

Consideration of Comments

Project 2010-13.2 – Phase II Relay Loadability SAR for PRC-023-3

The Project 2010-13.2 Drafting Team thanks all commenters who submitted comments on the Standard Authorization Request (SAR) for PRC-023-3. The supplemental SAR was posted for a 45-day public comment period from January 25, 2013 through March 11, 2013. Stakeholders were asked to provide feedback on the SAR and associated documents through a special electronic comment form. There were 20 sets of comments, including comments from approximately 89 different people from approximately 54 companies representing 9 of the 10 Industry Segments as shown in the table on the following pages.

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

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Mark Lauby, at 404-446-2560 or at mark.lauby@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

Summary Consideration

There were no changes to the posted supplemental SAR in response to comments. Commenters were unclear about the division of responsibilities between the Generator Owner and Transmission Owner. Changes were made to both standards to address these concerns. Please refer to the summary changes to the proposed draft 2 of PRC-023-3 in the Consideration of Comments for draft 2 of PRC-025-1.

¹ The appeals process is in the Standard Processes Manual: http://www.nerc.com/files/Appendix 3A StandardsProcessesManual 20120131.pdf



Index to Questions, Comments, and Responses

| 1. | Do you agree with this scope? If not, please explain |
|----|--|
| 2. | The SAR identifies a list of reliability functions that may be assigned responsibility for requirements in the set of standards addressed by this SAR. Do you agree with the list of proposed applicable functional entities? If no, please explain |
| 3. | Do the proposed changes in the draft PRC-023-3 – Transmission Relay Loadability create the necessary bright line between the draft PRC-025-1 – Generator Relay Loadability create the bright line between the two standards? If no, please explain what would make the bright line clearer |
| 4. | Are you aware of any regional variances that will be needed as a result of this project? If yes, please identify the regional variance |
| 5. | Are you aware of any business practice that will be needed or that will need to be modified as a result of this project? If yes, please identify the business practice |
| 6. | If you have any other comments on this SAR that you haven't already mentioned above, please provide them here: |



The Industry Segments are:

- 1 Transmission Owners
- 2 RTOs, ISOs
- 3 Load-serving Entities
- 4 Transmission-dependent Utilities
- 5 Electric Generators
- 6 Electricity Brokers, Aggregators, and Marketers
- 7 Large Electricity End Users
- 8 Small Electricity End Users
- 9 Federal, State, Provincial Regulatory or other Government Entities
- 10 Regional Reliability Organizations, Regional Entities

| G | roup/Individual | Commenter | | 0 | ganization | | | | Regi | stere | d Ballo | t Bod | y Segi | ment | | |
|----|-------------------|-------------------------------|-------------|----------|--------------------|----|---|---|------|-------|---------|-------|--------|------|---|----|
| | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 1. | Group | Brandy Spraker | Tennesse | e Valley | Authority | | Х | | х | | х | Х | | | | |
| | Additional Member | Additional Organization Regi | on Segment | Selectio | n | | | | | | | | | | | |
| 1. | Marjorie Parsons | SER | C 6 | | | | | | | | | | | | | |
| 2. | Tom Vandervort | SER | C 5 | | | | | | | | | | | | | |
| 3. | Annette Dudley | SER | C 5 | | | | | | | | | | | | | |
| 4. | Paul Palmer | SER | C 5 | | | | | | | | | | | | | |
| 5. | Lee Thomas | SER | C 5 | | | | | | | | | | | | | |
| 6. | Daniel McNeely | SER | C 1 | | | | | | | | | | | | | |
| 7. | Wayne Talley | SER | C 1 | | | | | | | | | | | | | |
| 2. | Group | Guy Zito | Northeast | Power | Coordinating Counc | il | | | | | | | | | | Х |
| | Additional Membe | r Additional Organiz | ation | Region | Segment Selection | | | | | | | | | | | |
| 1. | Alan Adamson | New York State Reliability Co | ouncil, LLC | NPCC | 10 | | | | | | | | | | | |
| 2. | Carmen Agavriloai | Independent Electricity Syste | m Operator | NPCC | 2 | | | | | | | | | | | |



| Gr | oup/Individual | Commenter | | 0 | rganization | | | Regi | stere | d Ballo | t Bod | y Segi | nent | | |
|------|-----------------------|---------------------------------------|--------------|---------|-----------------|----|---|------|-------|---------|-------|--------|------|---|----|
| | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 3. | Greg Campoli | New York Independent System | Operator | NPCC | 2 | | 1 | | 1 | | | | | I | |
| 4. | Sylvain Clermont | Hydro-Quebec TransEnergie | | NPCC | 1 | | | | | | | | | | |
| 5. | Chris de Graffenried | Consolidated Edison Co. of Ne | w York, Inc. | NPCC | 1 | | | | | | | | | | |
| 6. | Gerry Dunbar | Northeast Power Coordinating | Council | NPCC | 10 | | | | | | | | | | |
| 7. | Mike Garton | Dominion Resources Services, | Inc. | NPCC | 5 | | | | | | | | | | |
| 8. | Kathleen Goodman | ISO - New England | | NPCC | 2 | | | | | | | | | | |
| 9. | Michael Jones | National Grid | | NPCC | 1 | | | | | | | | | | |
| 10. | David Kiguel | Hydro One Networks Inc. | | NPCC | 1 | | | | | | | | | | |
| 11. | Christina Koncz | PSEG Power LLC | | NPCC | 5 | | | | | | | | | | |
| 12. | Randy MacDonald | New Brusnwick Power Transm | ission | NPCC | 9 | | | | | | | | | | |
| 13. | Silvia Parada Mitchel | NextEra Energy, LLC | | NPCC | 5 | | | | | | | | | | |
| 14. | Lee Pedowicz | Northeast Power Coordinating | Council | NPCC | 10 | | | | | | | | | | |
| 15. | Robert Pellegrini | The United Illuminating Compa | ıny | NPCC | 1 | | | | | | | | | | |
| 16. | Si-Truc Phan | Hydro-Quebec TransEnergie | | NPCC | 1 | | | | | | | | | | |
| 17. | David Ramkalawan | Ontario Power Generation, Inc | | NPCC | 5 | | | | | | | | | | |
| 18. | Brian Robinson | Utility Services | | NPCC | 8 | | | | | | | | | | |
| 19. | Brian Shanahan | National Grid | | NPCC | 1 | | | | | | | | | | |
| 20. | Wayne Sipperly | New York Power Authority | | NPCC | 5 | | | | | | | | | | |
| 21. | Bruce Metruck | New York Power Authority | | NPCC | 6 | | | | | | | | | | |
| 22. | Donald Weaver | New Brunswick System Opera | tor | NPCC | 2 | | | | | | | | | | |
| 23. | Ben Wu | Orange and Rockland Utilities | | NPCC | 1 | | | | | | | | | | |
| 24. | Peter Yost | Consolidated Edison Co. of Ne | w York, Inc. | NPCC | 3 | | | | | | | | | | |
| 3. | Group | Brenda Hampton | Luminant | | | | | | | | Х | | | | |
| | Additional Member | Additional Organization | Region | Segme | nt Selection | -1 | 1 | | 1 | 1 | | | | ı | 1 |
| 1. F | Rick Terrill L | uminant Generation Company L | _ | _ | | | | | | | | | | | |
| 4. | | | Southwest | Power | Pool Standards | | | | | | | | | | |
| •• | Group | Jonathan Hayes | Developm | ent Tea | m | Х | Х | Х | Х | Х | Х | | | | |
| | Additional Member | · · · · · · · · · · · · · · · · · · · | • | | gment Selection | | • | • | • | • | • | | | | • |
| 1. | Jonathan Hayes | Southwest Power Pool | SPI | | | | | | | | | | | | |



| G | Group/Individual Commenter | | | 0 | rgani | zation | | | | | Regi | stere | d Balle | ot Bod | y Segi | ment | | | |
|-----|----------------------------|---------------------------------|----------|----------|----------|---------|----------|----------|--------|---|------|-------|---------|--------|--------|------|---|---|----|
| | | | | | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 2. | Robert Rhodes | Southwest Power Pool | | SPP | NA | L | | | | • | • | • | • | • | • | • | | | |
| 3. | John Allen | City Utilities of Springfield | | SPP | 1, 4 | 4 | | | | | | | | | | | | | |
| 4. | Chandler Brown | Sunflower Electric | | SPP | 1 | | | | | | | | | | | | | | |
| 5. | Anthony Cassmeyer | Western Farmers Electric Co | operativ | e SPP | 1, 3 | 3, 5 | | | | | | | | | | | | | |
| 6. | Gary Condict | Sunflower Electric | | SPP | 1 | | | | | | | | | | | | | | |
| 7. | Karl Diekevers | NPPD | | MRC | 1, 3 | 3, 5 | | | | | | | | | | | | | |
| 8. | Tiffany Lake | Westar Energy | | SPP | 1, 3 | 3, 5, 6 | | | | | | | | | | | | | |
| 9. | Valerie Pinamonti | AEP | | SPP | 1, 3 | 3, 5 | | | | | | | | | | | | | |
| 10. | Paul Reynolds | Sunflower Electric | | SPP | 1 | | | | | | | | | | | | | | |
| 11. | Jerry White | Cleco | | SPP | 1, 3 | 3, 5 | | | | | | | | | | | | | |
| 12. | Don Schmit | NPPD | | MRC | 1, 3 | 3, 5 | | | | | | | | | | | | | |
| 13. | Paul Von Hersenber | g Westar Energy | | SPP | 1, 3 | 3, 5, 6 | | | | | | | | | | | | | |
| 14. | Bo Jones | Westar Energy | | SPP | 1, 3 | 3, 5, 6 | | | | | | | | | | | | | |
| 15. | Lynn Schroeder | Westar Energy | | SPP | 1, 3 | 3, 5, 6 | | | | | | | | | | | | | |
| 5. | Group | Ben Engelby | ACES | Stand | ards C | Collab | orators | | | | | | | | Х | | | | |
| | Additional Member | Additional Organiza | ation | | Regi | on Se | gment Se | election | | | | | | | | | | | |
| 1. | Megan Wagner | Sunflower Electric Power Corpo | ration | | SPP | 1 | | | | | | | | | | | | | |
| 2. | Mike Brytowski | Great River Energy | | | MRO | 1, 3 | 3, 5, 6 | | | | | | | | | | | | |
| 3. | Tom Alban | Buckeye Power, Inc. | | | RFC | 3, 4 | 4 | | | | | | | | | | | | |
| 4. | Mark Ringhausen | Old Dominion Electric Cooperat | tive | | SER | 3, 4 | 4 | | | | | | | | | | | | |
| 5. | Chris Bradley | Big Rivers Electric Corporation | | | SER | С | | | | | | | | | | | | | |
| 6. | Bob Solomon I | Hoosier Energy Rural Electric C | ooperat | ive, Inc | . RFC | 1 | | | | | | | | | | | | | |
| 6. | Group | Mike Garton | Domi | nion | | | | | | Х | | Х | | Х | Х | | | | |
| | Additional Member | Additional Organization | R | egion | Segme | ent Se | election | | | | | | | | | | | | |
| 1. | Louis Slade I | Dominion Resources Services, | Inc. R | FC | 5, 6 | | | | | | | | | | | | | | |
| 2. | Randi Heise I | Dominion Resources Services, | Inc. N | 1RO | 5, 6 | | | | | | | | | | | | | | |
| 3. | Connie Lowe I | Dominion Resources Services, | Inc. N | IPCC | 5, 6 | | | | | | | | | | | | | | |
| 4. | Michael Crowley | Virginia Electric and Power Con | npany S | ERC | 1, 3, 5, | , 6 | | | | | | | | | | | | | |
| 7. | Group | Stephen J. Berger | PPL C | orpora | ation I | NERC | Register | red Affi | liates | Х | | Х | Х | | Х | | | | |



| Gı | roup/Individual | Commenter | Organizat | Organization | | | | | Registered Ballot Body Segment | | | | | | | | | | | |
|------|----------------------|------------------------------------|--|--------------|--|---------------------|---|---|--------------------------------|---|---|---|---|---|----|--|--|--|--|--|
| | | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | | | | |
| | Additional Member | Addit | onal Organization | Region | | Segmen Selection | | | • | · | • | • | • | | | | | | | |
| 1. | Brenda L. Truhe | PPL Electric Utilities Corpor | ation | RFC 1 | | | | | | | | | | | | | | | | |
| 2. | Brent Ingebrigtson | LG&E and KU Services Cor | npany | SERC 3 | | | | | | | | | | | | | | | | |
| 3. | Annette M. Bannon | PPL Generation, LLC on be Entities | PPL Generation, LLC on behalf of its Supply NERC Registered Entities | | | | | | | | | | | | | | | | | |
| 4. | | | | WECC 5 | | | | | | | | | | | | | | | | |
| 5. | Elizabeth A. Davis | PPL EnergyPlus, LLC | | MRO 6 | | | | | | | | | | | | | | | | |
| 6. | | | | NPCC 6 | | | | | | | | | | | | | | | | |
| 7. | | | | SERC 6 | | | | | | | | | | | | | | | | |
| 8. | | | | SPP 6 | | | | | | | | | | | | | | | | |
| 9. | | | | RFC 6 | | | | | | | | | | | | | | | | |
| 10. | | | | WECC 6 | | | | | | | | | | | | | | | | |
| 8. | | | SERC Protection and Cont | rols | | | | | | | | | | | | | | | | |
| | Group | David Greene | Subcommittee | | | | | | | | | | | | | | | | | |
| | | Additional Organization Re | gion Segment Selection | | | | | | | | | | | | | | | | | |
| | | Ameren | | | | | | | | | | | | | | | | | | |
| | - | Santee Cooper | | | | | | | | | | | | | | | | | | |
| | | Dominion | | | | | | | | | | | | | | | | | | |
| | | SCE&G | | | | | | | | | | | | | | | | | | |
| _ | | Georga Transmission | | | | | | | | | | | | | | | | | | |
| | | Southern Co | | | | | | | | | | | | | | | | | | |
| | David Greene | SERC | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | |
| 9. | Group | Jamison Dye | Bonneville Power Adminis | stration | | Х | | Х | | Х | Х | | | | | | | | | |
| | | Additional Organization Re | = = | | | | | | | | | | | | | | | | | |
| 1. I | Dean Bender | Technical Svcs W | ECC 1 | | | | | | | • | | | | • | | | | | | |
| 10. | Individual | Bob Steiger | Salt River Project | | | Х | | Х | | Х | Х | | | | | | | | | |
| 11. | Individual | Ryan Millard | PacifiCorp | | | Х | | Х | | Х | Х | | | | | | | | | |
| 12. | Individual | Oliver Burke | ke Entergy Services, Inc. (Trans | | | Х | | | | | | | | | | | | | | |



| Group/Individual | | Commenter | Organization | Registered Ballot Body Segment | | | | | | | | | | | |
|------------------|------------|------------------|---|--------------------------------|---|---|---|---|---|---|---|----|--|--|--|
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | | |
| 13. | Individual | Thad Ness | American Electric Power | Х | | Х | | Х | Х | | | | | | |
| 14. | Individual | Ed Croft | Puget Sound Energy | Х | | Х | | Х | | | | | | | |
| 15. | Individual | Nazra Gladu | Manitoba Hydro | Х | | Х | | Х | Х | | | | | | |
| 16. | Individual | Michael Falvo | Independent Electricity System Operator | | Х | | | | | | | | | | |
| 17. | Individual | Timothy Brown | Idaho Power Co. | Х | | | | | | | | | | | |
| 18. | Individual | Dale Fredrickson | Wisconsin Electric Power Company | | | Х | Х | Х | | | | | | | |
| 19. | Individual | Travis Metcalfe | Tacoma Power | Х | | Х | Х | Х | Х | | | | | | |
| 20. | Individual | Bradley Collard | Oncor Electric Delivery LLC | Х | | | | | | | | | | | |



1. Do you agree with this scope? If not, please explain.

Summary Consideration:

Commenters were unclear about the division of responsibilities between the Generator Owner and Transmission Owner. Changes were made to both standards to address these concerns. Please refer to the summary changes to the proposed draft 2 of PRC-023-3 in the Consideration of Comments for draft 2 of PRC-025-1.

| Organization | Yes or No | Question 1 Comment |
|--------------------------------------|-----------|---|
| Northeast Power Coordinating Council | No | The Industry Need statement, as written, implies that the burden of the overlap between PRC-023-3 and PRC-025-1 rests with the Generator Owner as the owner of the protection for the elements that connect the generator to the transmission system. The intent of the drafting teams for PRC-023-3 and PRC-025-1 is to segregate the standards so that load-responsive relays used for generator protection are in one standard (PRC-025-1) and load-responsive relays used to protect transmission are in another (PRC-023-3). |
| | | The Applicability section of PRC 025-1 refers to generator interconnected Facilities which can be construed to mean Generator Owners are responsible for this protection and the terminals at each end. There are Transmission Owners that own protection assets on some, if not all of the terminals for a generator's interconnection. Terminal responsibility needs clarification. The wording places emphasis on asset ownership. |

Response: The drafting team thanks you for your comments. Responsibility is placed on the owner of load-responsive protective relays. The Generator Owner function has been retained in the Applicability of PRC-023-3 to address configurations where the



| Organization | Yes or No | Question 1 Comment | | | | | | | |
|--|--|---|--|--|--|--|--|--|--|
| Generator Owner owns load-responsive protective relays on the terminals of network transmission lines. In cases where the Distribution Provider or Transmission Owner owns load-responsive protective relays on the terminals of generator interconnection Facilities such as a generator step-up (GSU) transformer or generator interconnection Facility, the proposed draft 2 of PRC-023-3 Applicability has been revised to address Facilities the Distribution Provider or Transmission Owner may own relative to generating plants. The proposed draft 2 of the PRC-023-3 standard provides the criteria that the Distribution Provider or Transmission Owner shall use to set load-responsive protective relays. Change made to the proposed draft 2 PRC-023-3 standard. | | | | | | | | | |
| ACES Standards Collaborators No (1) In order to have a clear "bright line," the generator owner should not apply to PRC-023.Remove all reference to GO from PRC-023, and then the SAR will satisfy the intent of avoiding double jeopardy. | | | | | | | | | |
| PRC-023-3 to address configurations when network transmission lines. In cases when relays on the terminals of generator intercinterconnection Facility, the proposed dra Provider or Transmission Owner may own | the Generate the Distribut connection Factor of PRC-02 relative to ge or Transmissic | ents. Generator Owner function has been retained in the Applicability of or Owner owns load-responsive protective relays on the terminals of ion Provider or Transmission Owner owns load-responsive protective cilities such as a generator step-up (GSU) transformer or generator 3-3 Applicability has been revised to address Facilities the Distribution nerating plants. The proposed draft 2 of the PRC-023-3 standard provides on Owner shall use to set load-responsive protective relays. Change made | | | | | | | |
| Dominion | No | Dominion believes the Industry Need as indicated in the SAR could be better stated. We believe the intent of the drafting teams for PRC-023 and PRC-025 is to segregate the standards so that load-responsive relays used for generator protection are in one standard (PRC-025) and load-responsive relays used to protect the bulk power system (Transmission as defined in the NERC Glossary; An interconnected group of lines and associated equipment for the movement or transfer of electric energy between points of supply and points at which it is | | | | | | | |

SAR Consideration of Comments: Project 2010-13.2 PRC-023-3 | April 24, 2013



| Organization | Yes or No | Question 1 Comment |
|--------------|-----------|---|
| | | transformed for delivery to customers or is delivered to other electric systems.) are in another (PRC-023). |
| | | The SAR as written appears to infer that, in all cases, the GO owns the protection system that contains the load-responsive relays that protect Transmission (as defined in the NERC Glossary) from faults that occur on the element(s) that make up the Facility used to connect the generator to Transmission. |
| | | PRC 025 refers to generator interconnected Facilities (ie generator leadssome refer to this as GSU leads) which implies Generator Owners are responsible for this protection and the terminals at each end. There are TOs that own "lead" assets either on both ends or possibly one end of the leads. This is an area that needs further clarification when referring to terminal responsibility. Appears now that wording places emphasis on asset ownership? |

Response: The drafting team thanks you for your comments. Generator Owner function has been retained in the Applicability of PRC-023-3 to address configurations where the Generator Owner owns load-responsive protective relays on the terminals of network transmission lines. In cases where the Distribution Provider or Transmission Owner owns load-responsive protective relays on the terminals of generator interconnection Facilities such as a generator step-up (GSU) transformer or generator interconnection Facility, the proposed draft 2 of PRC-023-3 Applicability has been revised to address Facilities the Distribution Provider or Transmission Owner may own relative to generating plants. The proposed draft 2 of the PRC-023-3 standard provides the criteria that the Distribution Provider or Transmission Owner shall use to set load-responsive protective relays. Change made to the proposed draft 2 PRC-023-3 standard.

| PPL Corporation NERC Registered | No | The PPL Companies do not agree that addition of the phrase includes |
|---------------------------------|----|---|
| Affiliates | | the specificity needed to ensure "double jeapordy" for generation. As |
| | | stated by the North American Generators Forum standards review |



| Organization | Yes or No | Question 1 Comment | | | | |
|---|-----------|--|--|--|--|--|
| | | team: | | | | |
| | | Load-responsive protective relays installed on the high side terminals of the Generator Step-up transformer looking towards the Transmission system appear to be clearly in scope for PRC-23-3 but are not clearly excluded from being applicable to PRC-025-1. | | | | |
| Response: The drafting team thanks you for your comments. Generator Owner function has been retained in the Applicability PRC-023-3 to address configurations where the Generator Owner owns load-responsive protective relays on the terminals of network transmission lines. In cases where the Distribution Provider or Transmission Owner owns load-responsive protective relays on the terminals of generator interconnection Facilities such as a generator step-up (GSU) transformer or generator interconnection Facility, the proposed draft 2 of PRC-023-3 Applicability has been revised to address Facilities the Distribution Provider or Transmission Owner may own relative to generating plants. The proposed draft 2 of the PRC-023-3 standard protective relays. Change in the transmission of the proposed draft 2 PRC-023-3 standard. | | | | | | |
| Bonneville Power Administration No | | The difference between "applied to circuits defined in 4.2.1" and "applied at the terminals of the circuits defined in 4.2.1" is not clear. If there is any difference, it is subtle, and probably not worth revising PRC-023-2 for. The bigger problem is that transmission lines over 200kV that attach generating facilities to the BES seem to be covered by both PRC-023 and PRC-025. PRC-025 applies to Generation interconnection Facilities, but there is no definition of this term. It seems that a 230kV line that connects a GSU transformer to a substation would be considered to be a Generation interconnection facility, and subject to both standards. Therefore, there are two very different requirements that apply to the relays on such a line. A definition of Generator | | | | |

interconnection Facilities is needed, and clarification of which standard

the example given above would be covered by is needed.



| Organization | rganization Yes or No Question 1 Comment | | | | | | | | | |
|---|--|---|--|--|--|--|--|--|--|--|
| Response: The drafting team thanks you for your comments. Generator Owner function has been retained in the Applicability of PRC-023-3 to address configurations where the Generator Owner owns load-responsive protective relays on the terminals of network transmission lines. In cases where the Distribution Provider or Transmission Owner owns load-responsive protective relays on the terminals of generator interconnection Facilities such as a generator step-up (GSU) transformer or generator interconnection Facility, the proposed draft 2 of PRC-023-3 Applicability has been revised to address Facilities the Distribution Provider or Transmission Owner may own relative to generating plants. The proposed draft 2 of the PRC-023-3 standard provides the criteria that the Distribution Provider or Transmission Owner shall use to set load-responsive protective relays. Change made to the proposed draft 2 PRC-023-3 standard. | | | | | | | | | | |
| Manitoba Hydro No (1) Similar to PRC-025, the phrase "while maintaining reliable protection of the BES" is vague. There are no objective criteria specified for this determination, nor is it clear whether this element will be audited in some fashion. If this element of the requirement cannot be audited, it should be deleted. At a minimum, it should specify that the Responsible Entity makes this determination in its sole discretion. | | | | | | | | | | |
| | | naintaining reliable fault protection" describes that the responsible entity sired protection goals. This phrase is already approved language in PRC- | | | | | | | | |
| Wisconsin Electric Power Company | No | Adding this phrase does little to remove the confusion as to applicability to Generator Owners. | | | | | | | | |
| Response: The drafting team thanks you for your comments. Generator Owner has been retained in the Applicability of PRC-023-3 to address configurations where the Generator Owner owns load-responsive protective relays on the terminals of network transmission lines. No change made. | | | | | | | | | | |
| Tacoma Power | No | The phrase "at the terminals of the" does not seem to mitigate the | | | | | | | | |



| Organization | Yes or No | Question 1 Comment |
|--------------|-----------|---|
| | | potential overlap between PRC-023 and PRC-025. Should not the distinction be drawn for generation interconnection Facility(ies)? In other words, it seems that transmission lines only connecting generation would be subject to PRC-025-1 and that transmission lines that are part of the more interconnected transmission system would be subject to PRC-023-3. If the Generator Relay Loadability Standard Drafting Team disagrees, additional clarification is requested as to how the phrase "at the terminals of the" mitigates the potential overlap. |

Response: The drafting team thanks you for your comments. Generator Owner function has been retained in the Applicability of PRC-023-3 to address configurations where the Generator Owner owns load-responsive protective relays on the terminals of network transmission lines. In cases where the Distribution Provider or Transmission Owner owns load-responsive protective relays on the terminals of generator interconnection Facilities such as a generator step-up (GSU) transformer or generator interconnection Facility, the proposed draft 2 of PRC-023-3 Applicability has been revised to address Facilities the Distribution Provider or Transmission Owner may own relative to generating plants. The proposed draft 2 of the PRC-023-3 standard provides the criteria that the Distribution Provider or Transmission Owner shall use to set load-responsive protective relays. Change made to the proposed draft 2 PRC-023-3 standard.

| Tennessee Valley Authority | Yes | |
|---|-----|--|
| Luminant | Yes | |
| Southwest Power Pool Standards Development Team | Yes | |
| SERC Protection and Controls Subcommittee | Yes | |



| Organization | Yes or No | Question 1 Comment |
|---|-----------|---|
| PacifiCorp | Yes | |
| Salt River Project | Yes | |
| Entergy Services, Inc. (Transmission) | Yes | |
| American Electric Power | Yes | |
| Puget Sound Energy | Yes | |
| Independent Electricity System Operator | Yes | |
| Idaho Power Co. | Yes | |
| Oncor Electric Delivery LLC | | Oncor is not registered as a Generator Owner, nor does it perform the functions of a Generator Owner. Thus, this question is not applicable to Oncor. |

Response: The drafting team thanks you for your participation.



2. The SAR identifies a list of reliability functions that may be assigned responsibility for requirements in the set of standards addressed by this SAR. Do you agree with the list of proposed applicable functional entities? If no, please explain.

Summary Consideration:

Commenters were unclear about the division of responsibilities between the Generator Owner and Transmission Owner. Changes were made to both standards to address these concerns. Please refer to the summary changes to the proposed draft 2 of PRC-023-3 in the Consideration of Comments for draft 2 of PRC-025-1. Typographical errors raised in comments were addressed.

| Organization | Yes or No | Question 2 Comment |
|--|-----------|--|
| Northeast Power Coordinating Council | No | The Reliability Functions table has the Planning Coordinator checked. The Planning Coordinator by definition in the NERC Functional Model is "The functional entity that coordinates, facilitates, integrates and evaluates (generally one year and beyond) transmission facility and service plans, and resource plans within a Planning Coordinator area and coordinates those plans with adjoining Planning Coordinator areas." The Planning coordinator does not get involved with generator and transmission relay loadability. |
| Response: The drafting team thanks you for your comments. PRC-023-3, Requirement R6 assigns the responsibility to the Planning Coordinator. No change made. | | |
| ACES Standards Collaborators | No | (1) The purpose of the revised SAR is to remove the applicability of GOs for PRC-023-2. Therefore, we recommend unselecting the Generator Owner box in the supplemental SAR, as the revised standard would not apply to GOs. |
| Response: The drafting team thanks you for your comments. Generator Owner has been retained in the Applicability of PRC-023- | | |

3 to address configurations where the Generator Owner owns load-responsive protective relays on the terminals of network

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transmission lines. No change made.



| Organization | Yes or No | Question 2 Comment | |
|--|--|---|--|
| Dominion | No | Under 4.1.2 PRC 023-2 needs to be changed to PRC023-3. | |
| Response: The drafting team that 3. Correction made in the propo | | our comments and has corrected the typographical error in the proposed PRC-023-3 standard. | |
| Bonneville Power Administration | No | BPA believes there needs to be a clearer delineation between generator facilities and transmission facilities and PRC-023 and PRC-025 written so that there is no overlap between the two. Then the applicability of both PRC-023 and PRC-025 can be easily applied to the owners of the facilities covered by that standard, whether they are registered as a GO, TO, or DP. As PRC-025 is proposed, it only applies to GO's, but what if a TO owns the relays applied to a GSU transformer? These relays would presently not be covered by either PRC-023 or PRC-025. | |
| Response: The drafting team thanks you for your comments. Generator Owner function has been retained in the Applicability of PRC-023-3 to address configurations where the Generator Owner owns load-responsive protective relays on the terminals of network transmission lines. In cases where the Distribution Provider or Transmission Owner owns load-responsive protective relays on the terminals of generator interconnection Facilities such as a generator step-up (GSU) transformer or generator interconnection Facility, the proposed draft 2 of PRC-023-3 Applicability has been revised to address Facilities the Distribution Provider or Transmission Owner may own relative to generating plants. The proposed draft 2 of the PRC-023-3 standard provides the criteria that the Distribution Provider or Transmission Owner shall use to set load-responsive protective relays. Change made to the proposed draft 2 PRC-023-3 standard. | | | |
| Puget Sound Energy | No | Possibly the GO (section 4.1.2) should be taken out. This function is covered in PRC-025. Taking the GO function out of PRC-023 (and any accompanying items) would further strengthen the brightline between PRC-023-3 and PRC-025-1. | |
| _ | Response: The drafting team thanks you for your comments. Generator Owner function has been retained in the Applicability of PRC-023-3 to address configurations where the Generator Owner owns load-responsive protective relays on the terminals of | | |



| Organization | Yes or No | Question 2 Comment |
|---|-----------|--|
| network transmission lines. In cases where the Distribution Provider or Transmission Owner owns load-responsive protective relays on the terminals of generator interconnection Facilities such as a generator step-up (GSU) transformer or generator interconnection Facility, the proposed draft 2 of PRC-023-3 Applicability has been revised to address Facilities the Distribution Provider or Transmission Owner may own relative to generating plants. The proposed draft 2 of the PRC-023-3 standard provides the criteria that the Distribution Provider or Transmission Owner shall use to set load-responsive protective relays. Change made to the proposed draft 2 PRC-023-3 standard. | | |
| Wisconsin Electric Power Company | No | The applicability of this standard should be removed from the Generator Owner. |
| Response: The drafting team thanks you for your comments. Generator Owner has been retained in the Applicability of PRC-023-3 to address configurations where the Generator Owner owns load-responsive protective relays on the terminals of network transmission lines. No change made. | | |
| Manitoba Hydro | Yes | No comment. |
| Tennessee Valley Authority | Yes | |
| Luminant | Yes | |
| Southwest Power Pool Standards Development Team | Yes | |
| PPL Corporation NERC Registered Affiliates | Yes | |
| SERC Protection and Controls Subcommittee | Yes | |

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| Organization | Yes or No | Question 2 Comment |
|--|----------------|---|
| PacifiCorp | Yes | |
| Salt River Project | Yes | |
| Entergy Services, Inc. (Transmission) | Yes | |
| American Electric Power | Yes | |
| Independent Electricity System Operator | Yes | |
| Idaho Power Co. | Yes | |
| Tacoma Power | Yes | |
| Oncor Electric Delivery LLC | | Oncor is not registered as a Generator Owner, nor does it perform the functions of a Generator Owner. Thus, this question is not applicable to Oncor. |
| Response: The drafting team th | anks you for w | our participation |

Response: The drafting team thanks you for your participation.



3. Do the proposed changes in the draft PRC-023-3 – Transmission Relay Loadability create the necessary bright line between the draft PRC-025-1 – Generator Relay Loadability create the bright line between the two standards? If no, please explain what would make the bright line clearer.

Summary Consideration:

Commenters were unclear about the division of responsibilities between the Generator Owner and Transmission Owner. Changes were made to both standards to address these concerns. Please refer to the summary changes to the proposed draft 2 of PRC-023-3 in the Consideration of Comments for draft 2 of PRC-025-1. Typographical errors raised in comments were addressed.

| Organization | Yes or No | Question 3 Comment |
|----------------------------|-----------|---|
| Tennessee Valley Authority | No | Though the line could be derived from reading the purpose of the standard, it may help avoid potential confusion to the generator owners by specifically excluding generator step-up units from 4.2.1.6 or the second bullet of Attachment B. |

Response: The drafting team thanks you for your comments. Generator Owner function has been retained in the Applicability of PRC-023-3 to address configurations where the Generator Owner owns load-responsive protective relays on the terminals of network transmission lines. In cases where the Distribution Provider or Transmission Owner owns load-responsive protective relays on the terminals of generator interconnection Facilities such as a generator step-up (GSU) transformer or generator interconnection Facility, the proposed draft 2 of PRC-023-3 Applicability has been revised to address Facilities the Distribution Provider or Transmission Owner may own relative to generating plants. The proposed draft 2 of the PRC-023-3 standard provides the criteria that the Distribution Provider or Transmission Owner shall use to set load-responsive protective relays. Change made to the proposed draft 2 PRC-023-3 standard.

| Northeast Power Coordinating | No | The draft SAR and proposed standards PRC-023-3, PRC-025-1 fail to provide a |
|------------------------------|----|--|
| Council | | clear distinction as to whether the standard is meant to apply to the owner of a |
| | | protection system designed to protect transmission elements (which we believe is |

| Organization | Yes or No | Question 3 Comment |
|--------------|-----------|---|
| | | the intent of PRC-023-3), or the owner of a protection system designed to protect generation elements (which we believe is the intent of PRC-025-1). We believe this was the intent, but the applicability section of either of the proposed standards does not clearly articulate that intent. |
| | | Suggest the SDT consider an approach similar to that used in PRC-006-1 where the SDT chose to create a 'standard specific entity'; UFLS entities. |
| | | Alternatively, the applicability could be modified to more closely match the intent indicated in the Applicability section of the Guideline and Technical Basis document, and in the wording of the Supplemental SAR for Project 2010-13.2 Relay Loadability Order 733 Phase 2 (Relay Loadability: Generation). The standard should be applied to the owner of the particular type of protection system, not applied to a particular function. |
| | | We are aware of circumstances whereby an entity registered as Transmission Owner owns the protection system that protects for faults on the element(s) owned by an entity registered as a Generator Owner which are solely used to interconnect their generator to the bulk power system. |
| | | We are also aware of circumstances whereby the Generator Owner owns both the element(s) which are solely used to interconnect their generator to the bulk power system as well as the protection system that protects for faults on those generator interconnection element(s). |
| | | In both of these, the protection system is designed to protect the bulk power system from the fault, not the generator itself. Changes to proposed PRC 023-2 and PRC 025-1 attempt to establish a bright line, but the functional entity of Generator Owners is still included in PRC 023-3. This results in confusion as to what standard applies for the elements that connect the generator to the BES, as some Transmission Owners own GSU assets. The wording of PRC-025-1, and as |



| Organization | Yes or No | Question 3 Comment |
|--|-----------|--|
| | | stated in the Webinar, imply that "leads assets" will fall under PRC-025-1. There is still confusion in this area so a bright line still has not been established. |
| Response: The drafting team thanks you for your comments. Generator Owner function has been retained in the Applicability of PRC-023-3 to address configurations where the Generator Owner owns load-responsive protective relays on the terminals of network transmission lines. In cases where the Distribution Provider or Transmission Owner owns load-responsive protective relays on the terminals of generator interconnection Facilities such as a generator step-up (GSU) transformer or generator interconnection Facility, the proposed draft 2 of PRC-023-3 Applicability has been revised to address Facilities the Distribution Provider or Transmission Owner may own relative to generating plants. The proposed draft 2 of the PRC-023-3 standard provides the criteria that the Distribution Provider or Transmission Owner shall use to set load-responsive protective relays. Change made to the proposed draft 2 PRC-023-3 standard. | | |
| Southwest Power Pool Standards Development Team | No | While we agree that the revision to PRC023-2 creates a bright line we feel that language should be included in PRC-25-1 to clearly state that the protection relays under PRC023-2 ,or -3 if the SAR is approved, would be not be applicable under PRC025-1. |
| Response: The drafting team thanks you for your comments. Generator Owner function has been retained in the Applicability of PRC-023-3 to address configurations where the Generator Owner owns load-responsive protective relays on the terminals of network transmission lines. In cases where the Distribution Provider or Transmission Owner owns load-responsive protective relays on the terminals of generator interconnection Facilities such as a generator step-up (GSU) transformer or generator interconnection Facility, the proposed draft 2 of PRC-023-3 Applicability has been revised to address Facilities the Distribution Provider or Transmission Owner may own relative to generating plants. The proposed draft 2 of the PRC-023-3 standard provides the criteria that the Distribution Provider or Transmission Owner shall use to set load-responsive protective relays. Change made to the proposed draft 2 PRC-023-3 standard. | | |
| ACES Standards Collaborators | No | See comments above. There should not be any references to generators in the transmission loadability standard. |



| Organization | Yes or No | Question 3 Comment |
|---|-----------|---|
| Response: The drafting team thanks you for your comments. Generator Owner function has been retained in the Applicability of PRC-023-3 to address configurations where the Generator Owner owns load-responsive protective relays on the terminals of network transmission lines. In cases where the Distribution Provider or Transmission Owner owns load-responsive protective relays on the terminals of generator interconnection Facilities such as a generator step-up (GSU) transformer or generator interconnection Facility, the proposed draft 2 of PRC-023-3 Applicability has been revised to address Facilities the Distribution Provider or Transmission Owner may own relative to generating plants. The proposed draft 2 of the PRC-023-3 standard provides the criteria that the Distribution Provider or Transmission Owner shall use to set load-responsive protective relays. Change made to the proposed draft 2 PRC-023-3 standard. | | |
| Dominion | No | The draft SAR and proposed standards PRC-023-3, PRC-025-1 fail to provide a clear distinction as to whether the standard is meant to apply to the owner of a protection system designed to protect transmission elements (which we believe is the intent of PRC-023) or the owner of a protection system designed to protect generation elements (which we believe is the intent of PRC-025). We believe this was the intent of the SDT but we don't believe the applicability section of either of the proposed standards clearly articulates that intent. |
| | | We suggest the SDT consider an approach similar to that used in PRC-006-1 where the SDT chose to create a 'standard specific entity'; UFLS entities. |
| | | Alternatively, the applicability could be modified to more closely match the intent as indicated in the Applicability section of the Guideline and Technical Basis document and the Supplemental SAR for Project 2010-13.2 Relay Loadability Order 733 Phase 2 (Relay Loadability: Generation). We believe the standard should be applied to the owner of the particular type of protection system, not applied to a particular function. |
| | | We are aware of circumstances whereby an entity registered as TO owns the protection system that protects for faults on the element(s) owned by an entity registered as a GO which are solely used to interconnect their generator to the |



| Organization | Yes or No | Question 3 Comment |
|--|-----------|---|
| | | bulk power system. |
| | | We are also aware of circumstances whereby the GO owns both the element(s) which are solely used to interconnect their generator to the bulk power system as well as the protection system that protects for faults on those generator interconnection element(s). |
| | | In both of these, the protection system is designed to protect the bulk power system from the fault, not the generator itself. Changes to proposed PRC 023-2 and PRC 025-1 attempts to establish a bright line but the functional entity of Generator Owners is still included in PRC 023 so this results in confusion as to what standard applies for the elements that connect the generator to the BES as some Transmission Owners own GSU assets but the new standard and as stated on the Webinar it implies that "leads assets" will fall under PRC 025. There is still confusion in this area so a bright line still has not been established. |
| Response: The drafting team thanks you for your comments. Generator Owner function has been retained in the Applicability of PRC-023-3 to address configurations where the Generator Owner owns load-responsive protective relays on the terminals of network transmission lines. In cases where the Distribution Provider or Transmission Owner owns load-responsive protective relays on the terminals of generator interconnection Facilities such as a generator step-up (GSU) transformer or generator interconnection Facility, the proposed draft 2 of PRC-023-3 Applicability has been revised to address Facilities the Distribution Provider or Transmission Owner may own relative to generating plants. The proposed draft 2 of the PRC-023-3 standard provides the criteria that the Distribution Provider or Transmission Owner shall use to set load-responsive protective relays. Change made to the proposed draft 2 PRC-023-3 standard. | | |
| Bonneville Power Administration | No | As described in comments 1 and 2, BPA believes there needs to be a definition of "Generator interconnection Facilities" if this term will be used in PRC-025. There needs to be a clear separation between facilities included in PRC-023 and those included in PRC-025, with no overlap. |



| Organization | Yes or No | Question 3 Comment |
|--------------|-----------|--|
| | | The most likely place for this separation would be at the high-voltage terminal of the GSU transformer, with the GSU and everything between it and the generators included in PRC-025, and the line connecting the GSU to the BES included in PRC-023. |

Response: The drafting team thanks you for your comments. Generator Owner function has been retained in the Applicability of PRC-023-3 to address configurations where the Generator Owner owns load-responsive protective relays on the terminals of network transmission lines. In cases where the Distribution Provider or Transmission Owner owns load-responsive protective relays on the terminals of generator interconnection Facilities such as a generator step-up (GSU) transformer or generator interconnection Facility, the proposed draft 2 of PRC-023-3 Applicability has been revised to address Facilities the Distribution Provider or Transmission Owner may own relative to generating plants. The proposed draft 2 of the PRC-023-3 standard provides the criteria that the Distribution Provider or Transmission Owner shall use to set load-responsive protective relays. Change made to the proposed draft 2 PRC-023-3 standard.

| American Electric Power | No | AEP believes that the proposed changes in the draft PRC-023-3 create a bright line identifying the scope of PRC-023-3. |
|-------------------------|----|--|
| | | However, the proposed draft of PRC-025-1 does not create a bright line identifying the scope of PRC-025-1. Load-responsive protective relays installed on the high side terminals of the Generator Step-Up transformer looking towards the Transmission system are clearly in scope for PRC-023-3 but are not clearly excluded from being applicable from PRC-025-1. |
| | | AEP recommends including in PRC-025-1 verbiage clearly excluding load-responsive protective relays applicable to PRC-023-3 from PRC-025-1. |

Response: The drafting team thanks you for your comments. Generator Owner function has been retained in the Applicability of PRC-023-3 to address configurations where the Generator Owner owns load-responsive protective relays on the terminals of network transmission lines. In cases where the Distribution Provider or Transmission Owner owns load-responsive protective relays on the terminals of generator interconnection Facilities such as a generator step-up (GSU) transformer or generator



| Organization | Yes or No | Question 3 Comment |
|-------------------------------------|--------------------------------|---|
| Provider or Transmission Owner | may own rela Provider or Ti | of PRC-023-3 Applicability has been revised to address Facilities the Distribution ative to generating plants. The proposed draft 2 of the PRC-023-3 standard provides ransmission Owner shall use to set load-responsive protective relays. Change made |
| Puget Sound Energy | No | see answer to question 2 |
| Response: The drafting team that | anks you for y | our comments; please refer to the above response(s) in question 2. |
| Manitoba Hydro | No | (1) In section 4.1.1, 4.1.2 and 4.1.3, the redlined part "at the terminals of" should be changed to "at the Transmission Owner terminals of", "at the generator owner terminals of" and "at the Distribution Owner terminals of". Also, PRC-023-2 in section 4.1.2 should be changed to PRC-023-3. |
| made several changes to both d | rafts of PRC-02 | litional explanation in the PRC-025-1 Guidelines and Technical Basis document and 23-3 and PRC-025-1 to address these concerns and has corrected the typographical made to the proposed PRC-023-3 standard. |
| Wisconsin Electric Power Company | No | Any requirements applicable to the Generator Owner should be in a single standard, PRC-025-1. When this standard is approved, Generator Owners that employ load-sensitive relaying on the high-voltage side of the generator step-up transformer, between the GSU and the interconnection with the Transmission system, will be subject to the PRC-025-1 requirements in 3.2.4 for Generator interconnection Facilities, and at that time the PRC-023 standard should have all applicability to Generator Owners removed. |
| PRC-023-3 to address configurat | ions where th | our comments. Generator Owner function has been retained in the Applicability of e Generator Owner owns load-responsive protective relays on the terminals of e Distribution Provider or Transmission Owner owns load-responsive protective |



| Organization | Yes or No | Question 3 Comment |
|--|---|--|
| interconnection Facility, the pro Provider or Transmission Owner | posed draft 2 may own rela Provider or Ti | dection Facilities such as a generator step-up (GSU) transformer or generator of PRC-023-3 Applicability has been revised to address Facilities the Distribution ative to generating plants. The proposed draft 2 of the PRC-023-3 standard provides cansmission Owner shall use to set load-responsive protective relays. Change made |
| Tacoma Power | No The phrase "at the terminals of the" does not seem to mitigate the potential overlap between PRC-023 and PRC-025. Should not the distinction be drawn for generation interconnection Facility(ies)? In other words, it seems that transmission lines only connecting generation would be subject to PRC-025-1 and that transmission lines that are part of the more interconnected transmission system would be subject to PRC-023-3. If the Generator Relay Loadability Standard Drafting Team disagrees, additional clarification is requested as to how the phrase "at the terminals of the" mitigates the potential overlap. | |
| Response: The drafting team thanks you for your comments. Generator Owner function has been retained in the Applicability of PRC-023-3 to address configurations where the Generator Owner owns load-responsive protective relays on the terminals of network transmission lines. In cases where the Distribution Provider or Transmission Owner owns load-responsive protective relays on the terminals of generator interconnection Facilities such as a generator step-up (GSU) transformer or generator interconnection Facility, the proposed draft 2 of PRC-023-3 Applicability has been revised to address Facilities the Distribution Provider or Transmission Owner may own relative to generating plants. The proposed draft 2 of the PRC-023-3 standard provides the criteria that the Distribution Provider or Transmission Owner shall use to set load-responsive protective relays. Change made to the proposed draft 2 PRC-023-3 standard. | | |
| PPL Corporation NERC Registered Affiliates | No | |
| Luminant | Yes | |



| Organization | Yes or No | Question 3 Comment |
|--|-----------|---|
| SERC Protection and Controls Subcommittee | Yes | |
| PacifiCorp | Yes | |
| Salt River Project | Yes | |
| Entergy Services, Inc. (Transmission) | Yes | |
| Independent Electricity System Operator | Yes | |
| Idaho Power Co. | Yes | |
| Oncor Electric Delivery LLC | | Oncor is not registered as a Generator Owner, nor does it perform the functions of a Generator Owner. Thus, this question is not applicable to Oncor. |

Response: The drafting team thanks you for your participation.



4. Are you aware of any regional variances that will be needed as a result of this project? If yes, please identify the regional variance.

Summary Consideration:

No regional variances were identified.

| Organization | Yes or No | Question 4 Comment |
|--|-----------|--------------------|
| Manitoba Hydro | No | No comment. |
| Tennessee Valley Authority | No | |
| Northeast Power Coordinating Council | No | |
| Luminant | No | |
| Southwest Power Pool Standards Development Team | No | |
| ACES Standards Collaborators | No | |
| Dominion | No | |
| PPL Corporation NERC Registered Affiliates | No | |
| SERC Protection and Controls Subcommittee | No | |



| Organization | Yes or No | Question 4 Comment |
|--|-----------|---|
| Bonneville Power Administration | No | |
| PacifiCorp | No | |
| Salt River Project | No | |
| Entergy Services, Inc. (Transmission) | No | |
| American Electric Power | No | |
| Puget Sound Energy | No | |
| Independent Electricity System Operator | No | |
| Idaho Power Co. | No | |
| Wisconsin Electric Power Company | No | |
| Tacoma Power | No | |
| Oncor Electric Delivery LLC | | Oncor is not registered as a Generator Owner, nor does it perform the functions of a Generator Owner. Thus, this question is not applicable to Oncor. |

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5. Are you aware of any business practice that will be needed or that will need to be modified as a result of this project? If yes, please identify the business practice.

Summary Consideration:

Commenters were unclear about the division of responsibilities between the Generator Owner and Transmission Owner. Changes were made to both standards to address these concerns. Please refer to the summary changes to the proposed draft 2 of PRC-023-3 in the Consideration of Comments for draft 2 of PRC-025-1. Typographical errors raised in comments were addressed including the re-inserting the Implementation Plan for the proposed PRC-023-3.

| Organization | Yes or No | Question 5 Comment |
|---|-----------|--|
| SERC Protection and Controls Subcommittee | No | There may be owner issues that impact entity registration. |

Response: The drafting team thanks you for your comments. Generator Owner function has been retained in the Applicability of PRC-023-3 to address configurations where the Generator Owner owns load-responsive protective relays on the terminals of network transmission lines. In cases where the Distribution Provider or Transmission Owner owns load-responsive protective relays on the terminals of generator interconnection Facilities such as a generator step-up (GSU) transformer or generator interconnection Facility, the proposed draft 2 of PRC-023-3 Applicability has been revised to address Facilities the Distribution Provider or Transmission Owner may own relative to generating plants. The proposed draft 2 of the PRC-023-3 standard provides the criteria that the Distribution Provider or Transmission Owner shall use to set load-responsive protective relays. Change made to the proposed draft 2 PRC-023-3 standard.

| Manitoba Hydro | No | No comment. |
|-----------------|----|--|
| Idaho Power Co. | No | There will obviously be additional work to perform the analysis needed to be compliant with the standard. The only business practice that will need to be modified is to perform this analysis for any new or modified generators or |



| Organization | Yes or No | Question 5 Comment |
|--|----------------|---|
| | | generator protective relays to ensure compliance. |
| Response: The drafting team that | anks you for y | our comment. |
| Tennessee Valley Authority | No | |
| Northeast Power Coordinating Council | No | |
| Luminant | No | |
| Southwest Power Pool Standards Development Team | No | |
| ACES Standards Collaborators | No | |
| Dominion | No | |
| PPL Corporation NERC Registered Affiliates | No | |
| Bonneville Power Administration | No | |
| PacifiCorp | No | |
| Salt River Project | No | |
| American Electric Power | No | |



| Organization | Yes or No | Question 5 Comment |
|--|-----------|--|
| Puget Sound Energy | No | |
| Independent Electricity System Operator | No | |
| Wisconsin Electric Power Company | No | |
| Tacoma Power | No | |
| Entergy Services, Inc. (Transmission) | Yes | Elimination of the table under number 5 of section A in PRC-023-2. |
| Response: The drafting team thanks you for your comments and has re-inserted the Implementation Plan information under the proposed draft 2 of the PRC-023-3 standard, Section A, Item 5. Change made to the Implementation Plan. | | |
| Oncor Electric Delivery LLC | | No Comment |



6. If you have any other comments on this SAR that you haven't already mentioned above, please provide them here:

Summary Consideration:

Commenters were unclear about the division of responsibilities between the Generator Owner and Transmission Owner. Changes were made to both standards to address these concerns. Please refer to the summary changes to the proposed draft 2 of PRC-023-3 in the Consideration of Comments for draft 2 of PRC-025-1. Typographical errors raised in comments were addressed including the re-inserting the Implementation Plan for the proposed PRC-023-3.

| Organization | Yes or No | Question 6 Comment |
|---|-----------|--|
| SERC Protection and Controls Subcommittee | | - It needs to be clear that 'at the terminals' does not imply ownership. Entities may be responsible for protective relays on each end of the leads but may be in facilities where one end is owned by a TO and the other end facility is owned by a GO. |
| | | Response: The drafting team agrees and the proposed PRC-023-3 standard makes this distinction clear. No change made. |
| | | - The removal of the "Effective Dates" table needs to be reexamined. Among other things, this table included the timelines for meeting PRC-023 on sub-200kV Facilities. If a sub-200kV Facility is identified by the Planning Coordinator, pursuant to Requirement R6, Transmission Owners, Generator Owners, and Distribution Providers must be given a grace period in which to make protection modifications before PRC-023 is applicable to that Facility. PRC-023-2 included a 39-month window for modifying these Facilities once they've been identified by the Planning Coordinator. This is an oversight that will cause confusion. |
| | | Response: The drafting team thanks you for your comments and has re-inserted the implementation plan information under the proposed draft 2 of the PRC-023-3 |



| Organization | Yes or No | Question 6 Comment | |
|--|-----------|---|--|
| | | standard, Section A, Item 5. Change made to the proposed PRC-023-3 Implementation Plan. | |
| | | The comments expressed herein (Questions 1-6) represent a consensus of the views of the above-named members of the SERC EC Protection and Control Subcommittee only and should not be construed as the position of SERC Reliability Corporation, its board, or its officers. | |
| Response: The drafting team thanks you for your comments; please refer to the above response(s). | | | |
| ACES Standards Collaborators | | (1) We disagree with including GOs as an applicable entity to PRC-023-2. In order to create a "bright line," the drafting teams should have separate standards. Have PRC-023 apply to transmission and have PRC-025 apply to generators. It is a simple dividing line. If the team feels that any of the loadability criteria from the transmission loadability standard should be included in PRC-025, then do so, but do not leave any reference to GOs in PRC-023. | |
| | | (2) With the proposed PRC-023-3, there is overlap for GOs. The GO is listed in all six requirements in PRC-023 and in R1 of PRC-025. We recommend removing all references to GOs in PRC-023.If this cannot be accomplished, then update PRC-023-3 to include the aspects of PRC-025 and stop developing a duplicative standard. | |

Response: The drafting team thanks you for your comments. Generator Owner function has been retained in the Applicability of PRC-023-3 to address configurations where the Generator Owner owns load-responsive protective relays on the terminals of network transmission lines. In cases where the Distribution Provider or Transmission Owner owns load-responsive protective relays on the terminals of generator interconnection Facilities such as a generator step-up (GSU) transformer or generator interconnection Facility, the proposed draft 2 of PRC-023-3 Applicability has been revised to address Facilities the Distribution Provider or Transmission Owner may own relative to generating plants. The proposed draft 2 of the PRC-023-3 standard provides the criteria that the Distribution Provider or Transmission Owner shall use to set load-responsive protective relays. Change made to the proposed draft 2



| Organization | Yes or No | Question 6 Comment | |
|-------------------------|---|---|--|
| PRC-023-3 standard. | PRC-023-3 standard. | | |
| American Electric Power | | AEP believes there is a typo in PRC-023-3 Section 4.1.2. The statement references PRC-023-2 instead of the current standard revision. | |
| | Response: The drafting team thanks you for your comment and has corrected the typographical error from version -2 to version -3. Correction made to the proposed PRC-023-3 standard. | | |
| Entergy Services, Inc. | | Comments to NERC on Proposed PRC-023-3 Standard | |
| (Transmission) | | It is understood that PRC-023-3 is intended to replace PRC-023-1 and PRC-023-2 in the near future. The changes proposed for PRC-023-3 in comparison with PRC-023-2 are mainly the removal of the table under number 5 of section A. The table being removed provides the effective dates of the requirements in the PRC-023-2 standard corresponding to the applicable Functional Entities and circuits. Entergy has concerns over the removal of the table as explained below. | |
| | | Our specific area of concern is on the effective date of PRC-023-3 which is defined in the standard as the "first day of the first calendar quarter beyond the date that this standard is approved by applicable regulatory authorities". (See the bottom of page 1 of the proposed PRC-023-3 standard.) | |
| | | In the Implementation Plan for the proposed PRC-023-3 standard, it is stated that entities applicable to this standard shall be 100% compliant on the effective date of the standard. (See the last line on page 2 of the Implementation Plan.) | |
| | | In other words, the Implementation Plan considers a specific implementation period as not required based on the following two reasons. (See section General Considerations at the bottom of page 1 of the Implementation Plan.) | |
| | | 1. No new entity or facilities are subject to compliance. | |

| Organization | Yes or No | Question 6 Comment |
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| | | 2. The implementation plan and period for PRC-023-2 will have been achieved. Entergy sees some scenarios that do not agree with either or both of the above reasons. In such scenarios, the PRC-023-3 effective date and Implementation Plan become problematic. |
| | | In short, PRC-023-3 proposes to retroactively eliminate the NERC-defined implementation time for ongoing PRC-023-2 compliance activities. A couple of scenarios are provided below for illustration purposes. |
| | | The first scenario is related to the effective date of requirements R6 and R1 of PRC-023-2. PRC-023-2 became effective in the United States on July 1, 2012. (See the Background section on page 1 of the Implementation Plan for PRC-023-3.) However, PRC-023-2 gives various effective dates that are to be phased in over the period of more than four years. According to the table on pages 2-4 of the PRC-023-2 standard, R6 will become effective on 1/1/2014. For circuits identified by the Planning Coordinator pursuant to Requirement R6, R1 is to be effective 39 months following notification by the Planning Coordinator of their inclusion on a list of circuits subject to PRC-023-2 per application of Attachment B. It means that the applicable entity is given 39 months to develop and implement a plan to bring the applicable circuits to compliance. Therefore, the compliance date can be as late as 4/1/2017 or beyond depending on when the Planning Coordinator will send out its notification on applicable circuits. |
| | | If PRC-023-3 becomes effective before such date, it will be problematic. For reference, the relevant effective dates for R6 and R1 as specified in PRC-023-2(Please review Effective Dates as provided in table for NERC Standard PRC-023-2). The second scenario is about new circuits identified by Planning Coordinator during its assessments that are required to be conducted at least once each calendar year pursuant to R6 of PRC-023-3. (See the middle of page 4 of the PRC-023-3 standard.) |
| | | When new circuits are identified as the result of the yearly assessment, applicable |

| Organization | Yes or No | Question 6 Comment |
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| | | entities will need reasonable amount of time to bring the circuit to compliance. This time period is necessary for budget reasons as well as project planning and construction reasons. While both PRC-023-1 and PRC-023-2 recognize such a need, the proposed standard PRC-023-3 does not. (See section 5.1.3 on page 1 of PRC-023-1 and effective date table on pages 2-4 of PRC-023-2.) |
| | | Entergy suggests that a 39 months long period of time be given to applicable entities to comply with the PRC-023-3 standard for each facility that is added to the Planning Coordinator's list. Please review the referenced NERC standard documents. |
| | | 1) NERC Standard PRC-023-1 |
| | | 2) NERC Standard PRC-023-2 |
| | | 3) NERC Proposed Standard PRC-023-3 (clean) |
| | | 4) NERC PRC-023-3 Implementation Plan |
| | | our comments and has re-inserted the implementation plan information under the ection A, Item 5. Change made to the proposed PRC-023-3 Implementation Plan. |
| Dominion | | It needs to be clear that at the terminals does not imply ownership. Entities may be responsible for protective relays on each end of the leads but may be in facilities where one end is owned by a TO and the other end facility is owned by a GO. |
| | | Response: The drafting team agrees and the proposed PRC-023-3 standard makes this distinction clear. No change made. |
| | | -The removal of the "Effective Dates" table needs to be reexamined. Among other things, this table included the timelines for meeting PRC-023 on sub-200kV Facilities. If a sub-200kV Facility is identified by the Planning Coordinator, pursuant to Requirement R6, Transmission Owners, Generator Owners, and Distribution Providers must be given a grace period in which to make protection modifications |

| Organization | Yes or No | Question 6 Comment |
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| | | before PRC-023 is applicable to that Facility. PRC-023-2 included a 39-month window for modifying these Facilities once they've been identified by the Planning Coordinator. This is an oversight that will cause confusion. |
| | | Response: The drafting team thanks you for your comments and has re-inserted the implementation plan information under the proposed draft 2 of the PRC-023-3 standard, Section A, Item 5. Change made to the propose PRC-023-3 Implementation Plan. |
| Response: The drafting team th | anks you for y | our comments; please refer to the above response(s). |
| Northeast Power Coordinating Council | | It needs to be made clear that owning the protection systems at the terminals does not imply ownership of the facility. Entities may be responsible for protective relays on each end of a "lead", but the leads but may be in facilities where one end is owned by a Transmission Owner, and the other end facility is owned by a Generator Owner. |
| | | Response: The drafting team agrees and the proposed PRC-023-3 standard makes this distinction clear. No change made. |
| | | The removal of the "Effective Dates" table needs to be re-examined. Among other things, this table included the timelines for meeting PRC-023 on sub-200kV Facilities. If a sub-200kV Facility is identified by the Planning Coordinator, pursuant to Requirement R6, Transmission Owners, Generator Owners, and Distribution Providers must be given a grace period in which to make protection modifications before PRC-023 is applicable to that Facility. PRC-023-2 included a 39-month window for modifying these Facilities once they've been identified by the Planning Coordinator. This is an oversight that will cause confusion. |
| | | Response: The drafting team thanks you for your comments and has re-inserted the implementation plan information under the proposed draft 2 of the PRC-023-3 |

| Organization | Yes or No | Question 6 Comment |
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| | | standard, Section A, Item 5. Change made to the proposed PRC-023-3 Implementation Plan. |
| | | In PRC-023-3, in 4.1.2 PRC 023-2 needs to be changed to PRC-023-3. |
| | | Response: The drafting team thanks you for your comment and has corrected the typographical error from version -2 to version -3. Correction made to the proposed PRC-023-3 standard. |
| Response: The drafting team th | anks you for y | our comments; please refer to the above response(s). |
| Salt River Project | | No Comment |
| Manitoba Hydro | | No comment. |
| PacifiCorp | | Section 4.1 states that the Transmission Owner, Generator Owner, and Distribution Provider with load-responsive phase protection systems at the terminal of the circuits is responsible for ensuring compliance with PRC-023-3. PacifiCorp maintains that more clarification is needed with respect to who is ultimately responsible for ensuring compliance in instances where the circuit/transmission line has a different owner. Would the owner of the circuit/transmission line rely on the owner of the relays for ensuring compliance? |
| | | proposed PRC-023-3 standard makes this distinction clear. The proposed PRC-023-3 on ownership of the load-responsive protective relay, not the owner of the terminal or |
| Oncor Electric Delivery LLC | | The phase-in time for a newly declared critical circuit was removed from the draft PRC-023-3 Effective Dates section; the phase-in time needs to be added back to PRC-023-3. As written in PRC-023-2, R6 requires Planning Coordinators to conduct an |



| Organization | Yes or No | Question 6 Comment |
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| | | assessment of critical circuits on a periodic basis and provide "new circuits" to the appropriate registered entity. The Effective Dates section of PRC-023-2 states a registered entity will have 39 months to comply for newly declared critical circuits following declaration by the Planning Coordinator. This phase-in time period provides necessary time for a registered entity to budget and implement a project to meet PRC-023-2 compliance. The 39 month phase-in period was an acceptable and approved timeframe and should be added back to PRC-023-3. |

Response: The drafting team thanks you for your comment and has re-inserted the Implementation Plan information under the proposed draft 2 of the PRC-023-3 standard, Section A, Item 5. Change made to the proposed PRC-023-3 Implementation Plan.

END OF REPORT