

**UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION**

**Availability of Certain North American            )  
Electric Reliability Corporation                    )       Docket No. RM15-25-000  
Databases to the Commission                     )**

**COMMENTS OF THE FOUNDATION FOR RESILIENT SOCIETIES**

Submitted to FERC on December 15, 2015

Pursuant to the Federal Energy Regulatory Commission’s (“FERC” or “Commission”) Notice of Proposed Rulemaking (NOPR) for “Availability of Certain North American Electric Reliability Corporation Databases” issued on September 17, 2015, Foundation for Resilient Societies (“Resilient Societies”) respectfully submits Comments on the Commission’s proposal. The new regulation at 18 C.F.R. §39.11(c) would require the North American Electric Reliability Corporation (NERC) to provide the Commission and its staff access to certain databases compiled and maintained by NERC, including the Transmission Availability Data System (“TADS”) and Generating Availability Data System (“GADS”).

Resilient Societies is a 501(3)(c) non-profit foundation, organized in year 2012, with principal office in Nashua, NH. Resilient Societies engages in research and education to enhance the resiliency of critical infrastructures in the United States and globally.

In general, Resilient Societies supports the proposed regulation that would significantly support the Commission’s ability to exercise its authority as granted by Congress under the Energy Policy Act of 2005. However, Resilient Societies does not support NOPR provisions whereby all TADS and GADS data received by FERC from NERC would remain confidential and undisclosed to the public in any form, including data in aggregated and/or anonymous format.

The Commission states as a purpose of the proposed rulemaking that:

“Access to these [TADS and GADS] databases ... will provide the Commission with information necessary to determine the need for new or modified Reliability Standards and to better understand NERC’s periodic reliability and adequacy assessments.”<sup>1</sup>

Under the currently-worded NOPR, the Commission might be restricted from analyzing the NERC data and then using conclusions developed thereby to support rulemaking or other public policy actions. In effect, the Commission might make decisions with hidden rationale; this practice would be incompatible with requirements that rulemaking be conducted with “due process, openness, and balance of interests in developing Reliability Standards.”<sup>2</sup> In any final ruling, the Commission should make clear that analysis and conclusions from the TADS and GADS data could be used to support rulemaking and other public policy actions.

Resilient Societies does not support the counterproposal by NERC to provide only anonymous or aggregated data to the Commission. Transformer and generator locations within the Bulk Power System are highly idiosyncratic; the conditions that might cause equipment failures and/or protective system misoperations are often related to network configuration. Only by knowing the location of TADS and GADS events, and by cross-referencing to network configuration, will analysts at FERC be able to fully understand reasons for equipment failures, system misoperations, or grid outages.

Analysis of TADS and GADS data at FERC is necessary because NERC has not performed, or not disclosed data analysis when the results might not be consistent with the interest of NERC’s industry members in avoiding or minimizing regulation. For example, early in the meetings of the Geomagnetic Disturbance (GMD) Task Force, NERC staff gave a presentation on the intent of NERC to conduct a statistical comparison of transformer failures potentially caused by GMD with space weather indicia, such as the Geomagnetic Planetary A Index (“Ap Index”). To the

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<sup>1</sup> NOPR, “Availability of Certain North American Electric Reliability Corporation Databases to the Commission,” 152 FERC ¶ 61,208 at p. 1 (Sep. 17, 2015).

<sup>2</sup> See Federal Power Act, 16 U.S.C. §825o(c)(2)(D), and Commission regulations found at 18 C.F.R. § 39.3(b)(2)(iv) requiring development of reliability standards with “due process, openness, and balance of interests.”

best of our knowledge, this analysis was never performed or, if it was performed, the results were not disclosed to the GMD Task Force.

Independent, public review of causation of transformer failures, for example, can improve development of reliability standards: to replace transformers at risk, to improve transformer spares policies, and for other reliability-enhancing purposes. Many models of transformer end-of-life assume that transformer age is a significant cause of transformer failure. However, modeling of the National Grid transformer population in the United Kingdom indicates that age of transformer is not statistically significant in predicting end-of life transformer losses.<sup>3</sup>

Only by FERC disclosure of aggregate TADS and GADS data, and overall modeling assessments developed with this data, can the public be assured that reliability standards developed by the Commission are in the public interest.

There will be some instances where FERC might have site-specific vulnerability or impact information that cannot be disclosed to NERC staff that will nonetheless be necessary for analysis of, and correlation with, the TADS and GADS data. For example, FERC may have signals or human intelligence of cyberattacks on particular transformer and generator locations. TADS and GADS data could show whether these cyberattacks were successful, and what remedies might be required. If FERC has access to only anonymous or aggregate data, these correlations (“connecting the dots”) cannot be made.

For all of the above reasons, we urge the Commission to approve the NOPR, with appropriate additional provisions to allow public disclosure of modeling parameters and other conclusions developed from the TADS and GADS data to support rulemaking and other public policy actions.

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<sup>3</sup> See P. Jarman, et al. “End-of-Life Modelling for Power Transformers in Aged Power System Networks,” CIGRE Paper C105, 2009; and P. Jarmin, et al., “Transformer life prediction using data from units removed from service and thermal modelling,” CIGRE Paper A2 212, 2010.



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