Background Information
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 Reliability Standards. At the request of the NERC Standards Committee, the Planning Committee directed the System Protection and Control Subcommittee (SPCS) to research this issue. The SPCS along with the System Analysis and Modeling Subcommittee (SAMS) authored the technical report posted in full on this project’s web page. An excerpt of that report containing the rationale for the draft definition of an SPS is also provided for this informal comment posting.

The drafting team will use the draft definition developed by SPCS and SAMS as a starting point for developing a revision to the term, Special Protection System (SPS), found in the Glossary of Terms Used in NERC Reliability Standards. The revised term will form the basis for revising the existing SPS-related standards. Your comments on the draft definition are much appreciated and will aid the drafting team in developing a quality definition of SPS for stakeholder consideration and ballot.

Questions
You do not have to answer all questions. Enter comments in simple text format. Bullets, numbers, and special formatting will not be retained.

1. Does the proposed definition properly identify the types of protection schemes that should be subject to the SPS-related standards? If not, please explain your concerns and how you would address them.

☐ Yes
☒ No

Comments: We note that the SPS definition excludes what is traditionally considered to be “protection systems.” However, the existing NERC definition for Protection System does not
exclude Special Protection Systems. This creates a problem for NERC. We recommend concurrently with this new SPS definition to modify the definition for Protection System to specifically exclude Special Protection Systems. Without doing so would create potential compliance conflicts.

2. Do you agree with categorizing SPSs into the four proposed types? If not, please explain your concerns and how you would address them.

☐ Yes
☐ No

Comments:

3. If you have any other comments on this definition that you haven’t already mentioned, please provide them here:

Comments: The type classifications need to be clarified and and made consistent. For example, “two or more elements removed” can refer to TPL Planning Events P3, P4, P5, P6, and P7. By definition within the TPL Reliability Standard, these are NOT extreme events, but indeed are performance requirements. The proposed change makes the typing of a SPS clear and consistent with existing NERC Reliability Standards. To this end, suggest the following:

For the PS and PL types, suggest changing “A scheme designed to meet system performance requirements identified in the NERC Reliability Standards,...” to “A scheme designed to meet system performance requirements identified in NERC Reliability Standard TPL-001-4 Table 1 – Steady State & Stability Performance Planning Events,...”

For the ES and EL types, suggest changing “A scheme designed to limit the impact of two or more elements removed, an extreme event, or Cascading,...” to “A scheme designed to limit the impact of an extreme event(s) identified in NERC Reliability Standard TPL-001-4 Table 1 – Steady State & Stability Performance Extreme Events, or Cascading,...”

Centrally controlled undervoltage load shedding schemes should be covered by the new SPS definition. These are consistent with the nature of SPS regarding the complexity of the control logic and the effect of a single component failure on their reliable performance.