UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Transmission Relay Loadability Standard	)	Docket No. RM08-13-000

COMMENTS OF THE ELECTRIC POWER SUPPLY ASSOCIATION

The Electric Power Supply Association ("EPSA")[1] submits these comments in response to the Federal Energy Regulatory Commission's (FERC or the Commission) Notice of Proposed Rulemaking (NOPR) issued in the above-referenced proceeding, *Transmission Relay Loadability Standard.*[2] EPSA supports the Commission's proposal to approve Reliability Standard PRC-023-1 the Transmission Relay Loadability Standard developed by the North American Reliability Corporation (NERC). However, EPSA does not support modifying PRC-023-1, if it changes the applicability of the standard or if it includes generator step-up and auxiliary transformers. Industry technical experts have provided their expertise to design a consensus standard that fits the different topologies of the interconnected U.S. and Canadian systems. Therefore, EPSA submits that the Commission should accept the standard as it was proposed by the ERO.

[1] EPSA is the national trade association representing competitive power suppliers, including generators and marketers. These suppliers, who account for 40 percent of the installed generating capacity in the United States, provide reliable and competitively priced electricity from environmentally responsible facilities that seek to bring the benefits of competition to all power customers. The comments contained in this filing represent the position of EPSA as an organization, but not necessarily the views of any particular member with respect to any issue.

[2] 127 FERC ¶ 61,175 (2009) (Transmission Relay Loadability NOPR).

Competitive suppliers actively support NERC and have participated in the relevant dockets and initiatives of both FERC and NERC to facilitate the successful evolution of the Electric Reliability Organization ("ERO") contemplated by Congress when it enacted the Energy Policy Act of 2005.[3] In the evolutionary process of the ERO, competitive power suppliers join all other industry stakeholders in recognizing the importance of maintaining the reliability of the bulk power system (BPS). Competitive suppliers have contributed to standards that uphold system reliability and assist in preserving the positive link between reliability and markets. Therefore, EPSA strongly supports the Commission's efforts to approve clear standards that ensure electric reliability and find practical ways to improve competitive markets while contemporaneously improving reliability standards.

I. STANDARD OVERVIEW

The Transmission Relay Loadability Reliability Standard is a significant step toward improving the reliability of the bulk power system in North America because it addresses key August 14, 2003 blackout recommendations regarding relay loadability issues. Protective relays serve to restrain operation for load conditions by responding to measured voltage and current, and as such they must be set so that they will (1) detect the faults for which they must operate, while (2) not operating unnecessarily for non-fault load conditions. The proposed PRC-023-1 Reliability Standard requires certain Transmission Owners, Generator Owners and Distribution Providers to set protective relays to prescribed limits for the purpose of protecting the power system

[3] Energy Policy Act of 2005, Pub. L. No. 109-58, Title XII, Subtitle A, 119 Stat. 594, 941 (2005) (codified at 16 U.S.C. § 824o (2006)).

while ensuring that settings do not contribute to cascading outages. Additionally, the proposed Reliability Standard requires Transmission Owners, Generator Owners and Distribution Providers to establish agreements with Planning Coordinators regarding which transmission lines operated from 100 kV to 200 kV will be subject to this new standard. The protective relays should detect all fault conditions, and not unnecessarily limit transmission loadability, thus allowing system operators the flexibility and time to help maintain system reliability.

II. DISCUSSION

EPSA supports with the Commission's decision to approve Reliability Standard PRC-023-1 as just, reasonable, not unduly discriminatory or preferential and in the public interest. Moreover, EPSA agrees with FERC and NERC that PRC-023-1 is a significant step toward improving the reliability of the BPS in North America. Along with this support, EPSA offers answers to the Commission's questions, concluding that the standard that NERC developed in the standard development process should not be changed.

A. Applicability

In the NOPR NERC proposes that Reliability Standard PRC-023-1 apply to Transmission Owners, Generator Owners and Distribution Providers with load-responsive phase protection systems as described in Attachment A to PRC-023-1, applied to all transmission lines and transformers with low-voltage terminals operated or connected at 200 kV and above, and to those transmission lines and transformers with

low-voltage terminals operated or connected between 100 kV and 200 kV that are designated by planning coordinators as critical to the reliability of the bulk electric system. The Commission seeks comment on PRC-023-1's applicability with respect to:

> (1) transmission owners, generator owners, and distribution providers with facilities operated between 100 kV and 200 kV and facilities operated below 100 kV that are designated as critical to the reliability of the bulk electric system; and generator step-up and auxiliary transformers.

The Commission suggests there is a broader group of facilities below 200 kV to which PRC-023 should apply. FERC believes that the proposed standard should be applicable to all facilities between 100 to 200 kV, with limited exceptions being considered on a case by case basis. In addition, PRC-023 should apply to all facilities below 100 kV deemed critical to the BES.

NERC in the proposed standard explains that the implementation cost would be prohibitive if the standard were made applicable to facilities between 100 to 200 kV and that including these facilities "would have little additional benefit to the reliability of the interconnected system." EPSA supported NERC's reasoning on this point during the development of the standard. NERC's assertions were based on technical expertise that found making the standard applicable to these facilities would require expensive studies that would not render reliability benefits commensurate to their cost. Therefore EPSA encourages the Commission to defer to NERC's technical analysis on the applicability of facilities between 100 to 200 kV and not require a costly implementation that will drain resources away from areas that can provide more benefit to overall reliability.

EPSA members with interconnection facilities in the 100 to 200 kV range are concerned that changing the applicability of the standard could prompt additional registration in the compliance registry due to the standard, whereas a change in registration status should be prompted by a change in facilities only. Competitive suppliers assert that standards should not drive the registration of an entity. Entities by virtue of their known physical characteristics or responsibilities should be registered and begin complying with applicable standards. However, changing applicability in the standards approval process undermines the due process owed to entities regarding registration. All entities registered should be accorded proper due process prior to their registration by regional entities. Since entities in the Compliance Registry must comply with approved standards upon registration, a standard should not be introduced which then becomes the underlying cause for registration. It is improper for the Commission to change the applicability parameters after a standard has been submitted. Importantly, in the instant situation, it is likely that entities affected by the change have not participated in the development of the standard that now applies to them. It would seem to be a fundamental issue of fairness that all entities to whom the standards will apply are afforded a full opportunity to participate in the standard development process. Such fairness is undermined if, following development of the standard, its applicability is significantly expanded.

PRC-023-1 establishes the need for a minimum technical basis by the Planning Coordinator to include applicable facilities within the scope of the Standard operated between 100 kV and 200 kV, but does not include those facilities below 100 kV. However, the Commission directs NERC to expand the applicability to all elements in

this range and to facilities below 100 kV without technical support or the specific identification of a reliability gap that requires the lower voltages. EPSA suggests that such support is needed and could be established using the "Reliability Engineering" process to derive the needed parameters. This process could be used to provide a sufficient and measurable justification to determine if the applicability of PRC-023 needs to be expanded, and can be done at a minimal cost. The discipline of Reliability Engineering is currently used to develop modeling and maintenance strategies for complex systems, including multiple failure testing, that has been applied to systems such as oil pipelines and civil infrastructures. Similar modeling and testing could be applied to elements of the Power System, including lower rated lines and transmission relay equipment. These studies should provide a technical basis for including facilities rated below 200 kV in PRC-023 and should reflect an improvement in maintaining Adequate Level of Reliability (ALR) of the Bulk Electric System over existing PRC-023-1.

B. Generator Step-up and Auxiliary Transformers

The Commission asserts that generator step-up and auxiliary transformers are included in the reliability objectives relevant to relay loadability. The Commission proposes to address this inclusion in one of two ways: include generator step-up and auxiliary transformers in PRC-023-1 or address them in a separate reliability standard. The Commission submits two reasons for the first alternative -- that it will be timely, and that it would put coordination between generator and transmission protection systems in the same standard.

EPSA strongly believes that generator step-up and auxiliary transformers should be dealt with in a different standard. The proposed standard PRC-023-1 was developed as a standard for transmission owners and operators, not generators. Force fitting generators into what is in essence a transmission standard would not provide appropriate opportunity to fully consider the different aspects of generator operations.

While Competitive Suppliers want the assurance that timely standards provide, they also recognize that standards with over-lapping rules that can potentially conflict with one another make for an unwieldy compliance regime. In essence rushing standards with over-lapping requirements will only require additional lengthy process's to revise and implement, causing uncertainty for registered entities. Moreover, it has been the experience of Competitive Suppliers that when the applicability of standards drafted primarily to apply to transmission owners and operators is expanded to include generator owners and operators, compliance and compliance measurement is very difficult from the generators' perspective. Competitive Suppliers want to avoid the regulatory risk and uncertainty caused by the revision of several standards seeking to address the same reliability measure. Consequently, EPSA feels the best way to address generator step-up and auxiliary transformers is as a stand alone standard development process that will not overlap with other standards and will have full and active participation by generator representatives.

Coordinating efforts between generator and transmission protection systems is occurring on several levels and will inform future standards development. The NERC Board of Trustees has approved the formation of the Generator Owner (GO) & Operator (GOP)/Transmission Owner (TO)& Operator (TOP) Task Force, often referred to as the

GOTO Team, to examine in-depth issues and responsibilities among generators and transmission system. The GOTO Team's initial Draft Report was issued for comment on August 15. The group's work not only is reviewing technical issues in existing standards for GO&GOPs and TO&TOPs, but also existing standard requirements involved in the coordination among these entities. Therefore reliability will be best served by using the effective informational tools to address generator and transmission coordination -- the GOTO Team's work is such a tool that could be used in development of a separate standard.

The NERC's Event Analysis and Information Exchange recently updated the metrics that focus on mis-coordination between transmission and generation protection systems. This should provide additional technical resources for future standards development associated with protection systems. As part of the Exchange's work, the NERC System Protection and Control Subcommittee (SPCS) is preparing a Technical Reference paper on this issue that will be going to the Planning Committee in September for its approval. This paper certainly should shed light on the coordination issues for protection systems for both generation and transmission, and would be a valuable resource for the issues NERC identified in its PRC-023-01 submission that need to be addressed in a separate standard for generator auxiliary and step-up transformers.

Along with the technical criteria used to set relays, importantly the relay settings need to be established first and foremost based on protection of the generator and transformer (for which they are the primary protection), not on the needs of the transmission system (for which they may, in some circumstances, represent a back up

protection). Consequently all of the functions and their priorities need to be respected in the standards development process. In EPSA's view NERC has respected relay functions and priorities in development of this standard.

The NOPR also suggests that the Commission's understanding of protection systems, specifically those associated with Generator step up and auxiliary transformers, is potentially different from that of Competitive Suppliers. In the NOPR the Commission states:

> …the requirements of PRC-023-1 apply to all protection systems as described in Attachment A that provide protection to the facilities defined in sections 4.1.1 through 4.1.4 of PRC-023-1, regardless of whether the protection systems provide primary or backup protection and regardless of their physical location.[4]

This wording suggests that if the purpose of a generator step-up transformer protection is to provide backup protection to transmission lines, settings must be determined as per PRC-023-1. However, phase fault back-up protection on the low voltage side of a generator step-up transformer is designed to detect uncleared faults on the system with the primary function of protecting the generator and the transformer from supplying a prolonged fault current. Therefore, these relays are set in accordance to IEEE criteria, specifically, IEEE guide C37.102. NERC's decision to have generator step-up and auxiliary transformers addressed in its own standard was based in part on its deference to the IEEE criteria. EPSA supports NERC's reliance on the IEEE process and findings and appreciates their adherence to the IEEE guidance.

[4] NOPR at P 33.

III. CONCLUSION

For the reasons specified above, EPSA respectfully requests that the Commission accept PRC-023-1 as submitted by NERC and not expand the applicability of the proposed Standard. In addition generator step-up and auxiliary transformers and associated relays should be dealt with in their own standard.

Respectfully submitted,

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Dated: August 17, 2009

CERTIFICATE OF SERVICE

I hereby certify that I have served a copy of the comments via email upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, D.C., August 17, 2009.

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Nancy Bagot, VP of Reg. Policy