

Supporting Statement

FERC-725G, Mandatory Reliability Standards: PRC-026-1 Reliability Standard (Relay Performance During Stable Power Swings),
as approved in Final Rule in RM15-8-000

The reporting and recordkeeping requirements for the Reliability Standard PRC-026-1 (Relay Performance During Stable Power Swings) will be added to FERC-725G, as discussed in the Final Rule in Docket No. RM15-8-000¹ and this supporting statement. The Federal Energy Regulatory Commission (FERC or Commission) is requesting that the Office of Management and Budget (OMB) approve the reporting and recordkeeping requirements in Reliability Standard PRC-026-1 in the Final Rule in RM15-8-000.

1. CIRCUMSTANCES THAT MAKE THE COLLECTION OF INFORMATION NECESSARY

On August 8, 2005, The Electricity Modernization Act of 2005, which is Title XII of the Energy Policy Act of 2005 (EPAct 2005), was enacted into law.² EPAct 2005 added a new Section 215 to the Federal Power Act (FPA), which requires a Commission-certified Electric Reliability Organization (ERO) to develop mandatory and enforceable Reliability Standards, which are subject to Commission review and approval. Once approved, the Reliability Standards are enforced by the ERO and subject to Commission oversight.

On March 18, 2010, in Order No. 733, the Commission approved Reliability Standard PRC-023-1 (Transmission Relay Loadability) and directed NERC to develop a new Reliability Standard that requires the use of protective relay systems that can differentiate between faults and stable power swings and, when necessary, retirement of protective relay systems that cannot meet this requirement.³ In Order No. 733, the Commission cited the findings of both NERC and the U.S.-Canada Power System Outage Task Force on the causes of the 2003 Northeast Blackout, explaining that the cascade during this event was accelerated by zone 2 and zone 3 relays that continued to operate because these devices could not distinguish between a dynamic, but stable, power swing and an actual fault.⁴ The Commission recognized that addressing stable power swings is a complex issue which impacted the 2003 Blackout, and yet there was no Reliability

1 FERC's Final Rule is posted in FERC's eLibrary at <http://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14172530>.

2 The Energy Policy Act of 2005, Pub. L. No 109-58, Title XII, Subtitle A, 119 Stat. 594, 941, codified at 16 U.S.C. 824o.

3 Order No. 733, 130 FERC ¶ 61,221 at P 150.

4 *Id.* PP 3-4, 130 (citing U.S.-Canada Power System Outage Task Force, Final Report on the August 14, 2003 Blackout in the United States and Canada: Causes and Recommendations, at 80 (2004); and August 14, 2003 Blackout: NERC Actions to Prevent and Mitigate the Impacts of Future Cascading Blackouts, at 13 (2004)).

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Standard that addresses the issue; therefore, the Commission directed NERC to develop a Reliability Standard to address undesirable relay operation due to stable power swings.⁵

On February 17, 2011, in Order No. 733-A, the Commission denied rehearing of Order No. 733 and clarified that “[w]e continue to believe that not addressing stable power swings constitutes a gap in the current Reliability Standards and must be addressed.”⁶ Therefore, the Commission affirmed the directive that NERC develop a Reliability Standard addressing stable power swings.⁷ The Commission also clarified that it did not require a Reliability Standard containing an absolute obligation to prevent protection relays from operating unnecessarily during stable power swings or an across-the-board elimination of all zone 3 relays, but only the development of a standard that addresses protection systems that are vulnerable to stable power swings (resulting from Category B and Category C contingencies from the NERC Planning Standards in place at that time) that will result in inappropriate tripping.⁸ In Order No. 733-B, the Commission denied further clarification regarding the issue.

2. HOW, BY WHOM, AND FOR WHAT PURPOSE THE INFORMATION IS TO BE USED AND THE CONSEQUENCES OF NOT COLLECTING THE INFORMATION

On December 31, 2014, NERC submitted a petition seeking approval of the PRC-026-1 Reliability Standard, as well as the associated implementation plan, and violation risk factors and violation severity levels.⁹ NERC avers that Reliability Standard PRC-026-1 satisfies the Order No. 733 directive to develop a new standard that requires the use of protective relay systems that can differentiate between faults and stable power swings. According to NERC, the Reliability Standard sets forth requirements that prevent the unnecessary tripping of bulk electric system elements in response to stable power swings. NERC further explains that the identification of bulk electric system elements with protection systems at-risk of operating as a result of a stable or unstable power swing and subsequent review by the applicable generator owner or transmission owner “provides assurance that relays will continue to be secure for stable power swings if any changes in system impedance occur.”¹⁰

Reliability Standard PRC-026-1 has four requirements and two attachments. NERC explains that Attachment A “provides clarity on which load-responsive protective relay functions are

⁵ *Id.* P 153.

⁶ Order No. 733-A, 134 FERC ¶ 61,127 at P 104.

⁷ *Id.*

⁸ *Id.* P 107.

⁹ Reliability Standard PRC-026-1 is available on the Commission’s eLibrary document retrieval system in Docket No. RM15-8-000 and on the NERC website, www.nerc.com.

¹⁰ *Id.*

applicable” under the standard.¹¹ Specifically, Attachment A provides that Reliability Standard PRC-026-1 applies to:

any protective functions which could trip instantaneously or with a time delay of less than 15 cycles on load current (i.e., “load-responsive”)....

According to NERC, the 15 cycle time delay “is representative of an expected power swing having a slow slip rate of 0.67 Hertz (Hz) and is the average time that a stable power swing with that slip rate would enter the relays’ characteristic, reverse direction, and then exit the characteristic before the time delay expired.”¹² NERC states that the proposed standard does not apply to “functions that are either immune to power swings, block power swings, or prevent non-immune protection function operation due to supervision of the function.”¹³

3. DESCRIBE ANY CONSIDERATION OF THE USE OF IMPROVED INFORMATION TECHNOLOGY TO REDUCE THE BURDEN AND TECHNICAL OR LEGAL OBSTACLES TO REDUCING BURDEN

The use of current or improved technology is not covered in Reliability Standards and is, therefore, left to the discretion of each reporting entity. Commission staff thinks that nearly all of the respondents are likely to make and keep related records in an electronic format. Each of the eight Regional Entities has a well-established compliance portal for registered entities to electronically submit compliance information and reports. The compliance portals allow documents developed by the registered entities to be attached and uploaded to the Regional Entity’s portal. Compliance data can also be submitted by filling out data forms on the portals. These portals are accessible through an internet browser password protected user interface.

The submittals are not made to FERC.

4. DESCRIBE EFFORTS TO IDENTIFY DUPLICATION AND SHOW SPECIFICALLY WHY ANY SIMILAR INFORMATION ALREADY AVAILABLE CANNOT BE USED OR MODIFIED FOR USE FOR THE PURPOSE(S) DESCRIBED IN INSTRUCTION NO. 2

The information collection requirements are unique to this reliability standard and to this information collection. The Commission does not know of any duplication in the requirements.

¹¹ *Id.* at 31.

¹² *Id.* at 30.

¹³ *Id.* at 31.

In addition, the standard-developing group (the ERO and various stakeholders) and the scientific community think it needs to be addressed and documented as indicated in the NERC petition.

5. METHODS USED TO MINIMIZE THE BURDEN IN COLLECTION OF INFORMATION INVOLVING SMALL ENTITIES

Small entities generally can reduce their burden by taking part in a joint registration organization or a coordinated function registration. These options allow an entity the ability to share its compliance burden with other similar entities.

Detailed information regarding these options is available in NERC's Rules of Procedure at sections 507 and 508¹⁴.

6. CONSEQUENCE TO FEDERAL PROGRAM IF COLLECTION WERE CONDUCTED LESS FREQUENTLY

If this standard and the associated information collection requirements did not exist or were performed less frequently, the reduction or elimination of transmission system planning would likely lead to lower system reliability and higher vulnerability and risk, such as transmission system outages and loss of load.

7. EXPLAIN ANY SPECIAL CIRCUMSTANCES RELATING TO THE INFORMATION COLLECTION

There are some special circumstances as described in 5 CFR 1320.5(d)(2) related to this information collection.

The evidence retention requirements for PRC-026-1 are:

1.2. Evidence Retention

The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the CEA may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

¹⁴ NERC's current Rules of Procedure (effective 11/4/2015):
http://www.nerc.com/FilingsOrders/us/RuleOfProcedureDL/NERC_ROP_Effective_20151104_without_Appendices.pdf

The Generator Owner, Planning Coordinator, and Transmission Owner shall keep data or evidence to show compliance as identified below unless directed by its CEA to retain specific evidence for a longer period of time as part of an investigation.

- The Planning Coordinator shall retain evidence of Requirement R1 for a minimum of one calendar year following the completion of the Requirement.
- The Generator Owner and Transmission Owner shall retain evidence of Requirement R2 evaluation for a minimum of 12 calendar months following completion of each evaluation where a CAP is not developed.
- The Generator Owner and Transmission Owner shall retain evidence of Requirements R2, R3, and R4 for a minimum of 12 calendar months following completion of each CAP.

If a Generator Owner, Planning Coordinator, or Transmission Owner is found noncompliant, it shall keep information related to the non-compliance until mitigation is complete and approved, or for the time specified above, whichever is longer.

8. DESCRIBE EFFORTS TO CONSULT OUTSIDE THE AGENCY: SUMMARIZE PUBLIC COMMENTS AND THE AGENCY'S RESPONSE

The ERO process to establish Reliability Standards is a collaborative process with the ERO, Regional Entities and other stakeholders developing and reviewing drafts, and providing comments, with the proposed standard submitted to the FERC for review.¹⁵ In addition, each FERC rulemaking (both proposed and final rules) is published in the Federal Register, thereby providing public utilities and licensees, state commissions, Federal agencies, and other interested parties an opportunity to submit data, views, comments or suggestions concerning the approved collection of data. The final rule was published in the Federal Register on 3/24/2016¹⁶.

Seven entities filed comments in response to two issues raised in the NOPR. First, commenters stated that the 15-cycle limitation in the proposed Reliability Standard PRC-026-1 does not result in a reliability concern due to its interaction with other Reliability Standards. Second, commenters stated that expanding the applicability of the proposed standard to include relays with time delays of 15 cycles or greater would result in a significant risk to reliability.

Based on these comments, the Final Order concludes (1) that the potential reliability gap is adequately addressed by requirements of other standards, and (2) that concerns of the potential

¹⁵ Details of the current ERO Reliability Standard processes are available on the NERC website at <http://www.nerc.com>.

¹⁶ 81 FR 15635

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risk of expanding applicability of the standard are moot given the determination that the potential reliability gap is adequately addressed.

There were no paperwork-related comments.

9. EXPLAIN ANY PAYMENT OR GIFTS TO RESPONDENTS

The Commission does not make payments or provide gifts for respondents related to this collection.

10. DESCRIBE ANY ASSURANCE OF CONFIDENTIALITY PROVIDED TO RESPONDENTS

According to the NERC Rule of Procedure 1502¹⁴, “a Receiving Entity shall keep in confidence and not copy, disclose, or distribute any Confidential Information or any part thereof without the permission of the Submitting Entity, except as otherwise legally required.” This serves to protect confidential information submitted to NERC or Regional Entities.

Responding entities do not submit the information collected under the approved Reliability Standards to FERC. Rather, they maintain it internally. Since there are no submissions made to FERC, FERC provides no specific provisions in order to protect confidentiality unless and until any such information is submitted to FERC as part of an enforcement action or other compliance review.

11. PROVIDE ADDITIONAL JUSTIFICATION FOR ANY QUESTIONS OF A SENSITIVE NATURE, SUCH AS SEXUAL BEHAVIOR AND ATTITUDES, RELIGIOUS BELIEFS, AND OTHER MATTERS THAT ARE COMMONLY CONSIDERED PRIVATE

This collection does not include any questions of a sensitive nature.

12. ESTIMATED BURDEN OF COLLECTION OF INFORMATION

According to the NERC Compliance Registry as of 6/26/2015, NERC has registered 318 transmission owners, 884 generator owners, and 68 planning coordinators. However, under NERC’s compliance registration program, entities may be registered for multiple functions, so these numbers incorporate some double counting. The total number of unique entities that may be identified as a notification provider (e.g. applicable entity) in accordance with Reliability

Standard PRC-026-1 will be approximately 1,074 entities registered in the United States as a transmission owner and/or generator owner. The total number of unique entities that may be identified as evidence retention entities (e.g. applicable entity) in accordance with proposed Reliability Standard PRC-026-1 will be approximately 1,092 entities registered in the United States as a transmission owner, generator owner and/or planning coordinator.

RM15-8-000 (Mandatory Reliability Standards: Reliability Standard PRC-026-1)						
	Number of Respondents (1)	Annual Number of Responses per Respondent (2)	Total Number of Responses (1)*(2)=(3)	Average Burden & Cost Per Response (4)	Total Annual Burden Hours & Total Annual Cost (3)*(4)=(5)	Cost per Respondent (\$) (5)÷(1)
Notifications to GO/TO per Requirement R1	1,074	1	1,074	8 hrs.; \$485.28 ¹⁷	8,592 hrs.; \$521,191	\$485.28
Evidence Retention GO/TO/PC	1,092	1	1,092	12 hrs.; \$450.00 ¹⁸	13,104 hrs.; \$491,400	\$450.00
TOTAL			2,166		21,696 hrs.; \$1,012,591	

13. ESTIMATE OF THE TOTAL ANNUAL COST BURDEN TO RESPONDENTS

There are no non-labor costs currently associated with the FERC-725G. Commission staff assumes that the information collection requirement associated with this rulemaking is consistent with estimates for similar tasks in other Commission-approved Reliability Standards and can be completed by entities using existing hardware and/or software.

All of the costs in the final rule in RM15-8-000 are associated with burden hours (labor) and described in #12 and 15.

¹⁷ The estimates for cost per response are derived using the following formula: Average Burden Hours per Response * \$60.66 per Hour = Average Cost per Response. The hourly average of \$60.66 assumes equal time is spent by the manager, electrical engineer, and information and record clerk. The average hourly cost (salary plus benefits) is: \$37.50 for information and record clerks (occupation code 43-4199), \$78.04 for a manager (occupation code 11-0000), and \$66.45 for an electrical engineer (occupation code 17-2071). (The figures are taken from the Bureau of Labor Statistics, May 2014 figures at http://www.bls.gov/oes/current/naics2_22.htm).

¹⁸ The average hourly cost (salary plus benefits) is \$37.50. The BLS wage category code is 34-4199. This figure is also taken from the Bureau of Labor Statistics, May 2014 figures at http://www.bls.gov/oes/current/naics2_22.htm.

14. ESTIMATED ANNUALIZED COST TO FEDERAL GOVERNMENT

The Regional Entities and NERC do most of the data processing, monitoring and compliance work for Reliability Standards. Any involvement by the Commission is covered under the FERC-725 collection (OMB Control No. 1902-0225) and is not part of this request or package.

The estimated annualized cost to the Federal Government for FERC-725G as related to the requirements in the order in Docket No. RM15-8-000 follows:

	Number of Federal Employees (FTE)	Estimated Annual Federal Cost
FERC-725G Analysis and Processing of filings	0	\$0
PRA ¹⁹ Administrative Cost ²⁰		\$5,193
FERC Total		\$5,193

15. REASONS FOR CHANGES IN BURDEN INCLUDING THE NEED FOR ANY INCREASE

Pursuant to Section 215 of the Federal Power Act (FPA), FERC approves a revised Reliability Standard, PRC-026-1, developed and submitted by the North American Electric Reliability Corporation (NERC), the Commission-certified Electric Reliability Organization (ERO). Reliability Standard PRC-026-1 addresses the Commission’s directive from Order No. 733 by helping to prevent the unnecessary tripping of bulk electric system elements in response to stable power swings.

The RM15-8-000 Notice of Proposed Rulemaking (NOPR)²¹ was submitted under the FERC-725G3 information collection (OMB Control No. 1902-0285; ICR No. 201509-1902-008). FERC-725G3 was a temporary information collection number used in order to ensure timely submission to OMB. The RM15-8-000 Final Rule is now being submitted to FERC-725G (OMB Control No. 1902-0252; ICR No. 201603-1902-006) which is a permanent information collection. The increase to the number of responses and total annual burden are due to the requirements that we submitted under FERC-725G3 for the NOPR in Docket RM15-8;²² the

19 Paperwork Reduction Act of 1995 (PRA)

20 The PRA Administrative Cost is a Federal Cost associated with preparing, issuing, and submitting materials necessary to comply with the PRA for rulemakings, orders, or any other vehicle used to create, modify, extend, or discontinue an information collection.

21 80 FR 57549 (9/24/2015)

22 RM15-8-000 NOPR (80 FR 57549; ICR Ref. No. 201509-1902-008).

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requirements in the Final Rule in RM15-8 are now being submitted under FERC-725G. The burden estimate submitted to FERC-725G3 and FERC-725G were calculated in the same way and resulted in the same amount of burden.

The estimated revised totals after the changes in FERC-725G (Docket No. RM15-8-000) follow:

FERC-725G	Total Request	Previously Approved	Change due to Adjustment in Estimate	Change Due to Agency Discretion
Annual Number of Responses	7,479	5,313	0	2,166
Annual Time Burden (Hr)	526,877	505,181	0	21,696
Annual Cost Burden (\$)	0	0	0	0

16. TIME SCHEDULE FOR PUBLICATION OF DATA

There are no data publications as part of this collection

17. DISPLAY OF EXPIRATION DATE

The expiration date is displayed in a table posted on ferc.gov at <http://www.ferc.gov/docs-filing/info-collections.asp>.

18. EXCEPTIONS TO THE CERTIFICATION STATEMENT

There are no exceptions.

The requirements were submitted temporarily under FERC-725G3 at the NOPR stage due to other unrelated activity at the time under FERC-725G. At this Final Rule stage in RM15-8, the requirements are now able to be submitted under FERC-725G.