

151 FERC ¶ 61,026
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

18 CFR Part 40

[Docket No. RM15-9-000]

Protection System, Automatic Reclosing, and
Sudden Pressure Relaying Maintenance Reliability Standard

(Issued April 16, 2015)

AGENCY: Federal Energy Regulatory Commission.

ACTION: Notice of proposed rulemaking.

SUMMARY: Pursuant to the Federal Power Act, the Commission proposes to approve a revised Reliability Standard, PRC-005-4 (Protection System, Automatic Reclosing and Sudden Pressure Relaying Maintenance), developed and submitted by the North American Electric Reliability Corporation (NERC). In addition, the Commission proposes to approve one new definition and four revised definitions referenced in the proposed Reliability Standard, as well as NERC's proposed violation risk factors, violation severity levels, and implementation plan. Consistent with Order No. 758, the proposed Reliability Standard requires applicable entities to test and maintain certain sudden pressure relays as part of a protection system maintenance program.

DATES: Comments are due **[INSERT DATE 60 days after publication in the FEDERAL REGISTER]**

ADDRESSES: Comments, identified by docket number, may be filed in the following ways:

- Electronic Filing through <http://www.ferc.gov>. Documents created electronically using word processing software should be filed in native applications or print-to-PDF format and not in a scanned format.
- Mail/Hand Delivery: Those unable to file electronically may mail or hand-deliver comments to: Federal Energy Regulatory Commission, Secretary of the Commission, 888 First Street, NE, Washington, DC 20426.

Instructions: For detailed instructions on submitting comments and additional information on the rulemaking process, see the Comment Procedures Section of this document.

FOR FURTHER INFORMATION CONTACT:

Tom Bradish (Technical Information)
Office of Electric Reliability
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426
(301) 665-1391
Tom.Bradish@ferc.gov

Julie Greenisen (Legal Information)
Office of the General Counsel
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426
(202) 502-6362
julie.greenisen@ferc.gov

SUPPLEMENTARY INFORMATION:

151 FERC ¶ 61,026
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Protection System, Automatic Reclosing, and
Sudden Pressure Relaying Maintenance
Reliability Standard

Docket No. RM15-9-000

NOTICE OF PROPOSED RULEMAKING

(Issued April 16, 2015)

1. Pursuant to section 215 of the Federal Power Act (FPA),¹ the Commission proposes to approve a revised Reliability Standard, PRC-005-4 (Protection System, Automatic Reclosing and Sudden Pressure Relaying Maintenance), developed and submitted by the North American Electric Reliability Corporation (NERC), the Commission-certified Electric Reliability Organization (ERO). In addition, the Commission proposes to approve one new definition and four revised definitions referenced in the proposed Reliability Standard, as well as NERC's proposed violation risk factors, violation severity levels, and implementation plan. Consistent with Order No. 758,² the proposed Reliability Standard requires applicable entities to test and maintain certain sudden pressure relays as part of a protection system maintenance program.

¹ 16 U.S.C. 824o (2012).

² *Interpretation of Protection System Reliability Standard*, Order No. 758, 138 FERC ¶ 61,094, *clarification denied*, 139 FERC ¶ 61,227 (2012).

I. Background

A. Regulatory Background

2. Section 215 of the FPA requires a Commission-certified ERO to develop mandatory and enforceable Reliability Standards, subject to Commission review and approval.³ Once approved, the Reliability Standards may be enforced by the ERO subject to Commission oversight, or by the Commission independently.⁴ In 2006, the Commission certified NERC as the ERO pursuant to FPA section 215.⁵

3. In 2007, the Commission approved an initial set of Reliability Standards submitted by NERC, including initial versions of four protection system and load-shedding-related maintenance standards: PRC-005-1, PRC-008-0, PRC-011-0, and PRC-017-0.⁶ In addition, the Commission directed NERC to develop a revision to PRC-005-1 incorporating a maximum time interval during which to conduct maintenance and testing of protection systems, and to consider combining into one standard the various maintenance and testing requirements for all of the maintenance and testing-related standards for protection systems, underfrequency load shedding (UFLS) equipment and undervoltage load shedding (UVLS) equipment.

³ 16 U.S.C. at 824o(c) and (d).

⁴ *See id.* at 824o(e).

⁵ *North American Electric Reliability Corp.*, 116 FERC ¶ 61,062, *order on reh'g & compliance*, 117 FERC ¶ 61,126 (2006), *aff'd sub nom. Alcoa, Inc. v. FERC*, 564 F.3d 1342 (D.C. Cir. 2009).

⁶ *Mandatory Reliability Standards for the Bulk Power System*, Order No. 693, FERC Stats. & Regs. ¶ 31,242, at PP 1474, 1492, 1497, and 1514, *order on reh'g*, Order No. 693-A, 120 FERC ¶ 61,053 (2007).

4. In February 2012, the Commission issued Order No. 758 in response to NERC's request for approval of its interpretation of Requirement R1 of the then-current version of the protection system maintenance standard, Reliability Standard PRC-005-1. In that order, the Commission accepted NERC's proposed interpretation of Requirement R1, which interpretation provided guidance on the types of protection system equipment to which the Reliability Standard did or did not apply. In reviewing NERC's interpretation, the Commission raised several concerns about potential gaps in the coverage of PRC-005-1, including a concern that the standard as written may not include all components that serve in some protective capacity.⁷

B. NERC Petition and Proposed Standard PRC-005-4

5. On December 18, 2014, NERC submitted a petition seeking approval of proposed Reliability Standard PRC-005-4, which would add to the applicability of Reliability Standard PRC-005-3 those sudden pressure relays that NERC has identified as having a potential effect on the reliable operation of the Bulk-Power System.⁸ NERC states that

⁷ See Order No. 758, 138 FERC ¶ 61,094 at P 12. NERC has addressed the Commission's concerns stated in Order No. 758 through a series of projects modifying the PRC-005 standard. See *Protection System Maintenance Reliability Standard*, Order No. 793, 145 FERC ¶ 61,253 (2013) (approving Reliability Standard PRC-005-2, which incorporated specific minimum maintenance activities and maximum time intervals for maintenance of individual components of the protection systems and load shedding equipment affecting the bulk electric system); *Protection System Maintenance Reliability Standard*, Order No. 803,150 FERC ¶ 61,039 (2015) (approving PRC-005-3 and directing NERC to develop a modification to include maintenance and testing of supervisory relays associated with relevant autoreclosing relay schemes).

⁸ Proposed Reliability Standard PRC-005-4 is not attached to the NOPR; however, the complete text of the proposed Reliability Standard is available on the Commission's

these revisions were developed to satisfy NERC's commitment to develop modifications to PRC-005 that would address the Commission's concerns, as set out in Order No. 758, regarding the lack of maintenance requirements for non-electrical sensing relays (such as sudden pressure relays) that could affect the reliable operation of the Bulk-Power System.⁹

6. NERC states that sudden pressure relays "are designed to quickly detect faults on the Bulk-Power System transformer equipment that may remain undetected by other Protection Systems, and can operate to limit any potential damage on the equipment."¹⁰

NERC states that the "misoperation of sudden pressure relays that initiate tripping in response to fault conditions can impact the reliability of the Bulk-Power System," and accordingly proposes revisions to PRC-005-3 that will require entities to document and implement programs for maintenance of applicable sudden pressure relays.¹¹

7. NERC explains that, consistent with Order No. 758, NERC's System Protection and Control Subcommittee (SPCS) performed a technical study "to determine which devices that respond to non-electrical quantities should be addressed within PRC-005

eLibrary document retrieval system in Docket No. RM15-9-000 and is posted on NERC's web site, *available at*: <http://www.nerc.com>.

⁹ See NERC Petition at 3, 9.

¹⁰ *Id.* at 3. NERC describes sudden pressure relays as relays which "respond to changes in pressure and are utilized as protective devices for power transformers," and which may "detect rapid changes in gas pressure, oil pressure, or oil flow that are indicative of faults within the transformer equipment." *Id.* at 13. NERC notes that in addition to detecting faults, certain sudden pressure relays can trip the associated transformer circuitry in response to the fault conditions.

¹¹ *Id.* at 3-4.

identified devices.”¹² NERC states that the SPCS considered a broad range of devices that respond to non-electrical quantities, starting with the list of ninety-four devices included in the IEEE Standard Electrical Power System Device Function Numbers, then applying “multiple layers of analysis to each device to select the ones that can affect the reliability of the Bulk-Power System.”¹³ The SPCS first determined that only those devices that initiate action to clear faults or mitigate abnormal system conditions presented a risk to the Bulk-Power System. Next, the SPCS eliminated those devices that were “previously considered as a result of the revised definition of Protection System or those that are clearly not protective devices, such as primary equipment and control devices.”¹⁴ Finally, the SPCS conducted an in-depth analysis of the remaining devices, and concluded that only one category – sudden pressure relays that are utilized in a trip application – should be included in the revised PRC-005-4.

8. NERC also explains that the SPCS developed a Supplemental Report in response to comments and questions about its initial recommendations from the Commission staff. These comments and questions focused on whether PRC-005 should include turbine generator vibration monitors and circuit breaker arc extinguishing systems.¹⁵ The SPCS

¹² *Id.* at 4.

¹³ *Id.* at 10.

¹⁴ *Id.*

¹⁵ NERC Petition at 11, Ex. E, *Sudden Pressure Relays and Other Devices that Respond to Non-Electrical Quantities: Supplemental Information to Support Project 2007-17.3: Protection System Maintenance and Testing*, NERC SPCS (Oct. 31, 2014) (SPCS Supplemental Report).

Supplemental Report, issued on October 31, 2014, examined these two kinds of devices and provided information on events during which these devices operated or failed to operate. The Supplemental Report concluded that neither device affected the reliable operation of the Bulk-Power System.

9. NERC states that the standard drafting team that was tasked with developing the modifications to PRC-005 in response to Order No. 758 adopted the SPCS Report's recommendations, both as to the scope of additional relays included, and as to the required minimum maintenance activities and maximum maintenance intervals for these relays.

10. NERC maintains that proposed Reliability Standard PRC-005-4 will enhance reliability by extending the coverage of an applicable entity's protection system maintenance program to include sudden pressure relaying components. NERC further maintains that the proposed standard satisfies the Commission's concerns as raised in Order No. 758 "by including . . . sudden pressure relays that detect [a] fault on Bulk-Power System transformer equipment and trip in response to fault conditions, as recommended by the SPCS Report."¹⁶

11. NERC explains that proposed Reliability Standard PRC-005-4 has been modified to include a new definition for "Sudden Pressure Relaying," as well as four revised

¹⁶ NERC Petition at 12.

definitions as part of an applicable entity's protection system maintenance program.¹⁷

NERC further explains that the proposed standard would include a sudden pressure relay that trips an interrupting device to isolate the equipment it is monitoring, but "does not include other non-electric sensing devices, pressure relays that only initiate an alarm, or pressure relief devices."¹⁸ In addition, NERC explains that the revised standard replaces the term "Special Protection System" with the term "Remedial Action Scheme," to align the standard with NERC's employment of the latter term moving forward, and revises Applicability section 4.2.6.1 to address how the largest BES generating unit would be determined in circumstances involving a Reserve Sharing Group.

12. NERC's proposed implementation plan for PRC-005-4 incorporates the phased-in implementation period approved for PRC-005-2, which has a twelve year phase-in period, with the addition of compliance dates for the new requirements for applicable sudden pressure relays. NERC asks that PRC-005-4 become effective the first day of the first calendar quarter following Commission approval. Reliability Standard PRC-005-3 would be retired immediately prior to PRC-005-4 becoming effective.

13. NERC explains that the evidence retention period for PRC-005-4 is shorter than that required in the preceding versions of the standard, as it requires entities to maintain records for one maintenance cycle, rather than two cycles, if the interval of the

¹⁷ NERC proposes to modify the definitions of Protection System Maintenance Program, Component Type, Component, and Countable Event to reflect the addition of sudden pressure relays to the scope of a required maintenance program. NERC Petition at 15-16.

¹⁸ *Id.* at 18.

maintenance activity is longer than the audit cycle. For maintenance activities where the interval is shorter than the audit cycle, documentation is to be retained for all maintenance activities since the previous audit.

14. NERC states that the violation risk factors proposed in PRC-005-4 track those in previous versions of the standard, and that the violation severity levels have been revised to include the additional component (sudden pressure relays) in a manner consistent with the approach taken for PRC-005-3.

II. Discussion

15. Pursuant to section 215(d)(2) of the FPA, the Commission proposes to approve Reliability Standard PRC-005-4, as well as the new definition of Sudden Pressure Relaying, the four revised definitions referenced in the proposed standard, the assigned violation risk factors and violation severity levels, and the proposed implementation plan. We believe that proposed Reliability Standard PRC-005-4 will enhance reliability by requiring the inclusion of sudden pressure relays of certain criteria that are utilized in a trip application as part of the protection system maintenance program, and by requiring entities to undertake minimum required maintenance activities at maximum defined maintenance intervals.

16. NERC has relied on the SPCS's determination that the only non-electrical sensing devices that can impact reliable operation of the Bulk-Power System are the sudden pressure relays that can detect rapid changes in gas pressure, oil pressure, or oil flow that are indicative of faults within the transformer equipment, and can trip associated transformer circuitry to isolate the transformer and limit the potential damage of the

equipment. We agree that these relays should be included in an adequate protection system maintenance program.

17. However, we continue to have some concern that the misoperation of other types of non-electrical sensing relays or devices, such as pressure sensing devices associated with air blast or SF6 circuit breaker arc extinguishing systems, could affect the reliable operation of the Bulk-Power System. These non-electrical sensing devices are utilized in this context to give an indication that the circuit breaker may be unable to operate as designed on the Bulk-Power System. With regard to these types of devices, the SPCS stated that, “there is no operating experience in which misoperation of a density switch or sensor [i.e., pressure sensing device] in response to a system disturbance has contributed to a cascading event.”¹⁹ However, we expect Commission staff to continue exploring this issue with NERC, particularly in light of the findings in NERC’s 2014 and 2013 State of Reliability reports that AC substation equipment failures remain among the leading causes of Bulk Power System problems.

III. Information Collection Statement

18. The following collection of information contained in this Notice of Proposed Rulemaking is subject to review by the Office of Management and Budget (OMB) under section 3507(d) of the Paperwork Reduction Act of 1995 (PRA).²⁰ OMB’s regulations require approval of certain information collection requirements imposed by agency

¹⁹ SPCS Supplemental Report at 4.

²⁰ 44 U.S.C. 3507(d) (2006).

rules.²¹ Upon approval of a collection(s) of information, OMB will assign an OMB control number and an expiration date. Respondents subject to the filing requirements of a rule will not be penalized for failing to respond to these collections of information unless the collections of information display a valid OMB control number.

19. We solicit comments on the Commission's need for this information, whether the information will have practical utility, the accuracy of the burden estimates, ways to enhance the quality, utility, and clarity of the information to be collected or retained, and any suggested methods for minimizing respondents' burden, including the use of automated information techniques. Specifically, the Commission asks that any revised burden or cost estimates submitted by commenters be supported by sufficient detail to understand how the estimates are generated.

20. The Commission proposes to approve Reliability Standard PRC-005-4, which will replace PRC-005-3 (Protection System and Automatic Reclosing Maintenance). The proposed Reliability Standard expands the existing standard to cover sudden pressure relays that meet certain criteria, thereby imposing mandatory minimum maintenance activities and maximum maintenance intervals for the applicable relays. Because the specific requirements were designed to reflect common industry practice, entities are not expected to experience a meaningful change in actual maintenance and documentation practices. However, each applicable entity will have to perform a one-time review of sudden pressure relays that detect rapid changes in gas pressure, oil pressure, or oil flow

²¹ 5 CFR 1320.11 (2012).

that are indicative of faults within transformer equipment, and, if it has applicable sudden pressure relay devices, review current maintenance programs to ensure that they meet the requirements of proposed standard PRC-005-4. Accordingly, all additional information collection costs are expected to be limited to the first year of implementation of the revised standard.

21. Proposed Reliability Standard PRC-005-4 reduces the evidence retention requirements approved in previously-approved versions of the standard, and now requires entities to maintain documentation of maintenance activities for only one maintenance cycle (a maximum of twelve years) if the maintenance interval is longer than the audit cycle. For maintenance activities where the interval is shorter than the audit cycle, documentation is to be retained for all maintenance activities since the previous audit. While the potential data retention requirement exceeds the three-year period that is routinely allowed for regulations requiring record retention under the OMB regulations implementing the PRA,²² the maximum evidence retention period has been reduced from 24 years to a maximum of 12 years as a result of the Commission's prior request for comment on the reasonableness of the evidence retention period in earlier versions of the standard, and appears to reflect the minimum time needed to ensure compliance with maintenance requirements.²³

²² See 5 CFR 1320.5(d)(2)(iv).

²³ See Order No. 803, 150 FERC ¶ 61,039 at PP 37-38.

22. Public Reporting Burden: Affected entities must perform a one-time review of their existing sudden pressure relay schemes and associated maintenance programs to ensure that the programs contain at a minimum the activities required by Reliability Standard PRC-005-4. If the existing maintenance program does not meet the criteria in Reliability Standard PRC-005-4, the entity will have to make certain adjustments to the program.

23. Our estimate below assumes that the number of unique applicable entities (distribution providers, generator owners and transmission owners, or a combination of those) in the United States is approximately 1,287²⁴ and the time required to do the one-time review will be approximately eight hours. The estimate further assumes that the one-time review would be performed by an engineer at a rate of \$65.34 per hour.²⁵

RM15-9-000 (Mandatory Reliability Standards: Reliability Standard PRC-005-4)						
	Number of Respondents (1)	Annual Number of Responses per Respondent (2)	Total Number of Responses (1)*(2)=(3)	Average Burden (Hours) & Cost Per Response (4)	Total Annual Burden Hours & Total Annual Cost (3)*(4)=(5)	Cost per Respondent (\$) (5)÷(1)
One-time review of sudden pressure relay maintenance program and adjustment	1,287	1	1,287	8 \$523	10,296 \$673,101	\$523

²⁴ This figure reflects the generator owners, transmission owners, and distribution providers identified in the NERC Compliance Registry as of February 27, 2015.

²⁵ The figure is taken from the Bureau of Labor Statistics at http://www.bls.gov/oes/current/naics2_22.htm; Occupation Code: 17-2071).

Title: FERC-725P1,²⁶ Mandatory Reliability Standards: Reliability Standard PRC-005-4

Action: Proposed Collection of Information

OMB Control No: To be determined

Respondents: Business or other for-profit and not-for-profit institutions.

Frequency of Responses: One time.

Necessity of the Information: The proposed Reliability Standard PRC-005-4, if adopted, would implement the Congressional mandate of the Energy Policy Act of 2005 to develop mandatory and enforceable Reliability Standards to better ensure the reliability of the nation's Bulk-Power System. Specifically, the proposal would ensure that transmission and generation protection systems affecting the reliability of the bulk electric system are maintained and tested.

24. Internal review: The Commission has reviewed revised Reliability Standard PRC-005-4 and made a determination that approval of this standard is necessary to implement section 215 of the FPA. The Commission has assured itself, by means of its internal review, that there is specific, objective support for the burden estimates associated with the information requirements.

25. Interested persons may obtain information on the reporting requirements by contacting the Federal Energy Regulatory Commission, Office of the Executive Director,

²⁶ The FERC-725P1 is a temporary collection established so the Commission can submit this proposed rulemaking to OMB on time. However, the burden contained in this rulemaking should be contained in FERC-725G (OMB Control No. 1902-0252). Commission staff plans eventually to move this burden to FERC-725G.

888 First Street, NE, Washington, DC 20426 [Attention: Ellen Brown, e-mail: DataClearance@ferc.gov, phone: (202) 502-8663, fax: (202) 273-0873].

26. Comments concerning the information collections proposed in this NOPR and the associated burden estimates should be sent to the Commission in this docket and may also be sent to the Office of Management and Budget, Office of Information and Regulatory Affairs [Attention: Desk Officer for the Federal Energy Regulatory Commission]. For security reasons, comments should be sent by e-mail to OMB at the following e-mail address: oira_submission@omb.eop.gov. Please reference the docket number of this Notice of Proposed Rulemaking (Docket No. RM15-9-000) in your submission.

IV. Regulatory Flexibility Act Analysis

27. The Regulatory Flexibility Act of 1980 (RFA)²⁷ generally requires a description and analysis of Proposed Rules that will have significant economic impact on a substantial number of small entities. Proposed Reliability Standard PRC-005-4 is expected to impose an additional, one-time burden on 1,287 entities (distribution providers, generator owners, and transmission owners, or a combination thereof).

Comparison of the applicable entities with FERC's small business data indicates that

²⁷ 5 U.S.C. 601-12. The number of small distribution providers required to comply with PRC-005-4 may decrease significantly. In March 2015, the Commission approved revisions to the NERC Rules of Procedure to implement NERC's "risk based registration" program, which raised the registry threshold for distribution providers from a 25 MW to 75 MW peak load. *North American Electric Reliability Corp.*, 150 FERC ¶ 61,213 (2015).

approximately 789 of the 1,287 entities are small entities, or 61.31 percent of the respondents affected by this proposed Reliability Standard.²⁸

28. On average, each small entity affected may have a one-time cost of \$523, representing a one-time review of the program for each entity, consisting of 8 man-hours at \$65.34/hour, as explained above in the information collection statement. We do not consider this cost to be a significant economic impact for small entities. Accordingly, the Commission certifies that proposed Reliability Standard PRC-005-4 will not have a significant economic impact on a substantial number of small entities. The Commission seeks comment on this certification.

V. Environmental Analysis

29. The Commission is required to prepare an Environmental Assessment or an Environmental Impact Statement for any action that may have a significant adverse effect on the human environment.²⁹ The Commission has categorically excluded certain actions from this requirement as not having a significant effect on the human environment. Included in the exclusion are rules that are clarifying, corrective, or procedural or that do

²⁸ The Small Business Administration sets the threshold for what constitutes a small business. Public utilities may fall under one of several different categories, each with a size threshold based on the company's number of employees, including affiliates, the parent company, and subsidiaries. For the analysis in this NOPR, we are using a 500 employee threshold for each affected entity. Each entity is classified as Electric Bulk Power Transmission and Control (NAICS code 221121).

²⁹ *Regulations Implementing the National Environmental Policy Act of 1969*, Order No. 486, FERC Stats. & Regs. ¶ 30,783 (1987).

not substantially change the effect of the regulations being amended.³⁰ The actions proposed herein fall within this categorical exclusion in the Commission's regulations.

VI. Comment Procedures

30. The Commission invites interested persons to submit comments on the matters and issues proposed in this notice to be adopted, including any related matters or alternative proposals that commenters may wish to discuss. Comments are due [**INSERT DATE 60 days after publication in the FEDERAL REGISTER**]. Comments must refer to Docket No. RM15-9-000, and must include the commenter's name, the organization they represent, if applicable, and address.

31. The Commission encourages comments to be filed electronically via the eFiling link on the Commission's web site at <http://www.ferc.gov>. The Commission accepts most standard word processing formats. Documents created electronically using word processing software should be filed in native applications or print-to-PDF format and not in a scanned format. Commenters filing electronically do not need to make a paper filing.

32. Commenters that are not able to file comments electronically must send an original of their comments to: Federal Energy Regulatory Commission, Secretary of the Commission, 888 First Street, NE, Washington, DC 20426.

33. All comments will be placed in the Commission's public files and may be viewed, printed, or downloaded remotely as described in the Document Availability section

³⁰ 18 CFR 380.4(a)(2)(ii).

below. Commenters on this proposal are not required to serve copies of their comments on other commenters.

VII. Document Availability

34. In addition to publishing the full text of this document in the Federal Register, the Commission provides all interested persons an opportunity to view and/or print the contents of this document via the Internet through the Commission's Home Page (<http://www.ferc.gov>) and in the Commission's Public Reference Room during normal business hours (8:30 a.m. to 5:00 p.m. Eastern time) at 888 First Street, NE, Room 2A, Washington, DC 20426.

35. From the Commission's Home Page on the Internet, this information is available on eLibrary. The full text of this document is available on eLibrary in PDF and Microsoft Word format for viewing, printing, and/or downloading. To access this document in eLibrary, type the docket number of this document excluding the last three digits in the docket number field.

36. User assistance is available for eLibrary and the Commission's website during normal business hours from the Commission's Online Support at 202-502-6652 (toll free at 1-866-208-3676) or e-mail at ferconlinesupport@ferc.gov, or the Public Reference Room at (202) 502-8371, TTY (202) 502-8659. E-mail the Public Reference Room at public.referenceroom@ferc.gov.

By direction of the Commission.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.