

UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION

Coordination of Protection Systems for  
Performance During Faults and Specific Training  
for Personnel Reliability Standards

Docket No. RM16-22-000

**COMMENTS OF THE  
NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION  
AND THE ELECTRICITY CONSUMERS RESOURCE COUNCIL**

The National Rural Electric Cooperative Association (NRECA) and the Electricity Consumers Resource Council (ELCON) submit these comments on the notice of proposed rulemaking issued by the Commission in this docket on November 16, 2017 (NOPR).

NRECA and ELCON support the Commission's proposal to approve Reliability Standards PRC-027-1 (Coordination of Protection Systems for Performance During Faults) and PER-006-1 (Specific Training for Personnel), which were submitted for approval by the North American Electric Reliability Corporation (NERC), the Commission-certified Electric Reliability Organization.

The Commission should approve the proposed Reliability Standard PRC-027-1 as submitted by NERC. The Commission should not direct NERC to modify Reliability Standard PRC-027-1 to require an initial protection system coordination study by an applicable entity to demonstrate proper coordination of its protection systems. This proposed directive is unnecessary to ensure reliable operation of the Bulk Electric System (BES) and would not provide a reliability benefit commensurate with the significant burden it would impose. In this respect, NRECA and ELCON concur in the "Comments

of the North American Electric Reliability Corporation in Response to Notice of Proposed Rulemaking” submitted in this docket (NERC Comments). NRECA and ELCON provide brief additional comments below.

NRECA and ELCON also support the explanation in the NERC Comments of the technical basis for using a 15-percent deviation threshold in proposed Reliability Standard PRC-027-1, Requirement R2, Option 2.

### **INTEREST OF NRECA AND ELCON IN THIS PROCEEDING**

NRECA is the national service organization for America’s electric cooperatives. The nation’s member-owned, not-for-profit electric cooperatives are responsible for keeping the lights on for more than 42 million people across 47 states. Because of their critical role in providing affordable, reliable, and universally accessible electric service, electric cooperatives are vital to the economic health of the communities they serve.

America’s electric cooperatives serve 56 percent of the nation’s territory, 88 percent of all counties, and 12 percent of the nation’s electric customers, while accounting for approximately 11 percent of all electric energy sold in the United States. NRECA’s member cooperatives include 63 generation and transmission (G&T) cooperatives and 834 distribution cooperatives. The distribution cooperatives provide power directly to the end-of-the-line consumer-owners. The G&T cooperatives generate and transmit power to nearly 80 percent of the distribution cooperatives and are owned by those distribution cooperatives. Remaining distribution cooperatives receive power directly from other generation sources within the electric utility sector. NRECA members account for about five percent of national generation and, on net, generate approximately 50 percent of the electric energy they sell and purchase the remaining 50 percent from

non-NRECA members. Both distribution and G&T cooperatives share an obligation to serve their members by providing safe, reliable, and affordable electric service.

Most G&T cooperatives and some distribution cooperatives are Registered Entities subject to the mandatory Reliability Standards adopted by NERC and approved by this Commission. Cooperative representatives are active participants in the NERC standards-development process, and they provided input in the process that led to NERC's proposal of the Reliability Standards that are the subject of this proceeding. Numerous cooperatives are Transmission Owners, Generation Owners, or Distribution Providers that own Protection Systems installed to detect and isolate Faults on elements of the BES. Thus, NRECA and the cooperatives it represents have a direct interest in the outcome of this proceeding.

ELCON is the national association representing large industrial consumers of electricity. ELCON member companies produce a wide range of products from virtually every segment of the manufacturing community. ELCON members operate hundreds of major facilities and are consumers of electricity in the footprints of all organized markets and other regions throughout the United States. Many ELCON members also operate behind-the-meter generation and are NERC registered entities, and ELCON has actively participated in NERC's stakeholder and standards development processes. Reliable electricity supply is essential to its members' operations.

## COMMUNICATIONS

Service should be made on, and communications directed to, these persons:

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## COMMENTS

- I. The Commission should approve proposed Reliability Standard PRC-027-1 as submitted by NERC without directing that NERC modify Requirement R2, Option 2.**

The proposed Reliability Standard PRC-027-1 (Coordination of Protection Systems for Performance During Faults) addresses the coordination of Protection Systems installed to detect and isolate faults on BES Elements. The proposed standard has three requirements. Requirements R1 and R3 obligate applicable entities to establish and utilize a process for developing new and revised Protection System settings for BES Elements so that these systems operate in the intended sequence during Faults. Requirement R2 obligates entities to periodically study Protection System settings that

could be affected by incremental changes in Fault current to ensure these systems continue to operate in the intended sequence.

Requirement R2 provides three options for compliance. Every six calendar years or less, entities must perform a “Protection System Coordination Study” (Option 1), or “[c]ompare present Fault current values to an established Fault current baseline and perform a Protection System Coordination Study when the comparison identifies a 15 percent or greater deviation” (Option 2), or use a combination of these measures (Option 3). The proposed Reliability Standard provides that “initial Fault current baseline(s) shall be established by the effective date of this Reliability Standard and updated each time a Protection System Coordination Study is performed.”

The Commission states that Requirement R2, Option 2 “does not require an initial protection system coordination study,” and “do[es] not indicate that the ‘Fault current baseline’ must be established through an initial protection system coordination study.” NOPR, P 15. The Commission proposes “to direct that NERC develop modifications to proposed Reliability Standard PRC–027–1 addressing our concern that applicable entities that choose Requirement R2, Option 2 perform (or have already performed) an initial baseline study demonstrating proper coordination of their protection systems.” *Id.*, P 14.

We concur with the NERC Comments that this proposed additional requirement is unnecessary to ensure reliable operation of the BES and would not provide a reliability benefit commensurate with the significant burden it would impose. Indeed, the proposed requirement to Requirement R2, Option 2 would create a significant increase in workload for entities such as a G&T cooperative that elect to use Option 2.

As submitted by NERC, Requirement R2, Option 2 allows entities to establish a Fault current baseline that can be obtained from a short-circuit study of the BES or from historical records. The change proposed by the Commission may require significant modifications or inputs to system fault/coordination study tools to conduct the proposed modified studies, requiring significant unnecessary compliance documentation burden with no apparent improvement to the reliable operations of the BES.

**II. If the Commission directs NERC to modify the Reliability Standard, the Commission should alter the directive to reduce the compliance burden.**

NRECA and ELCON concur in the recommendations in the NERC Comments on how the Commission could modify the proposed directive to reduce the compliance burden and create a more risk-based approach:

- Limit the directive to higher-risk Protection Systems, and provide NERC and the industry with flexibility to determine the appropriate threshold;
- Provide NERC flexibility to determine the appropriate implementation period for performing the studies.

In particular, the six-year period in the proposed Requirement R2 was based on the flexibility provided by Option 2. If Option 2 requires initial Protection System Coordination Studies for every Protection System on every BES Element, a six-year interval is not enough time. We recommend that the Commission's proposal to complete the initial coordination analysis in six years from the effective date of the Reliability Standard be increased to 10 years to reduce the annual increase in workload. We estimate that increasing the number of years from six to 10 would allow some companies to reduce the amount of additional staff needed by half. An alternative the Commission

might consider is to require initial studies for only the most critical facilities in a six-year period and allow additional time for the less critical facilities.

**III. The Commission should confirm in the final rule that existing Protection System Coordination Studies may be used to satisfy Requirement R2.**

As proposed in the NOPR, the Commission should state in any final rule in this proceeding that applicable entities may use existing (i.e., already performed) Protection System Coordination Studies to satisfy Requirement R2, provided the entity can demonstrate that the study remains valid.

**CONCLUSION**

The Commission should approve the proposed Reliability Standards as submitted by NERC. The Commission should not direct NERC to modify Reliability Standard PRC-027-1 as proposed in the November 16 notice.

Respectfully submitted,

/s/ John P. Hughes

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