

**Individual or group. (20 Responses)**  
**Name (11 Responses)**  
**Organization (11 Responses)**  
**Group Name (9 Responses)**  
**Lead Contact (9 Responses)**  
**Question 1 (20 Responses)**  
**Question 1 Comments (20 Responses)**  
**Question 2 (18 Responses)**  
**Question 2 Comments (20 Responses)**  
**Question 3 (0 Responses)**  
**Question 3 Comments (20 Responses)**

Group
Northeast Power Coordinating Council
Guy Zito
Yes
The annual assessment of SPS in transmission planning studies should be addressed within Transmission Planning (TPL) standards. We recommend that Transmission Planning requirements not be included in Protection and Control (PRC) standards.
No
Individual
Anthony Jablonski
ReliabilityFirst
Yes
ReliabilityFirst agrees with the scope of the SAR and believes these revised standards will enhance reliability. Specifically a modified SPS definition will increase clarity and removal of the RRO as the applicable entity from certain standards will remove the "fill-in the blank" aspects and correctly make them enforceable on users, owners and operators of the BES.
Group
MRO NERC Standards Review Forum
Joseph DePoorter
Yes
The current draft of the SAR scope includes PRC-017 to avoid any gaps or overlap between PRC-017 and the proposed SPS standard. Since the PRC-017 standard is scheduled to be

retired with the effective date of PRC-005-2, which is April 1, 2014, PRC-005-2 already includes in its scope the maintenance and testing requirements of the Protection System elements of a SPS. Therefore there is no gap, and addressing of PRC-017 in the SPS standard creates overlap and potential double jeopardy (between PRC-005-2 and the SPS standard). It is recommended that the maintenance and testing requirements of all of the elements of the SPS be in the same standard and not split the requirements for the testing of parts of the SPS into two standards. Since the specific requirements for the testing of the "Protection System components" of a SPS are already in PRC-005, it seems to make more sense to simply make PRC-005 apply to "all" components (parts) of a SPS, rather than repeat the specific requirements for the testing in a second standard. While the NSRF understands that SPS misoperations were not addressed in the recent PRC-004 revision, the NSRF believes that SPS misoperations can be addressed under PRC-004-3 without any further significant modifications. Once the definition of a SPS is clearly determined (part of this project), the analysis of any operation (or lack of operation) of the scheme does not need to be treated any differently than other Protection System analysis and correct-operation determination. It is recommended that the evaluation of proper/improper operation of a SPS be included in PRC-004 rather than in a second Misoperation standard, PRC-016. Once the definition of a SPS is well defined, it should be no more or less difficult to determine if it operated correctly than any other protection scheme. The time frames for review, possible involvement of multiple parties, and Corrective Action Plans aspects apply directly to SPSs just as they do to ordinary Protection System schemes. The SAR scope should be expanded to include more definition of the term, "functional modification." There will continue to be uncertainty and inconsistency regarding which SPS changes are a "functional modification" until specific criteria and examples are developed. For instance, the criteria and examples should be able to address the treatment of such changes as a direct replacement of a failed SPS component failure (e.g. SEL-321 relay for SEL-321 relay), upgrading a SEL-321 relay with a SEL-421 relay with the same logic, and using a different logic to accomplish the same system result.

No

The NRSF has concerns that the proposed SPS definition in the technical paper remains broad, lacks sufficient clarity and the specificity necessary for consistent identification / classification of SPS systems across all eight regions. While the SPCS effort is commendable, the definition remains overly broad and will continue to bring in protection systems that don't affect the security of the BES. This is evidenced by the long list of identified exclusions. The drafting team cannot identify and exclude all possible protection schemes that respond to non-fault conditions and entities will continue to identify more systems that need to be excluded as there are many reasons to install specific protection systems. The MRO NSRF suggests that the SAR allow room for the drafting team to consider enhancements other than what is proposed in the SPCS technical paper. Perhaps a hybrid definition / screening process followed by a specific BES system instability analysis are needed to 1) clearly communicate the SPS definition intentions, and 2) identifying only BES

protection systems that are "Special" because they have a regional impact on BES security. An example is the difference between a reverse power relay that trips a backfed 100kV and greater BES bus (which should not be a special protection system), versus the SONGS scheme that helped trigger the southwest power outage (which should be special due to its security impact on the BES). The hybrid definition / screening process could start with an English SPS definition similar to what was proposed by the SPCS allowing entities to quickly screen protection systems for potential inclusions and exclusions similar to the BES definition. This could be followed by a BES security impact analysis which would screen for BES transmission instability, uncontrolled separation, and cascading using known and understood power stability program stability analyses similar to the TPL standards. This would provide repeatable concrete and measurable results that would clearly identify protection schemes that had a BES security impact. Concrete and measurable criteria could be specified using understood industry practices and IEEE papers or standards for identifying when BES security was impacted through regional undamped and poorly damped power system oscillations.

Individual

Jonathan Meyer

Idaho Power Co.

No

No

Individual

Oliver Burke

Entergy Services, Inc.

No

No

The centralized UVLS program should be considered as part of SPS.

Individual

Thomas Foltz

American Electric Power

Yes

The SAR proposes that PRC-017-0 be retired or revised, however this standard is already approved to be retired under PRC-005-2.

No

We are hopeful that the establishment of SPS “types”, as detailed in the SPCS technical report, may eliminate the need for regional variances.
We are encouraged by NERC’s willingness to pursue revision of the definition of Special Protection Systems and impacted standards.
Group
PPL NERC Registered Affiliates
Brent Ingebrigtsen
No
Comments: These comments are submitted on behalf of the following PPL NERC Registered Affiliates (“PPL”): 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.
No
None
Group
Southern Company: Southern Company Service, 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
The current draft of the SAR scope includes PRC-017-0. This standard is scheduled to be retired with the effective date of PRC-005-2, which is 01 Apr 2014. PRC-005-2 already includes in its scope the maintenance and testing requirements of the Protection System elements of a SPS. It is recommended that the maintenance and testing requirements of all of the elements of the SPS be in the same standard - either include the "Protection System components" and "non-Protection System components" of a SPS in PRC-005 or in PRC-017, and not split the requirements for the testing of parts of the SPS into two standards. Since the specific requirements for the testing of the "Protection System components" of a SPS are already in PRC-005, it seems to make more sense to simply make PRC-005 apply to "all" components (parts) of a SPS rather than repeat the specific requirements for the testing in a second standard. It is not clear how a SPS can have "non-Protection System components". If a component is required in the composition of a SPS to achieve the desired operability, it seems implicit that it becomes a "Protection System component". Once the definition of a SPS is clearly determined (part of this project), the analysis of any operation (or lack of operation) of the scheme does not need to be treated any differently than other Protection System analysis and correct-operation determination. It is recommended that the evaluation of proper/improper operation of a SPS be included in PRC-004 rather than in a

second Misoperation standard, PRC-016. Once the definition of a SPS is well defined, it should be no more or less difficult to determine if it operated correctly than any other protection scheme. The time frames for review, possible involvement of multiple parties, and Corrective Action Plans aspects apply directly to SPSs just as they do to ordinary Protection System schemes.
Group
Florida Municipal Power Agency
Frank Gaffney
No
FMPA appreciates the efforts of the team and believes the definition is a significant improvement over the former definition. There are only a few comments we are making in response to this and the next two questions First is that we are of the opinion that Special Protection Systems are indeed Protection Systems as defined in the NERC Glossary, and as applicable to PRC-005-2 recently approved by FERC. The Applicability Section of PRC-005-2 at 4.2.4 reads: "Protection Systems installed as a Special Protection System (SPS) for BES reliability." If an SPS is not a Protection System, then what is the scope of testing required in PRC-005-2 for an SPS? If an SPS is not a Protection System, should the scope of the SAR be changed to include modifications to PRC-005-2? The SDT seems to depend on: "... SPS are not limited to detecting faults or abnormal conditions and tripping affected equipment" in expressing its opinion that SPSs are not Protection Systems; however, those terms are not used in the Glossary definition of Protection Systems. There is nothing in the definition of Protection System that would eliminate SPSs from being a subset of Protection Systems. In addition, under the section "Voltage Threshold" of the paper that includes the proposed definition, the paper states: "(a)ll elements, at any voltage level, of an SPS intended to remediate performance issues on the bulk electric system (BES), or of an SPS that acts upon BES elements, should be subject to the NERC requirements." If the SPS is not a Protection System that includes: (i) relays; (ii) communication systems; (iii) voltage and current sensing devices; (iv) dc supply; and (v) control circuits as elements of the Protection System, then to what does "all elements" refer?
No
The definition should not include brightlines. Brightlines already exist in at least two standards that would just cause confusion over what brightline to use. The CIP-002-5 standard has a Medium Risk brightline criteria 2.9 of Attachment 1 to CIP-002-5 which states: "2.9. Each Special Protection System (SPS), Remedial Action Scheme (RAS), or automated switching System that operates BES Elements, that, if destroyed, degraded, misused or otherwise rendered unavailable, would cause one or more Interconnection Reliability Operating Limits (IROLs) violations for failure to operate as designed or cause a reduction in one or more IROLs if destroyed, degraded, misused, or otherwise rendered unavailable." IRO-005, R9 uses a criteria of: "... a Special Protection System that may have

an inter-Balancing Authority, or inter-Transmission Operator impact (e.g., could potentially affect transmission flows resulting in a SOL or IROL violation) ..." Adding another set of brightlines (for no apparent purpose contained within the standards but presumably for the convenience of three of the Regions) that conflict with these brightlines already within the standards will only bring confusion. Brightlines for SPSs should be within each standard, not within the definition. If the SDT does not agree, then, at minimum, the SAR should be changed to modify CIP-002-5 and IRO-005 to align with the newly proposed brightlines. The definition is exceptionally long. By removing the categories and brightlines from the definition, it cuts the definition roughly in half.

The definition does not address automatic actions taken by an EMS, SCADA or DCS and whether that would be considered an SPS. For instance, an EMS can be programmed to perform automated switching (without human intervention) to relieve an overloaded Facility in a similar manner to an SPS designed with relays or a programmable logic controller. Would such automation cause the EMS to be an SPS and subject to PRC-005-2 requirements for testing?

Individual

Catherine Wesley

PJM Interconnection

Yes

Based on the high level information included in the SAR, PJM offers the following comments: a. Recommend a new name for the project. It is not a phase 2 of the Protection Misoperation standard effort as identified. It is a new project covering all aspects of SPSs, and the present Project numbering and project name are confusing. b. Specific to the strawman definition, for 'd' in the listing of schemes that do not constitute an SPS, the list of equipment is very discrete/specific. Please revise to be more generic because if not revised, could possibly leave out emerging technologies requiring future revision. c. For the classifications identified, they should be static in their scope, not dynamic which would result in potentially continued reevaluation of the classifications. In other words, base the SPS types on the contingency mitigated not the results of the contingency. d. PJM is reluctant to support adding the BA to the applicability of the standard since it is administrative in nature; however, understands that the BA is the source of the information (the largest generator unit in the BA area). Alternatives to making a new administrative requirement include using the data request section of the RoP (section 1600). e. The standard should not allow new permanent SPSs except for temporary installations that will eventually be removed when permanent mitigation is built or for maintenance conditions.

No

Individual

Bill Fowler

City of Tallahassee

Yes
While TAL appreciates the need for consistency among regions in regards to the classification of SPS, flexibility in this classification should be afforded the regions due to valid geographical concerns. For this reason, TAL believes the classification component of the proposed language should be independently developed from the SPS definition.
No
N/A
Individual
Karen Webb
City of Tallahassee - Electric Utility
Yes
While TAL appreciates the need for consistency among regions in regards to the classification of SPS, flexibility in this classification should be afforded the regions due to valid geographical concerns. For this reason, TAL believes the classification component of the proposed language should be independently developed from the SPS definition.
Yes
TAL believes valid geographical concerns exist among regions, and therefore some flexibility should be afforded in the classification of SPS.
Individual
Scott Langston
City of Tallahassee
Yes
While TAL appreciates the need for consistency among regions in regards to the classification of SPS, flexibility in this classification should be afforded the regions due to valid geographical concerns. For this reason, TAL believes the classification component of the proposed language should be independently developed from the SPS definition.
Yes
TAL believes valid geographical concerns exist among regions, and therefore some flexibility should be afforded in the classification of SPS.
TAL provides no comment
Group
PacifiCorp
Sandra Shaffer
No
Yes

PacifiCorp agrees with the Industry Need statement for this project and that the existing NERC Glossary of Terms definition for a Special Protection System (SPS) or Remedial Action Scheme (RAS) as used in the Western Interconnection lacks the clarity and specificity necessary for consistent identification and classification of protection schemes as SPS or RAS across the eight NERC Regions. This leads to inconsistent application of the SPS-related NERC Reliability Standards. Phase 1 of Project 2010-05.1 addresses Misoperations of Protection Systems (PRC-004-03). The implementation Plan for PRC-004-03 will require the Western Electricity Coordinating Council (WECC) to modify Regional Reliability Standard PRC-004-WECC-1 which has an attached Table, Major WECC Remedial Action Schemes (RAS). As this Project 2010-05.2 Special Protection Systems (Phase 2 of Protection Systems) is addressing all aspects of Special Protection Systems, including misoperations, NERC should instruct WECC to review the PRC-004-WECC-1 Table, Major WECC Remedial Action Schemes (RAS), and, to the extent possible, conform to NERC SPS/RAS definitions and classifications developed in Project 2010-05.2 SPS Phase 2. In addition, the purpose of WECC Criterion PRC-(012 through 014)-WECC-CRT-2 is to (1) establish a documented RAS review procedure to ensure compliance with PRC-012-0, (2) establish a RAS database per PRC-013-0, and (3) meet the Regional Reliability Organization / Reliability Assurer requirements of PRC-014-0. This regional criterion will require modification upon completion of Project 2010-05.2 SPS Phase 2, which is expected to provide a continent-wide definition and classification of SPS/RAS.

Individual

Gul Khan

Oncor Electric Delivery Company LLC

No

See response to Question 3 which addresses Oncor's comments regarding the System Protection Control Subcommittee (SPCS) Technical Report.

No

The purpose of this SAR is stated to "develop continent-wide standards to address all aspects of SPS." Oncor interprets this to mean regional variance is not considered.

With respect to the System Protection Control Subcommittee (SPCS) Technical Report (Report), Oncor provides the following comments. First, Oncor agrees with the proposed SPS definition and encourages the SDT to keep the following in the exclusions; Static Var Compensators (SVCs), Series/Shunt Capacitors, and Series/Shunt Reactors. Oncor believes these devices, as used today, are part of "standard" business practice. Additionally, Oncor has general concern about the SPS Operations Review Process as described on Page 23 of the Report. SPS design is based on long-range planning data provided by the Planning Authority. Tools to perform in depth real-time analysis are limited. Oncor believes that the immediate assessment of an SPS operation should be limited to considering if it operated as designed. As proposed in Appendix C of the Report, the new PRC-016 requirement which replaces PRC-012-0 R1.7, adds real time SPS operation analysis. Oncor recommends the

SDT not require this level of analysis to PRC-016 and indicate that the SPS Operations Review Process is for Mis-Operations only.
Individual
Nazra Gladu
Manitoba Hydro
Yes
(1) In the "Brief Description" section of the SAR, it is stated that the project will develop a standard to address the "periodic comprehensive SPS assessments". Are the periodic comprehensive SPS assessments necessary given that an initial review has been completed and annual assessments of SPS have been included in the transmission planning studies?
No
(1) General comment as a reminder to the SDT, consider keeping the new standard as simple as possible and of minimum length. (2) General comment - consider replacing all instances of the word "standard" with "NERC Reliability Standard". (3) Page 3 - capitalize the word "data" in the title for PRC-015-0 Special Protection System data and Documentation. (4) Page 3 - capitalize and re-write "bulk power system" as "Bulk-Power System". (5) Page 3 - a 'period' is missing after the text ".....into a Reliability Standard".
Group
ACES Standards Collaborators
Jason Marshall
Yes
(1) In general, we are supportive of the concept of the SAR. We support developing a more specific definition of SPS for consistent application and classification of SPSs across all NERC regions. However, we do have some specific concerns identified below. (2) The SAR should clarify what is meant by "planning, coordination, and design" and "review, assessment, and documentation" of SPS. If by "planning, coordination, and design," the SAR intends to consider which facilities the SPS will open by performing planning studies and to consider their impacts on one another in the same studies, we are supportive. If the engineering design (e.g. such as what relays will be used, what CT settings will be) is what is intended, we do not support the SAR as it is inconsistent with any other standard. For example, there is no engineering design standard for Protection Systems. This would extend the standards beyond what the original intention of the fill-in-the-blank unapproved standards. Furthermore, inclusion of "review" and "assessment" is part of the confusion because we interpret this to mean the analysis that is performed in the planning studies. Please clarify. (3) In the "Brief Description" section, what is the difference between "annual assessments of SPS in transmission planning studies" and "periodic comprehensive SPS assessments?" Annual would be periodic. Please provide clarification.
No

(1) We have no additional comments. Thank you for the opportunity to comment.
Individual
David Jendras
Ameren
Yes
(1) Will the term RAS be eliminated, such that SPS is used consistently by all eight regions? If RAS is retained then the statement "Also called Remedial Action Scheme" from the present definition also needs to be retained. (2) Is our understanding correct that the scope is to be limited to the 693 reliability standards?
No
We believe that the term 'system' is used in a myriad of ways in the NERC Glossary of Terms. Thus we request revising the first sentence of the proposed SPS definition from the SAMS-SPCS SPS Technical Reference to clarify 'system'. We recommend the following: 'A scheme designed to detect predetermined Bulk Electric System (system) conditions and automatically take corrective actions, other than the isolation of faulted elements, to meet system performance requirements identified in the NERC Reliability Standards, or to limit the impact of: two or more elements removed, an extreme event, or Cascading.'
Group
Bonneville Power Administration
Andrea Jessup
No
No
Group
SPP Standards Review Group
Robert Rhodes
Yes
We are concerned that the scope of this project may creep beyond the true purpose of Special Protection Systems into the area of protection schemes used for individual facilities. While we believe this is covered in the accompanying SPCS report, it is not spelled out specifically in the SAR. It needs to be included to keep the SDT on track.
No
While we realize this is a standard question on SAR postings, it seems odd that it is included in a project that is intended to pull the differing interpretations of SPS from the individual Regions into a single, continent-wide effort. This being the case, we hope that regional differences can be put aside.

We note the effort within the SPCS report to clearly state that SPS are not truly Protection Systems and an effort was made to use lower case protection systems to stay away from the conflict. This being the case, perhaps we should defer to the naming convention used in WECC and designate these systems Remedial Actions Schemes.