

**TVA Comments on the Transmission Availability Data System  
Phase II Preliminary Report March 13, 2008 and the  
Data Reporting Instruction Manual April 4, 2008**

*Comments submitted on June 16, 2008 by Roger Thorn of TVA*

In response to NERC's *Request for Public Comment on Phase II TADS Report and Manual* dated April 30, 2008, the following comments are provided per *B. Comment Questions*.

**Executive Summary:** While the collection of Operational Outage data is useful, TVA perceives no value for the collection of Planned Outage data as it relates to improving the bulk power system reliability. Moreover, the proposed metrics are not appropriate because they can be misleading in analyzing the performance of a robust bulk power system. Finally, the Phase II schedule is unreasonable as there is insufficient time between the implementation of Phase I and Phase II to allow the TOs time to adjust to new data collection and reporting procedures resulting from Phase I implementation. Details are provided in the answers to the questions below.

**Question:**

1. If you are a Transmission Owner, do you currently collect Non-Automatic transmission outage data similar to Phase II TADS? If "yes," please explain.

**Answer:** Yes. TVA has collected this information for years, although in less detail than would be required for Phase II. However, TVA perceives no value for this data as it relates to improving the bulk power system reliability and has found minimal internal use for this data. Therefore, TVA has decided to discontinue the collection of Planned Outage data, and TVA resources have been tailored to this decision. In addition it should be noted that Planned Outages have been recently dropped from the SGS Transmission Reliability Benchmarking Study which contains over 50% of the U.S. transmission grid.

**Question:**

2. Is the data being requested reasonable and obtainable? See Sections 2 and 3 of the Phase II Report. If "no," please explain.

**Answer:** No. Although the requested data is obtainable with significant modification to TVA's existing transmission outage database and process, the potential gain from the proposed metric calculations **does not** justify the extensive time and large monetary cost to complete these modifications. TVA has found that the overall complexity of the data required to produce the metrics increases the risk of data error (inclusion of some details, exclusion of others). For example, NERC requires much more data than DOE 411 for planned outages and uses causes that are very different to those that TVA currently collects. TVA revised procedures to discontinue the collection of Planned Outages (<200kV) because there is minimal value and use for the data. Moreover, TVA evaluates the risks of Planned Outages before the outage occurs, negating the need for this data. TVA continues to collect Planned Outage data for TADS elements in anticipation of Phase II implementation, but as noted earlier, perceives no value for this data as it relates to improving the bulk power system reliability. As a measure of the resources required to report outages, TVA recorded 85 Planned Outages, 24 Operational Outages and 74 Automatic Outages for TADS elements over a 12-month period. TVA finds Operational Outage data useful and will continue to collect this information for all voltages.

**Question:**

3. Planned Outages have a 30-minute outage exclusion that is stated as follows:  
"Outages of TADS Elements of 30 minutes or less duration resulting from

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switching steps or sequences that are performed in preparation or restoration of

an outage of another TADS Element are not reportable.”

Please comment on the appropriateness of this exclusion. While the 30-minute exclusion will reduce the number of reported outages, should all outage times be recorded in order to determine which outages can be excluded based upon the 30-minute limit? Should a TO’s supporting data for determining exclusions be part of NERC’s data review? Does the 30-minute exclusion reduce the reporting burden or does it increase it? Please explain your response.

**Answer:** This exclusion is unreasonably complex and confusing. For example: Does a TO report the switching of a TADS element for a non-TADS element? Also, if a TO switches out a single-TADS element for less than 30 minutes, this is reportable? Why? A better solution is to exclude all Planned Outages that are less than 30 minutes, or report all Planned Outages. In addition, TVA does not identify switching step outages within the Non-Automatic outage data. Substantial program modifications would be needed to collect this data, thus increasing the reporting burden.

**Question:**

4. Are the metrics appropriate? See Section 4 the Phase II Report. If “no,” please explain.

**Answer:** No. The proposed metrics are not appropriate because they can be misleading in analyzing the performance of a robust bulk power system. TVA has built its bulk power system for peak loads, and therefore, has an operating margin for “normal” (non-peak) operating conditions. This margin is used to perform maintenance and perform improvement projects which increase the reliability of the system. Most of the metrics for non-automatic outages could give a false impression of condition or risk without more specific knowledge. The bulk power system does not necessarily suffer since every bulk power line is not critical to daily operation.

**Question:**

5. Are the data review process and the requirement that TOs maintain historical supporting information used to develop its TADS data for a five-year period reasonable to ensure the quality of TADS data? If “no,” please explain.

**Answer:** Yes. Maintaining the data for five years is not a problem for TVA.

**Question:**

6. Is the implementation schedule for Phase II TADS for 2009 reasonable? See Section 6 of the Phase II Report, Table 3. If “no,” please explain.

**Answer:** No. The Phase II schedule is unreasonable as there is insufficient time between the implementation of Phase I and Phase II. It would be better if Phase II were implemented so that 2010 data would be reported in 2011. This would allow the TOs time to adjust to new data collection and reporting procedures resulting from Phase I implementation. Also, it would allow time for TO collaboration on best practices to meet the new requirements.

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7. Are there ambiguities in the Manual that need clarification? If "yes," please explain.

**Answer:** Yes. For example, the 30 minute switching criterion, planned outage/human error, etc. (see additional comments below).

**Additional Comments:**

Reference: TADS Data Manual, Appendix 7 Section G. "Planned Outage Cause Codes" and Section H. "Operational Cause Codes" (Page 16) and Phase II Preliminary Report Appendix 2 Section B.5 "Outage Reporting Definitions - Planned Outage" and B.6 "Outage Reporting Definition - Operational Outage" (Page 5) as well as Section G and H (Page 16)

Comment: All three of these referenced sections either define or discuss planned and operational outages. The definitions/discussions do not include any type of time frame to distinguish between a Planned or Emergency Operational Outage. To ensure consistency across TO reporting the following modifications to these definitions are proposed.

- Planned Outage - A Non-Automatic Outage **usually with 24 hours or more of** advance notice for the purpose of maintenance, construction, inspection, testing, or planned activities by third parties that may be deferred. An outage which **has been planned and usually scheduled 24 hours or more in advance** which results from the manual operation (including supervisory control) of a switching device, causing an Element to change from and In-Service State to a not In-Service State. This type of outage could be deferred as there is no immediate threat to equipment or personnel.
- Operational Outage (Emergency) - A Non-Automatic Outage **,with less than 24 hours advance notice**, for the purpose of avoiding an emergency (i.e., risk to human life, damage to equipment, damage to property) or to maintain the system within operational limits, and that cannot be deferred.

Comment: Page 1, Introduction, 2nd Paragraph: states " ... is posted that describes a proposal to collect Non-Automatic Outages." should be **collect**.

Comment: Page 19, Section 6, Forms for Detailed Non-Automatic Outage data: states "These forms contain data for each and every Non-Automatic Outage of an Element" should be stated as "...for each and every **reportable** Non-Automatic Outage..." since some non-automatic outages are not reportable.

Comment: Page 4, Appendix 7, item #13: It lists voltage classes 400-499kV and 500-599kV, however, for AC circuits only **400-599 kV** is used.

Comment: Page 16, Appendix 7, item G,3: states that other planned outages can include human error. Can you please list some examples of what a planned outage / human error would be? (Same for page 17, Other Operational Outages).

Comment: Appendix 10, Page 89, Example 2A: Include an example with a non-TADS transformer and/or circuit.

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General Comment: More examples are needed, especially for System Protection and Human Error.