Individual or group. (24 Responses)
Name (12 Responses)
Organization (12 Responses)
Group Name (12 Responses)
Lead Contact (12 Responses)
IF YOU WISH TO EXPRESS SUPPORT FOR ANOTHER ENTITY'S COMMENTS WITHOUT ENTERING ANY ADDITIONAL COMMENTS, YOU MAY DO SO HERE. (0 Responses)
Comments (24 Responses)
Question 1 (22 Responses)
Question 1 Comments (24 Responses)
Question 2 (21 Responses)
Question 2 Comments (24 Responses)
Question 3 (17 Responses)
Question 3 Comments (24 Responses)
Question 4 (17 Responses)
Question 4 Comments (24 Responses)
Question 5 (20 Responses)
Question 5 Comments (24 Responses)
Question 6 (22 Responses)
Question 6 Comments (24 Responses)
Question 7 (20 Responses)
Question 7 Comments (24 Responses)
Question 8 (21 Responses)
Question 8 Comments (24 Responses)
Question 9 (16 Responses)
Question 9 Comments (24 Responses)
Question 10 (16 Responses)
Question 10 Comments (24 Responses)
Question 11 (22 Responses)
Question 11 Comments (24 Responses)

Group
Dominion NERC Compliance Policy
Randi Heise
No
Dominion does not agree from a technical perspective. The requirement applies to all entities registered as GOP. There is no defined reporting threshold in the standard. We think the recently filed (but remanded TOP standards) allowed the TOP to determine its data reporting requirements; and, Dominion knows for a fact that PJM requires its intermittent resources to report any change to real power that is equal to, or exceeds, 1 mw. For this reason, we do not

agree with the SDT relative to this requirement. Also disagree with 5.11.3.3 Requirement R14 for same reason.
Yes
No
See preceding comments.
Yes
Dominion agrees with the prioritization methodology as well as the priority assigned to each stanadard. However, Dominion does not agree with the Target Applicability assigned to some of the TOP standards (see previous comment) and suggests the SDT be consistent in verbiage used or explain if there is a reason for the differences. Examples are: Point where aggregates to >75MVA and Aggregate Facility Level.
Yes
Dominion agrees with the SDT that the Misoperations of any individual generating unit may not have an impact upon the BPS and agrees that it is not necessary to analyze Protective System Misoperations affecting individual generation units of dispersed generation resources. Dominion further supports the analysis of potential Misoperations of dispersed generation resources if the trip is greater than 75 MVA of aggregate occurs in response to a system disturbance. Dominion supports the continued review and study of the potential reporting process for Misoperations required by dispersed generation resources due to the limited information available due to turbine design and technology that would be available for analysis and reporting.
Yes
Yes
Yes
Dominion believes that a misoperation that results in the loss of dispersed power generation for resources greater than 74MV may have a significant impact on BES reliability. We thefore support a threshold of 75 MVA for such resources under this standard.
No
We do not support a blanket exclusion of dispersed power producing resources from requirements 4 & 5. If such respurces have been traditionally excluded then we would expect their respective TO and TP to continue such exclusion, if they so choose.
No
No
Group
PacifiCorp

Sandra Shaffer
Yes
Yes
Yes
Yes
Yes
Yes
Yes
Yes
The SDT recognizes concern with the potential for reliability impacts involving a common mode failure that leads to (1) loss of a significant number of generating units or the entire facility (White Paper Section 4.2.3 – Page 8) or (2) the potential for misoperations involving several individual generating units (5.10.4 – Page 19). PacifCorp shares this concern. The reliability impacts of a common mode failure and related loss of units at a dispersed generation resource site may affect reliability depending upon the magnitude, timing, and duration of the resource loss. PacifiCorp agrees with the SDT proposal of requiring analysis for potential Misoperation of individual generating units, if a trip of greater than 75 MVA aggregate occurs in response to a system disturbance.
Yes
Yes
PacifiCorp agrees that dispersed power producing resource individual generator transformers have traditionally been excluded from VAR-002-2b R4 and R5, as they are not used to improve voltage performance at the point of interconnection, and further agrees with the SDT on the need to clarify the applicability of VAR-002-2b to exclude dispersed power producing resource individual generator transformers from R4 and R5 up to the point of aggregation of 75 MVA, as they are not used to improve voltage performance at the point of interconnection.
Yes
As discussed in White Paper Sections 5.10.11 and 5.10.12 (applicable to PRC-024 and PRC-025), PacifiCorp supports the point made by the SDT, that for the purpose of compliance evidence it may be sufficient to provide the settings of a single sample unit within a site as

these units are typically set identically, rather than providing documentation for each individual unit.
Group
Northeast Power Coordinating Council
Guy Zito
No
PRC-004-2.1a should not be modified to exclude dispersed power producing resources. it is important to know about relay misoperations in order to maintain system reliability. This extends to individual units that make up an aggregated dispersed power producing resource, especially when one considers the potential that similar practices would be used in setting each of the protection systems applied to individual units . FERC has explicitly recognized this in its March 20, 2014 Order Approving Revised Definition, where it stated that: "[f]or example, a wind farm larger than 75 MVA can affect reliability if all of its wind turbines trip offline simultaneously after just a slight fluctuation in voltage or frequency. Therefore, because variable generation can impact the interconnected transmission network, we anticipate that wind plant owners whose facilities meet the inclusion I4 criteria who seek to exclude individual wind turbines from the bulk electric system through the exception process will be infrequent." See North American Reliability Corporation, 146 FERC ¶ 61,199 (2014) at P 48.
No
The applicability of PRC-004 should not be modified as explained above in the response to Question No. 1.
Yes
With respect to MOD-032, it is important that generators provide accurate models of each individual unit. Therefore, if all units are identical, then providing aggregate information may be sufficient. However, if units are not identical, then generators should be required to provide individual models.
No
PRC-004 and associated relay misoperations are important for reliability. Efforts to reduce it's applicability should not be a priority.
No
The justification provided by the SDT is contrary to FERC's March 20, 2014 Order (please refer to the response to Question No. 1 above).
No
We do not agree with this approach because limiting the analysis requirement to a trip of greater than 75 MVA only accounts for very large occurrences that could be unusual. Smaller occurrences, however, may predict an unusual large occurrence that could impact reliability especially when one considers the potential that similar practices would be used in setting each of the protection systems applied to individual units.
No

In general, relay maintenance is a vital part of system reliability and reducing the applicability of the standard seems counter to good utility practice.
Yes
Yes, as explicitly recognized by FERC, a wind farm larger than 75 MVA can affect reliability if all of its wind turbines trip offline simultaneously after just a slight fluctuation in voltage or frequency. In addition, loss of a wind farm as a dispersed generation resource has been observed real time to impact Quebec's Main Transmission System (the Quebec equivalent of the BES). In Quebec, all the generation or dispersed generation greater than 50MVA connected into 44kV and above are included in its Main Transmission System. Because of the variability of system loads (peak, off-peak, shoulder periods), and the electrical locations of generating resources and their impacts on the BES, what is a large number of generating resources?
No
In general, providing voltage regulation at the point of aggregation is acceptable. However embedded dynamic devices may affect aggregate voltage performance. The "clarification" needs to address this.
No
There is no need to modify the applicability of R4 and R5 of VAR-002-2b. The information under R4 has to be provided only upon request of the Transmission Planner and Transmission Operator. If this information is not necessary, it should not be requested and, accordingly, there is no need to modify the standard. Similarly, R5 is only applicable if the Transmission Operator requests a change to the tap setting. The Transmission Operator should only do this when necessary; therefore, there is no need to modify the applicability of the standard. In addition, other reactive devices, such as embedded dynamic reactive devices,may affect aggregate voltage performance and should be addressed.
No
Individual
John Seelke
Public Service Enterprise Group
No
Although Inclusion I4 refers to dispersed power resources that are "greater than 75 MVA to a common point of connection at a voltage of 100 kV or above," for comparability to traditional resources (Inclusion I2), changes in standard thresholds for dispersed resources should apply to points where dispersed resources aggregate to greater than 20 MVA at a common point. While these points may be considered non-BES, many standards apply to non-BES Elements, and the BES definition does not prohibit the application of standards to non-BES Elements. For example, Cranking Paths that are less than 100 kV are still subject to EOP-005-2. See Order 773, paragraph 103. In addition UFLS is not in the BES definition, but standards still apply – see PRC-006-2. • We note that the team has taken this approach on p. 25 with respect

to TOP-002-2.1b, R14. However, Appendix B recommends a threshold at the “Point where [generation] aggregates to >75MVA” for the five “High Priority” standards. Appendix B tracks the recommends in the white paper where each standard is discussed, with the exception of VAR-002 – there is no mention of “Point where [generation] aggregates to >75MVA” and neither should there be. We urge the team to reconsider and adopt a consistent “point where generation aggregates to > 20 MVA” approach in each of these standards (except VAR-002). If a 20 MVA threshold applies to I2 generators and that’s reliability-based, there would be a reliability gap if a > 75 MVA threshold was adopted.
Yes
Yes, with respect as to “what” changes need to be addressed. However, the white paper is unclear as to “how” it will attempt to implement those changes (i.e., the process it will follow). A new column should be added to Appendix B that addresses the “how.” Here are examples of potential implementation problems that the team should consider: PRC-004-2.1a (Misoperations) is undergoing revisions to PRC-004-3 in Project 2010-05.1 Protection Systems - Phase 1 (Misoperations). How will the team address its needed changes, given that ongoing project? • The same applies to changes in PRC-005 – a team is developing PRC-005-4 in Project 2007-17.3 Phase 3 of Protection System Maintenance and Testing (Sudden Pressure Relays) • And same applies to changes in VAR-002 – a team has just completed a passing successive ballot on VAR-002-3 in Project 2013-04 Voltage & Reactive Control The question on “how” is administrative, but extremely important. If an existing SDT is working on a standard and a second SDT wants to work on that same standard, but with a different scope, it would be very inefficient to have two teams balloting different versions of the same standard, which must eventually be combined. Only ONE team should be involved in changing a standard at a time. To do that, the existing team’s SAR (which is its scope) would need to be amended to include the additional scope of the second SDT. I don’t believe the SDT has considered this issue.
Yes
No
As stated and supported in response to question 1, we believe the aggregate threshold should be > 20 MVA, not > 75 MVA. If a 20 MVA threshold applies to I2 generators and that’s reliability-based, there would be a reliability gap if a > 75 MVA threshold was adopted.
No
As stated and supported in response to question 1, we believe the aggregate threshold should be > 20 MVA, not > 75 MVA. If a 20 MVA threshold applies to I2 generators and that’s reliability-based, there would be a reliability gap if a > 75 MVA threshold was adopted.
No
As stated and supported in response to question 1, we believe the aggregate threshold should be > 20 MVA, not > 75 MVA. If a 20 MVA threshold applies to I2 generators and that’s reliability-based, there would be a reliability gap if a > 75 MVA threshold was adopted.

Yes
A common mode failure could be caused by either a consistently applied bad relay setting (more likely) or consistently bad relays (less likely).
Individual
Thomas Foltz
American Electric Power
Yes
AEP supports the efforts of this drafting team, and believes that the approach proposed in the white paper is reasonable (including the importance of focusing on PRC-004, PRC-005, and VAR-002). AEP will review the additional standards that the drafting team believes are and are-not impacted, and will provide comments on those in future comment periods.
Group
MRO NERC Standards Review Forum
Joe DePoorter
No
Within Appendix B under column “Target Applicability” there are four (4) different applications; “Point where aggregates to > 75 MVA, Individual BES Resources / Elements, Point of common control, and Aggregate Facility Level. Without these attributes being defined, the industry cannot know if the Standards within Appendix B have the proper “Target Applicability”. Recommend that these terms be included in the NERC Glossary of Terms as they will have a major impact on the applicability of the Standards with reference to dispersed power producing resources. The SDT is encouraged to proceed expeditiously on the identified high priority standards: PRC-004-2.1a, PRC-005 (relevant versions) and VAR-002 so

that owners can proceed with implementation of the BES definition and these standards without unnecessary interim work.
Yes
Yes this seems reasonable.
No
The SDT has not made in clear what six (6) Standards they are referring too. Within in Appendix B, there are six (6) standards with the Target Applicability of either “Point where aggregates to > 75 MVA” or “Individual BES Resources / Elements”. Which six (6) Standards is the SDT referring to?
No
The NSRF does not understand why the High priority states: “High priority was assigned if compliance-related efforts with no appreciable reliability benefit would require not only significant resources but also would require efforts to be initiated by anentity well in advance of the implementation date”. The NSRF believes that High Priority should have a the STRONGEST reliability benefit, not “…with no appreciable reliability benefit…”. The NSRF does agree with the High, Medium and Low priority prioritization methodology.
Yes
The NSRF agrees and would like to have the wording in the applicability statement that PRC-004-2.1a will only be implemented when there is a trip greater the or equal to 75 MVA, or words to that effect.
Yes
The NSRF agrees and would like to have the wording in the applicability statement that PRC-004-2.1a will only be implemented when there is a trip greater the or equal to 75 MVA, or words to that effect.
Yes
Yes
Yes, and recommend that the 75 MVA threshold be used as in PRC-004.
No
Section 5.13.2 uses the words of “aggregate facility level”. The NSRF recommends that Facility use a capitol F. This term is used like the Target Applicability which is not defined. Within Appendix B under column “Target Applicability” there are four (4) different applications; “Point where aggregates to > 75 MVA, Individual BES Resources / Elements, Point of common control, and Aggregate Facility Level. Without these attributes being defined, the industry cannot know if the Standards within Appendix B have the proper “Target Applicability”.
Yes
The SDT needs to provide less guidance whereby the GO/GOP can develop their own way of meeting the TOP’s voltage schedule. The SDT should not be so granular to discuss items that are on the collector system, which is not a BES asset.
Yes

Section 4.2.2, First paragraph, Please note that just because technology exist in short term forecasting capabilities, there are small entities that may not have these expensive tools. There may have been State Laws that mandated the use of dispersed power producing resources within their capacity portfolios. Recommend section 4.2.2, be updated to read that technology exist but may not be employeed by entity's with dispersed power producing resources. Section 4.2.2, Second paragraph, as stated above, the same is true for concerning voltage and frequency system support. The majority of dispersed power producing resources provide real power and voltage which is provided by a fixed power factor control. The SDT's White Paper needs to take in many system configurations, we are not all created equal. Please note that the NSRF cannot comment on the Priority of Standards listed in appendix B since the Target Applicability terms are not defined.
Individual
Amy Casuscelli
Xcel Energy
Yes
No
We strongly disagree with the assertion that issues with FAC-008-3 can be addressed with guidance alone. We agree with the SAR recommendations that the applicability of FAC-008 be limited to the point of 75 MVA or above. Furthermore, we think the wording of requirements R1 and R2 is very problematic due to the uncertainty caused by the usage of the term "main step up transformer" as well as the wide variability in the possible location of "the point of interconnection with the Transmission Owner." For example, we have instances where the point of interconnection for one of our wind farms is located at the transmission voltage level (>100 KV) with miles of transmission line/Generator Interconnection Facility between the wind farm aggregating system and the point of interconnection. In this instance, application of FAC-008-3 R1 and R2 is fairly straight forward but could be interpreted to require that we apply ratings criteria to non-BES portions of the aggregating system. We also have wind farms where the point of interconnection to the Transmission Owner system occurs at a main disconnect switch on each of the individual feeders at the aggregating system voltage level of 34.5 KV and at a point prior to aggregation of 75 MVA or greater. The Transmission Owner owns the aggregating system from the main disconnect switch on each feeder through a 34.5 KV bus where the feeders aggregate to >75 MVA and the transformer utilized to step up the output to transmission level voltage. For this facility, application of FAC-008-3 R1 and R2 is entirely dependent on the interpretation of the term "main step-up transformer" and results in R1 and/or R2 requiring analysis of non-BES components or which describe components only owned by the Transmission Owner and not owned by the Dispersed Generation Owner. It is recommended that FAC-008-3 R1 and R2 be simplified to state that: "The Generator Owner must have a ratings methodology and study for the following: For BES generation not included per BES Definition Inclusion I4, from and including the generator to the point of interconnection to the Transmission Owner system. For BES generation included per BES

Definition Inclusion I4, for all Generator Owner owned equipment from the point of aggregation of 75 MVA or greater to the point of interconnection to the Transmission Owner system."

No

We strongly disagree with the assertion that issues with FAC-008-3 can be addressed with guidance alone. We agree with the SAR recommendations that the applicability of FAC-008 be limited to the point of 75 MVA or above. Furthermore, we think the wording of requirements R1 and R2 is very problematic due to the uncertainty caused by the usage of the term "main step up transformer" as well as the wide variability in the possible location of "the point of interconnection with the Transmission Owner." For example, we have instances where the point of interconnection for one of our wind farms is located at the transmission voltage level (>100 KV) with miles of transmission line/Generator Interconnection Facility between the wind farm aggregating system and the point of interconnection. In this instance, application of FAC-008-3 R1 and R2 is fairly straight forward but could be interpreted to require that we apply ratings criteria to non-BES portions of the aggregating system. We also have wind farms where the point of interconnection to the Transmission Owner system occurs at a main disconnect switch on each of the individual feeders at the aggregating system voltage level of 34.5 KV and at a point prior to aggregation of 75 MVA or greater. The Transmission Owner owns the aggregating system from the main disconnect switch on each feeder through a 34.5 KV bus where the feeders aggregate to >75 MVA and the transformer utilized to step up the output to transmission level voltage. For this facility, application of FAC-008-3 R1 and R2 is entirely dependent on the interpretation of the term "main step-up transformer" and results in R1 and/or R2 requiring analysis of non-BES components or which describe components only owned by the Transmission Owner and not owned by the Dispersed Generation Owner. It is recommended that FAC-008-3 R1 and R2 be simplified to state that: "The Generator Owner must have a ratings methodology and study for the following: For BES generation not included per BES Definition Inclusion I4, from and including the generator to the point of interconnection to the Transmission Owner system. For BES generation included per BES Definition Inclusion I4, for all Generator Owner owned equipment from the point of aggregation of 75 MVA or greater to the point of interconnection to the Transmission Owner system."

No

We believe clarification of FAC-008-3 requires higher priority. See our comments concerning FAC-008-3 in Questions 2 and 3 above. The remaining concern we have is regarding timing of standard changes. We understand that the SDT has internal completion milestones of balloted standards to be sent to BOT approval November 2014, and February 2015, and this leaves more than a year for final NERC BOT and FERC approval. We understand that based on past completion history, this allows a reasonable timeframe of more than a year to expect these final steps to occur. The effort and focus of this SDT seems outstanding, however, we remain skeptical that so many standards can be changed properly to prevent a 'nonsense' non-compliant condition on the BES Definition effective date of July 1, 2014. We strongly recommend that this SDT, and appropriate members of the BOT and FERC, develop a contingency milestone at an appropriate point in the process, say February 2015, to

determine if there are any needed standard revisions in delay, that could create an unnecessary noncompliance condition on the effective date. This effort is expected to be needed to expedite any standards that have been clearly identified as needing dispersed generation applicability exemptions, but are lagging in the process and could create an unneeded issue on the effective date.
Yes
We agree with SDT that the analysis and the Mitigation of Generator Protection System Misoperations should not extend to each individual generating unit.
Yes
Yes
No
The aggregate size of the common mode failure must be considered to determine the impact to grid reliability. We suggest the existing threshold value of 75 MVA. In addition, we believe that this would have to do more with a setting associated with PRC-019, PRC-034, and PRC-025. These common mode failures would not be a classical PRC-004 operation analysis because the equipment is not in-scope.
Yes
No
As worded, this question does not agree with the white paper. Xcel Energy supports the position put forth in the white paper, which states that R4 and R5 of the VAR-002-2b standard would not be applicable to the individual units.
No
Individual
Tim Brown
Idaho Power Company
Yes
No
See comments on proposed changes to PRC-004 below. Otherwise the approaches seem reasonable.
Yes
Yes

Yes
No
Based on the discussion for TOP-001-1a R7 and TOP-002-2.1b R14, the SDT might consider the analysis of a trip of greater than 20 MVA. The rationale seem similar that if the loss of 20 MVA of generation is necessary to plan for, then it would be significant enough to analyze when it lost.
Yes
Yes
since 75MVA has been determined to be cut off for significance to the reliably operation of the BPS, I would think a loss of any 75MVA generating resource would be considered equally (not considering MVAR capability!)
Yes
No
No
Individual
Barbara Kedrowski
Wisconsin Electric Power Co
No
The CIP standards must be modified to remove the individual dispersed generator controls from the scope. Given the direction in FERC Order 791 to develop actual auditable requirements for low impact BESCS, the argument that CIP doesn't need to worry about applicability due to no real requirements is a faulty argument.
No
The VAR-002 target applicability should be at the point of interconnection.
No
We think that the target applicability for MOD-032 should be on the aggregate facility level.
Yes
Yes
Yes
Yes

The second paragraph in this section in part states “Should these protection elements fail to remove the generating unit for this scenario, the impacts would be limited to the loss the individual generating unit and potentially the next device upstream in the collection system of the dispersed generation resource”. If the next device upstream is the collection system and it is greater than 75 MVA then this argument needs additional clarification. If the applicability of dispersed power-producing resources is not changed, we would ask the SDT to provide guidance for the testing of these elements considering the safety, physical constraints and elements that are part of protection systems that were not considered in PRC-005 as it is written. For example, parts of the protection systems of wind turbines cannot be accessed when they are running because of safety reasons. In addition, the system protection elements of some dispersed power-producing resources include molded case circuit breakers, power circuit breakers with trip units, UPSs and other devices that are not currently in PRC-005.
Yes
Agreed as long as the “large number” is greater than 75 MVA.
No
Technical justification should recognize that an individual dispersed generating resource does not provide sufficient reactive resources to provide reliability of the BES.
No
We would agree if the question included …transformers are NOT subject to the R4 and R5… In addition, has the DGR SDT considered coordination with Project 2013-04, Voltage and Reactive Control, VAR-002-3 on any proposed changes regarding clarifying applicability?
Yes
Executive summary of white paper: "… the intent of this effort is generally to maintain the status quo for applicability of the standards as they have been applied over time with respect to dispersed generation resources, where the status quo does not create a reliability gap.” We disagree with the language about “being applied over time” because each Regional Entity could have been applying it differently. Section 5.10.1 PRC-001-1.1: We agree that the SDT should push this issue on the current Project SDT’s, but what happens in the interim? Will the Project teams for 2007-06 and 2014-03 finish in time so that our compliance is not affected? Section 5.10.11 PRC-024: Note that the SDT “ … has determined it is necessary to require that Protection Systems applied on both the individual generating units, as well as any aggregating facilities, are set within the “no-trip zone” referenced in the requirements to maintain reliability of the BPS.” SDT says no changes to applicability are required, but states an RSAW or guidance should specify compliance evidence requirements. We did not think an RSAW could specify compliance requirements; only standards could specify compliance requirements.
Individual
Jo-Anne Ross
Manitoba Hydro
No

The SDT should consider modifications to FAC-001-1. Requirement R1 notes that Facility connection requirements for “Generation Facilities” shall be documented. It should be clear in the scope of the standard that any special connection requirements for dispersed power producing resources (Inclusion I4) should be documented. NERC IVGTF 1-3 recommended reactive power requirements be clearly defined as well as any special modeling requirements (eg. aggregation), for example. Frequency response requirements for both under and overfrequency should be documented in FAC-001-1. Also the SDT should consider modifications to VAR-001-3 to include language more appropriate for DGR. Automatic Voltage Regulator in R4 is applicable to conventional synchronous generators and a generic plant-level volt/var controller is more applicable to DGR with a voltage controller controlling the voltage at the point of interconnection. It should be clear that a voltage or Reactive Power schedule can be given by the TO to a DGR. The schedule may be influenced by the technology (eg. switched capacitor banks vs static var compensator). The SDT correctly identifies some standards, such as the MOD standards, where “the SDT will consider the need to develop guidelines for dispersed generation resource modeling and therefore recommends consulting other groups” that are currently working on these issues. This is inconsistent with the statement in the same section “The existing and proposed modeling standards are sufficient for modeling dispersed generation resources”. As such it is suggested that the SDT may wish to consult with these groups prior to establishing priorities on some standards.
Yes
Yes
We agree this would be helpful however, we suggest using the term “common and electrically similar” dispersed power producing resources rather than “common”. Dispersed power producing resources with sufficiently different electrical characteristics from a modeling perspective, may be installed at the same location.
No
In addition, changes to FAC-001-1 should be added to the high priority and changes to VAR-001-3 added to the low priority list. The justification for establishing “High” vs “Medium” priority levels for standards is not clear. It is possible that the choice of wording does not clearly explain the difference between the two levels. It is suggested that these two priority level justifications be reworded for clarity.
No
Section 5.10.4 relates applicability of PRC-004 to PRC-024 but is not clear what is proposed to be changed in PRC-004. The current applicability used in PRC-024 is for all generating units with some technical modifications for asynchronous units. We agree that the applicability should not apply to individual units within a DGR.
No
One of the areas of concern with DGR is the ability to ride through disturbances (e.g. low voltage ride through). We disagree that a trip greater than 75 MVA should only be considered as this would remove a lot of DGR from consideration. The timing of a disturbance may correlate with a period when the output of the DGR is low. In this case, the reliability impact

of the lost generation may be low but the misoperation may point to a problem that could occur at any output level. Perhaps, to set a reasonable boundary, protection misoperation that occurs when DGR had an output of 20 MVA or greater should be analyzed in PRC-004.
Yes
Yes
Common mode failures, such as the ability to ride through low voltages or low frequency, can impact reliability. It is possible to have groups of DGR in close electrical proximity that may also experience the same common mode failure, making the system more prone to underfrequency or other reliability event. Ground fault relays that are not coordinated can also result in loss of DGR for BES faults. The impact would depend on the definition of “large”, the location of the dispersed generation resource, whether tapped off of a major BES high voltage transmission tie or not, and the type of common mode failure. For example if it is tapped off a BES transmission tie line, special considerations , such as installing a three ring breaker at the POI or adding/modifying an SPS may be necessary to minimize the impact to BES reliability.
Yes
The individual generator transformers within the DGR can be excluded in R4 and R5 in favor of the main aggregating transformer connected to the BES. Revised applicability should also be included in R3. There can be power factor correction capacitors located within each individual generator transformer. Only major sources of Reactive Power that impact the BES should be included in the applicability of R3. Terminology of “automatic voltage regulator (AVR)” could be adjusted to in VAR-002-2b to reflect the technology used in a DGR – see comments to Question 1.
No
If the applicability is revised as per Question 9, additional guidance should not be needed.
Yes
It is suggested that the data provided in the table in Section 5 (page 11) be rearranged for clearer presentation of the information. Subtotals for “NERC Standards” and “Region-specific Standards (*Out of Scope)” may be placed at the end of their respective categories rather than at the beginning.
Individual
John Pearson
ISO New England
No
PRC-004-2.1a should not be modified to exclude dispersed power producing resources. From ISO New England’s perspective, it is important to know about relay misoperations in order to maintain system reliability. This extends to individual units that make up an aggregated dispersed power producing resource, especially when one considers the potential that similar practices would be used in setting each of the protection systems applied to individual units .

FERC has explicitly recognized this in its March 20, 2014 Order Approving Revised Definition, where it stated that: "[f]or example, a wind farm larger than 75 MVA can affect reliability if all of its wind turbines trip offline simultaneously after just a slight fluctuation in voltage or frequency. Therefore, because variable generation can impact the interconnected transmission network, we anticipate that wind plant owners whose facilities meet the inclusion I4 criteria who seek to exclude individual wind turbines from the bulk electric system through the exception process will be infrequent." See North American Reliability Corporation, 146 FERC ¶ 61,199 (2014) at P 48.
No
The applicability of PRC-004 should not be modified as explained above in the answer to Question No. 1.
Yes
With respect to MOD-032, it is important that generators provide accurate models of each individual unit. Therefore, if all units are identical, then providing aggregate information may be sufficient. However, if units are not identical, then generators should be required to provide individual models.
No
PRC-004 and associated relay misoperations are important for reliability. Efforts to reduce it's applicability should not be a priority.
No
The justification provided by the SDT is contrary to FERC's March 20, 2014 Order (please see our answer to Question No. 1 above).
No
We do not agree with this approach because limiting the analysis requirement to a trip of greater than 75 MVA only accounts for very large occurrences that could be unusual. Smaller occurrences, however, may predict an unusual large occurrence that could impact reliability especially when one considers the potential that similar practices would be used in setting each of the protection systems applied to individual units.
No
In general, relay maintenance is a vital part of system reliability and reducing the applicability of the standard seems counter to good utility practice.
Yes
Yes, as explicitly recognized by FERC, a wind farm larger than 75 MVA can affect reliability if all of its wind turbines trip offline simultaneously after just a slight fluctuation in voltage or frequency.
No
In general, providing voltage regulation at the point of aggregation is acceptable. However imbedded dynamic devices may affect aggregate voltage performance. The "clarification" needs to address this.
No

There is no need to modify the applicability of R4 and R5 of VAR-002-2b. The information under R4 has to be provided only upon request of the Transmission Planner and Transmission Operator. If this information is not necessary, it should not be requested and, accordingly, there is no need to modify the standard. Similarly, R5 is only applicable if the Transmission Operator requests a change to the tap setting. The Transmission Operator should only do this when necessary; therefore, there is no need to modify the applicability of the standard. In addition, other reactive devices, such as embedded dynamic reactive devices,may affect aggregate voltage performance and should be addressed.
No
Individual
Heather Bowden
EDP Renewables North America LLC
Yes
Section 4.2.2 of the white paper notes that the age of dispersed generation resources affects their ability to provide reliability services. However, identification of relevant standards as described in the Technical Discussion does not refer to age or ability. It is not clear what role those characteristics play in identifying relevant Standards.
No
The SDT should be as precise as possible in the guidance it provides, since that guidance will be the basis for significant revisions to the numerous Standards identified to date. EDP Renewables North America LLC (EDP Renewables) recommends that the SDT define the terms used to specify “Target Applicability” of the Standard revisions. If the terms “Point of common control”, “point where aggregated to > 75 MVA”, and “Aggregate Facility Level” are intended to have different meanings, these should be specified. A better approach would be to use the Point of Interconnect as the Target Applicability. This is a well defined industry term. Using the other terms could lead to misunderstanding, and/or result in inconsistency due to individuals’ interpretations.
No
EDP Renewables recommends that the SDT specify how common components should be aggregated into “Elements” to prevent confusion and inconsistency across Standards and regions. Given the variety of technologies lumped under the dispersed generation rubric, a technically justified, technology neutral approach for the aggregation methodology is needed. The critical mass components must attain to be treated as Elements must be clearly established. EDP Renewables requests confirmation that the statement “loss of significant number of units” in section 4.2.3. means “more than 75MVA of aggregated capacity”.
Yes
No

Instead of opening a debate about the relationship between misoperations and common mode trips, PRC-004's applicability should be limited to individual protection system components that affect > 75 MVA of capability.
No
PRC-004's applicability should be limited to any individual protection system component that affects > 75 MVA of capability. Additionally, the reliability of the Bulk Electric System would not be compromised should the individual generator trips occur over a period greater than sixty cycles. Within the White Paper, the SDT denotes that, "Protection system maintenance on individual generating units at a dispersed generation facility would not provide any additional reliability benefits to the BES…" The applicability of PRC-001, PRC-004, and PRC-005 should be congruent.
Yes
The applicability of PRC-001, PRC-004, and PRC-005 should be congruent.
No
For consistency and to prevent confusion, a specific capability limit (>75 MVA) should be used. It is widely agreed that until capability aggregates to that level, BES reliability is not threatened.
No
Dispersed generation resources are often required to install reactive devices as a condition of interconnection. The applicability of VAR-002 should specify how these devices should be treated when establishing voltage schedules and performance expectations. This may be a Standard that should take into account the capability ("older dispersed generation resources") of a resource. Further, if dispersed generation is to include storage devices, care should be taken that requirements are technology neutral. Rather than using the Agregate Facility Level, the reference point for maintaining the voltage schedule, usually the Point Of Interconnect, shall be used.
Yes
It is necessary to exclude these transformers form requirements R4 and R5.
Yes
It would be beneficial if the applicabilities were defined within the NERC Glossary. It would be prudent to include the same applicability recommendation to each of the Project teams (i.e. Project 2014-03 and Project 2014-01), to ensure that both PRC-001 and PRC-005 view the same applicability as it applies to dispersed generation resources.
Group
PPL NERC Registered Affiliates
Brent Ingebrigtson
These comments are submitted on behalf of the following PPL NERC Registered Affiliates: Louisville Gas and Electric Company and Kentucky Utilities Company; PPL Electric Utilities Corporation, PPL EnergyPlus, LLC; PPL Generation, LLC; PPL Susquehanna, LLC; and PPL Montana, LLC. The PPL NERC Registered Affiliates are registered in six regions (MRO, NPCC,

RFC, SERC, SPP, and WECC) for one or more of the following NERC functions: BA, DP, GO, GOP, IA, LSE, PA, PSE, RP, TO, TOP, TP, and TSP.
Yes
The SDT states on p.7 of the Whitepaper that “Dispersed generation resources are often considered to be variable energy resources such as wind and power, “ but, “This description is not explicitly stated in the BES definition.” The SDT’s comment that “NERC and FERC characterize variable generation in this manner,” is helpful, but the absence of a formal definition of Dispersed Generation Resources remains a concern. We request that the term Dispersed Generation Resources be formally defined in the NERC Glossary.
Group
FirstEnergy
Cindy Stewart
Yes
FE questions the need for both PRC-005-1.1b and PRC-005-2. Why not just focus on PRC-005-2
Yes
Yes
Yes
Approach seems logical for prioritization of Standards to be revised.
Yes
How will this Project be coordinated with the current efforts on Project 2010-05.1, Phase I of Protection System Misoperations.
Yes
It is consistent with the requirement for existing BES identified generating units.
Yes
Required reporting of aggregated facility equipment consistent with BES definition is the proper methodology.
Yes

The BES definition has provided technical justification for a threshold of 75 MVA of aggregated generation viewed as having reliability impact on the BES. The PRC Standards focus on loss of this and higher levels of generating resources.
Yes
No
If the individual generator transformers are below the BES defined level then R4 and R5 should not apply.
No
Group
DTE Electric
Kathleen Black
Yes
No comments
No
See Question 3 comments
No
More clarity would be appreciated regarding the individual vs aggregate approach for the facility ratings Standard. Guidance on the scopeof equipment to be rated for DGRs would be helpful.
No comments
Yes
Yes
The applicability statement should be clear in that individual generating unit trips should only be analyzed relative to comon mode trips.
Yes
Yes
BES reliability could be impacted if a concurrent loss of individual generating units aggregating to nore than seventy five MVA occurs.
No comments
No comments
No
Individual

Scott Langston
City of Tallahassee
Yes
Yes
Yes
Yes
No
Tal agrees with the exclusion of aggregate levels of generation below 75MVA. Tal would prefer to see justification of the 75 MVA brightline for the requirement of protection devices to be included under PRC-005.
Yes
No
Group
NEA Joint Commenters (NextEra, Exelon and MidAmercian)
Silvia Parada Mitchell
No
NextEra Energy, Inc., Exelon, and MidAmerican (Joint Commenters NEA) jointly submit these comments. The Joint Commenters NEA individually and collectively own and operate most of the variable generation in North America, and, therefore have unique perspective and expertise on the issues presented in the April 14, 2014 Draft White Paper Proposed Revisions to the Applicability of NERC Reliability Standards NERC Standards Applicability to Dispersed Generation Resources (Draft White Paper). The Joint Commenters NEA appreciates the hard work that is represented in the Draft White Paper, and the technical discussion of the Standards. The Joint Commenters NEA also appreciates the identification of three Standards that for technical reasons should be revised; however, the Joint Commenters NEA are concerned that the White Paper goes much further than the scope of the Standards Authorization Request and recommends that the drafting team focus its efforts solely on

three identified Standards. Specifically, the Joint Commenters NEA supports the Standards Drafting Team (SDT) moving forward with revisions to PRC-004-2.1a, PRC-005 (relevant versions) and VAR-002. The Joint Commenters NEA do not support the SDT moving forward on work of any other Standard, because there is not a clear and justified technical reason at this time to require revisions to any more Standards. Specifically, the Joint Commenters NEA recommend that the SDT hand off all other observations in the Draft White Paper to NERC Staff to work with the appropriate NERC technical committees to develop and publish any guidance, etc needed for those Standards.

No

The Joint Commenters NEA only agree with the recommended revisions to PRC-004-2.1a, PRC-005 (relevant versions) and VAR-002 at this time, and recommend that the SDT focus on and complete these changes as soon as possible. The Joint Commenters NEA also recommend that the SDT also hand off the suggested guidance issues to NERC Staff to work with the appropriate NERC technical committees to develop and publish any guidance, etc needed for those Standards. The Joint Commenters NEA are concerned that some of the issues raised in the White Paper implicate compliance rather than technical issues, and, thus believe stakeholders are best served with these observations being reviewed by the NERC technical committees. For example, TOP-001, TOP-003 and TOP-006 as discussed in the White Paper do not raise to the level of a change to the requirements, and, thus, guidance can be developed by NERC staff and the Operating Committee with regards to how to apply to dispersed power producing resources, as these standards all relate to communication of real-time status, future outage planning and capabilities of dispersed generating resource. While communication of these data may be feasible from a technical perspective this could be construed as a compliance issue that can be resolved through guidance rather than standard revisions.

Yes

The Joint Commenters NEA agrees that revisions are not necessary and guidance may be helpful for the following standards FAC-008-3, PRC-019-1, PRC-024-1, PRC-025-1, MOD-025-2 and MOD-032-1. As mentioned above, the Joint Commenters recommend that these Standards and associated observations be provided to NERC Staff for additional work with the relevant NERC technical committee to consider any needed guidance. For FAC-008-3 in particular, the Joint Commenters feel that the guidance document should implicate standard requirements for Dispersed Generation from the point of aggregation greater than 75 MVA, up to the point of interconnect as was indicated in the SAR. For FAC-008, the guidance should address the issue in the SAR, which transformer (point of aggregation) is in scope. Also, why in the FAC-008 analysis in the Whitepaper is there reference to SOL's? The second paragraph of the FAC-008 analysis seems out of scope.

No

Although the Joint Commenters NEA generally recognize the need to prioritize the SDTs work, it is concerned that the SDT undertook a task that is arguably well outside the scope of the SAR presented to the Standards Committee to include "consideration is necessary for other requirements that affect the interaction of a Balancing Authority (BA), Transmission Operator

(TOP), or Reliability Coordinator (RC) with individual BES Elements." As mentioned above, the Joint Commenters NEA recommends that the SDT focus its efforts solely on the implementations of revisions to PRC-004-2.1a, PRC-005 (relevant versions) and VAR-002.
Yes
The Joint Commenters NEA believe that the technical basis for the Standard change for I4 BES dispersed generation (i.e., wind and solar) is clear and supported. As such, the Joint Commenters NEA also concur with the SDT's decision to defer to the BES Reference Document's description of I4 "dispersed power producing resources" in the analysis as noted on page 5 of the Draft White Paper, as this description clearly is intended to identify the unique and "non-traditional" variable generation such as wind and solar, rather than traditional resources such as fossil generating resources.
Yes
The Joint Commenters NEA believe that the technical basis for the Standard change for I4 BES dispersed generation (i.e., wind and solar) is clear and supported. As such, the Joint Commenters NEA also concur with the SDT's decision to defer to the BES Reference Document's description of I4 "dispersed power producing resources" in the analysis as noted on page 5 of the Draft White Paper, as this description clearly is intended to identify the unique and "non-traditional" variable generation such as wind and solar, rather than traditional resources such as fossil generating resources.
Yes
The Joint Commenters NEA believe that the technical basis for the Standard change for I4 BES dispersed generation (i.e., wind and solar) is clear and supported. As such, the Joint Commenters NEA also concur with the SDT's decision to defer to the BES Reference Document's description of I4 "dispersed power producing resources" in the analysis as noted on page 5 of the Draft White Paper, as this description clearly is intended to identify the unique and "non-traditional" variable generation such as wind and solar, rather than traditional resources such as fossil generating resources. The drafting team should take care to address only issues related to the unique nature of these non-traditional resources and not duplicate issues already addressed in the PRC-005 standard and it's supporting documents such as protection systems at the interfaces.
Yes
For the purposes of limiting misoperations reporting to an entire site as opposed to individual resources.
Yes
The Joint Commenters NEA believe that the technical basis for the Standard change for I4 BES dispersed generation (i.e., wind and solar) is clear and supported. As such, the Joint Commenters NEA also concur with the SDT's decision to defer to the BES Reference Document's description of I4 "dispersed power producing resources" in the analysis as noted on page 5 of the Draft White Paper, as this description clearly is intended to identify the unique and "non-traditional" variable generation such as wind and solar, rather than traditional resources such as fossil generating resources.
Yes

The Joint Commenters NEA believe that the technical basis for the Standard change for I4 BES dispersed generation (i.e., wind and solar) is clear and supported. As such, the Joint Commenters NEA also concur with the SDT's decision to defer to the BES Reference Document's description of I4 "dispersed power producing resources" in the analysis as noted on page 5 of the Draft White Paper, as this description clearly is intended to identify the unique and "non-traditional" variable generation such as wind and solar, rather than traditional resources such as fossil generating resources. In particular there are no reliability benefits to be gained by requiring R4 and R5 to be applicable to the individual generator transformers at a dispersed generation facility; as such, these requirements should be implemented on the aggregating equipment only.
Yes
Section 4.2. Dispersed generation resources are often variable energy resources such as wind and solar. Section 4.2.1. The generating capacity of individual dispersed generating modules can be as small as a few hundred watts to as large as several megawatts. The utilization of these small generating units' results in a large number of units (e.g., several hundred wind generators or several million solar panels) installed collectively as a single facility that is connected to the transmission system.
Individual
Bill Fowler
City of Tallahassee, TAL
Yes
Yes
Yes
Yes
No
TAL agrees with the the exclusion of aggregate levels of generation below 75MVA. TAL would prefer to see a justification of the 75MVA brightline for the requirement of protection devices to be included under PRC-005.
Yes
No

Individual
Karen Webb
City of Tallahassee - Electric Utility
Yes
Yes
Yes
Yes
No
TAL agrees with the the exclusion of aggregate levels of generation below 75MVA. TAL would prefer to see a justification of the 75MVA brightline for the requirement of protection devices to be included under PRC-005.
Yes
No
Group
Duke Energy
Colby Bellville
Yes
Yes
Yes
Yes
Yes

Yes
Yes
Duke Energy agrees with the SDTs recommendation that if a trip of generation resulting in the aggregate loss of 75MVA or greater occurs, then an analysis of potential Misoperations of the individual generating units should take place.
Yes
No
We believe the SDT may have misstated question 10. We do not believe that individual generator transformers should be subject to R4 and R5. The White paper leads the reader to believe that this question should be asking if we agree that individual generators should “not” be subject to R4 and R5. Please clarify the SDTs intent for this question.
No
Individual
Larry Heckert
Alliant Energy
No
We understand the SDT’s concern with regard to a common mode trip of several generating units. However, we do not support any language that would effectively bring turbine control systems in scope for PRC-004, in lieu of protection systems which is the current scope of PRC-004.
No
Group
SPP Standards Review Group
Shannon V. Mickens

Yes
Yes
The chosen approaches seem reasonable.
Yes
Yes
Yes
Yes
Yes
Yes
With significant numbers of dispersed generation resources currently in existence and more being placed into service daily, the issue of a, misoperation (common mode) of a large number of individual generating resources becomes more probable. Not that such an event would be any more detrimental to the reliability of the BES than the loss of a comparable amount of traditional generation, the impact would be about the same.
Yes
Yes
Yes
We note that the SDT swings back and forth between the BPS and BES. Shouldn't we restrict ourselves to the BES since the reliability standards are about preserving the reliability of the BES? We don't quite understand the statement that begins the Section 4.2.1 Design Characteristics. It states 'For dispersed power producing resources to be economically viable, it is necessary for the equipment to be geographically dispersed.' Could the SDT expand on this? Use a lower case 't' in 'the' in the italicized sentence at the end of Section 5.4.4 FAC-008 – Facility Ratings. A similar error appears in Section 5.7.7. The opening statement in Section 5.6.2 IR0-005 – Reliability Coordination – Current Day Operations mentions only one of the requirements in the standard that applies to Generator Operators which does not provide a total picture of the purpose of the standard. The statement refers to Requirement R10. However, Requirement R6 also applies to Generator Operators regarding the development of action plans to address potential or actual SOL, DCS or CPS violations. Although the conclusion reached in Section 5.6.2 won't change with this additional information, it does provide a fuller picture of what the Generator Operator's responsibilities are with regards to the standard. Something appears to be missing at the end of the 3rd line of the 3rd (R3) paragraph under

Section 5.10.1. My quess is that the SDT meant to say '…non-operation of an interconnected entity's Protection Systems,…' However, 'protection' is not capitalized in the text, so I'm unsure just what belongs here. Replace the 'is' in the 1st sentence of the paragraph under Section 5.10.2 with 'has been' such that the sentence reads '…, which has been adopted by the NERC…'. There are numerous references to Real-time in the White Paper. Be sure to use the NERC Glossary spelling in those references. Delete the extra 'in' in the 6th line in Section 5.11.3.1. The phrase 'to the nature' in the 1st bullet of Section 5.11.3.2 doesn't seem to fit nor add anything to the sentence. I'd suggest deleting it. Delete the 'the' in the last line of that same paragraph and replace it with 'its host'. Delete the plural 's' in 'resources' in the 1st line of the last paragraph of Section 5.11.3.3. Replace 'the SDT project' in the 8th line of the 2nd paragraph under Section 5.11.4.2 with 'Project 2014-01'. In that same paragraph, delete the 'in' in the next to last line in the italicized sentence at the end of the paragraph. These same errors appear in Section 5.11.5. The conclusion in the italicized sentence at the end of Section 5.14.1 is not supported by the sentence immediately preceding it.
Group
Southern Company: Southern Company Services, Inc.; Alabama Power Company; Georgia Power Company; Gulf Power Company; Mississippi Power Company; Southern Company Generation; Southern Company Generation and Energy Marketing
Wayne Johnson
Yes
No
See comments specific to VAR-002 in Q9 and Q10 comments.
Yes
Do the "aggregated facilities" in Appendix B refere to > 75 MVA aggregation points? PRC-024 needs to pertain to common settings for individual generating resources where incorrectly set protection elements could cause > 75 MVA to trip where is it not deisred. The region specific PRC-006 standards should include mention of common mode effects (e.g. for SERC, one must specify the # MW lost when the UF protection activates - this should include the aggregated MW of all units set similarly). This question is a difficult to answer not knowing what the specific guidance will be.
Yes
Yes
Yes
Yes

The current revision project to PRC-005 is 2007-17.3 (it is shown incorrectly in the last paragraph of section 5.10.6)
No
Only in rare cases of multiple contingencies might a misoperation of a large number of the individual generating resources at a dispersed generation resource site impact BES reliability.
Yes
VAR-002-2b should apply only to dispersed generation resources that are designed to provide voltage and/or reactive support for the BES. This includes those where voltage or reactive sources (cap banks, reactor banks, static var devices, plant voltage outer-loop control, etc.) which are installed specifically to provide system voltage and reactive support at the point of interconnection or aggregate facility level. Dispersed generation resources that do not have such capability by design should be exempted from VAR-002-2b.
Yes
It should be clear that the plant step-up transformer (HV side > 100kV) should be included in the R4 and R5, but that any individual resource transformer (HV side < 100kV) is not included in the scope.
No
Group
ACES Standards Collaborators
Jason Marshall
No
(1) The drafting team has done an excellent job reviewing all of the standards that apply to GOs and GOPs and also identifying some of the ancillary issues such as the interaction of BAs, TOPs, and RCs and dispersed generation resources. However, we do believe a deeper dive is required with some of the standards to identify additional issues and that the standards need to be reviewed from the perspective of whether a GO/GOP has only dispersed generation resources and no other resources. Specific examples of our concerns are discussed below. (2) For example, while EOP-004-2 at first glance appears to apply to the function and not the individual elements, closer inspection reveals that a GO with dispersed generation would have to report for each individual unit as the dispersed generation site when there is “damage or destruction of its Facilitiy that results from actual or suspected intentional human action”. The definition of Facility would include individual wind turbines since they are classified as part of the BES. This literally means that if there was intentional damage caused to 1 MVA wind turbine at an applicable dispersed generation resource site, the BA, GO, and GOP would all have to report intentional human damage per EOP-004-2. There are other thresholds for reporting that would apply in EOP-004-2 as well. These need to be reviewed further. (3) If EOP-005-2 is reviewed from the perspective of applying the standard to a GOP that only operates dispersed generation resources, we question if the standard should apply at all. Can dispersed generation resources be Blackstart Resources? If dispersed generation resources

cannot serve as Blackstart Resources, only one requirement (R18) would apply and the GOP would be burdened with proving that the Blackstart Resource requirements do not apply during every compliance monitoring event. Furthermore, what possible role could a GOP with only dispersed generation resources play in restoration. If they have no role, why would they need to pariticpate in “restoration drills, exercises, or simulations”. (4) We disagree that limiting the applicability of the NUC standard to exclude dispersed generation resources would create a reliability gap. A Nuclear Plant Generator Operator cannot practically rely on variable output resources such as dispersed generation resources to meet its NPIRs. Thus, limiting applicability does not create realibility gap. (5) We disagree with the determination for TOP-001-1a R6 in the whitepaper. The requirement requires the GOP to provide “all available emergency assistance”. From a reliability perspective, what “emergency assistance” would the GOP of a dispersed generating resource be expected to supply. Shut down the units or reduce output? These are examples of actions that would be issued via a directive and are covered under IRO-001-1.1 R8 and TOP-001-1a R3 directive. Thus, the requirement does not need to apply to dispersed generation resources. (6) For TOP-003-1 R1, the whitepaper should explain that the standard should be applied on an aggregate basis and not an individual resource basis. There is no need for the Transmission Operator to be aware of individual wind turbine outages. They only need to know the aggregate outage amount.
No
agree conceptually with the approach overall but have identified a few standards where we disagree with the assessment. Those are documented in the first and third questions.
No
We agree with all standards except PRC-025. We do not understand why PRC-025 would need to apply to individual generating units in a dispersed generator resource. This would imply that the loss of a single unit at these dispersed generation resource sites would have a reliability impact which would be counterintuitive to this entire standards project. Futhermore, it is not consistent with the drafting team’s approach that standards that apply to individual generating elements need to be modified. The whitepaper may even contradict the applicability section 3.2.5 of the standard that states “Elements utilized in the aggregation of dispersed power producing resources” which suggests the standard applies to individual generating elements and not the GOP as a whole. We suggest that either PRC-025 should be added to the standards that need the applicability modified or a better explanation for why it does not need to be modified should provided in the whitepaper.
Yes
We agree conceptually with the approach.
We believe adequate justification has been provided.
Yes
The SDT’s approach is supported by the fact that the threshold for dispersed generation resources is 75 MVA for inclusion in the BES. If the facility impacts the BPS reliability, it will be included in the BES. Thus, a loss of less than 75 MVA of dispersed generation resources by definition cannot impact BPS reliability and, thus, analysis of misoperations of Protection Systems is unnecessary when less than 75 MVA of generation will be lost.

Yes
We believe adequate justification for the revisions have been provided.
No
For the vast majority of dispersed generating resources, we do not believe that a common mode failure for that dispersed generating resource site would be impactful to reliability in most cases. First, most of these sites are not that large. Second, because the output is variable, these resources must be backed up with operating reserve to account for their variability. Third, there are other NERC standards that require operation of the BES to withstand the next contingency so the loss of entire wind farm or solar array will not be impactful to reliability unless another standard is concurrently violated.
Yes
We believe adequate justification has been provided.
Yes
We believe that guidance or modification to the standard is necessary to ensure that VAR-002-2b only applies to a step-up transformer at the interconnection point to the BES for the dispersed generating resource.
Yes
(1) Although there was discussion of the NPCC and SERC versions of PRC-006-1, we did not see any discussion regarding the NERC version of PRC-006. This needs to be included. (2) We are concerned about the coordination of some changes with other drafting teams identified for several requirements in the whitepaper. Some drafting teams have already reached a point where it is too late for coordination. For example, PRC-001 is to be coordinated with the Project 2014-03 TOP IRO drafting team. However, that drafting team is currently preparing documentation to post for public comment in May and will have completed preparations by the time this comment is received. Better coordination with other drafting teams appears to be warranted.

Question 4 – Response: Yes

Comments: The Implementation Plan can be read that it obligates applicable entities to complete the initial risk assessment in Requirement R1, on or before the effective date of the standard. The implementation plan should be adjusted.

The following is a suggestion to facilitate reading of the standard and stay whitn defined terms without introfucing new terms which are undefined: For all requirements: Replace the expression "Transmission stations and Transmission substations" with "Transmission facilities". Otherwise, please explain why such a distinction is necessary.

While the requirement for unaffiliated third party verification of the physical security plan is something required by the FERC in its order, the mandate is misguided and will lead to security breaches while at the same time adding no incremental value to the physical security plan. The utility, which owns the assets, is already highly incentivized to put together a good security plan to avoid loss of its facilities to terrorism without third party verification. The utility may decide to use security consultants to help develop the plan if it involves new, state of the art physical security topics outside the utilities experience base. On balance the third party verification requirement outlined in R6 regarding the physical security plan is unneeded.

Additional comment received from Marcus Pelt, Southern Company

"The wording of Requirement R2.s, as it stands currently, could be interpreted to place requirements on the unaffiliated third party verifier when the responsible entity is actually the Transmission Owner. Southern recommends that R2.2 be reworded as follows to address this concern:

Proposed R2.2
2.2 The responsible Transmission Owner shall ensure the unaffiliated third party verification is completed within 90 calendar days following the completion of the Requirement R1 risk assessment. The unaffiliated third party verification may, but is not required to, include recommended additions or deletions of Transmission station(s) or Transmission substation(s)."