

Supporting Statement
FERC-725N, Mandatory Reliability Standards: TPL-¹Reliability Standard,
changes proposed in NOPR in Docket No. RM18-8-000

The reporting and recordkeeping requirements for proposed Reliability Standard TPL-007-2 (Transmission System Planned Performance for Geomagnetic Disturbance Events) will be included in FERC-725N,² as discussed in the Notice of Proposed Rulemaking (NOPR) in Docket No. RM18-8³ and this supporting statement⁴. The Federal Energy Regulatory Commission (FERC or Commission) is requesting that the Office of Management and Budget (OMB) approve the proposed reporting and recordkeeping requirements in the NOPR in Docket RM18-8-000.

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 (EPAAct 2005), was enacted into law.⁵ EPAAct 2005 added a new section 215

1 “TPL” stands for Transmission Planning

2 FERC-725N currently contains Reliability Standard TPL-001-4.

3 The Commission’s NOPR is posted in FERC’s eLibrary at <https://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=14921726>.

The Staff Presentation is posted at

<https://www.ferc.gov/industries/electric/indus-act/reliability/05-17-18-E-1-presentation.pdf>.

4 OMB’s terms of clearance for FERC-725N (for the final rule in RM15-11, ICR 201609-1902-007, dated 11/28/2016) state: “Note that FERC included a one-time burden estimate (42,137 hours) associated with the addition of Reliability Standard TPL-007-1 in this collection that was annualized over the three year approval period. FERC will need to remove this burden from this collection and their inventory after year 3. Similarly there are a number of one time responses that will need to be adjusted. Additionally, the previous terms of clearance will need to be addressed by FERC when Reliability Standards TPL-001-0 through TPL-001-004 are revised: “When FERC considers approval of the next versions of Reliability Standards TPL-001 through TPL-004, and TPL-007, they should consider small entity impacts and potential options for reducing their recordkeeping and reporting burden.””

The 3-year approval period OMB mentioned above will not end until 11/2019, so the related one-time burden estimate (which was annualized over Years 1-3) is not being removed from FERC-725N at this time. The effect on small entities has been considered in the NOPR in Docket No. RM18-8, and there is no significant effect as discussed in the Regulatory Flexibility Act section of the NOPR.

The information collection requirements in the Reliability Standards TPL-001-0 through TPL-004-0 are approved by OMB under FERC-725A (OMB Control No.1902-0244). TPL-001-4 (from the final rule in Docket Nos. RM12-1 and RM13-9). Reliability Standard TPL-001-4 was approved by OMB on 1/10/2014 in FERC-725N. Reliability Standards TPL-001 through TPL-004 are not affected by the NOPR in Docket No. RM18-8 and are not addressed further in this supporting statement.

5 The 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 (2000).

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 may be enforced by the ERO, subject to Commission oversight.

On March 16, 2007, in Order No. 693, pursuant to section 215(d) of the FPA, the Commission approved 83 of 107 proposed Reliability Standards, six of the eight proposed regional differences, and the North American Electric Reliability Corporation (NERC) *Glossary of Terms Used in Reliability Standards* (NERC Glossary), including Version 0 TPL Reliability Standards.⁶

Docket No. RM15-11. In the Final Rule in Docket RM15-11, FERC approved Reliability Standard TPL-007-1. Reliability Standard TPL-007-1 established requirements for certain entities to assess the vulnerability of their transmission systems to geomagnetic disturbance events (GMDs). NERC submitted the Reliability Standard for Commission approval in response to a FERC directive in Order No. 779. In addition, the Commission directed that NERC develop modifications to the benchmark GMD event definition set forth in Attachment 1 of the approved Reliability Standard, so that the definition is not based solely on spatially-averaged data.

Docket No. RM18-8. In this NOPR in Docket RM18-8, the Commission proposes to approve Reliability Standard TPL-007-2 (Transmission System Planned Performance for Geomagnetic Disturbance Events). The North American Electric Reliability Corporation (NERC), the Commission-certified Electric Reliability Organization (ERO), submitted proposed Reliability Standard TPL-007-2 for approval in response to a Commission directive in Order No. 830. Geomagnetic disturbance events (GMDs) occur when the sun ejects charged particles that interact with and cause changes in the earth's magnetic fields. Proposed Reliability Standard TPL-007-2 modifies currently-effective Reliability Standard TPL-007-1 (Transmission System Planned Performance for Geomagnetic Disturbance Events) by requiring applicable entities to: (1) conduct supplemental GMD vulnerability assessments and thermal impact assessments; (2) obtain geomagnetically induced current (GIC) and magnetometer data; and (3) meet certain deadlines for the development and completion of tasks in corrective action plans. In addition, the Commission proposes to direct NERC to develop modifications to the Reliability Standards to require applicable entities to develop and implement corrective action plans to mitigate supplemental GMD event vulnerabilities.

The Commission also proposes to approve the associated violation risk factors and violation severity levels, implementation plan, and effective date for proposed Reliability Standard TPL-007-2.

Proposed Reliability Standard TPL-007-2 addresses the directives in Order No. 830 to modify currently-effective Reliability Standard TPL-007-1: (1) to revise the benchmark GMD event

⁶ *Mandatory Reliability Standards for the Bulk-Power System*, Order No. 693, FERC Stats. & Regs. ¶ 31,242 at PP 1840, 1845, *order on reh'g*, Order No. 693-A, 120 FERC ¶ 61,053 (2007). The currently-effective versions of the TPL Reliability Standards are as follows: TPL-001-4 and TPL-007-1 (which is proposed to be replaced by TPL-007-2 in Docket RM18-8 and discussed here).

definition, as it pertains to the required GMD Vulnerability Assessments and transformer thermal impact assessments, so that the definition is not based solely on spatially-averaged data; (2) to require the collection of necessary GIC monitoring and magnetometer data and to make such data publicly available; and (3) to include a one-year deadline for the completion of corrective action plans and two and four-year deadlines to complete mitigation actions involving non-hardware and hardware mitigation, respectively.

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

In its petition to the Commission, NERC states,

Currently-effective Reliability Standard TPL-007-1 requires entities to conduct initial and on-going assessments of the potential impact of the defined benchmark GMD event on BPS equipment and the BPS as a whole. Proposed Reliability Standard TPL-007-2 builds upon these Requirements and adds new Requirements for entities to assess their vulnerabilities to a second defined event, the supplemental GMD event. This supplemental GMD event is designed to account for the localized peak effects of severe GMD events on systems and equipment. The proposed standard also contains new Requirements for the collection of GIC and magnetometer data. Lastly, the proposed standard revises Requirement R7 to include deadlines for the development and completion of any necessary Corrective Action Plans. Each of these revisions and how they address the Commission's directives from Order No. 830 is discussed below. ...

The supplemental GMD event provides a technically justified method of assessing vulnerabilities to the localized peak effects of severe GMD events, thereby addressing the Commission's Order No. 830 directive. Together, the approved benchmark GMD event and the proposed supplemental GMD event provide a high threshold for assessing GMD impacts.

Proposed Reliability Standard TPL-007-2 supports future data collection across the North American BPS by requiring planning entities to implement processes for obtaining GMD data for each planning area. NERC, pursuant to the pending Section 1600 GMD Data Request,⁴² will collect GMD data from entities and make that data available to support ongoing research and analysis of GMD risk. The proposed standard, together with the pending Section 1600 GMD Data Request, would thus satisfy the Commission's data collection directives in Order No. 830 and provide data to help address the potential reliability risks posed by GMDs.

As described in the Background section of the standard, “[d]uring a GMD event, geomagnetically-induced currents (GIC) may cause transformer hot-spot heating or damage, loss of Reactive Power sources, increased Reactive Power demand, and Misoperation(s), the combination of which may result in voltage collapse and blackout.” GMD events could cause widespread blackouts and cause damage to equipment that could result in sustained system outages. The information generated for compliance with this standard will be used to ensure that

entities are appropriately studying whether their systems and equipment are vulnerable to GMD events and correcting any vulnerabilities discovered through the benchmark GMD study.

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. We think 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. In addition, the standard-developing group (the ERO and various stakeholders) think the proposed standard is an effective means for meeting the Commission directives from Order No. 830, 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 508⁷.

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

⁷Details of the current ERO Reliability Standard processes are available in Appendix 3A of the NERC Rules of Procedure on the NERC website at <https://www.nerc.com/AboutNERC/Pages/Rules-of-Procedure.aspx>.

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.

Some of the evidence must be retained for five years (or longer) as described below, in the Evidence Retention section of the proposed TPL-007-2. The proposed standard states in part:

“1.2. Evidence Retention: The following evidence retention period(s) 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 Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full-time period since the last audit.

The applicable entity shall keep data or evidence to show compliance as identified below unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.

- For Requirements R1, R2, R3, R5, R6, R9, and R10, each responsible entity shall retain documentation as evidence for five years.
- For Requirements R4 and R8, each responsible entity shall retain documentation of the current GMD Vulnerability Assessment and the preceding GMD Vulnerability Assessment.
- For Requirement R7, each responsible entity shall retain documentation as evidence for five years or until all actions in the Corrective Action Plan are completed, whichever is later.
- For Requirements R11 and R12, each responsible entity shall retain documentation as evidence for three years.”

These special circumstances are necessary for reliability purposes. The schedule for revisiting the GMD vulnerability assessments and corrective action plans is every 60 months (see Requirement R4). The retention periods essentially require evidence to be retained until updated assessments are performed. The updates would incorporate such things as better scientific or engineering tools, changes to the electric grid topology and resources, and better mitigation measures.

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 final standard submitted to the Commission for review and approval.⁸ 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.

NERC submitted a Petition⁹ on 1/22/2018 to the Commission requesting Commission approval of the proposed standard.

In this NOPR in Docket No. RM18-8 (issued 5/17/2018), the Commission is soliciting public comments and proposing to approve the draft TPL-007-2. The NOPR is being published in the Federal Register on 5/23/2018.

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 1502, “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 Standard to FERC. Rather, they maintain it internally or provide it to NERC or the Regional Entities. Since there are no submittals made to the Commission, 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,

⁸ Details of the current ERO Reliability Standard processes are available on the NERC website at <http://www.nerc.com> .

⁹ The NERC Petition is posted in FERC’s eLibrary at <https://elibrary-backup.ferc.gov/idmws/common/OpenNat.asp?fileID=14802641>. The proposed standard (Exhibit A) is posted at <https://elibrary-backup.ferc.gov/idmws/common/OpenNat.asp?fileID=14802642>. The remaining Exhibits (e.g., Implementation Plan, Record of Development, etc.) are posted as separate files under FERC’s eLibrary accession number 20180122-5163.

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

The Commission estimates the burden and cost¹⁰ for this information collection as:

FERC-725N, Changes Proposed in NOPR in Docket No. RM18-8^{11, 12}						
Requirement (R)	Number and Type of Respondents (1)	Annual Number of Responses Per Respondent (2)	Total No. of Responses (1)X(2)=(3)	Average Burden Hrs. & Cost per Response (4)	Total Annual Burden Hrs. & Total Annual Cost (rounded) (3)X(4)=(5)	Cost per Respondent (\$) (5)÷(3)
R1 through R6	No change	No change	No change	No change	No change	No change
R7	188 (PC and TP)	1/5 (once for every five year study)	37.6	Rep. 5 hrs., \$334.5; RK 5 hrs., \$160.2	Rep. 188 hrs., \$12,577; RK 188 hrs., \$6,023	Rep. 1 hr., \$66.9; RK 1 hr., \$32.04

10 Hourly costs are based on the Bureau of Labor Statistics (BLS) figures for May 2017 (Sector 22, Utilities) for wages (https://www.bls.gov/oes/current/naics2_22.htm) and benefits for December 2017 (<https://www.bls.gov/news.release/ecec.nr0.htm>). We estimate that an Electrical Engineer (NAICS code 17-2071) would perform the functions associated with reporting requirements, at an average hourly cost (for wages and benefits) of \$66.90. The functions associated with recordkeeping requirements, we estimate, would be performed by a File Clerk (NAICS code 43-4071) at an average hourly cost of \$32.04 for wages and benefits. The estimated burden and cost are in addition to the burden and cost that are associated with the existing requirements in Reliability Standard TPL-007-1 (and in the current OMB-approved inventory), which would continue under proposed Reliability Standard TPL-007-2.

11 Rep.=reporting requirements; RK =recordkeeping requirements

12 For each Reliability Standard, the Measure shows the acceptable evidence (Reporting Requirement) for the associated Requirement (R numbers), and the Compliance section details the related Recordkeeping Requirement.

R8	188 (PC and TP)	1/5 (once for every five year study)	37.6	Rep., 27 hrs., \$1,806.30; RK, 21 hrs., \$672.84	Rep. 1,015 hrs., \$67,917; RK 790 hrs., \$25,299	Rep., 5.4 hrs., \$361.26; RK 4.2 hrs., \$134.57
R9	188 (PC and TP)	1/5 (once for every five year study)	37.6	Rep. 9 hrs., \$602.10 RK 7 hrs., \$224.28	Rep. 338 hrs.; \$22,639 RK 263 hrs., \$8,432	Rep. 1.8 hrs., \$120.42; RK 1.4 hrs., \$44.85
R10	280 (25% of 1,119) (GO and TO)	1/5 (once for every five year study)	56	Rep. 22 hrs.;; \$1,471.8; RK 18 hrs. \$576.72	Rep. 1,232 hrs., \$82,421; RK 1,008 hrs., \$32,296	Rep. ;4.4 hrs., \$294.36; RK 3.6 hrs., \$115.34
R11	188 (PC and TP)	1 (on-going reporting)	188	Rep. 10 hrs., \$669; RK. 10 hrs., \$320.40	Rep. 1,880 hrs., \$125,772; RK 1,880 hrs., \$60,235	Rep. 10 hrs., \$669; RK 10 hrs., \$320.40
R12	188 (PC and TP)	1 (on-going reporting)	188	Rep. 10 hrs., \$669 RK. hrs 320.4	Rep. 1,880 hrs. \$125,772; RK 1,880 hrs., \$60,235	Rep. 10 hrs., \$669; RK 10 hrs., \$320.40
Total Additional Hrs. and Cost (rounded) , due to NOPR in RM18-8					12,542 hrs. & \$629,585 [composed of Rep., 6,533 hrs., \$437,057; RK 6,009 hrs., \$192,528]	

The proposed burden for RM18-8 in the table above is in addition to the current OMB-approved inventory for FERC-725N of 45,020 hours (for 2,205 responses). If approved and implemented, the new annual estimated burden total would be 57, 562 hours {(45,020 + 6,533 [reporting] + 6,009 [recordkeeping]) hrs.}.

13. ESTIMATE OF THE TOTAL ANNUAL COST BURDEN TO RESPONDENTS

There are no non-labor costs currently associated with the FERC-725N.

All of the costs in the NOPR in RM18-8 are associated with burden hours (labor) and described in #12 and 15.

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 related 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 PRA Administrative Cost is a Federal Cost associated with preparing, issuing, and submitting materials necessary to comply with the Paperwork Reduction Act (PRA) for rulemakings, orders, or any other vehicle used to create, modify, extend, or discontinue an information collection. This average annual cost (updated 5/2018) includes requests for extensions, all associated rulemakings, and other changes to the collection, as well as necessary publications in the Federal Register.

FERC-725N	Number of Employees (Full-Time Equivalents [FTEs])	Estimated Annual Federal Cost
PRA Administration Cost		\$4,931
Data Processing and Analysis	0	\$0
FERC Total		\$4,931

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

The Commission proposes to approve Reliability Standard TPL-007-2 and the associated implementation plan, violation severity levels, and violation risk factors, as discussed above. Reliability Standard TPL-007-2 will modify one requirement from TPL-007-1 and impose new requirements for transmission planners, planning coordinators, transmission owners, and generator owners.

1. Reliability Standard TPL-007-2, Requirement R7 modifies the existing TPL-007-1, Requirement R7, to require development of the corrective action plans within one year of the completion of the GMD Vulnerability Assessment and implementation of non-hardware mitigation within two years and hardware mitigation within four years.
2. Reliability Standard TPL-007-2, Requirement R8 requires responsible entities to perform a supplemental GMD Vulnerability Assessment of the near-term planning horizon at least once every 60 calendar months.
3. Reliability Standard TPL-007-2, Requirement R9 requires responsible entities to provide GIC flow information related to the supplement GMD event to the transmission owners and generator owners that own an applicable bulk electric system power transformer in the planning area. This information is necessary for applicable transmission owners and generator owners to conduct the supplemental thermal impact assessments required by Requirement R10.
4. Reliability Standard TPL-007-2, Requirement R10 requires applicable transmission owners and generator owners to conduct thermal impact assessments where the maximum effective GIC value provided in Requirement R9 is 85 A/phase or greater.
5. Reliability Standard TPL-007-2, Requirement R11 requires responsible entities to implement a process to obtain GIC monitor data from at least one monitor within the Planning Coordinator’s planning area or other part of the system included in the Planning Coordinator’s GIC System model.
6. Reliability Standard TPL-007-2, Requirement R12 requires responsible entities to implement a process to obtain geomagnetic field data for tis Planning Coordinator’s planning area.

The following table shows the total burden of the collection of information. The format, labels, and definitions of the table follow the ROCIS submission system’s “Information Collection Request Summary of Burden” for the metadata.

FERC-725N	Total Request	Previously Approved	Change due to Adjustment in Estimate	Change Due to Agency Discretion
Annual Number of Responses	2,449	2,205	0	+244 ¹³
Annual Time Burden (Hr.)	57,562	45,020	0	+12,542
Annual Cost Burden (\$)	0	0	0	0

16. TIME SCHEDULE FOR PUBLICATION OF DATA

There are no data publications as part of this collection

¹³ Because each entity has multiple activities (labelled “responses” for reginfo.gov and ROCIS) in a year, the number of additional responses is counted as one response per entity affected annually (188+56).

FERC-725N (OMB Control No.: 1902-0264)
Docket No. RM18-8-000, NOPR issued 5/17/2018
RIN: 1902-AF52

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.