6									
8. Valerie Pinamonti	American Electric Power	SPP	1, 3, 5									
9. Mahmood Safi	Omaha Public Power District	MRO	1, 3, 5									
10. Sean Simpson	Board of Public Utilities, City of McPherson	SPP	NA									
11. Don Taylor	Westar Energy	SPP	1, 3, 5, 6									
12. Mark Wurm	Board of Public Utilities, City of McPherson	SPP	NA									
8. Group	Frank Gaffney	Florida Municipal Power Agency	X		X	X	X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Timothy Beyrle	City of New Smyrna Beach	FRCC	4
2.	Jim Howard	Lakeland Electric	FRCC	3
3.	Greg Woessner	Kissimmee Utility Authority	FRCC	3
4.	Lynne Mila	City of Clewiston	FRCC	3
5.	Cairo Vanegas	Fort Pierce Utility Authority	FRCC	4
6.	Randy Hahn	Ocala Utility Services	FRCC	3
7.	Stanley Rzad	Keys Energy Services	FRCC	3

9. Group	Joe Tarantino	BANC & SMUD	X		X	X	X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Kevin Smith	Balancing Authority Northern California	WECC	1

10. Group	Jamison Dye	Bonneville Power Administration	X		X		X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Lorissa Jones	Transmission Reliability Program	WECC	1
2.	John Anasis	Technical Operations	WECC	1
3.	Berhanu Tesema	Transmission Planning	WECC	1
4.	Chuck Matthews	Transmission Planning	WECC	1

11. Group	Colby Bellville	Duke Energy	X		X		X	X				

Group/Individual	Commenter	Organization	Registered Ballot Body Segment									
			1	2	3	4	5	6	7	8	9	10

	Additional Member	Additional Organization	Region	Segment Selection
1.	Doug Hils		RFC	1
2.	Lee Schuster		FRCC	3
3.	Dale Goodwine		SERC	5
4.	Greg Cecil		RFC	6

12.	Group	David Dockery	Associated Electric Cooperative, Inc. - JRO00088	X		X		X	X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Central Electric Power Cooperative		SERC	1, 3
2.	KAMO Electric Cooperative		SERC	1, 3
3.	M & A Electric Power Cooperative		SERC	1, 3
4.	Northeast Missouri Electric Power Cooperative		SERC	1, 3
5.	N.W. Electric Power Cooperative, Inc.		SERC	1, 3
6.	Sho-Me Power Electric Cooperative		SERC	1, 3

13.	Group	Ben Engelby	ACES Standards Collaborators						X				

	Additional Member	Additional Organization	Region	Segment Selection
1.	John Shaver	Arizona Electric Power Cooperative/Southwest Transmission Cooperative, Inc.	WECC	1, 4, 5
2.	Shari Heino	Brazos Electric Power Cooperative, Inc.	ERCOT	1, 5
3.	Mike Brytowski	Great River Energy	MRO	1, 3, 5, 6
4.	Bob Solomon	Hoosier Energy Rural Electric Cooperative, Inc.	RFC	1
5.	Mark Ringhausen	Old Dominion Electric Cooperative	SERC	3, 4
6.	Bill Hutchison	Southern Illinois Power Cooperative	SERC	1
7.	Megan Wagner	Sunflower Electric Power Corporation	SPP	1

14.	Individual	Ashley Stringer	Oklahoma Municipal Power Authority				X						
15.	Individual	Emily Pennel	Southwest Power Pool Regional Entity										X
16.	Individual	Janet Smith, Regulatory Affairs Supervisor	Arizona Public Service Company	X		X		X	X				
17.	Individual	Bob Steiger	Salt River Project	X		X		X	X				
18.	Individual	William Gallagher	Transmission Access Policy Study Group	X		X	X	X	X				

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
19.	Individual	Wayne Johnson	Southern Company	X		X		X	X				
20.	Individual	Kelly Cumiskey	PacifiCorp	X		X		X	X				
21.	Individual	Thomas Breene	Wisconsin Public Service Corporation			X	X	X	X				
22.	Individual	Joseph DePoorter	Madison Gas and Electric Company			X	X	X	X				
23.	Individual	David Thorne	Pepco Holdings Inc	X		X							
24.	Individual	Scott Bos	Muscatine Power and Water	X		X		X	X				
25.	Individual	John Seelke	Public Service Enterprise Group	X	X			X	X				
26.	Individual	Scott Berry	Indiana Municipal Power Agency				X						
27.	Individual	Barbara Kedrowski	Wisconsin Electric Power Company			X	X	X					
28.	Individual	John Bee	Exelon and its' affiliates	X		X		X					
29.	Individual	Bob Thomas	Illinois Municipal Electric Agency				X						
30.	Individual	Gary Kruempel, Terry Harbour, Tom Mielnik	MidAmerican Energy Company	X		X							
31.	Individual	Shaun Moran, Lynn Schmidt, Joe O'Brien, Ed Mackowicz,	NIPSCO	X		X		X	X				
32.	Individual	Michael Falvo	Independent Electricity System Operator		X								
33.	Individual	David Jendras	Ameren	X		X		X	X				
34.	Individual	Chifong Thomas	BrightSource Energy, Inc.					X					
35.	Individual	Amber Anderson	East Kentucky Power Cooperative	X		X		X					
36.	Individual	Thomas Foltz	American Electric Power	X		X		X	X				
37.	Individual	William Waudby	Consumers Energy Company			X	X	X					
38.	Individual	Kenneth A Goldsmith	Alliant Energy				X						
39.	Individual	Nazra Gladu	Manitoba Hydro	X		X	X	X					
40.	Individual	Si Truc PHAN	Hydro-Quebec TransEnergie	X									
41.	Individual	Kayleigh Wilkerson	Lincoln Electric System	X		X		X	X				
42.	Individual	Don Schmit	Nebraska Public Power District	X		X		X					

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
43.	Individual	Larry Watt	Lakeland Electric	X									
44.	Individual	Bret Galbraith	Seminole Electric Cooperative, Inc.			X	X	X	X				
45.	Individual	Wayne Sipperly	New York Power Authority	X		X		X	X				
46.	Individual	Mahmood Safi	Omaha Public Power District	X		X		X	X				
47.	Individual	Don Streebel	Idaho Power Company	X									
48.	Individual	Diane Barney	NARUC									X	
49.	Individual	Thomas Dvorsky	New York State Department of Public Service									X	
50.	Individual	Patrick Farrell	Southern California Edison Company	X		X		X	X				
51.	Individual	Scott Langston	City of Tallahassee	X									
52.	Individual	Oliver Burke	Entergy Services, Inc.	X									
53.	Individual	Terry Volkmann	Volkmann Consulting, Inc								X		
54.	Individual	Ryan Walter	Tri-State Generation and Transmission Association, Inc.	X		X		X					
55.	Individual	Alice Ireland	Xcel Energy	X		X		X	X				
56.	Individual	Russel Mountjoy	MRO										X
57.	Individual	David Kiguel (by Ayesha Sabouba)	Hydro One	X									
58.	Individual	Andrew Z. Pusztai	American Transmission Company, LLC	X									
59.	Individual	John Robertson	First WInd	X				X					
60.	Individual	Anthony Jablonski	ReliabilityFirst										X
61.	Individual	Michael Goggin	American Wind Energy Association								X		
62.	Individual	Dan Inman	Minnkota Power Cooperative	X									
63.	Individual	Richard Vine	California Independent System Operator		X								
64.	Individual	Spencer Tacke	Modesto Irrigation District			X	X		X				
65.	Individual	Kenn Backholm	Public Utility District No.1 of Snohomish County	X		X	X	X	X			X	

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

Summary Consideration: The SDT thanks you for following the guidelines and will consider your comments as supporting the positions of the entities shown here.

Organization	Supporting Comments of "Entity Name"
Lakeland Electric	Lakeland Electric supports the Florida Municipal Power Agency comments.
New York Power Authority	LPPC
seattle city light	Sacramento Municipal Utility District (SMUD)
Entergy Services, Inc.	SERC OC Review Group comments
Oklahoma Municipal Power Authority	Transmission Access Policy Study (TAPS) Group
Illinois Municipal Electric Agency	Transmission Access Policy Study Group (TAPS) and SERC OC Review Group

1. **The SDT has separated Inclusion I2 and I4 to provide the clarity requested by the industry in the first posting comments. In addition, again in response to industry comments, the SDT has added language to Inclusion I4b to identify the equipment from an aggregation point of greater than 75 MVA to the connection to the BES. Do you agree with these changes? If not, please provide technical rationale for your disagreement along with suggested language changes.**

Summary Consideration: The proposed definition continues to include individual dispersed power producing resources, through Inclusion I4, if those resources aggregate to a total value greater than 75 MVA. Inclusion I4 treats dispersed power producing resources in a manner that is comparable to other non-dispersed power producing resources and is an approach that was accepted and emphasized by the Commission in Orders No. 773 & 773-A. The SDT has explored various options associated with dispersed power producing resources; however, none of the options explored provided an equal and effective approach to address the Commission's reliability concerns with these facilities. The SDT continues to believe that the best resolution to the industry's concerns about inclusion of individual dispersed power-producing units is through clarification of the applicability of individual Reliability Standards and not a revision to the BES definition. Given these facts, the SDT is retaining Inclusion I4a but has revised the language of inclusion I4, based on industry comments, to provide greater clarity of the SDT's intent. The revised language is as follows:

I4 - Dispersed power producing resources that aggregate to a total capacity greater than 75 MVA (gross nameplate rating), and that are connected through a system designed primarily for delivering such capacity to a common point of connection at a voltage of 100 kV or above. Thus, the facilities designated as BES are:

a) The individual resources, and
b) The system designed primarily for delivering capacity from the point where those resources aggregate to greater than 75 MVA to a common point of connection at a voltage of 100 kV or above.

Organization	Yes or No	Question 1 Comment
NAGF Standards Review Team	No	1. Replace the current ballot's draft I4 language:"I4 - Dispersed power producing resources consisting of: a) Individual resources that aggregate to a total capacity greater than 75 MVA (gross nameplate rating), and b) The system designed primarily for delivering capacity from the point where those resources aggregate to greater than 75 MVA to a common point of connection at a voltage of 100 kV or

Organization	Yes or No	Question 1 Comment
		above."With the proposed comment I4 language:"I4 - Dispersed power producing resource projects, or portion(s) thereof, designed primarily for supplying wholesale power (e.g., a wind farm, or solar farm) that aggregate to a total capacity greater than 75 MVA (gross nameplate rating) at a common point of connection to a voltage of 100 kV or above consisting of: a) The individual resources, and b) The delivery system designed primarily for delivering capacity from i) the point where those resources aggregate to the total connected capacity; to ii) a common point of connection at a voltage of 100 kV or above." Rationale: o "projects ... designed primarily for wholesale" - nothing in this posted version distinguishes between generation for retail (behind the meter) and generation for wholesale. As such rooftop PVs, generator assistance programs, or other similar small power-producing incentives, might be otherwise interpreted as included under I4. o "(e.g., a wind farm, or solar farm)" - Because the SDT's I4 text-box will be dropped from the final version, we believe this inclusion is necessary to retain an illustration of the intent. o I4.a - While imposing BES Standards of governance toward management of individual small units is counter-productive and administratively burdensome, we do agree that differentiating applicability to various Standards should be specified through those Standards. To that end, we are dedicated to drafting and vigorously promoting a SAR to appropriately address dispersed power producing resource applicability within individual NERC Standards. In keeping with that commitment it is suggested that I4a be deleted from the BES definition. This would avoid temporarily imposing inappropriate requirements that would later have to be eliminated by modification of individual standard requirements. A better approach would be to add requirements where needed for individual small

Organization	Yes or No	Question 1 Comment
		units. o I4.b - We believe our proposed wording: o Appropriately addresses impact to BES reliability. Rather than offering some illusion for reliability at a lesser impact level, this proposal recognizes that reliability rests in TPs, BAs, RCs, and TOPs responsibly addressing the single greatest contingency arising from, and the behavior of, dispersed power producing resources in the aggregate. Enforcing governance for management to any lesser level is not productive and has no true value to BES reliability. o Better aligns with FERC's Determination within Order 770 paragraph 114. o Aligns with FERC's Determination for I2 within Order 773 paragraph 91. o Aligns with FERC's Determination for I2 within Order 773 paragraph 92.
Associated Electric Cooperative, Inc. - JRO00088	No	FOR: Inclusion I4REPLACE: Complete wording of I4WITH: "I4 - Dispersed power producing resource projects , or portion(s) thereof, designed primarily for supplying wholesale power (e.g., a wind farm, or solar farm) that aggregate to a total capacity greater than 75 MVA (gross nameplate rating) at a common point of connection to a voltage of 100 kV or above consisting of:a) The individual resources, and b) The delivery system designed primarily for delivering capacity from i) the point where those resources aggregate to the total connected capacity; to ii) a common point of connection at a voltage of 100 kV or above."RATIONALE: (1) o "projects ... designed primarily for wholesale" - nothing in this posted version distinguishes between generation for retail (behind the meter) and generation for wholesale. As such roof-top PVs, generator assistance programs, or other similar small power-producing incentives, might be otherwise

Organization	Yes or No	Question 1 Comment
		interpreted as included under I4. (2) o "(e.g., a wind farm, or solar farm)" - Because the SDT's I4 text-box will be dropped from the final version, we believe this inclusion is necessary to retain an illustration of the intent. (3) o I4.a - While imposing BES Standards of governance toward management of individual small units is counter-productive and administratively burdensome, we do agree that differentiating applicability to various Standards should be specified through those Standards. To that end, we are dedicated to drafting and vigorously promoting a SAR to appropriately address dispersed power producing resource applicability within individual NERC Standards. (4) o I4.b - We believe our proposed wording:o Appropriately addresses impact to BES reliability. Rather than offering some illusion for reliability at a lesser impact level, this proposal recognizes that reliability rests in TPs, BAs, RCs, and TOPs responsibly addressing the single greatest contingency arising from, and the behavior of, dispersed power producing resources in the aggregate. Enforcing governance for management to any lesser level is not productive and has no true value to BES reliability.o Better aligns with FERC's Determination within Order 770 paragraph 114.o Aligns with FERC's Determination for I2 within Order 773 paragraph 91.o Aligns with FERC's Determination for I2 within Order 773 paragraph 92. ALTERNATE APPROACH:In the consideration of comments, the drafting team indicated that a SAR might be submitted to appropriately adjust GO and GOP standards requirements for dispersed generating facilities. We agree that is the approach to undertake. In order to support this approach, I4 should be deleted to avoid the situation where inappropriate provisions could become effective and compliance become difficult or impossible for entities until work is completed through the SAR to adjust those requirements. In the filing with FERC this procedure could be explained so that FERC can be assured that their approval of inclusion of dispersed generating facilities in the phase I order will be appropriately implemented. AECI also supports NAGF's recommendation for the

Organization	Yes or No	Question 1 Comment
		SDT with regard to I2 changes.
Response: The SDT does not believe introducing the term 'wholesale' into the definition provides any additional clarity. No change made. The proposed Inclusion I4 treats dispersed power producing resources comparably to the non-dispersed power producing resources in Inclusion I2 and is consistent with the established values shown in the Statement of Compliance Registry Criteria. The threshold values shown have been accepted by the Commission and endorsed by the Planning Committee. No change made.		
American Electric Power	No	AEP does not agree with the premise that BES elements (measured for compliance) should be as granular as the individual dispersed power resource. We do not see the reliability benefit of tracking all of the compliance elements for individual wind turbines when the focus should be placed on the aggregate of the facilities. Does the RC want to be notified of an outage of each individual wind turbine in real-time, or a loss of significant portion of the wind farm? If we are not careful, we will have entities at these resources and others monitoring them (BAs, TOPs, RCs) focusing on minor issues that will distract from more relevant reliability needs. We believe it would be beneficial and provide more clarity if the verbiage "aggregate to a total capacity greater than 75 MVA (gross nameplate rating) at a common point of connection to a voltage of 100 kV or above" were moved to the beginning of the I4 paragraph rather than as a sub-bullet. For example, "Dispersed power producing resources that aggregate to a total capacity greater than 75 MVA....".We appreciated the development of the diagram to explain the scenario. We encourage the team to continue to provide these illustrations to clarify the intent and the application.
Alliant Energy	No	Alliant Energy agrees with the changes to I2 and I4b, however, firmly believe I4a must be deleted. There is no way an individual dispersed generator in the range

Organization	Yes or No	Question 1 Comment
		of <1 MW to 5 MW will have any reliability impact on the reliability of the BES. In addition, in the MRO footprint alone there would be ~7500 generators added to the list of BES equipment, which would be extremely costly to manage from both the Registered Entity and Regional Entity's perspective.
Lincoln Electric System	No	Although appreciative of the drafting team's efforts, LES is concerned with the proposed inclusion of the individual dispersed power producing resources as part of the Bulk Electric System versus the point at which the resources aggregate to a capacity greater than 75MVA. As currently proposed, the burden would be on the registered entities to either seek multiple exclusions through the BES Exception Process or else race to add numerous BES Elements to existing programs, processes and maintenance schedules to ensure compliance with Reliability Standards such as PRC-005-1.1b, PRC-004-2a, FAC-001, etc. To prevent broad sweeping changes to existing compliance requirements without sufficient technical justification, LES recommends Inclusion I4a be removed altogether and I4b be retained. In the event a reliability-related need is identified in the future pertaining to the individual resources, LES suggests that revisions be made to those standards deemed applicable.
American Transmission Company, LLC	No	ATC appreciates the changes the SDT made to I4, however, believe the wording of I4a still does not adequately communicate the desired treatment of small dispersed power producing resources as an aggregate, rather than an individual basis, when the aggregate capacity is 75 MVA or more. To address this issue, we suggest the following wording change to I4a, "Aggregate of dispersed resources when they aggregate to a total capacity of greater than 75 MVA (gross nameplate rating, and"

Organization	Yes or No	Question 1 Comment
Minnkota Power Cooperative	No	During the 8/21/2013 webinar the presenter emphasized the critical nature of the aggregate generation of dispersed power producing resources to the reliability of the interconnected transmission system. I4 subpart (a) is inconsistent with the stated critical nature of the aggregate generation. The presenter also indicated that standards that apply to GO/GOP associated standards should be addressed via a SAR to correct reliability standards that impose a burden on the industry without providing a significant benefit to reliability. The appropriate manner to address this discrepancy is not to submit a SAR to modify the standards that would inappropriately invoke requirements on individual generators due to their inclusion in the BES definition, but to eliminate I4 subpart (a) and modify standards in the future to address any reliability issues that may need the imposition of requirements for individual dispersed power producing resources. The following language is suggested for a revised I4:I4 - Dispersed power producing resources consisting of the system designed primarily for delivering capacity from the point where those resources aggregate to greater than 75 MVA to a common point of connection at a voltage of 100 kV or above. Proceeding in this manner will avoid temporary inappropriate standards requirements being applied to individual dispersed power resources and still address the individual resources in standards where needed to support reliability.
First WInd	No	First Wind supports the separation of I2 and I4 and the 75 MVA threshold for aggregating facilities in Inclusion I4 (b), and the exclusion of collector system components that aggregate less than 75 MVA of generation, First Wind disagrees with the inclusion of small individual dispersed generators per Inclusion I4 (a). This problem can be resolved by either removing I4 (a) in its entirety or revising it to clarify that the only BES-relevant standards that apply to individual dispersed

Organization	Yes or No	Question 1 Comment
		generators are those that affirmatively state that they apply to dispersed generators. While individual generators were included in the Phase I BES definition, Phase II of this project provides an opportunity to refine and improve the BES definition such that industry compliance efforts are focused on activities that will truly have a beneficial impact on reliability. Including individual dispersed generators in the BES definition will cause a major diversion away from efforts that improve BES reliability, as entities are forced to simultaneously seek relief via the Exception Process to exclude individual dispersed generators that are insignificant from a reliability standpoint from their programs while at the same time attempting to modify their existing compliance programs to accommodate individual dispersed generators in the event that the exception applications are not approved. Regions will be faced with a huge backlog of exception requests for small distributed generators while Generator Owners with dispersed generating assets struggle to implement reliability standards that were never drafted with the intent of being applicable to anything but large scale generating stations. As a result, proceeding with the BES definition as currently drafted would actually impair, rather than improve, bulk electric system reliability. First Wind supports the exclusion of collector system components that aggregate less than 75 MVA, it seems inconsistent that a 1-2 MVA individual dispersed generator is deemed significant to reliability but the equipment that is utilized to connect multiple dispersed generators totaling up to 75 MVA is deemed not significant to reliability. The logic that led to the exclusion of collector system equipment that aggregates less than 75 MVA, as well as the logic expressed on the webinar that 75 MVA is the threshold at which the loss of generation could have an impact on BES reliability, argues for also excluding individual dispersed generators. Furthermore, what is the logic of including individual 1-2 MVA wind turbine generator at a >75 MVA wind farm while excluding an individual wind turbine at a <75 MVA wind farm? With no technical rationale or difference in effects on BES reliability, how can identical 2 MVA units be treated so differently? The only compelling reason

Organization	Yes or No	Question 1 Comment
		for applying BES standards to individual dispersed generators would be if there were a real risk of a common mode failure affecting a large share of the dispersed generators in a >75 MVA wind plant. However, per FERC Order 661A, wind turbine generators already comply with voltage and frequency ride-through standards that are far more stringent than those apply to other types of generators. As a result, if a common mode failure caused by a grid disturbance were to affect the wind turbines in a >75 MVA wind plant, the impact on the wind plant would be irrelevant for grid reliability because the voltage and/or frequency deviation would have already caused most if not all of the conventional generators in the grid operating area to trip offline. No compelling rationale has been offered for why including individual dispersed wind turbine generators in the BES definition will improve grid reliability.
Florida Municipal Power Agency	No	FMPA thanks the SDT for its efforts. Although FMPA agrees with separating I4 from I2, we believe the SDT made a grammatical / logical error in the new I4. Inclusion I4 as posted reads: I4 - Dispersed power producing resources consisting of:a) Individual resources that aggregate to a total capacity greater than 75 MVA (gross nameplate rating), and b) The system designed primarily for delivering capacity from the point where those resources aggregate to greater than 75 MVA to a common point of connection at a voltage of 100 kV or above. The logical structure of I4 a) and I4 b) read literally does not reflect the intent of the SDT. The SDT seems to want to both: i) Identify the intersection of bullet a) and bullet b) [e.g., only a) vehicles with b) more than 2 axels need to be weighed at a truck stop, e.g., the subset of a) vehicles and b) with more than two axels]ii) While at the same time describe what is part of the BES [e.g., a pie is made of a) filling and b) crust, e.g., the addition of a) and b)]. The use of “and” at the end of bullet a) read literally would be interpreted as adding a) and b), i.e., a pie being made of filling and crust, and does not limit the scope to the intersection of bullets a) and

Organization	Yes or No	Question 1 Comment
		b). That is, the BES pie is made of individual resources that aggregate to > 75 MVA with no criteria over which that aggregation is performed (is it service territory, geography, within a fence, etc.) and b) the portion of a collector system that carries > 75 MVA in aggregation. The word "and" cannot perform both functions of adding a)+b) while at the same time identifying the intersecting subset of set a) and set b), which is what the SDT seems to be attempting to do. What the team must have meant was:I4 - Dispersed power producing resources that aggregate to a total capacity greater than 75 MVA (gross nameplate rating), and that are connected through a system designed primarily for delivering such capacity from the point at which those resources aggregate to greater than 75 MVA to a common point of connection at a voltage of 100 kV or above. The BES portion of such resources includes: a) The individual resources, and b) The system designed primarily for delivering capacity from the point where those resources aggregate to greater than 75 MVA to a common point of connection at a voltage of 100 kV or above. This intent is reflected in the diagram provided by the SDT in the comment form. This grammatical / logic error almost caused FMPA to vote Negative. The version of I4 posted read literally, an auditor does not know on what basis the 75 MVA of generation would be integrated, e.g., over the service territory of the entity? The auditor also is uninformed of whether this includes behind the meter generation or not. FMPA implores the SDT to correct this grammatical / logical error. If this error is not corrected, we will likely be changing our vote, and making recommendations to vote Negative on recirculation / final ballot.
Indiana Municipal Power Agency	No	For question 1, Indiana Municipal Power Agency agrees with the comments submitted by Frank Gaffney, Floriday Municipal Power Agency.

Organization	Yes or No	Question 1 Comment
California Independent System Operator	No	It is clear that the SDT has taken significant action to distinguish between dispersed power producing resources and traditional generating resources through modification of inclusion I4. However, the California ISO is concerned that the new verbiage under I4 a), as well as the color-coded diagram included on the comment form to provide clarification of BES elements, actually results in ambiguity as to whether each individual power producing resource must be treated as a BES Element. In particular, use of the phrase "Individual resources that aggregate..." under I4 a), along with use of the word "and" between I4 a) and I4 b), leaves open to interpretation whether each individual power producing resource (e.g., each wind turbine within a wind farm that aggregates to greater than 75 MVA) must be treated as a BES element or whether only the aggregated whole is a BES element. Though it may be that the SDT meant to capture that the combination of all aggregated resources and the delivery system together comprise a BES element, it could be construed that each individual resource under a) is a BES element and the system for delivering capacity referred to under b) is a BES element. This is further confused by the drawing included on the comment form which uses a blue color to identify each individual power producing resource and uses the same blue color to identify the system for delivering capacity. The legend in the comment box above this drawing states "Green identifies non-BES portions of the Collector System. Blue identifies the dispersed power producing resources and BES Elements." The ISO is concerned that this ambiguity may create uncertainty regarding whether particular Reliability Standard requirements apply only to the aggregated resource as a whole or to the individual power producing resources that comprise the aggregated resource, which is a matter that is better addressed on a Standard-specific basis. In light of this ambiguity, the ISO is abstaining and recommends that the SDT clarify its definition so that the focus is on aggregated resource rather than the individual components.

Organization	Yes or No	Question 1 Comment
Madison Gas and Electric Company	No	MG&E is voting against the BES Phase II definition due to the fact that it contains Inclusion (I) 4a; Individual resources that aggregate to a total capacity greater than 75 MVA (gross nameplate rating). MG&E recommends that I4a be removed and I4b be maintained as the point of aggregation is what is modeled and makes the most sense. Recommend I4 to read as: "Dispersed power producing resources consisting of the system designed primarily for delivering capacity from the point where those resources aggregate to greater than 75 MVA to a common point of connection at a voltage of 100 kV or above". Please see the following reasons for our negative vote: 1. An individual 1.5 mW wind turbine does not impact the BES when it reduces its output (remember just because a turbine is rated at 1.5mW doesn't mean it automatically reaches that output when the wind blows) or trips offline. Entities have been making comments that the place where power is aggregated (usually the bus) should be included and not individual wind turbines, solar collectors, manure digesters, etc (as shown in the comment form). The amount of compliance time for PRC-004 would never be completed. Wind turbines have up to 250 plus reasons why they can trip. Usually due to the change in wind direction. If the wind changes direction and the turbine head cannot keep up within a certain degree of angle, the unit will trip. Coming back on line when the angle requirements are met. So, Entity's will need to apply the R2 of PRC-004-2a, for every wind turbine trip. We do not have the resources to review these trips and that 1.5 wind turbine does not impact the BES. We will agree that the point of interconnection (of greater than 75 MVA) is important and should be contained in the BES definition as written in I4B. PRC-004-2a is only one Standard, notwithstanding; BAL-001-TRE-01, FAC-001, FAC-003, FAC-008-3, MOD-024, MOD-025, MOD-026, MOD-027, PRC-005, PRC-006-SPP-01, PRC-019, PRC-024, PRC-025, and TOP-003. A 75 MVA wind farm is not equal to a 75 MVA combustion turbine. Yes, energy flow is modeled the same (at full name plate output) but these two extremely different facilities are quite different. The wind facility is not

Organization	Yes or No	Question 1 Comment
		dispatchable (only reduction in Mw output can take place when there is an output) and wind facilities usually are set at a constant power factor and do not adjust for frequency deviations.2. The SDT has recommended that a SAR be submitted in order to refine the Standards that would be applicable to individual power producing resources contained under I4 of the phase II definition. This response is not acceptable. The SDT should not passively answer an entity's question by stating that a different process "may" fix the issue at hand. Recommend I4a be deleted and I4b be maintained as I4a. During the 8/21/2013 webinar the presenter emphasized the critical nature of the aggregate generation of dispersed power producing resources to the reliability of the interconnected transmission system. I4 subpart (a) is inconsistent with the stated critical nature of the aggregate generation. The presenter also indicated that standards that apply to GO/GOP associated standards should be addressed via a SAR to correct reliability standards that impose a burden on the industry without providing a significant benefit to reliability. The appropriate manner to address this discrepancy is not to submit a SAR to modify the standards that would inappropriately invoke requirements on individual generators due to their inclusion in the BES definition, but to eliminate I4 subpart (a) and modify standards in the future to address any reliability issues that may need the imposition of requirements for individual dispersed power producing resources. Please Note that FAC-001 and FAC-002 have established processes for generators (of all shapes and sizes) to interconnect to the BES.3. I4a should be deleted in its entirety. The SDT is forcing every dispersed power Facility over 75 MVA to be in the definition, where the SDT should be keeping individual resources out and allow other Standards and SDTs to determine if that should be included within each individual Standard. The BES definition should be written to give broad details and each individual Standard should be where details are maintained. This is already the case for the following Standards; MOD-025-1, R1 and VAR-001-2, R3 are two examples where the Standard dictates what is applicable and what is not.

Organization	Yes or No	Question 1 Comment
		4. We do not believe that since FERC has approved Phase I that the SDT is bound by that approval as being unchangeable. The Commission has only approved a part of the process and nowhere is it stated that once Phase I is approved that it cannot be changed. This is proof with the other changes that the SDT has made in Phase II compared to Phase I. 5. NERC or the SDT have not provided the industry with event analysis or lessons learned information that an individual dispersed power producing resource (not whole facilities) within a Facility has led to instability of the BES. 6. The inclusion of I4a does not alien itself with the current NERC and Regional RAI process. NERC's CEO and President has said that everything cannot be a priority. The amount of records management will only benefit a company who sells their services in managing individual power producing resources (i.e. paper work). The Registered entity and their Region will not see the benefit of tracking several thousand wind turbines and solar panels, for what? The "what" is unknown because the SDT is taking words of the "Statement of Compliance Registry Criteria" and applying it to our standards development process. Currently Entities do not register per Facility, but this definition does force entities to register per Facility. The SDT is mixing apples and oranges.7. The BES SDT has stated that the collector system is not included within the definition. But, FAC-008-3, is written to support the reliability of the BES and Requirement 2 states that each Generator Owner shall have a documented methodology between the generator (R1) to the point of interconnection. This means that the collector system is part of the BES definition. Please clarify how one standard pulls in the collector system and the proposed definition keeps it out? The removal of I4a will solve this issue. If individual resources need to be in based on system instability issues, then this can be addressed at a later date, once it is proven that individual resources need to be considered part of the BES and the individual resources cause BES instability.

Organization	Yes or No	Question 1 Comment
Muscatine Power and Water	No	MP&W appreciates the changes SDT made to I4. However, we think that the wording of I4a still does not adequately communication that desired treatment of small dispersed power producing resources as an aggregate, rather than on an individual basis, when the aggregate capacity is 75 MVA or more. To address this issue, we suggest the following wording change to I4a, “Aggregation point of dispersed resources when they aggregate to a total capacity of greater than 75 MVA (gross nameplate rating, and”An individual 1.5 MW wind turbine does not impact the BES when it reduces its output (remember just because a turbine is rated at 1.5 MW doesn't mean it automatically reaches that output when the wind blows) or trips offline. Entities have been making comments that the place where power is aggregated (usually the bus) should be included and not individual the wind turbines, solar collectors, manure digesters, etc. The amount of compliance time for PRC-004 would never be enough. Wind turbines have up to 250 plus reasons why they can trip. Usually due to the change in wind direction. If the wind changes direction and the turbine head can not keep up within a certain degree of angle, the unit will trip. Coming back on line when the angle requirement is met. So, Entity's will need to apply the R2 of PRC-004-2a, for every wind turbine trip. Not all Entities have the resources to review these trips and that 1.5 MW wind turbine does not impact the BES. MP&W beleives that the point of interconnection (of greater than 75 MVA) is important and should be contained in the BES definition as written in I4B. PRC-004-2a is only one Standard, notwithstanding; BAL-001-TRE-01, FAC-001, FAC-003, MOD-024, MOD-025, MOD-026, MOD-027, PRC-005, PRC-006-SPP-01, PRC-019, PRC-024, PRC-025, and TOP-003.
MRO	No	MRO recommends the removal of I4 a) and 14b Industry requested the point of aggregation to be added in place of the individual generators themselves, not as

Organization	Yes or No	Question 1 Comment
		well. The inclusion of this statement, I4 b, tends to lead industry to believe the individual generators will still remain under the new definition of the BES in addition to the aggregation point. The addition of individual resources which are not material to the BES creates undue burden on the registered entities and regional entities through the process of identifying these assets in order to have to apply for an exception due to these assets not being material to the BES. Proposed re-write of I4: Aggregate point where dispersed power producing resources aggregate at a common bus to a total capacity greater than 75 MVA (gross name plate rating) linking to a common point of connection at a voltage of 100kV or above.
BrightSource Energy, Inc.	No	No. We agree with the separation of I2 and I4 and this does provide clarity by creating a distinction between more traditional generation and distributed generation resources. We disagree with I4 to be applied only when both (A) and (B) are true. We recognize that each single small generator or even a group of these small generators cannot impact the BES and therefore, we would support the including only of the individual generating resources (A) (i.e., greater than 75 MVA) in the definition. The inclusion of the aggregate point (B) below 100 kV will improve reliability by focusing on the area that can cause the loss of 75MVA of distributed generation resources. We recognize that there will be complication in determining the aggregate point and to the implementation of standards associated with this portion of the collector system. For example, the various standards that are associated with the BES definition will also need to apply to this portion of the collector system and associated low voltage equipment.
Omaha Public Power District	No	Omaha Public Power District (OPPD) agrees and appreciates the SDT's efforts to provide clarity by separating dispersed power producing resources from Inclusion

Organization	Yes or No	Question 1 Comment
		I2 and returned to its own separate Inclusion I4. However, OPPD is still concerned with the Inclusion I4a that includes the individual generator as part of BES. Where, the Inclusion I4b clearly and correctly recognizes the aggregate point to be identified as a BES facility. We agree that the aggregation point (or bus) should be part of the BES, if the total aggregated generation is at 75 MVA or higher, as stated in the Inclusion I4b. OPPD believes that the individual unit by itself can't impact the reliability of BES. On the other hand, the compliance responsibilities that go along with are burdensome with no benefit to the reliability of the BES. Therefore, OPPD suggests consider removing Inclusion I4a from the BES Definition Inclusions. We strongly believe that I4b is completely addressing the dispersed power producing resources inclusion into BES. Additionally, OPPD supports comments provided by Madison Gas & Electric (MG&E).
Public Utility District No.1 of Snohomish County	No	Snohomish supports the Project 2010-17 - Definition of the BES (Phase 2) Standard Drafting Team in its efforts to clarify the BES definition. Although Snohomish supports the current definition and will be voting affirmative, we are concerned with the compliance burden to small dispersed generators that typically are less than 2 MW and have capacity factors in the 25 to 35% range, and may be inclined to change our position if the following issues are not resolved. Snohomish believes these concerns can be addressed within the Reliability Standards applicable to GO/GOPs or with the suggested changes below".1.Replace the current ballot's draft I4 language:"I4 - Dispersed power producing resources consisting of:a) Individual resources that aggregate to a total capacity greater than 75 MVA (gross nameplate rating), and b) The system designed primarily for delivering capacity from the point where those resources aggregate to greater than 75 MVA to a common point of connection at a voltage of 100 kV or above."With the proposed comment I4 language:"I4 - Dispersed power producing resource projects , or portion(s) thereof, designed primarily for

Organization	Yes or No	Question 1 Comment
		supplying wholesale power (e.g., a wind farm, or solar farm) that aggregate to a total capacity greater than 75 MVA (gross nameplate rating) at a common point of connection to a voltage of 100 kV or above consisting of:a) The individual resources, andb) The delivery system designed primarily for delivering capacity from i) the point where those resources aggregate with a total connected capacity greater than 75MVA; to ii) a common point of connection at a voltage of 100 kV or above."Rationale:"projects ... designed primarily for wholesale" - nothing in the currently posted version of Inclusion I4 distinguishes between generation for retail (behind the meter) and generation for wholesale. As such roof-top PVs, generator assistance programs, or other similar small power-producing incentives, might be otherwise interpreted as included under I4. There is a real possibility that, with net metering laws, tax incentives, and related public policies strongly favoring the development of, for example, small, individually-owned solar PV systems, those small systems could easily exceed the 75 MVA thresholds in the aggregate. Considered individually, these small systems have no discernible impact on the reliable operation of the BES. With sufficient market penetration, these systems might conceivably have some impact on the BES, but mediating that impact should be the responsibility of TPs, BAs, TOPs, and other system operators. The regulatory burden imposed on small owners of individual distributed generation systems that would result from classifying such small generators as part of the BES would be significant, and a strong disincentive running contrary to current public policy favoring such systems. Yet, because such small systems have no impact on the reliable operation of the BES, extending regulation in this way would have no benefit for BES reliability. o "(e.g., a wind farm, or solar farm)" - Because the SDT's I4 text-box will be dropped from the final version, we believe this language is necessary to clearly express the intent of the BES to cover utility-scale wind farms, solar farms, and similar installations that consist of many relatively small units that are aggregated for wholesale while excluding small, individually-owned systems, such as rooftop solar PV arrays, that are not aggregated for the

Organization	Yes or No	Question 1 Comment
		wholesale market but are owned by and benefit individual retail customers o I4.a - Imposing BES related Reliability Standards on individual small units is counter-productive and administratively burdensome. To the extent that applying individual Reliability Standards to such small, non-aggregated units is demonstrably necessary to protect BES reliability, application should be governed by the language of individual Standards rather than by classifying such small systems as BES. To that end, we are dedicated to drafting and vigorously promoting a SAR to appropriately address the applicability of individual NERC Standards to dispersed power-producing resources. o I4.b - We believe our proposed wording: oAppropriately addresses impact to BES reliability. The proposed language recognizes that reliability rests depends on TPs, BAs, RCs, and TOPs responsibly addressing the single greatest contingency arising from, and the behavior of, dispersed power producing resources in the aggregate. Enforcing reliability standards on the owners of small, dispersed, and non-aggregated resources is not productive and has no true value to BES reliability. Better aligns with FERC's Determination in Order 773 paragraph 114. , where FERC determined that it will not direct NERC to include collector systems within wind farms and similar generation systems in the BES through Inclusion I4. oAligns with FERC's Determination for I2 in Order 773 paragraph 91 and 92, that multiple step-up transformers that connect generators to the BES at above 100-kV should be included in the BES, while connections at lower voltages that operate as part of a local distribution system should not be classified as part of the BES.
Tri-State Generation and Transmission Association, Inc.	No	The NERC draft shows a schematic for resources that aggregate at a single bus location. Tri-State Generation and Transmission Association, Inc. (Tri-State) has included a drawing (Sent via email to Wendy Muller (NERC Standards Development Administrator-*see link at the end of the report*)) that shows four examples of distributed generation that could have been developed as phases of a

Organization	Yes or No	Question 1 Comment
		single developer or as multiple developers. The drawings show Tri-State's interpretation of which elements (highlighted in yellow) would be included based on the draft BES definition Inclusion I4. As written, it would include any line element from the point where the aggregated generation exceeds 75 MVA through the transformer that steps the voltage up to 100 kV or greater and include every dispersed generator attached to the line, even if it is a solitary unit. Please provide comments as to our interpretation. Inclusion I4a should be deleted. It does not appear to follow the intent of the FERC Order 773. In Order 773, paragraph 106 "NERC states that the inclusion is meant to address the dispersed power producing resources themselves, not the individual elements of the collector systems operated below 100 kV." Tri-State agrees with the EEI comment within this paragraph, "that inclusion I4 applies to generating resources meeting the threshold in the aggregate, not the individual generating units". There is no apparent requirement within the Commission Determination where FERC is requiring this inclusion. Tri-State does not find the inclusion of individual generating resources as low as 2MVA beneficial to the BES. A loss of a 2MVA generating resource on low voltages does not pose the same risk as the loss of an aggregated loss of 75MVA. If inclusion I4a is not deleted, a minimum MVA level for the individual resource to be included in the BES should be added, just as I2 has. Tri-State recommends the Standard Drafting Team replace the current ballot's draft I4 language with:"The system designed primarily for delivering capacity of dispersed power resources from the point where those resources aggregate to greater than 75 MVA to a common point of connection at a voltage of 100 kV or above."
Consumers Energy Company	No	The proposed wording of I4(b) is acceptable in that includes "...from the point where resources aggregate to greater than 75 MVA...". Consumers Energy objects to I4 (a) which includes all "individual resources that aggregate to a total ampacity

Organization	Yes or No	Question 1 Comment
		greater than 75 MVA". This could be interpreted to include each of the small generators, each 690V to 34.5kV transformer and the collector systems on a wind farm. I4(a) should be removed from the BES definition leaving only I4(b) as an inclusion. Consumers Energy recommends a negative ballot until the wind farm generators, transformers and collector systems are excluded.
PacifiCorp	No	The SDT has made significant progress by separating dispersed power producing resources from traditional generating resources in Inclusion I2. By including I4 subpart (b), the SDT has identified the critical element(s) that impact reliability. However, by failing to sufficiently address the real issue of the impact of the mandatory reliability standards on individual dispersed power resources, the SDT has perpetuated a gross error identified during phase one of the BES definition project, by including each "individual" dispersed power producing resource as potentially within the scope of the BES. During NERC's August 21, 2013 webinar on this project, the presenter emphasized the critical nature of the aggregate generation of dispersed power producing resources for the reliability of the interconnected transmission system. To that end, Inclusion I4 subpart (a) is inconsistent with NERC's express statements concerning the critical nature of the generation in the aggregate. The presenter also indicated that those reliability standards that apply to the GO/GOP functions should be addressed via a SAR in order to modify those standards that impose an unreasonable burden on sectors within the industry without providing a commensurate benefit to reliability. PacifiCorp believes that the appropriate manner to address this discrepancy is in fact not to submit a SAR to modify the standards, but rather to first eliminate Inclusion I4 subpart (a) - and thus remove the collective set of individual resources from within the BES - and then modify those standards in the future to address any lingering reliability gaps that may apply to dispersed power producing resources on an individual basis.PacifiCorp recommends the following language

Organization	Yes or No	Question 1 Comment
		for I4:Dispersed Power Producing Resources: For dispersed power producing resources that aggregate to a total capacity greater than 75 MVA, the system designed primarily for delivering capacity from the point where such resources aggregate to greater than 75 MVA to a common point of connection at a voltage of 100 kV or above. Note: While individual dispersed power producing resources are not considered part of the BES, that does not exempt registration as a GO or GOP for those entities that solely own and/or operate such resources where the aggregate is greater than 75 MVA. Dispersed power producing resources are small-scale power generation technologies using a system designed primarily for aggregating capacity providing an alternative to, or an enhancement of, the traditional electric power system. Examples could include but are not limited to solar, geothermal, energy storage, flywheels, wind, micro-turbines, and fuel cells. PacifiCorp's justification for this revised language is as follows: a dispersed power producing resource necessarily consists of individual units of a limited size to take advantage of the distributed nature of the resource (e.g., wind or solar) upon which the facility relies for its fuel source. One benefit of such facilities' unit size and geographical distribution is that the facility is not as susceptible to a substantial loss of generating capability as a single unit of 20 MVA or greater (the registration threshold for a single generating unit). If the arrayed generators were each 2 MVA then the probability of losing 20 MVA at the generator level would be .00000001%. If the units were 5 MVA each the probability of losing all four units at the generator level would be .01%. The probability of losing a single 20 MVA unit would be 10%. These variations illustrate that there will be different values depending upon the arrayed generator's size. Given the reliability advantage this diversity affords it does not seem reasonable to treat this type of facility in the same way as a single unit facility of 20 MVA or greater. As recognized by the SDT, a dispersed generating facility of 75 MVA or greater (NERC Registry Criterion Section III.c.2) can have an impact on the BES. To recognize this impact and to also account for the dispersed nature and reliability advantage as described above,

Organization	Yes or No	Question 1 Comment
		PacifiCorp requests that the SDT exclude individual dispersed power producing resources from the BES through a revised Inclusion I4 substantially similar to the proposal above.A technical example of the impact of the loss of an individual wind turbine to the BES is available from PacifiCorp to the SDT upon request.
MidAmerican Energy Company	No	The SDT has made significant progress by separating dispersed power producing resources from traditional generating resources. By including I4 subpart (b) the SDT has identified the critical element(s) that impact reliability. However, by failing to address the issue of reliability standards as they apply to individual dispersed power resources, the SDT has perpetuated a gross error implemented in phase one of the BES, by including each individual dispersed resource as BES. During the 8/21/2013 webinar the presenter emphasized the critical nature of the aggregate generation of dispersed power producing resources to the reliability of the interconnected transmission system. I4 subpart (a) is inconsistent with the stated critical nature of the aggregate generation. The presenter also indicated that standards that apply to GO/GOP associated standards should be addressed via a SAR to correct reliability standards that impose a burden on the industry without providing a significant benefit to reliability. The appropriate manner to address this discrepancy is not to submit a SAR to modify the standards that would inappropriately invoke requirements on individual generators due to their inclusion in the BES definition, but to eliminate I4 subpart (a) and modify standards in the future to address any reliability issues that may be required of individual dispersed power producing resource.The following language is recommended for I4:Dispersed Power Producing Resources: Where dispersed power producing resources aggregate to greater than 75 MVA the to a common point of connection at a voltage of 100 kV or above. Note: Individual dispersed power producing resources are not BES, but does not exempt registration as a GO or GOP. Dispersed power producing resources are small-scale power generation

Organization	Yes or No	Question 1 Comment
		technologies using a system designed primarily for aggregating capacity providing an alternative to, or an enhancement of, the traditional electric power system. Examples could include but are not limited to solar, geothermal, energy storage, flywheels, wind, micro-turbines, and fuel cells. Justification: A dispersed power generating facility necessarily consists of individual units of a limited size to take advantage of the distributed nature of the resource (e.g., wind or solar) upon which the facility relies for its fuel source. One benefit of such facilities' unit size and geographical distribution is that they are not as susceptible to a substantial loss of generating capability as a single unit of 20 MVA or greater (the registration threshold for a single generating unit). If the arrayed generators were each 2 MVA then the probability of losing 20 MVA at the generator level would be .00000001%. If the units were 5 MVA each the probability of losing all four units at the generator level would be .01%. The probability of losing a single 20 MVA unit would be 10%. These variations illustrate that there will be different values depending upon the arrayed generator's size. Given the reliability advantage this diversity affords it does not seem reasonable to treat this type of facility in the same way as a single unit facility of 20 MVA or greater. As recognized by the SDT and FERC in Order No. 773, a dispersed generating facility of 75 MVA or greater (NERC Registry Criterion Section III.c.2) can have an impact on the BES. To recognize this impact and to also account for the dispersed nature and reliability advantage as described above, it is requested that the individual power producing resources be excluded from the BES.A technical example of the impact of the loss of an individual wind turbine to the BES is available to the SDT upon request.
Volkmann Consulting, Inc	No	There is no technical justification to include disperse generation into the BES definition. The impact of the aggregation is studied and addressed in the FAC-001 and FAC-002 processes. Once the effects of dispatchability and frequency / voltage control in aggregation are addressed and mitigated in these processes, the

Organization	Yes or No	Question 1 Comment
		inclusion of each individual generator into the BES definition provides no further value to the industry and reliability.
Xcel Energy	No	To be clear, Xcel Energy is strongly supportive of the change made to Exclusion E1, to raise the exclusion threshold for radial and local networks from 30 kV to 50 kV. However, we are voting negative due the unnecessary inclusion of dispersed power individual resources in Inclusion I4(a). We understand that the individual dispersed generators ended up being included in the Phase I BES definition, but based on the development history, it is clear that the industry did not believe they should be included and thought they WERE NOT included. It wasn't until the guidance document was finalized that it was apparent where the drafting team landed on the subject. Phase II of this project provides the best opportunity to refine and improve the BES definition such that industry compliance efforts are focused on activities that will truly have an impact on reliability. Please see our detail comments and justifications below: While we strongly support the separation of I2 and I4 and the 75 MVA threshold for aggregating facilities in Inclusion I4 (b), Xcel Energy continues to disagree with the inclusion of small individual dispersed generators per Inclusion I4 (a). We provided alternative language for I4 in the last comment period. That recommendation still stands. Including individual dispersed generators in the BES definition will cause a huge diversion in work activities as entities are forced to simultaneously seek relief via the Exception Process to exclude reliability insignificant individual dispersed generators from their programs while at the same time attempting to modify their existing compliance programs to accommodate individual dispersed generators in the event that the exception applications are not approved. NERC and the Regions will be faced with a huge backlog of exception requests for small distributed generators while Generator Owners with dispersed generating assets will struggle to implement reliability standards that were never drafted with the

Organization	Yes or No	Question 1 Comment
		intent of being applicable to anything but large scale generating stations.In the August 21, 2013 webinar, the BES definition drafting team indicated that its justification for the 75 MVA aggregating threshold in I4 (b) was that 75 MVA is the level that the drafting team believes that single failures resulting in the loss of generation could have an appreciable impact on the grid. It seems inconsistent that a 2 MVA individual dispersed generator is deemed significant to reliability but the equipment that is utilized to connect individual dispersed generators totaling to <75 MVA is deemed not significant to reliability. Furthermore, with no requirement that the BES be contiguous, how can individual 2 MVA wind turbine generator at a >75 MVA wind farm have a greater effect on BES reliability than an identical individual 2 MVA wind turbine at a <75 MVA wind farm? With no technical rationale or difference in effects on BES reliability, how can identical 2 MVA units legally be treated so differently? In the Consideration of Comments document for the first draft of Phase II BES definition, the Drafting Team acknowledged that there are both existing and pending reliability standards which likely will need to be reviewed and revised to clarify or correct the applicability of the standard requirements to small scale generation and recommended that the industry create a SAR to call for this action. Relative to the approval and implementation time frames being discussed for the new BES definition, we do not believe any such action could be taken in a timely enough fashion to resolve industry uncertainty and avoid major regulatory burden with no commensurate improvement in grid reliability. Examples: o PRC-005-2 Protection System testing - the based relay test requirements were developed with large generators in mind, and differ significantly from requirements in DOE Order 661A, of 2005 that requires wind plants to meet Low Voltage Ride-Through (LVRT) and Power Factor Design Criteria. These standards significantly change the protection scheme applied to individual turbines, and is not addressed here. Wind turbine protection systems are often integral to the wind farm control system and the PRC-005-2 requirements were developed for protection equipment typically applied on large

Organization	Yes or No	Question 1 Comment
		scale generation not wind farm control systems. o TOP-002 Normal Operations Planning - Under R14 of this standard, an unplanned outage for any individual wind turbine would require a status notification report from the GO to the TO/TOP. This level of reporting, at typically less than 3 MVA, is much less that any practical reliability threshold, and would simply result in a documentation effort with no value.Similar concerns exist for FAC-008-3, PRC-001-1, PRC-004-2a, PRC-019-1, PRC-024-1, and PRC-025-1, and other standards where it is quite evident that small scale dispersed generators were not considered during the standard's development. Unless Inclusion I4 (a) is eliminated, we do not believe implementation of the new BES definition should go forward until all reliability standards have been reviewed and revised as necessary to clarify the applicability to individual dispersed generating assets. What reliability benefit is there to a "bright line" BES definition if there is not a corresponding clarity in the applicability of reliability standards to the elements deemed to be included in the BES?
Wisconsin Public Service Corporation	No	We agree with including the Generating stations with dispersed generation from the point of aggregation to 75 MVA as I4-b does. We agree with the statement made on the BES Phase II webinar of August 21 that this is the point where the dispersed power plant is significant to the reliability of the BES. We disagree with including the individual resources themselves since, as indicated on the webinar, they are not significant to the reliability of the BES . Including dispersed power producing resources less than 25MVA ignores differences in engineering design and operating philosophies. For our company each 2MVA wind turbine is designed to sync on and off the grid several times a day. For this reason, the engineering design incorporates a large contactor to handle these operations. This contactor is controlled by the turbine PLC which contains the main protective relay functions (i.e. frequency, over/under voltage, imbalance...etc) traditionally contained in

Organization	Yes or No	Question 1 Comment
		discrete protective relays. A generator breaker is designed in series with the contactor, which includes a self contained overcurrent element that serves as a backup function, but is different in traditional design in that each Protection Component is contained in the breaker device. Due to the PLC control/protection integration, equipment differences, and operating philosophies implementation of NERC Reliability Standards such as PRC-004, PRC-005 and FAC-008 would be impractical and onerous lending little to no reliability improvement.We suggest eliminating I4a completely since, as indicated on the webinar I4b encompasses the portion of the dispersed power generating plant that is significant to the reliability of the BES
American Wind Energy Association	No	While we strongly support the separation of I2 and I4 and the 75 MVA threshold for aggregating facilities in Inclusion I4 (b), and the exclusion of collector system components that aggregate less than 75 MVA of generation, we still strongly disagree with the inclusion of small individual dispersed generators per Inclusion I4 (a). This problem can be resolved by either removing I4 (a) in its entirety or revising it to clarify that the only BES-relevant standards that apply to individual dispersed generators are those that affirmatively state that they apply to dispersed generators. While individual generators were included in the Phase I BES definition, that is not a compelling reason why they should also be included in Phase II. Phase II of this project provides an opportunity to refine and improve the BES definition such that industry compliance efforts are focused on activities that will truly have a beneficial impact on reliability. Including individual dispersed generators in the BES definition will cause a major diversion away from efforts that improve BES reliability, as entities are forced to simultaneously seek relief via the Exception Process to exclude individual dispersed generators that are insignificant from a reliability standpoint from their programs while at the same time attempting to modify their existing compliance programs to accommodate

Organization	Yes or No	Question 1 Comment
		individual dispersed generators in the event that the exception applications are not approved. With more than 45,000 wind turbines installed in the U.S. and the vast majority of them in wind plants larger than 75 MVA, NERC will be faced with a huge backlog of exception requests for small distributed generators while Generator Owners with dispersed generating assets struggle to implement reliability standards that were never drafted with the intent of being applicable to anything but large scale generating stations. As a result, proceeding with the BES definition as currently drafted would actually impair, rather than improve, bulk electric system reliability.In the Consideration of Comments document for the first draft of Phase II BES definition, the Drafting Team acknowledged that there are both existing and pending reliability standards which likely will need to be reviewed and revised to clarify or correct the applicability of the standard requirements to small-scale generation and recommended that the industry create a SAR to call for this action. Relative to the approval and implementation time frames being discussed for the new BES definition, we do not believe any such action could be taken in a timely enough fashion to resolve industry uncertainty and avoid a major regulatory burden that would distract from efforts that actually improve grid reliability. Examples of standards that were not drafted with small dispersed generators in mind include: o PRC-005-2 Protection System testing - the relay test requirements were developed with large generators in mind, and differ significantly from requirements in FERC Order 661A, of 2005 that require wind plants to meet Low Voltage Ride-Through (LVRT) and Power Factor Design Criteria. These standards significantly change the protection scheme applied to individual turbines, and there is no clarity about how they should be applied. Wind turbine protection systems are often integral to the wind farm control system and the PRC-005-2 requirements were developed for protection equipment typically applied to large-scale generation, not wind farm control systems. o TOP-002 Normal Operations Planning - Under R14 of this standard, an unplanned outage for any individual wind turbine would require a status

Organization	Yes or No	Question 1 Comment
		notification report from the GO to the TO/TOP. While such a report can be important for large central station generation, it would provide no value for a small individual wind turbine generator. This level of reporting, at typically less than 3 MVA, is much lower that any practical reliability threshold, and would simply result in a documentation effort with no value.Similar concerns exist for FAC-008-3, PRC-001-1, PRC-004-2a, PRC-019-1, PRC-024-1, and PRC-025-1, and other standards in which small-scale dispersed generators were not considered during the standards' development. Unless Inclusion I4 (a) is eliminated, or significantly revised to clarify that the only BES-relevant standards that apply to dispersed generators are those that affirmatively state that they apply to dispersed generators, we do not believe implementation of the new BES definition should go forward until all reliability standards have been reviewed and revised as necessary to clarify the applicability to individual dispersed generating assets. What reliability benefit is there to a "bright line" BES definition if there is not a corresponding clarity in the applicability of reliability standards to the elements deemed to be included in the BES? On the August 21, 2013 webinar, the BES definition drafting team indicated that its justification for the 75 MVA aggregating threshold in I4 (b) was that 75 MVA is the level that the drafting team believes that single failures resulting in the loss of generation could have an appreciable impact on the grid. While we support the exclusion of collector system components that aggregate less than 75 MVA, it seems inconsistent that a 2 MVA individual dispersed generator is deemed significant to reliability but the equipment that is utilized to connect multiple dispersed generators totaling up to 75 MVA is deemed not significant to reliability. The logic that led to the exclusion of collector system equipment that aggregates less than 75 MVA, as well as the logic expressed on the webinar that 75 MVA is the threshold at which the loss of generation could have an impact on BES reliability, argues for also excluding individual dispersed generators. Furthermore, what is the logic of including individual 2 MVA wind turbine generator at a >75 MVA wind farm while excluding

Organization	Yes or No	Question 1 Comment
		individual 2 MVA wind turbine at a <75 MVA wind farm? With no technical rationale or difference in effects on BES reliability, how can identical 2 MVA units be treated so differently? The only compelling reason for applying BES standards to individual dispersed generators would be if there were a real risk of an abrupt common mode failure affecting a large share of the dispersed generators in a >75 MVA wind plant. However, per FERC Order 661A, wind turbine generators already comply with voltage and frequency ride-through standards that are far more stringent than those that apply to other types of generators. As a result, if a common mode failure caused by a grid disturbance were to affect the wind turbines in a >75 MVA wind plant, the impact on the wind plant would be irrelevant for grid reliability because the voltage and/or frequency deviation would have already caused most if not all of the conventional generators in the grid operating area to trip offline. While weather-driven changes in wind speed can significantly change the aggregate output of a wind plant, those changes in output occur too gradually to pose a risk to bulk power system reliability, and regardless such changes in output would not be regulated or mitigated by BES-relevant standards. No compelling rationale has been offered for why including individual dispersed wind turbine generators in the BES definition will improve grid reliability.
Wisconsin Electric Power Company	No	Wisconsin Electric appreciates the work the Standard Drafting Team (SDT) has accomplished, but is concerned that the team has not corrected a fatal flaw in the definition of the Bulk Electric System. During the 8/21 webinar, the SDT said that they don't have the power to change an existing approved definition with regard to the inclusion of individual distributed generation resources, yet that's what they in fact do every time they draft a standard revision. FERC accepted the Phase 1 definition, but we believe the SDT had the opportunity to correct the flawed definition. The SDT team did not address industry's comments that individual

Organization	Yes or No	Question 1 Comment
		wind turbines (and other dispersed generating units) should not be included in the definition. The SDT stated that industry has the option to address whether dispersed generation should be applicable to a standard by revising the applicability of those standards. This method of correcting for the wrong elements' inclusion in the definition will take time and resources from the industry. During this time period, the industry would still need to assume responsibility for compliance to each affected standard because it would be unknown when/if the revisions would be accepted and approved. For instance, compliance to Reliability Standard PRC-005 requires the industry to include thousands of individual wind turbines (and small solar panels) in the maintenance and testing of relays and associated equipment. Resources required to complete this testing are specialized and significant, with little to no measureable benefit to the BES (and an indirect detriment by taking those resources away from other tasks that are beneficial). In regards to CIP Version 5 requirements, if each wind turbine is part of the BES, then each wind turbine's monitoring and control systems will be "BES Cyber Systems". Again, resources will be required for compliance with no benefit to reliability.Individual dispersed generation units (generally less than 2 MW) do not impact the reliability of the Bulk Electric System. The SDT points out that it is not including collector circuits of dispersed generators because collector circuits do not have a true reliability impact, but the SDT fails to recognize that the individual dispersed generators have even less of an impact. The issue of concern is a single point of failure affecting 75 MWs of generation, not the failure of an individual wind turbine. By excluding the collector systems, but including the individual generators, the SDT team is not following FERC's Order 773 (issued 12/20/2012) Paragraph 165, in which the Commission stated that it is appropriate to have the bulk electric system contiguous, without facilities or elements "stranded" or "cut-off" from the remainder of the bulk electric system. The individual dispersed generating units are stranded from the remainder of the bulk electric system in the current draft of

Organization	Yes or No	Question 1 Comment
		the definition.The SDT stated during the 8/21 webinar, that industry can use the exception process to exclude wind turbines, or other dispersed generators. This viewpoint has a fundamental problem. It mandates that individual generators be included in a faulty definition that pulls in insignificant elements into the BES and then requires industry to exclude them (essentially an entire asset type). That requires hundreds of dispersed generator owners to rely on the regulator to be reasonable and allow us to exclude all of our individual dispersed generators. The proposed Phase 2 definition poses a huge compliance and regulatory burden that doesn't add to the reliability of the BES.
BANC & SMUD	No	Although we believe the Drafting Team has provided vast improvement to the Draft #2 of the Phase 2-I4 BES Definition SMUD is posting a Negative position for Draft #2 for the following reasons. Salient Issues: o In accordance with Paragraph 115 of the Commission's Order 773, exclude the collector system from the BES definition. o Wind/Solar BES delineation should be limited the GSU where the total plant capacity is connected at a common point to 100kV or greater. o During Phase-1, it was suggested that a 75 MVA threshold be established where the loss of a single element would render the entire 75 MVA of resources unavailable. This was in lieu of including the individual small-scaled machines as BES to avoid subjecting those machines to administrative burden for little or no impact on the BES as compared to the compliance obligation. o Redundant to TPL & TOP standards where loss of the resource(s) for a single element is addressed in system studies that include evaluation for adequate level

Organization	Yes or No	Question 1 Comment
		of resources, system impacts and Single Largest Contingencies. o Must include the phrase "(e.g., wind or solar)" after "Dispersed power producing resource projects" to fully clarify the applicability of Inclusion I4. o Support a Standard Authorization Request or other mechanism to reduce administrative burden for compliance to specific standards (e.g., PRC-004 (Misoperations) & PRC-005 (Maintenance & Testing). The following is suggested wording for I4 that are associated with the points above: "I4 - Dispersed power producing resource projects, or portion(s) thereof, designed primarily for supplying wholesale power (e.g., a wind farm, or solar farm) that aggregate to a total capacity greater than 75 MVA (gross nameplate rating) at a common point of connection to a voltage of 100 kV or above consisting of: a) The individual resources, and b) The delivery system designed primarily for delivering capacity from i) the point where those resources aggregate to the total connected capacity; to ii) a common point of connection at a voltage of 100 kV or above." Rationale:1. "projects ... designed primarily for wholesale...": Nothing in this posted version distinguishes between generation for retail (behind the meter) and generation for wholesale. As such, rooftop PVs, generator assistance programs, or other similar small power-producing incentives, might be otherwise interpreted as included under I4.2. "(e.g., a wind farm, or solar farm)": Because the SDT's I4 text-box will be dropped from the final version, we believe this inclusion is necessary to retain an illustration of the intent. 3. I4.a:While applying BES NERC Reliability Standards to the management of individual small units is counter-productive and administratively burdensome, we

Organization	Yes or No	Question 1 Comment
		do agree that differentiating applicability of various Standards should be specified within those Standards. 4. I4.b: We believe the proposed wording: a. Appropriately addresses impact to BES reliability. Rather than offering some illusion for reliability at a lesser impact level, this proposal recognizes that reliability rests in TPs, BAs, RCs, and TOPs responsibly addressing the single greatest contingency arising from, and the behavior of, dispersed power producing resources in the aggregate. Enforcing governance for management to any lesser level is not productive and has no true value to BES reliability. b. Better aligns with FERC's Determination within Order 770 paragraph 114.c. Aligns with FERC's Determination for I2 within Order 773 paragraph 91.d. Aligns with FERC's Determination for I2 within Order 773 paragraph 92.
New York Power Authority	No	Inclusion 4b does not support a contiguous BES due to the exclusion of a portion of the path from the generator terminals to the resource aggregation point. Inclusion 4b is not consistent with the elements included under Inclusion I2 which applies to all generating resources.
Response: The proposed definition continues to include, through inclusion I4, individual dispersed power producing resources if those resources aggregate to a total value greater than 75 MVA. This inclusion treats dispersed power producing resources in a manner that is comparable to other non-dispersed power producing resources and is an approach that was accepted and emphasized by the Commission in Orders No. 773 & 773-A. The SDT has explored various options associated with dispersed power producing resources; however, none of the options explored provided an equal and effective approach to address the Commission's reliability concerns with these facilities. The SDT continues to believe that the best resolution to the industry's concerns is through clarification of the applicability of individual Reliability Standards and not a revision to the BES definition. Given these facts, the SDT is retaining Inclusion I4a but has revised the language of inclusion I4, based on industry comments, to provide greater clarity of the SDT's intent.		

Organization	Yes or No	Question 1 Comment
I4 - Dispersed power producing resources that aggregate to a total capacity greater than 75 MVA (gross nameplate rating), and that are connected through a system designed primarily for delivering such capacity to a common point of connection at a voltage of 100 kV or above. Thus, the facilities designated as BES are: a) The individual resources, and **b)** The system designed primarily for delivering capacity from the point where those resources aggregate to greater than 75 MVA to a common point of connection at a voltage of 100 kV or above.		
East Kentucky Power Cooperative	No	In the consideration of comments, the drafting team indicated that a SAR might be submitted to appropriately adjust GO and GOP standards requirements for dispersed generating facilities. We agree that is the approach to undertake. In order to support this approach, I4 should be deleted to avoid the situation where inappropriate provisions could become effective and compliance become difficult or impossible for entities until work is completed through the SAR to adjust those requirements. In the filing with FERC this procedure could be explained so that FERC can be assured that their approval of inclusion of dispersed generating facilities in the Phase I order will be appropriately implemented.
Response: The SDT is charged with resolving the definition in total at this time and can't point to future possible outcomes for resolution. The proposed definition continues to include, through inclusion I4, individual dispersed power producing resources if those resources aggregate to a total value greater than 75 MVA. This inclusion treats dispersed power producing resources in a manner that is comparable to other non-dispersed power producing resources and is an approach that was accepted and emphasized by the Commission in Orders No. 773 & 773-A. The SDT has explored various options associated with dispersed power producing resources; however, none of the options equated to an equal and effective approach to address the Commission's reliability concerns with these facilities. The SDT continues to believe that the best resolution to the industry's concerns is through clarification of the applicability of individual Reliability Standards and not a revision to the BES definition. Given these facts, the SDT is retaining Inclusion I4a but has revised the language of inclusion I4, based on industry comments, to provide greater clarity of the SDT's intent.		

Organization	Yes or No	Question 1 Comment
I4 - Dispersed power producing resources that aggregate to a total capacity greater than 75 MVA (gross nameplate rating), and that are connected through a system designed primarily for delivering such capacity to a common point of connection at a voltage of 100 kV or above. Thus, the facilities designated as BES are: a) The individual resources, and **b)** The system designed primarily for delivering capacity from the point where those resources aggregate to greater than 75 MVA to a common point of connection at a voltage of 100 kV or above.		
Southwest Power Pool Regional Entity	No	Separation of I2, no issue No: 75MVA threshold may be higher than what FERC will support. Comments: Paragraph 167 of Order 773 implies that FERC sees the aggregation point for tie lines at 20MVA. However, there was some flexibility provided in the rehearing comments on this point. Paragraph 113 of Order 773 states that multiple step-up transformers (in particular 34.5/115kV) are expected to be included by FERC.
Response: Paragraph 167 speaks to embedded generation in a radial system and is not pertinent to Inclusions I2 or I4. The SDT believes that there is support for the 75 MVA threshold for aggregation. No change made. The Reference Document shows examples of where and when multiple step-up transformers are to be included in the BES. No change made.		
Public Service Enterprise Group	No	The proposed elimination of the "collector system" as part of the BES makes the BES non-contiguous. In Order 773, the Commission (P 113 and P 114) stated that radial collector systems used solely to aggregate generation SHOULD be part of the BES since multiple transformers connections did not exempt I2 generators.

Organization	Yes or No	Question 1 Comment
		However, FERC did not direct NERC to include the collector system in the BES. However, it did require that radial lines that connect I2 generators (call "tie lines" in Order 773) should be part of the BES (P 164-P 167) for reasons of contiguity. This BES definition proposed in Phase 2 creates an unlevel competitive environment between I4 generators and I2 generators. Moreover, in its SAR for Phase 2, the question of BES contiguity was supposed to be addressed. The team's response on this issue allows dispersed power generators to be non-contiguous from the point where ac power is produced to where it is injected into the grid. The connections of I2 BES generators are, however, ARE included in the BES. In the diagram shown in the comment form, if the dispersed generators were forty 2 MVA diesel generators connected as shown, would their collector system be excluded from the BES also? What is there were eight 10 MVA gas turbines connected via a collector system? How about six 16 MVA gas turbines? As a member of the RBB, we direct that the team include collector systems that are solely used to aggregate generation in the BES definition.

Response: The proposed definition continues to include, through inclusion I4, individual dispersed power producing resources if those resources aggregate to a total value greater than 75 MVA. This inclusion treats dispersed power producing resources in a manner that is comparable to other non-dispersed power producing resources and is an approach that was accepted and emphasized by the Commission in Orders No. 773 & 773-A. The SDT has explored various options associated with dispersed power producing resources; however, none of the options explored provided an equal and effective approach to address the Commission's reliability concerns with these facilities. The SDT continues to believe that the best resolution to the industry's concerns is through clarification of the applicability of individual Reliability Standards and not a revision to the BES definition. Given these facts, the SDT is retaining Inclusion I4a but has revised the language of inclusion I4, based on industry comments, to provide greater clarity of the SDT's intent.

> I4 - Dispersed power producing resources that aggregate to a total capacity greater than 75 MVA (gross nameplate rating), and that are connected through a system designed primarily for delivering such capacity to a common point of connection at a voltage of 100 kV or above. Thus, the facilities designated as BES are:

Organization	Yes or No	Question 1 Comment
a) The individual resources, and b) The system designed primarily for delivering capacity from the point where those resources aggregate to greater than 75 MVA to a common point of connection at a voltage of 100 kV or above. Gas turbine and diesel generators are handled through Inclusion I2. In the examples shown in the comment, generation aggregates to greater than 75 MVA so the generation and equipment connecting that generation to a common point operated at 100 kV or above is included.		
NIPSCO	No	We requested some clarification regarding a wind farm within NIPSCO from members of the SDT, and promptly received feedback. The main concern is that we are not sure of the intent of inclusion I4 because it is attempting to include a bus within an intermediate voltage. In our case it is 69 kV that may or may not be included since there are 2 transformations within the path to the 138KV; 1 up to 69 kV and 2 parallel transformers up to the 138 kV. In addition the entire 69 kV path is not "designed primarily for delivering" this wind power to the 138 kV system; the 69 kV system includes many lines serving various demand. Some on the SDT felt that the single step-up transformer is the same as 2 transformers in parallel, while others did not. Following this discussion we failed to receive a uniform clarification. Some opinions were that the 69 kV system would be included in the BES while others believed it would not; we have similar differing interpretations within NIPSCO. Further clarification needs to be made on whether or not multiple transformations are or are not included.
Response: The SDT is not allowed to offer opinions on compliance issues. All that the SDT can do is to show its intent when it crafted the definition. This intent is shown in the Reference Document which shows several examples of multiple transformation configurations for consideration.		

Organization	Yes or No	Question 1 Comment
Nebraska Public Power District	Yes	Still have concern with including individual wind turbines as it relates to total generation.
ACES Standards Collaborators	Yes	(1) We thank the drafting team for separating dispersed power producing resources to a separate inclusion category. This avoids some of the confusion in the prior posting. (2) We have a question regarding the diagram provided in the comment form. Why is each generating unit considered a part of the BES? Wouldn't the point of aggregation be the first BES element? If a single dispersed power producing resource fails, there is no impact on the BES. We request the drafting team consider this aspect.
Transmission Access Policy Study Group	Yes	Although we support the SDT's willingness to address the lack of clarity caused by the previous posting's merging of I4 with I2, we are concerned that the wording of the new version of I4 does not capture the SDT's intent, and could lead to absurd results if read literally. As we understand it, the SDT's intent is to include only dispersed power producing resources that both (a) aggregate to more than 75 MVA, and (b) are connected through a system designed primarily for delivering capacity at a common point of connection of 100 kV or above. We believe that the SDT also intends that only the individual resources and the point from which they aggregate to 75 MVA should be included in the BES; in other words, the portion of the collector system that carries <75 MVA is not BES by virtue of I4. In order to express that intent clearly, we suggest the following revised text: I4 - Dispersed power producing resources that aggregate to a total capacity greater than 75 MVA (gross nameplate rating), and that are connected through a system

Organization	Yes or No	Question 1 Comment
		designed primarily for delivering such capacity from the point at which those resources aggregate to greater than 75 MVA to a common point of connection at a voltage of 100 kV or above. The BES portion of such resources includes: a) The individual resources, and b) The system designed primarily for delivering capacity from the point where those resources aggregate to greater than 75 MVA to a common point of connection at a voltage of 100 kV or above. We believe that this text is consistent with the intent reflected in the diagram provided by the SDT in the comment form, and is more clear and accurate than the text of I4 as posted.
ReliabilityFirst	Yes	Even though ReliabilityFirst votes in the Affirmative, ReliabilityFirst is aware of some concerns among Registered Entities for the potential issue of individual wind units (i.e. single generators) being required to register based on the language of the revised definitions (specifically I4). Though ReliabilityFirst staff agrees with I4 and does not believe this is an issue, ReliabilityFirst recommends NERC and the Regional Entities come up with a common understanding on how Entities are registered based on their ownership of wind units which are designated as BES through the new definition.
Hydro One	Yes	We reluctantly support the separation of I2 and I4 because we believe that their wordings in the BES definition as approved by the industry, NERC BOT, FERC and applicable governmental authorities in Canada should have been retained. In our opinion, I4 is meant for renewable energy resources (in particular Wind). These resources are inherently different when considered for planning and for real time operations. This change will essentially designate every element of a wind farm above 75MVA to its interconnection at 100kV as a BES element including the medium voltage collector systems (less than 50kV) adding burden which may not be necessary. Further, it is not clear what and how standards will apply to

Organization	Yes or No	Question 1 Comment
		collector systems designated as BES.
Response: The proposed definition continues to include, through inclusion I4, individual dispersed power producing resources if those resources aggregate to a total value greater than 75 MVA. This inclusion treats dispersed power producing resources in a manner that is comparable to other non-dispersed power producing resources and is an approach that was accepted and emphasized by the Commission in Orders No. 773 & 773-A. The SDT has explored various options associated with dispersed power producing resources; however, none of the options explored provided an equal and effective approach to address the Commission's reliability concerns with these facilities. The SDT continues to believe that the best resolution to the industry's concerns is through clarification of the applicability of individual Reliability Standards and not a revision to the BES definition. Given these facts, the SDT is retaining Inclusion I4a but has revised the language of inclusion I4, based on industry comments, to provide greater clarity of the SDT's intent. I4 - Dispersed power producing resources that aggregate to a total capacity greater than 75 MVA (gross nameplate rating), and that are connected through a system designed primarily for delivering such capacity to a common point of connection at a voltage of 100 kV or above. Thus, the facilities designated as BES are: a) The individual resources, and **b)** The system designed primarily for delivering capacity from the point where those resources aggregate to greater than 75 MVA to a common point of connection at a voltage of 100 kV or above.		
Duke Energy	Yes	Duke Energy agrees with the changes made by the SDT.
Arizona Public Service Company	Yes	This change returns it to the original language in Phase I. Either way it still has the same intent.
Southern California Edison	Yes	SCE believes that the revision to I4, the inclusion for dispersed power producing resources, is a move in the right direction, but we think that additional clarity

Organization	Yes or No	Question 1 Comment
Company		could be provided by changing "common point of connection" to "common point of interconnection".
Response: The SDT does not see where the suggested change adds any clarity to the text. No change made.		
SPP Standards Review Group	Yes	While we don't have an issue with separating I4 from I2 as in the previous draft, we do have concern with the wording of the inclusion, especially the phrase 'primarily designed'. While the diagram provided in the comment form clearly shows the distinction, it is difficult to pull it from the wording of I4. Additionally, we are confused by what was explained during the NERC industry webinar and what is shown in the above figure. The figure and the words in I4 indicate the point of aggregation is included in the BES. The discussion during the webinar did not include it in the BES.
Response: The SDT points the commenter to the Reference Document where it shows the aggregation point and how it is handled within the definition.		
Southern Company	Yes	The separation of dispersed generation where a collector system aggregates the total generation prior to connecting to the BES is clear in I4.
Northeast Power Coordinating Council	Yes	
Dominion	Yes	

Organization	Yes or No	Question 1 Comment
SERC Planning Standards Subcommittee	Yes	
Bonneville Power Administration	Yes	
Salt River Project	Yes	
Pepco Holdings Inc	Yes	
Exelon and its' affiliates	Yes	
Independent Electricity System Operator	Yes	
Ameren	Yes	
Manitoba Hydro	Yes	
Hydro-Quebec TransEnergie	Yes	

Organization	Yes or No	Question 1 Comment
Idaho Power Company	Yes	
City of Tallahassee	Yes	

Response: Thank you for your support. The SDT is retaining Inclusion I4a but has changed the language of this inclusion to provide greater clarity of the SDT's intent based on industry comments.

I4 - Dispersed power producing resources that aggregate to a total capacity greater than 75 MVA (gross nameplate rating), and that are connected through a system designed primarily for delivering such capacity to a common point of connection at a voltage of 100 kV or above. Thus, the facilities designated as BES are:

a) The individual resources, and
b) The system designed primarily for delivering capacity from the point where those resources aggregate to greater than 75 MVA to a common point of connection at a voltage of 100 kV or above.

2. **The SDT has proposed an equally effective and efficient alternative to the Commission's sub-100 kV loop concerns for radial systems by the addition of Note 2 in Exclusion E1 with a threshold value of 50 kV, and posted a technical rationale to support this threshold. Do you agree with this threshold? If you do not support this threshold, please provide specific suggestions and technical rationale in your comments.**

Summary Consideration: Some commenters suggested raising the threshold value above 50 kV. However, no technical rationale for doing so was presented in the comments. Without such rationale, the SDT is unable to entertain such suggestions.

The SDT believes that the 50 kV threshold is an appropriate continent-wide, bright-line value for reliability of the BES. The selection of this value is not due to a FERC directive but is based on physical principles. Therefore, the SDT sees no reason for a reference to non-US Registered Entities.

No changes were made to the proposed definition due to comments raised in this question.

Organization	Yes or No	Question 2 Comment
Ameren	No	In our opinion, the SDT has improved the E1 exclusion criteria by increasing the 30 kV threshold to 50 kV. However, we still believe that the threshold is too low and request that it be raised to at least 70 kV. As the definition now stands, we will have to perform what we feel is unnecessary analysis to prove that most of our local subtransmission networks should also be excluded.
Response: The commenter has presented no technical rationale for increasing the threshold value above 50 kV. The studies performed by the SDT indicate that 50 kV is the highest supportable threshold value, i.e., where the loop configuration starts to flow back to the BES and may be considered necessary for the reliable operation of the interconnected transmission system. No change made.		

Organization	Yes or No	Question 2 Comment
Arizona Public Service Company	No	Note two was added in draft 1 to Phase II. This change to Note 2 changes it from 30KV to 50KV, due to analysis they performed. 50KV threshold is less restrictive than 30KV. FERC forced Note 2 - this note requires determining loops between radial lines, and including radials with >50 KV loops
Response: The SDT fails to see a question or suggestion here and is thus unable to provide a response.		
American Electric Power	No	The thought process of the note #2 is confusing the process. One could take this to mean that a 69 kV system would be included by exclusion. AEP does not believe this to be the case, but the wording of this note does not lead to an obvious conclusion. We suggest that the SDT make another attempt to provide a simpler and clearer approach. AEP also suggests that E1 have transmission removed from between the words contiguous and Elements. We recommend that it instead say "Radial systems: A group of contiguous Elements that emanates from a single point of connection of 100 kV or higher and:"
Response: The SDT reviewed the contents of the note and believes that the wording is clear. No change made. The SDT has previously explained the rationale for inclusion of the word 'transmission' and believes that the rationale is still appropriate. The word transmission is not capitalized and is used as a qualifier to the word Element and is meant to differentiate between the types of Elements that are identified in the NERC Glossary of Terms Used in NERC Reliability Standards definition of Element. Element (NERC Glossary of Terms): "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."		

Organization	Yes or No	Question 2 Comment
The use of the words: “a group of contiguous transmission Elements,” means Elements originating at a voltage of 100 kV or higher that are connected in a contiguous manner. No change made.		
Nebraska Public Power District	No	The white paper for the low voltage loop threshold is a logical review of the issues. We would like to see some clarification for certain configurations. For example, two 115kV/69kV parallel transformers at the same substation serving only load at 69kV and no looped 69kV lines: 1) with 115kV and 69kV bus tie breakers, 2) with no 115kV bus tie breaker but does have a 69kV tie breaker, 3) with no 115kV bus tie breaker and no 69kV tie breaker, and 4) with 115kV bus tie breaker and no 69kV tie breaker. All breakers are normally closed but if no breakers exist then transformers are connected directly by bus operating in parallel for all cases. Does this make the interrupting device on the high side of each transformer BES elements? Does this make the transformer a BES element or suggest an analysis for an exception must be made to remove them from the BES? Our concern is how a PRC-005 audit/enforcement group will interpret these configurations if it is not clearly stated in an example or considered in the white paper. How would the SDT interpret a configuration where a 115kV “radial” line feeds a substation with a 56MVA 115/69kV transformer. The 69kV side of the transformer is connected to a networked 69kV system owned by another entity. The 69kV system does connect back to the transmission system in multiple points in the other entities system. There is some 69kV generation greater than 20MVA or 75MVA aggregate but the substation and line in question is not used for black start. Note the 115kV/69kV transformer would never allow greater than 75MVA to pass through it back to the 115kV line since the transformer is too small. Is the substation with the 115/69kV transformer a BES substation? Is the 115kV line to the 115kV/69kV substation BES? Please clarify. It seems transformer size should have some impact but the reference document does not reference this.

Organization	Yes or No	Question 2 Comment
Response: The SDT is not allowed to provide advice on adherence/compliance to entities. The best that it can do is to provide examples as to the intent of the SDT when it was writing the definition. Such examples have been provided in the Reference Document and this document will be updated to show the Phase 2 changes as quickly as possible.		
Hydro One	Yes	We agree that 50kV is more reasonable and are voting positively to the change made by SDT. This change was essentially initiated to address a FERC directive in its Order 773. However it should be noted that the demarcation point between transmission and distribution may be different in non FERC jurisdictions, such as Canadian provinces. In establishing voltage thresholds, NERC needs to consider non-US legislated demarcation points, and the standard development process must make allowances for such regulatory and/or jurisdictional differences and frameworks consistent with NUC 001 and TPL footnote b. We suggest that NERC and the SDT consider revising Note 2 to read as follows: Note 2 - The presence of a contiguous loop, operated at a voltage level of 50 kV or less, between configurations being considered as radial systems, does not affect this exclusion. Non-US Registered Entities can adopt the same voltage level or should implemented in a manner that is consistent with, or under the direction of, the applicable governmental authority or its agency.
Independent Electricity System Operator	Yes	We suggest that NERC and the SDT consider revising Note 2 to read as follows: Note 2 - The presence of a contiguous loop, operated at a voltage level of 50 kV or less, between configurations being considered as radial systems, does not affect this exclusion. Non-US Registered Entities can adopt the same voltage level or should be implemented in a manner that is consistent with, or under the direction of, the applicable governmental authority or its agency.
Response: The SDT believes that the 50 kV threshold is an appropriate continent-wide, bright-line value for reliability of the BES.		

Organization	Yes or No	Question 2 Comment
The selection of this value is not due to a FERC directive but is based on physical principles. Therefore, the SDT sees no reason for a reference to non-US Registered Entities. No change made.		
SERC Planning Standards Subcommittee	Yes	In our opinion, the SDT has improved the E1 exclusion criteria by increasing the 30 kV threshold to 50 kV. We wish to thank the SDT for its diligence in justifying an increase to 50 kV. However, we still believe that the threshold is too low and would like to see it raised to at least to 70 kV.
Response: The commenter has presented no technical rationale for increasing the threshold value above 50 kV. The studies performed by the SDT indicate that 50 kV is the highest supportable threshold value, i.e., where the loop configuration starts to flow back to the BES and may be considered necessary for the reliable operation of the interconnected transmission system. No change made.		
Associated Electric Cooperative, Inc. - JRO00088	Yes	AECI appreciates the SDT's willingness to tackle this issue and provide a higher kV level than 0, as well as its technical justification.
Duke Energy	Yes	Duke Energy agrees with the modifications made by the SDT.
Indiana Municipal Power Agency	Yes	IMPA appreciates the work that the SDT has done to come up with an alternative to the Commission's sub-100kV loop concerns for radial systems. IMPA supports the SDT's white paper and the proposed 50kV threshold value.
Southern Company	Yes	It is clear that looping facilities operating at voltages < 100 kV are NOT included in the BES and that contiguous loops operated at voltage < 50 kV in configurations

Organization	Yes or No	Question 2 Comment
		being considered as radial systems does not affect this exclusion (i.e., they are also NOT included in the BES).
Transmission Access Policy Study Group	Yes	TAPS appreciates the SDT's work on the sub-100 kV loop issue. For the reasons set out in the SDT's white paper, and in TAPS' comments on the 30 kV threshold that was proposed in the first posting of Phase 2 of the BES definition project, TAPS strongly supports the proposed 50 kV threshold.
Southwest Power Pool Regional Entity	Yes	The technical justification document supports this conclusion.
Wisconsin Public Service Corporation	Yes	We agree with the 50kv limit since the SDT has posted a reasonable technical rationale.
ACES Standards Collaborators	Yes	We thank the drafting team for increasing the minimum threshold to 50 kV for sub-100 kV looped radial systems.
NIPSCO	Yes	We'd rather see it at 70 kV, however we appreciate the analysis that was performed justifying the 50 kV.
Xcel Energy	Yes	Xcel Energy strongly supports this modification.

Organization	Yes or No	Question 2 Comment
Northeast Power Coordinating Council	Yes	
Dominion	Yes	
SPP Standards Review Group	Yes	
Florida Municipal Power Agency	Yes	
BANC & SMUD	Yes	
Bonneville Power Administration	Yes	
Salt River Project	Yes	
PacifiCorp	Yes	
Madison Gas and Electric Company	Yes	

Organization	Yes or No	Question 2 Comment
Pepco Holdings Inc	Yes	
Muscatine Power and Water	Yes	
Public Service Enterprise Group	Yes	
Exelon and its' affiliates	Yes	
MidAmerican Energy Company	Yes	
BrightSource Energy, Inc.	Yes	
Consumers Energy Company	Yes	
Alliant Energy	Yes	
Manitoba Hydro	Yes	

Organization	Yes or No	Question 2 Comment
Hydro-Quebec TransEnergie	Yes	
New York Power Authority	Yes	
Omaha Public Power District	Yes	
Idaho Power Company	Yes	
City of Tallahassee	Yes	
Volkmann Consulting, Inc	Yes	
Tri-State Generation and Transmission Association, Inc.	Yes	
MRO	Yes	
American Transmission Company, LLC	Yes	

Organization	Yes or No	Question 2 Comment
First WInd	Yes	
Minnkota Power Cooperative	Yes	
Public Utility District No.1 of Snohomish County	Yes	
Response: Thank you for your support.		

3. **The SDT has added the term 'Real' to Exclusion E3b to clarify its intent. Do you agree with this change? If you do not support this change, please provide specific suggestions and technical rationale in your comments.**

Summary Consideration: There were no negative comments regarding this change.

No changes were made to the proposed definition due to comments raised in this question.

Organization	Yes or No	Question 3 Comment
SPP Standards Review Group	Yes	This change has been made to clarify the drafting team's intent. We would be interested in knowing what that intent is.
Response: The intent of the SDT was to clarify that Real Power is the issue with regard to local networks. Reactive Power is a local issue and not easily or customarily transferred outside of the local network.		
Ameren	Yes	We agree with the addition of the word "Real", but we have other concerns with E3b and we have identified in the comments to question 4 below.
Response: Please see the response to Q4.		
Southern California Edison Company	Yes	Clearly identifying "Real" Power makes sense and helps clarify the intent.
NIPSCO	Yes	good

Organization	Yes or No	Question 3 Comment
Arizona Public Service Company	Yes	This is in regard to local networks and this change is less restrictive.
Northeast Power Coordinating Council	Yes	
Dominion	Yes	
SERC Planning Standards Subcommittee	Yes	
Florida Municipal Power Agency	Yes	
BANC & SMUD	Yes	
Bonneville Power Administration	Yes	
Duke Energy	Yes	
Associated Electric Cooperative,	Yes	

Organization	Yes or No	Question 3 Comment
Inc. - JRO00088		
ACES Standards Collaborators	Yes	
Southwest Power Pool Regional Entity	Yes	
Salt River Project	Yes	
Southern Company	Yes	
PacifiCorp	Yes	
Wisconsin Public Service Corporation	Yes	
Madison Gas and Electric Company	Yes	
Pepco Holdings Inc	Yes	

Organization	Yes or No	Question 3 Comment
Muscatine Power and Water	Yes	
Public Service Enterprise Group	Yes	
Indiana Municipal Power Agency	Yes	
Exelon and its' affiliates	Yes	
MidAmerican Energy Company	Yes	
Independent Electricity System Operator	Yes	
BrightSource Energy, Inc.	Yes	
American Electric Power	Yes	
Consumers Energy Company	Yes	

Organization	Yes or No	Question 3 Comment
Alliant Energy	Yes	
Manitoba Hydro	Yes	
Hydro-Quebec TransEnergie	Yes	
Nebraska Public Power District	Yes	
New York Power Authority	Yes	
Omaha Public Power District	Yes	
Idaho Power Company	Yes	
City of Tallahassee	Yes	
Volkmann Consulting, Inc	Yes	

Organization	Yes or No	Question 3 Comment
Tri-State Generation and Transmission Association, Inc.	Yes	
Xcel Energy	Yes	
MRO	Yes	
Hydro One	Yes	
American Transmission Company, LLC	Yes	
First WInd	Yes	
Minnkota Power Cooperative	Yes	
Response: Thank you for your support.		

4. Are there any other concerns with this definition that haven't been covered in previous questions and comments?

Summary Consideration: The proposed definition continues to include, through inclusion I4, individual dispersed power producing resources if those resources aggregate to a total value greater than 75 MVA. This inclusion treats dispersed power producing resources in a manner that is comparable to other non-dispersed power producing resources and is an approach that was accepted and emphasized by the Commission in Orders No. 773 & 773-A. The SDT has explored various options associated with dispersed power producing resources; however, none of the options explored provided an equal and effective approach to address the Commission's reliability concerns with these facilities. The SDT continues to believe that the best resolution to the industry's concerns is through clarification of the applicability of individual Reliability Standards and not a revision to the BES definition. Given these facts, the SDT is retaining Inclusion I4a but has revised the language of inclusion I4, based on industry comments, to provide greater clarity of the SDT's intent.

> **I4** - Dispersed power producing resources that aggregate to a total capacity greater than 75 MVA (gross nameplate rating), and that are connected through a system designed primarily for delivering such capacity to a common point of connection at a voltage of 100 kV or above. Thus, the facilities designated as BES are:
>
> a) The individual resources, and
> b) The system designed primarily for delivering capacity from the point where those resources aggregate to greater than 75 MVA to a common point of connection at a voltage of 100 kV or above.

The SDT made the following changes to the white paper on the 50 kV threshold in response to suggestions made by commenters:

> In this simplified depiction of a portion of an electric system, two radial 115 kV lines emanate from 115 kV substations A and B to serve distribution loads via 115 kV distribution transformers at stations C and D. Stations C and D are "looped" together via either a distribution bus tie (zero impedance) or a feeder tie (modeled with typical distribution feeder impedances).
>
> The analyses determined the LODF which represents the portion of the high voltage transmission flow that would flow across the low voltage distribution circuit or bus ties under a single contingency outage of the line between stations A and B.

Organization	Yes or No	Question 4 Comment
Dominion	No	
Bonneville Power Administration	No	
Duke Energy	No	
Salt River Project	No	
PacifiCorp	No	
Wisconsin Public Service Corporation	No	
Pepco Holdings Inc	No	
Public Service Enterprise Group	No	
Indiana Municipal Power Agency	No	

Organization	Yes or No	Question 4 Comment
MidAmerican Energy Company	No	
Independent Electricity System Operator	No	
Consumers Energy Company	No	
Omaha Public Power District	No	
City of Tallahassee	No	
Volkmann Consulting, Inc	No	
Tri-State Generation and Transmission Association, Inc.	No	
Xcel Energy	No	
MRO	No	

Organization	Yes or No	Question 4 Comment
First WInd	No	
Minnkota Power Cooperative	No	
Public Utility District No.1 of Snohomish County	No	
Response: Thank you for your review and comments.		
Manitoba Hydro	Yes	(1) General Comment - replace " Board of Trustees " with " Board of Trustees' " throughout the applicable documents/standards for consistency with other standards.
Response: The SDT believes that the use of the apostrophe is appropriate if using the term in the possessive sense and will review SDT documents for any instances of possessive use.		
Seminole Electric Cooperative, Inc.	Yes	(1) The definition utilizes the term "non-retail generation." This term does not appear to be clarified within the definition. However, the drafting team has attempted to clarify the term in the guidance document. Unfortunately, the guidance document is not final, meaning that it can be revised before being finalized. Please define retail and non-retail generation as separate definitions for inclusion into the Glossary contingent upon each other or make the BES definition approval contingent on the guidance document being approved. See

Organization	Yes or No	Question 4 Comment
		Exclusion E1(c). (2) The terms “plant and facility” are not defined and are ambiguous. Please provide quantitative and/or qualitative factors that an entity can utilize in determining what is a plant/facility. See Inclusion I2. (3) The following note will be placed in the Reference document:”Dispersed power producing resources are small-scale power generation technologies using a system designed primarily for aggregating capacity providing an alternative to, or an enhancement of, the traditional electric power system.” Please strike the following language from the paragraph “or an enhancement of,” as it is more of a persuasive statement than an objective statement. (4) In Exclusion E1(c), please clarify that reactive devices, such as capacitor banks, can be included in this section also. Reactive devices are differentiated from real power devices in Inclusion I2 and so we request clarification that reactive devices can be included in Exclusion E1(c). (5) Inclusion I2 includes generation above 20 MVA/75MVA connected at 100 kV or higher. However, the base definition includes all generation units connected at 100 kV or higher. Units below 20 MVA/75MVA are never actually excluded. The net effect is to include all generation under the base definition regardless of size. To avoid future interpretation issues and ensure consistency with the intent communicated in the Phase 1 guidance document (page 13, Figure I2-6), Inclusion I2 needs to be written as an exclusion of units less than 20 MVA/75 MVA. If this not the intent of I2, then the definition needs to be modified to clarify the intent. (6) Exclusion E2 currently states “: (i) the net capacity provided to the BES does

Organization	Yes or No	Question 4 Comment
		not exceed 75 MVA, and (ii) standby, back-up, and maintenance power services...". This statement could easily be covered under the section currently labeled I2 and suggested above to be rewritten as an exclusion. We would like to suggest potential language to simplify the definition, eliminate inclusion I2 to ensure that units under 20 MVA/75 MVA are actually excluded from the definition, and incorporate these ideas into exclusion E2 so that Exclusion E2 would be:E2 - Generating resource(s) including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above with: a) Gross individual nameplate rating less than 20 MVA. Or, b) Gross plant/facility aggregate nameplate rating less than 75 MVA. Or, c) One or more generating units on the customer's side of the retail meter that serve all or part of the retail Load with electric energy 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. (7) It would be extremely valuable for the team as part of any guidance document to develop and review a decision tree supporting the definition and include this decision tree in the next revision of the guidance document.
Response: 1. The SDT believes that the explanation provided in the Reference Document clarifies the term. Any revisions to the Reference Document for Phase 2 will be completed by the SDT so consistency of intent and use will be accomplished. No change made. 2. The SDT uses the terms plant and facility interchangeably as shown in the definition by the word structure 'plant/facility'. The SDT does not believe that this introduces ambiguity or confusion and that the examples shown in the Reference Document suffice to		

Organization	Yes or No	Question 4 Comment
explain the terminology. No change made. 3. The SDT will consider this suggestion when the Reference Document is revised. No change made at this time. 4. Reactive devices are included in the BES if they fall under the criteria shown in Inclusion I5. No change made. 5. The SDT believes that Inclusion I2 correctly identifies what units are included in the BES and that stating the converse is unnecessary and duplicative. No change made. 6. The SDT disagrees and believes that there are important distinctions and conditions shown in Exclusion E2 that warrant it being treated separately. No change made. 7. The SDT believes that the hierarchical approach to the application of the definition that has been published in several documents, including the Reference Document, fulfils the intent of the decision tree methodology suggested in the comment. As noted above, the Reference Document will be revised after the Phase 2 definition is finalized, and the SDT will consider whether any additional clarification would be helpful.		
Idaho Power Company	Yes	1. In the wording for E3b (Local Networks), the phrase “and the LN does not transfer energy originating outside the LN for delivery through the LN” does not seem to add any value or specificity to the LN Exclusion. In fact, the phrase seems misleading and serves to add confusion since some amount of energy flowing in a parallel BES path outside the LN will always flow through the LN, even if it’s just a trickle and does not impact the sign of the measured power flow at the LN points of connection. Suggested reword for E3b is “Real power flows only into the LN at each LN connection point.” 2. We agree that your clarifying single-line diagram for Inclusion I4 (40 - 2 MVA generators aggregated up through the point of aggregation to the common point of connection) for dispersed power producing resources properly designates the point of aggregation of the dispersed power producing resources as a BES element. We also agree with the basis for this designation which states for the point of aggregation "where the individual generator

Organization	Yes or No	Question 4 Comment
		nameplate ratings of the dispersed generation total > 75 MVA (actual 80 MVA) and a single point failure would result in loss of all generation contained on the dispersed generation site". However, following the same logic in basis, we do not agree with the BES designation for each individual 2 MVA generator in your clarifying single-line diagram. We think it makes sense that the reliability of the power system should be considered for the loss of the 80 MVA and we agree that a potential single point of failure exists at the point of aggregation that could result in the loss of all generation. However, we do not think that the loss of one 2 MVA generator would have any significant negative impact on the reliability of the power system. If the loss of greater than 20 MVA via a single point failure scenario is deemed significant to the reliability of the power system (Inclusion I2, a), then that same logic suggests that each of the two buses that aggregates 40 MVA of generation should be designated as BES. If, on the other hand, due to the dispersed nature of the generation in the clarifying single-line diagram, the loss of greater than 75 MVA via a single point failure scenario is deemed significant to the reliability of the power system (Inclusion I2, b), then that same logic suggests that the point of aggregation that aggregates 80 MVA of generation should be designated as BES. No place in the BES core definition nor in any of the inclusions (or exclusions) is there a concern for the loss of 2 MVA of generation as having a negative reliability impact on the power system. Therefore, we would not designate each individual 2 MVA generator as BES as you have in your clarifying single-line diagram and would suggest the following wording for Inclusion I2 for your consideration:I2 - Generating resource(s) with: a) gross individual nameplate rating greater than 20 MVA, including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above or,b) the point of aggregation of gross plant/facility with aggregate nameplate rating greater than 75 MVA, including the system designed primarily for delivering the aggregated capacity from the point where the

Organization	Yes or No	Question 4 Comment
		resources aggregate to greater than 75 MVA to a common point of connection at a voltage of 100 kV or above.I4 - DELETED
Response: 1. The SDT disagrees and re-iterates its position that any flow out of a local network disqualifies it for Exclusion E3. This point has been consistently presented by the SDT as one of the basic tenets for a local network and was explained in the white paper published in Phase 1 (http://www.nerc.com/pa/Stand/Project%20201017%20Proposed%20Definition%20of%20Bulk%20Electri/bes_definition_technical_justification_local_network_20110819.pdf). No change made. 2. The proposed definition continues to include, through inclusion I4, individual dispersed power producing resources if those resources aggregate to a total value greater than 75 MVA. This inclusion treats dispersed power producing resources in a manner that is comparable to other non-dispersed power producing resources and is an approach that was accepted and emphasized by the Commission in Orders No. 773 & 773-A. The SDT has explored various options associated with dispersed power producing resources; however, none of the options explored provided an equal and effective approach to address the Commission's reliability concerns with these facilities. The SDT continues to believe that the best resolution to the industry's concerns is through clarification of the applicability of individual Reliability Standards and not a revision to the BES definition. Given these facts, the SDT is retaining Inclusion I4a but has revised the language of inclusion I4, based on industry comments, to provide greater clarity of the SDT's intent. I4 - Dispersed power producing resources that aggregate to a total capacity greater than 75 MVA (gross nameplate rating), and that are connected through a system designed primarily for delivering such capacity to a common point of connection at a voltage of 100 kV or above. Thus, the facilities designated as BES are: a) The individual resources, and b) The system designed primarily for delivering capacity from the point where those resources aggregate to greater than 75 MVA to a common point of connection at a voltage of 100 kV or above.		
NAGF Standards Review Team	Yes	1. The language of the proposed BES definition is rather convoluted and is therefore difficult to apply correctly without the Reference Document. The FERC order 773/773a-amended Reference Document is not complete or final

Organization	Yes or No	Question 4 Comment
		for the phase-2 BES definition, however. Its exclusion E1 statement is that of phase-1, not phase-2, for example, and a disclaimer on p.1 states "...this reference document is outdated. Revisions to the document will be developed at a later date to conform to the definition being developed in Phase 2." It appears that the phase-2 BES definition is being rushed through the approval process, and it would be preferable to take the time to compile a complete and consistent body of documentation before putting the matter up for a vote. This is especially important for correctly classifying very small, standby, non-Blackstart Resource gensets feeding the aux buses of generation plants for emergency purposes. Such emergencies include blackouts and max-generation situations, and in the latter case displacing some of the aux load can temporarily boost the net amount of power delivered by the plant. 2. Figure I2-5 of the Reference Document suggests that such standby generators are part of the BES, if the plant totals more than 75 MVA, because they "contribute to the gross aggregate rating of the site." Fig. I2-5 depicts all units exporting to the grid, however, and we are considering here only standby gensets feeding aux buses that remain net importers of power. Exclusion E3 may apply, however. Fig. S1-9b of the Reference Document shows a system composed of several generating plants and users, but the conclusions reached by the SDT should be unchanged if one drew a box around the diagram and labeled it a single generating plant. Specifically, the SDT decided that Exclusion 3 is invoked by the circumstance that the bus fed by the 5 MVA generator at lower left is exclusively an importer of power, and this ruling should apply as well for standby gensets that feed aux buses within generation plants. Making such a classification would require that a Local Network (LN) can exist within a generation plant, as opposed be being found exclusively in the systems of TOs and DPs. Such an interpretation may be permitted by the circumstance that the definition of an LN uses the word "transmission" with a lower-case "t", as

Organization	Yes or No	Question 4 Comment
		opposed the TO and DP-oriented term "Transmission" in the NERC Glossary, but the LN definition also references serving "retail customer load." This definition should be changed, or (better) the BES definition should explicitly state that gensets < 20 MVA feeding power-importing aux buses of generation plants are excluded from the BES. The term "nameplate rating" should be replaced by the NERC-defined term "Facility Rating" to harmonize the BES definition with NERC's standards. 3. Inclusion I2a should be deleted and I2b should be used to define the threshold for all generating facilities. It is inconsistent to include a 21 MVA single generator (using I2a) and not include 74.5 MVA aggregated conglomeration of individual generators (using I2b). Since 75MVA is used as the threshold in multiple places in this definition, a single generator unit (Facility Rating) at 75 MVA connected at > 100kV should be the individual unit size threshold. 4. Please specify what size of reactive power resources is included by I5 (> 75MVAR?).
PPL NERC Registered Affiliates	Yes	a. The language of the proposed BES definition is somewhat vague and is therefore difficult to apply correctly without the Reference Document. The FERC order 773/773a-amended Reference Document is not complete or final for the phase-2 BES definition, however. Its exclusion E1 statement is that of phase-1, not phase-2, for example, and a disclaimer on p.1 states that "...this reference document is outdated. Revisions to the document will be developed at a later date to conform to the definition being developed in Phase 2." It appears that the phase-2 BES definition is being rushed through the approval

Organization	Yes or No	Question 4 Comment
		process, and it would be preferable to take the time to compile a complete and consistent body of documentation before putting the matter up for a vote. This is especially important for correctly classifying very small, standby, non-Blackstart Resource gensets feeding the aux buses of generation plants for emergency purposes. Such emergencies include blackouts and max-generation situations, and in the latter case displacing some of the aux load can temporarily boost the net amount of power delivered by the plant. Figure I2-5 of the Reference Document suggests that such standby generators are part of the BES, if the plant totals more than 75 MVA, because they "contribute to the gross aggregate rating of the site." Fig. I2-5 depicts all units exporting to the grid, however, and we are considering here only standby gensets feeding aux buses that remain net importers of power. Exclusion E3 may apply, however. Fig. S1-9b of the Reference Document shows a system composed of several generating plants and users, but the conclusions reached by the SDT should be unchanged if one drew a box around the diagram and labeled it a single generating plant. Specifically, the SDT decided that Exclusion 3 is invoked by the circumstance that the bus fed by the 5 MVA generator at lower left is exclusively an importer of power, and this ruling should apply as well for standby gensets that feed aux buses within generation plants. Making such a classification would require that a Local Network (LN) can exist within a generation plant, as opposed be being found exclusively in the systems of TOs and DPs. Such an interpretation may be permitted by the circumstance that the definition of an LN uses the word "transmission" with a lower-case "t", as opposed the TO and DP-oriented term "Transmission" in the NERC Glossary, but the LN definition also references serving "retail customer load." This definition should be changed, or (better) the BES definition should explicitly state that gensets < 20 MVA feeding power-importing aux buses of generation plants are excluded from the BES.

Organization	Yes or No	Question 4 Comment
		b. The term "nameplate rating" should be replaced by the NERC-defined term "Facility Rating" to harmonize the BES definition with NERC's standards. c. Inclusion I2a should be deleted and I2b should be used to define the threshold for all generating facilities. It is inconsistent to include a 21 MVA single generator (using I2a) and not include 74.5 MVA aggregated conglomeration of individual generators (using I2b). Since 75MVA is used as the threshold in multiple places in this definition, a single unit (facility rating) at 75 MVA connected at > 100kV should be the individual unit size threshold. d. Please specify what size of reactive power resources is included by I5 (> 75MVAR?).
Associated Electric Cooperative, Inc. - JRO00088	Yes	AECI supports the NAGF's draft comment for concern, duplicated immediately below:"The language of the proposed BES definition is rather convoluted and is therefore difficult to apply correctly without the Reference Document. The FERC order 773/773a-amended Reference Document is not complete or final for the phase-2 BES definition, however. Its exclusion E1 statement is that of phase-1, not phase-2, for example, and a disclaimer on p.1 states that "...this reference document is outdated. Revisions to the document will be developed at a later date to conform to the definition being developed in Phase 2." It appears that the phase-2 BES definition is being rushed through the approval process, and it would be preferable to take the time to compile a complete and consistent body of documentation before putting the matter up for a vote. This is especially important for correctly classifying very small, standby, non-Blackstart Resource gensets feeding the aux buses of generation plants for emergency purposes. Such emergencies include blackouts and max-generation situations, and in the latter case displacing some of the aux load can

Organization	Yes or No	Question 4 Comment
		temporarily boost the net amount of power delivered by the plant. Figure I2-5 of the Reference Document suggests that such standby generators are part of the BES, if the plant totals more than 75 MVA, because they, "contribute to the gross aggregate rating of the site." Fig. I2-5 depicts all units exporting to the grid, however, and we are considering here only standby gensets feeding aux buses that remain net importers of power. Exclusion E3 may apply, however. Fig. S1-9b of the Reference Document shows a system composed of several generating plants and users, but the conclusions reached by the SDT should be unchanged if one drew a box around the diagram and labeled it a single generating plant. Specifically, the SDT decided that Exclusion 3 is invoked by the circumstance that the bus fed by the 5 MVA generator at lower left is exclusively an importer of power, and this ruling should apply as well for standby gensets that feed aux buses within generation plants. Making such a classification would require that a Local Network (LN) can exist within a generation plant, as opposed be being found exclusively in the systems of TOs and DPs. Such an interpretation may be permitted by the circumstance that the definition of an LN uses the word "transmission" with a lower-case "t", as opposed the TO and DP-oriented term "Transmission" in the NERC Glossary, but the LN definition also references serving "retail customer load." This definition should be changed, or (better) the BES definition should explicitly state that gensets < 20 MVA feeding power-importing aux buses of generation plants are excluded from the BES. Additionally, the MVA size of reactive power generator that is included by I5 should be specificed."
Response: 1. The SDT has not published a Phase 2 Reference Document at this time and did not intend the posted version to represent a full implementation of Phase 2 as Phase 2 isn't complete. A revised Reference Document will be published in the same timeframe and sequence that was used in Phase 1. The SDT is following the established development process and while working against a deadline is not rushing things through. No change made. 2. The identified equipment exists today and precedent has already been established as to how to handle it with regard to BES		

Organization	Yes or No	Question 4 Comment
inclusion. Nothing in the proposed definition changes this. The intent of the SDT is that the precedent will not change how the identified equipment is classified. The intent of the SDT is to identify BES generators and it believes that the current language is clear in that regard. No change made. The SDT believes that nameplate rating is the correct term to use in a bright-line definition. Facility Rating is a variable value that would cause the determination of whether units are BES or not to fluctuate from period to period making for an untenable compliance situation. No change made. 3. The SDT is following the recommendation of the Planning Committee in its report on threshold values (http://www.nerc.com/pa/Stand/Project%20201017%20Proposed%20Definition%20of%20Bulk%20Electri/bes_phase2_pc_report_final_20130306.pdf) in the retention of the 20 and 75 MVA threshold values. No change made. 4. All reactive power devices are included by Inclusion I5 regardless of size as recommended by the Planning Committee in the report cited in response 3.		
Ameren	Yes	1. We request the SDT to provide clarification for E3b testing conditions, specifically for all facilities in service or for single transmission contingency conditions. We believe that the criteria needs to be very clear so it is not confusing for entities when determining inclusion of local network facilities as BES facilities. 2. Also, we do not believe that 1 MW of back-feed from local network facilities to transmission facilities for a few hours out of the year constitutes classification of the local network facilities as BES facilities. We request that the SDT consider for inclusion that the magnitude of the injections from the local network should be in line with other injections into the transmission system such as: (a) Generators with a nameplate greater than 20 MVA, or (b) Aggregate resources greater than 75 MVA. 3. In our opinion, the standard puts additional burden on local network owners including local subtransmission network owners to prove that their

Organization	Yes or No	Question 4 Comment
		facilities should be excluded from consideration as BES facilities. (a) We believe that, testing for BES inclusion could be included in the annual TPL contingency analysis, but it may not be possible to complete this type of analysis before the end of the year unless the criteria is clearly defined and limited in scope, otherwise numerous models reflecting varying system conditions would need to be considered. (b) We ask the SDT to recall that it was suggested in the last webinar that SCADA data could be used to prove that there was no back-feed from the local network to the transmission system. (c) We realize that the accuracy of SCADA data at low flow levels can be suspect at low load flows but if considered with the type of relaying, that is if the relaying limits power flow back into the BES transmission system, this could be used as a means of quick determination for inclusion. We appreciate the work of the SDT effort to provide a reasonable and balanced approach to the determination of BES facilities, and doing all of this within a very short period of time. Again we ask the SDT for consideration with respect of the 50kV threshold being raised to 70kV, and that with respect to injections into the transmission network from the various generation and local network sources that they be considered as a comparable basis in the determination of BES facilities.
SERC Planning Standards Subcommittee	Yes	E3b: The testing conditions for E3b should be clearly stated, namely for all facilities in service or for single transmission contingency conditions. We believe that the criteria need to be anchored so as not to manufacture a justification for inclusion of local network facilities as BES facilities. Add word “normally” between “not” and “transfer” to E3b: Real Power flows only into the LN and the LN does not normally transfer energy originating outside the LN

Organization	Yes or No	Question 4 Comment
		for delivery through the LN; and We do not believe that 1 MW of back-feed from local network facilities to transmission facilities for a few hours of the year constitutes classification of the local network facilities as BES facilities. We believe that the magnitude of the injections from the local network should be reviewed in line with other injections into the transmission system such as a) generators with a nameplate greater than 20 MVA, or b) aggregate resources greater than 75 MVA. In our opinion, the standard puts additional burden on local network owners including local subtransmission network owners to prove that their facilities should be excluded from consideration as BES facilities. In theory, this testing could be included in the annual TPL contingency analysis, but it may not be possible to complete this type of analysis before the end of the year for numerous models reflecting varying system conditions. It was suggested in the last webinar that SCADA data could be used to prove that there was no back-feed from the local network to the transmission system, but the accuracy of some SCADA data at low flow levels can be suspect and the SCADA data does not identify the exact system conditions that were experienced when the SCADA measurements were recorded, including outages to local subtransmission facilities. We appreciate the work of the SDT to try and provide a reasonable and balanced approach to the determination of BES facilities, and within a very short period of time. We ask that the injections into the transmission network from the various generation and local network sources be considered on a comparable basis in the determination of BES facilities. The comments expressed herein represent a consensus of the views of the

Organization	Yes or No	Question 4 Comment
		above named members of the SERC PSS and the SERC OC Review Group only and should not be construed as the position of the SERC Reliability Corporation, or its board or its officers.
Response: 1. The SDT has been clear from the beginning that local networks must meet the criteria of Exclusion E3 for all operating conditions. No change made. 2. The position of the SDT has consistently been that local networks that have flow back into the BES at any time do not qualify under exclusion E3 as a local network. In the Reference Document, the SDT proposed a method to measure this factor so that a brief momentary fluctuation will not negate the ability to invoke Exclusion E3. No change made. 3. The SDT has always proposed that SCADA data could be used to determine local network applicability. 4. The commenter has presented no technical rationale for increasing the threshold value above 50 kV. The studies performed by the SDT indicate that 50 kV is the highest supportable threshold value, i.e., where the loop configuration starts to flow back to the BES and may be considered necessary for the reliable operation of the interconnected transmission system. No change made.		
Southern Company	Yes	A) Inclusion I2a should be deleted and I2b should be used to define the threshold for all generating facilities. It is inconsistent to include a 21 MVA single generator (using I2a) and not include 74.5 MVA aggregated conglomeration of individual generators (using I2b). Since 75 MVA is used as the threshold in multiple places in this definition, a single generator at 75 connected at > 100kV should be the individual unit size threshold. B) Please specify what size of Reactive Power resources is included by I5. Order 773 acknowledged that Inclusion I5 is the technical equivalent of Inclusion I2 (generating resources) for reactive power devices. Since generating resources in Inclusion I2 are limited to those connected at 100kV or above with individual and aggregate ratings of 20MVA and 75 MVA, respectively, it could be consistent -- if technically justified -- to include a

Organization	Yes or No	Question 4 Comment
		threshold of >75MVAR for reactive power resources. Some technical justification should be pursued to determine whether 75 MVAR or a different size threshold would be appropriate to include in Inclusion I5 for Reactive Power resources. C) Southern Transmission believes that Exclusion E3 should include a limit on the size of a Local Network (LN). This position is consistent with the proposal from the NERC System Analysis and Modeling Subcommittee (SAMS). Without placing a size limitation on such a network, a single contingency could result in significant flows across the BES to serve the LN from a different location. The SAMS provided technical justification for a 300 MW load limit and Southern would be supportive of such a limit. Southern also agrees with the SAMS that the flow should be into the LN under single contingency conditions. (See NERC's Review of Bulk Electric System Definition Thresholds, March 2013, Section 5.3) D) Southern believes that the second part of Exclusion E3 should be deleted for three reasons: First, Exclusion E3a refers to "non-retail generation". Southern believes that whether a unit is "retail" or "non-retail" should be irrelevant when determining inclusion in the BES. Regardless of how a generator is classified, if it is large enough to impact flows on the system, then it should be included in the BES. Second, the phrase "and do not have" in the second phrase of Exclusion E3a is ambiguous and redundant and could lead to confusion and misapplication. Specifically, it is ambiguous as to whether the last phrase regarding aggregate non-retail capacity:(a) refers back to the generation resources identified in Inclusion I2, I3, or I4 (thus defining a smaller subset of generation resources from I2, I3, and I4 that are carved out from the definition of LN, but other Inclusion I2-I4 generation resources can be part of the local network); or(b) simply refers back to "generation resources"

Organization	Yes or No	Question 4 Comment
		(therefore, local networks exclude BOTH Inclusion I2-I4 generation resources AND, separately, generation resources with aggregate non-retail generation >75MVA).Third, Inclusions I2 and I4 already both use the 75 MVA limit. It seems redundant to state that a Local Network under Exclusion E3a does not include generation resources with aggregate capacities greater than 75 MVA when Exclusion E3a already states that local networks do not include generation resources identified in Inclusion I2 and I4 (which, in turn, include generation resources with aggregate capacities above 75 MVA). To clarify and to eliminate confusing and unnecessary redundancy, Southern suggests striking all language after "Inclusion I4." Exclusion E3a should therefore read: "a) Limits on connected generation: The LN and its underlying Elements do not include generation resources identified in Inclusions I2, I3, or I4."

Response: a. The SDT is following the recommendation of the Planning Committee in its report on threshold values (http://www.nerc.com/pa/Stand/Project%20201017%20Proposed%20Definition%20of%20Bulk%20Electri/bes_phase2_pc_report_final_20130306.pdf) in the retention of the 20 and 75 MVA threshold values. No change made.

b. All reactive power devices, regardless of size, are included by Inclusion I5 as recommended by the Planning Committee in the report cited in response a.

c. The SDT does not believe that such a limit is needed. In the example provided, the SDT sees no affect on the reliability of the BES simply because a configuration of equipment has been designated as a local network. Further, evaluating local network applicability under planning scenarios such as single contingency operation violates the bright-line principle of the definition. No change made.

d. The differentiation between retail and non-retail is based on Exclusion E2 and the SDT believes that such differentiation is warranted in Exclusion E3. There is a difference in citing individual units or aggregation of units under Inclusion I2 and a 75 MVA limit as expressed in Exclusion E3a. The 75 MVA limit was retained to capture the situation where there are multiple plants/facilities within the local network that might add up to 75 MVA but which wouldn't be captured under inclusion i2. No change made.

Organization	Yes or No	Question 4 Comment
Alliant Energy	Yes	Alliant Energy reiterates that Inclusion I4a must be removed from the definition of the BES. It makes no technical sense, and creates an extremely burdensome compliance workload and risk.
Madison Gas and Electric Company	Yes	The inclusion of I4a does not support the reliabile operation of the BES. As stated before, we agree that the point of interconnection should be included, not the individual intermitent resources.
BANC & SMUD	During Phase-1, it was suggested that a 75 MVA threshold be established where the loss of a single element would render the entire 75 MVA of resources unavailable. This was in lieu of including the individual small-scaled machines as BES to avoid subjecting those machines to administrative burden for little or no impact on the BES as compared to the compliance obligation. (Please refer to response to Q2 for additional details.)	

Response: The proposed definition continues to include, through inclusion I4, individual dispersed power producing resources if those resources aggregate to a total value greater than 75 MVA. This inclusion treats dispersed power producing resources in a manner that is comparable to other non-dispersed power producing resources and is an approach that was accepted and emphasized by the Commission in Orders No. 773 & 773-A. The SDT has explored various options associated with dispersed power producing resources; however, none of the options explored provided an equal and effective approach to address the Commission's reliability concerns with these facilities. The SDT continues to believe that the best resolution to the industry's concerns is through clarification of the applicability of individual Reliability Standards and not a revision to the BES definition. Given these facts, the SDT is retaining Inclusion I4a but has revised the language of inclusion I4, based on industry comments, to provide greater clarity of the SDT's intent.

> **I4** - Dispersed power producing resources that aggregate to a total capacity greater than 75 MVA (gross nameplate rating), and that are connected through a system designed primarily for delivering such capacity to a common point of connection at

Organization	Yes or No	Question 4 Comment
a voltage of 100 kV or above. Thus, the facilities designated as BES are: a) The individual resources, and b) The system designed primarily for delivering capacity from the point where those resources aggregate to greater than 75 MVA to a common point of connection at a voltage of 100 kV or above.		
NIPSCO	Yes	Another major concern is whether our 138 kV industrial customers with multiple feeds are part of the BES. One of the criteria is whether power ever flows through the customer's system. This could be very difficult to prove with evidence. Perhaps during the last year's peak load or maximum transfer across the host TOP's system, the flow could be integrated over an hour; if there is system flow across the customer's system during the integrated hour, then the customer's system should be considered part of the BES and the customer should have multiple years to comply with becoming part of the BES. If the customer becomes part of the BES would this mean that they would have to become a TO/TOP? Would it require that they have NERC certified operators? We see these as emerging concerns. Additionally, it appears that several small wind generators may become part of the BES which would bring PRC-004 misoperations into play for them. It is our understanding that such generators trip off line based on wind and wind direction. Keeping track of these operations and the associated analysis may become quite an undertaking. Other standards such as PRC-005 may also become a concern.
Response: The SDT can't respond to individual requests for determination of whether a specific configuration is BES or not. However, in the Reference Document, the SDT did supply a mechanism for measuring flow that did involve integrated hourly values.		

Organization	Yes or No	Question 4 Comment
Similarly, the SDT can't make a determination on registration issues or the need for certified operators. The proposed definition continues to include, through inclusion I4, individual dispersed power producing resources if those resources aggregate to a total value greater than 75 MVA. This inclusion treats dispersed power producing resources in a manner that is comparable to other non-dispersed power producing resources and is an approach that was accepted and emphasized by the Commission in Orders No. 773 & 773-A. The SDT has explored various options associated with dispersed power producing resources; however, none of the options explored provided an equal and effective approach to address the Commission's reliability concerns with these facilities. The SDT continues to believe that the best resolution to the industry's concerns is through clarification of the applicability of individual Reliability Standards and not a revision to the BES definition. Given these facts, the SDT is retaining Inclusion I4a but has revised the language of inclusion I4, based on industry comments, to provide greater clarity of the SDT's intent. I4 - Dispersed power producing resources that aggregate to a total capacity greater than 75 MVA (gross nameplate rating), and that are connected through a system designed primarily for delivering such capacity to a common point of connection at a voltage of 100 kV or above. Thus, the facilities designated as BES are: a) The individual resources, and b) The system designed primarily for delivering capacity from the point where those resources aggregate to greater than 75 MVA to a common point of connection at a voltage of 100 kV or above.		
American Transmission Company, LLC	Yes	ATC has the following additional comment for consideration by the SDT: o Exclusion 3b does not currently define the limited set of conditions entities are to consider when determining if real power flows only into the local network (LN). Without this clarification, entities will have no certainty regarding the exclusion determination made, which can have a material impact on the entity under all of the NERC standards. ATC recommends the following revision to E3b:E3b) Real Power flows only into the LN under intact system and most severe single contingency conditions and the LN does not transfer energy originating outside the LN for delivery through the LN; and' This revision is warranted for the reason noted above. In addition, the language is consistent with how the system is operated under the NERC TOP standards and the

Organization	Yes or No	Question 4 Comment
		proposed addition matches NERC's own statements to the FERC as recorded in paragraph 71 of FERC Order 773-A. As noted in the same paragraph, FERC agreed with NERC's reasoning. Therefore, this clarification should be recorded in the BES definition.
Response: The SDT has consistently indicated its intent that local networks must meet the criteria of Exclusion E3 for all operating conditions. No change made.		
Modesto Irrigation District	Yes	I voted NO for the following reasons:1. WECC studies have shown that there are thousands of MWs of wind and PV generating plants currently on-line, and thousands of MWs under development, in the WECC system, of 20 MW and less capacity units. Ignoring the impacts of these units on the BES would be a mistake, as recent studies by the WECC MVWG (Modeling and Validation Work Group) have shown (i.e., June 2013 Meeting). 2. The revisions have made the definition of the BES so complicated, that the definition is no longer in a form that can be applied in a straight forward and reasonable manner. Also, there are no technical justifications provided for some of the exclusion criteria (e.g, 75 MVA). 3. The best way to define the BES is by using the engineering methodology developed by the WECC BES Definition Task Force, and published in May 2010. That study work showed that for the location in question to have a material impact to the interconnected bulk electric power system, there must be an equivalent short circuit MVA exceeding 6000 at that location.Thank you.
Response: 1.The SDT is not proposing to ignore the impact of wind and PV generation but to arrive at the optimal solution for achieving over-all BES reliability. The SDT is also attempting to achieve a bright-line definition of BES. If there are some units that		

Organization	Yes or No	Question 4 Comment
fall 'outside' of the bright-line that a reliability entity feels should be part of the BES that entity always has the option to file for an inclusion to the BES through the established exception process. No change made. 2. The SDT is following the recommendation of the Planning Committee in its report on threshold values (http://www.nerc.com/pa/Stand/Project%20201017%20Proposed%20Definition%20of%20Bulk%20Electri/bes_phase2_pc_report_final_20130306.pdf) in the retention of the 20 and 75 MVA threshold values. No change made. 3. As stated in the FERC Orders, material impact alone is not a sufficient condition for determining BES applicability. The revised "bright-line" definition developed under the Phase 1 project was approved by the industry and the Board of Trustees. No change made.		
Hydro-Quebec TransEnergie	Yes	HQT's position remains the same concerning the BES Definition, as limitations on exclusion are increased in phase 2 as imposed by FERC without proper hearing of non-US jurisdictions. One other comment on the Implementation plan refers to the second sentence of Effectives dates. The second sentence should be arranged differently as it refers both to "no regulatory approval required" and "applicable governmental authorities". The last part of the sentence should be moved with the first sentence to add clarity.
Hydro One	Yes	In Canada, local load reliability requirements are under the provincial authority of local regulators such as the Ontario Energy Board in Ontario. We understand that NERC needs to follow FERC Orders and directives. In our opinion NERC must ensure that any provisions within the BES definition and/or NERC standards that are to address load reliability and load supply continuity issues and NOT interconnected BES reliability should be limited to the FERC jurisdiction only. Accordingly we suggest that when addressing such requirements in a standard it must include that for a non-US Registered Entity

Organization	Yes or No	Question 4 Comment
		it should be implemented in a manner that is consistent with, or under the direction of, the applicable governmental authority or its agency in the non-US jurisdiction. Good examples to address these issues are through the Standards process as was done for NUC 001 and TPL001 Footnote b.
Northeast Power Coordinating Council	Yes	Suggest the following rewording of the Effective Dates section of the Implementation Plan to add clarity regarding approvals: In those jurisdictions where no regulatory approval is required the definition shall become effective on the first day of the second calendar quarter after Board of Trustees adoption, or as otherwise made effective pursuant to the laws of applicable governmental authorities. In those jurisdictions where no regulatory approval is required the definition shall (go should be deleted) become effective on the first day of the second calendar quarter after Board of Trustees adoption. NPCC participating members suggest that when addressing the requirements pertaining to load reliability and continuity in a standard, they must include that for a non-U.S. Registered Entity it should be implemented in a manner that is consistent with, or under the direction of, the applicable governmental authority or its agency in the non-U.S. jurisdiction.
Response: The revised definition project was undertaken in response to a FERC Order but provides an appropriate continent-wide, bright-line for reliability of the BES based on physical principles and demonstrated in the technical analysis in the white paper supporting the selection of the 50 kV threshold (http://www.nerc.com/pa/Stand/Project%20201017%20Proposed%20Definition%20of%20Bulk%20Electri/bes_phase2_white_paper_sub100kv_threshold_20130802.pdf). Therefore, the SDT sees no reason for a reference to non-US Registered Entities. No change made.		

Organization	Yes or No	Question 4 Comment
SPP Standards Review Group	Yes	In the Implementation Plan, delete 'go' at the beginning of the 3rd line of the 1st paragraph. WhitepaperOn Page 9, Line 9 of the 1st paragraph, delete the '/'. On Page 9, Line 3 of the 2nd paragraph, replace 'represent' with 'represents'. On Page 9, Line 4 of the 2nd paragraph, replace 'distribute' with 'flow'.
Response: The SDT agrees with your correction to the Implementation Plan language; however, that language has been revised to reflect different approaches to making standards enforceable in various Canadian jurisdictions. The SDT agrees and has made the suggested change to the white paper.		
Arizona Public Service Company	Yes	Inclusion I5 is about reactive sources. However it only excludes E4. There is no reason why all exclusions E1 to E4 should not apply to reactive sources. The current definition will include reactive sources in radial system as part of BES. There is no technical reason for excluding radial system and yet including reactive sources in radial system as part of BES
Response: The SDT is following the recommendation of the Planning Committee in its report on reactive devices (http://www.nerc.com/pa/Stand/Project%20201017%20Proposed%20Definition%20of%20Bulk%20Electri/bes_phase2_pc_report_final_20130306.pdf) where the Planning Committee recommended that all reactive devices be included in the BES. No change made.		
Nebraska Public Power District	Yes	It is imperative to have the BES reference document be updated to reflect the latest changes and drafting team position on various items with the definition since the definition is not self-explanatory due to the significant BES system

Organization	Yes or No	Question 4 Comment
		variations. Perhaps some additional examples with low voltage looped systems would be beneficial similar to the scenarios noted in question 2 above. We also have concerns with the disclaimer in the reference document on page 1 and noted below. We would hope this document would be endorsed by NERC to help address the complexity of the definition and to aid in transparency."Disclaimer-This document is not an official position of NERC and will not be binding on enforcement decisions of the NERC Compliance Program. This reference document reflects the professional opinion of the DBES SDT, given in good faith for illustrative purposes only."
Response: The SDT will be updating the Reference Document to reflect Phase 2 as soon as possible. The Reference Document can only reflect the intent of the SDT and isn't a legal document. No change made.		
NARUC	Yes	NARUC shares the concern raised by New York about the Phase II Report's failure to meet its purported goal of providing a technical justification for 100kV bright line rule and generation thresholds. NY raised specific concerns about a survey not being appropriate technical support for specific numbers and the drafting team did not specifically address this, or other concerns raised about the technical justification, in its response. NARUC is also concerned that the methodology utilized historically by the NPCC was not considered as one of five alternatives. So in response to whether or not there are other concerns with this definition that have not been covered in previous questions and comments, NARUC notes that it shares these concerns that have been raised, as well as the lack of a response from the drafting team thus far and requests a thorough response.

Organization	Yes or No	Question 4 Comment
New York State Department of Public Service	Yes	NERC has an obligation to provide technical advice to FERC, so that any number provided to FERC by NERC is interpreted as technical advice. A major purpose of the BES Phase II effort was to establish a technical basis for the 100 kV brightline and the 20/75 MVA generation levels. While NERC has provided a report purportedly providing a technical basis for these threshold levels, the report fails to do so. NERC should not include any numbers in any definition or standard for which it cannot provide a technical basis. Surveys do not provide a technical basis. Particularly troublesome is the presentation of alternatives to the 100 kV brightline. The report authors looked at 5 alternatives to establishing a technical basis for determining the bulk system. The report failed to evaluate the methodology historically applied to the NPCC system. If a major NERC region was able to successfully apply their methodology, why was it not evaluated and why would it be impossible to expect other regions to perform a similar analysis as the base for determining the BES? This comment is being resubmitted as the response provided in the previous comment period does not address the issues raised.
Response: The SDT is following the recommendation of the Planning Committee in its report on threshold values (http://www.nerc.com/pa/Stand/Project%20201017%20Proposed%20Definition%20of%20Bulk%20Electri/bes_phase2_pc_report_final_20130306.pdf) in the retention of the 20 and 75 MVA threshold values as well as the 100 kV bright-line. No change made. The methodology applied by NPCC was rejected by FERC in its Order on the BES definition. No change made.		
Exelon and its' affiliates	Yes	Suggest adding the following to E4: or for the sole purpose of regulating internal generating station auxiliary buses. So that it reads: E4 - Reactive Power devices installed for the sole benefit of a retail customer(s) or for the sole

Organization	Yes or No	Question 4 Comment
		purpose of regulating internal generating station auxiliary buses.
Response: The SDT believes that if a reactive device is installed for the sole purpose of regulating internal generating station auxiliary buses that the device has been installed for the sole benefit of a retail customer and therefore the suggested language is not necessary. No change made.		
New York Power Authority	Yes	Support the development of a SAR that will create a project to review all of the GO and GOP standards for effective applicability to dispersed power resources so that generator owners and operators are only subject to the Standards requirements that have reliability impacts and those standard requirements that are applicable to the generator type.
Response: Any entity is free to develop a SAR to address areas of concern.		
Muscatine Power and Water	Yes	The SDT has recommended that a SAR be submitted in order to refine the Standards that would be applicable to individual power producing resources contained under I4 of the phase II definition. This response is not acceptable. The SDT should not passively answer an entity's question by stating that a different process "may" fix the issue at hand. MP&W recommends I4a be deleted and I4b be maintained as I4a. I4a should be deleted in its entirety. The SDT is forcing every dispersed power Facility over 75 MVA to be in the definition, where the SDT should be keeping individual resources out and allow other Standards and SDTs to determine if that should be included within each individual Standard. The BES definition should be written to give broad details and each individual Standard should be where the details are maintained. This is already the case for the following Standards; MOD-025-1, R1 and VAR-001-2, R3 are two examples where the

Organization	Yes or No	Question 4 Comment
		Standard dictates what is applicable and what is not. MP&W does not believe that since FERC has approved Phase I that the SDT is bound by that approval as being unchangeable. The Commission has only approved a part of the process and no where is it stated that once Phase I is approved that it can not be changed. This is proof with the other changes that the SDT has made in Phase II compared to Phase I. NERC or the SDT have not provided the industry with event analysis or lessons learned information that an individual dispersed power producing resource within a Facility has led to instability or cascading events on the BES. The inclusion of I4a does not align itself with the current NERC and Regional RAI process. NERC's CEO and President has even said that everything cannot be a priority. The amount of records management will only benefit a consultant who sells their services in managing individual power producing resources (i.e. paper work). The Registered Entity and their Region will not see the benefit of tracking several thousand wind turbines and solar panels, for what? The "what" is unknown because the SDT is taking words of the "Statement of Compliance Registry Criteria" and applying it to our standards development process. Currently Entities do not register per Facility, but this definition does force entities to register per Facility. The SDT is mixing apples and oranges.

Response: Applicability of individual standards is not within the scope of this SDT. A new SAR specifically tailored to address this presumed problem is the correct method to alleviate these concerns.

The proposed definition continues to include, through inclusion I4, individual dispersed power producing resources if those resources aggregate to a total value greater than 75 MVA. This inclusion treats dispersed power producing resources in a manner that is comparable to other non-dispersed power producing resources and is an approach that was accepted and emphasized by the Commission in Orders No. 773 & 773-A. The SDT has explored various options associated with dispersed power producing resources; however, none of the options explored provided an equal and effective approach to address the Commission's reliability concerns with these facilities. The SDT continues to believe that the best resolution to the industry's concerns is through clarification of the applicability of individual Reliability Standards and not a revision to the BES definition. Given these facts, the SDT is retaining

Organization	Yes or No	Question 4 Comment
Inclusion I4a but has revised the language of inclusion I4, based on industry comments, to provide greater clarity of the SDT's intent. I4 - Dispersed power producing resources that aggregate to a total capacity greater than 75 MVA (gross nameplate rating), and that are connected through a system designed primarily for delivering such capacity to a common point of connection at a voltage of 100 kV or above. Thus, the facilities designated as BES are: a) The individual resources, and b) The system designed primarily for delivering capacity from the point where those resources aggregate to greater than 75 MVA to a common point of connection at a voltage of 100 kV or above.		
American Electric Power	Yes	To reiterate, AEP does not agree with the premise that BES elements (measured for compliance) should be as granular as the individual dispersed power resource. We do not see the reliability benefit of tracking all of the compliance elements for individual wind turbines when the focus should be placed on the aggregate of the facilities. Does the RC want to be notified of an outage of each individual wind turbine in real-time, or a loss of significant portion of the wind farm? If we are not careful, we will have entities at these resources and others monitoring them (BAs, TOPs, RCs) focusing on minor issues that will distract from more relevant reliability needs. We appreciated the development of the diagram to explain the scenario. We encourage the team to continue to provide these illustrations to clarify the intent and the application. When the guidance documents were produced last year, we had a better understanding of how the pieces of the definition fit together (and where there were significant gaps). We encourage the SDT to develop the scenarios and the diagrams first for industry review then the definition should be crafted to meet those.

Organization	Yes or No	Question 4 Comment
		We understand the pressure to meet the FERC deadlines, but continuing to tweak this foundation little by little had proved to be a difficult task and an overhaul of the approach might yield better results. If this requires modifying the SAR to provide the SDT with the flexibility to address broader concerns, AEP endorses this approach.
Response: The proposed definition continues to include, through inclusion I4, individual dispersed power producing resources if those resources aggregate to a total value greater than 75 MVA. This inclusion treats dispersed power producing resources in a manner that is comparable to other non-dispersed power producing resources and is an approach that was accepted and emphasized by the Commission in Orders No. 773 & 773-A. The SDT has explored various options associated with dispersed power producing resources; however, none of the options explored provided an equal and effective approach to address the Commission's reliability concerns with these facilities. The SDT continues to believe that the best resolution to the industry's concerns is through clarification of the applicability of individual Reliability Standards and not a revision to the BES definition. Given these facts, the SDT is retaining Inclusion I4a but has revised the language of inclusion I4, based on industry comments, to provide greater clarity of the SDT's intent. I4 - Dispersed power producing resources that aggregate to a total capacity greater than 75 MVA (gross nameplate rating), and that are connected through a system designed primarily for delivering such capacity to a common point of connection at a voltage of 100 kV or above. Thus, the facilities designated as BES are: a) The individual resources, and b) The system designed primarily for delivering capacity from the point where those resources aggregate to greater than 75 MVA to a common point of connection at a voltage of 100 kV or above. The Reference Document will be revised to reflect Phase 2 as soon as possible. Any entity is free to develop a SAR to address areas of concern.		
Transmission Access Policy Study	Yes	We suggest that the SDT clarify, either in the definition itself or in the reference document, that a momentary flow-through caused by an

Organization	Yes or No	Question 4 Comment
Group		abnormal/contingency condition does not make a system ineligible for Exclusion E3. TAPS members are willing to work with the SDT on defining appropriate limits for such minimal, momentary flow-throughs.
Response: The position of the SDT consistently has been that local networks that have flow back into the BES at any time do not qualify under exclusion E3 as a local network. In the Reference Document, the SDT proposed a method to measure this factor so that a brief momentary fluctuation will not negate the ability to invoke Exclusion E3. No change made.		
ACES Standards Collaborators	Yes	We understand that NERC has developed a process for handling exception requests. We are concerned this process could be similar to the TFE exception process. We recommend that the exception process should be included with future BES definition postings with the opportunity to comment on the process.
Response: The exception process was posted for review and comment during Phase 1 of the project. It was approved by the industry, the Board of Trustees, and FERC. No changes have been made or are expected to be made to this process during Phase 2. If changes are needed to this process in the future, they will be posted for review and comment as per the established procedures.		

**Figure submitted by Tri-State G&T referenced in Q1 comments:*

http://www.nerc.com/pa/Stand/Documents/BES_I4_Clarification_for_Included_Elements_09042013.pdf

END OF REPORT