

November 12, 2010

TO: NERC Planning Committee

CC: NERC Data Coordination Subcommittee

TADSWG Request for Approval of Changes to TADS Event Type Data Collection

Action Required

Approve the TADSWG recommendation to change the TADS Event Type Number data collection beginning with calendar year 2012 data, as detailed below in Attachment #1.

Summary

Approximately one-fourth of the automatic outages reported in 2008 and 2009 (i.e., 1,208 outages per year) were reported as *Event Type Number 50 – “Other”*. It was determined that the available TADS information for *Event Type Number 50 – “Other”* outages do not present a clear picture of the event types within “Other”, so a change to TADS was deemed necessary.

There are approximately 192 registered Transmission Owners with 200 kV and above circuits. Going forward, each Transmission Owner will need to review and re-categorize an average of 6.3 outages per year from *Event Type Number 50 – “Other”* to one of the proposed new Event Type Numbers. A pilot test of the proposed event types was conducted among the members of the TADSWG. In general, there was no difficulty in understanding the new codes and descriptions. After the pilot test, several clarifications were added to a new draft of the TADS Data Reporting Instruction Manual. On a NERC-wide basis, the additional analysis to re-categorize one-fourth of the automatic outages and choose one of the proposed Event Type Number categories will not create an unreasonable burden on the Transmission Owners.

As stated in the original TADS Phase I report “...we believe that the greatest use of TADS data will be for outage cause analysis and outage Event analysis.” If we delay changing the proposed Event Type Numbers for several more years, approximately one-quarter of the TADS Event characteristics will continue to be unidentified on a NERC-wide basis. The proposed Event Type Number categories will aid in the determination of credible contingencies and will result in a better understanding of the “Other” Events. The increased granularity of the data will increase the understanding of actual NERC-wide events that could allow for improved system analysis by bridging gaps between the operating environment and planning assumptions, and may therefore influence the development of future NERC planning and operating standards.

Background

The proposed *Event Type Number* data collection was approved for public comment by the NERC Planning Committee on June 15, 2010. On July 7, 2010, NERC requested public comment by August 23, 2010 on the proposed revision to the TADS *Event Type Number* data collection. The associated documents including the request letter, revised TADS Data Reporting Instruction Manual, and revised TADS Appendix 7 Definitions may be downloaded at <http://www.nerc.com/filez/tadswg.html>. See the November 2010 section called “Proposed TADS Event Type Data Collection.” The July 7 request for comments is attached to this letter as Appendix A. The TADSWG response to the public comments is attached to this letter as Appendix B. Please read Appendix B for the TADSWG detailed response to the public comments received.

During 2008 and 2009 TADS, approximately 75 percent of the TADS outages were single Element AC or DC outages with Normal Clearing (70 percent average of 2008 and 2009) or multi-circuit structure-related circuit outages (4.6 percent). On a NERC-wide basis, 25 percent of the outages are associated with *Event Type Number 50 – “Other.”* That statistical average varies among the NERC Regions from approximately 15 to 40 percent. Such variations indicate the need to have a number of years of data before meaningful long-term averages for each Region can be identified.

The proposed changes to the *Event Type Numbers* are scheduled to go into effect January 1, 2012. During 2011, Transmission Owner internal business system protocols will need to be revised to collect the revised *Event Type Number* data. Attachment 1 at the end of this document summarizes the proposed TADS *Event Type Numbers*. These TADS event types are compatible with the event categories described in the current TPL Standards Table 1 and the revised TPL draft currently under consideration. However, the implementation of this data request does not depend upon approval of the revised TPL draft standard.

The implementation of the ten *Event Type Numbers* (instead of the current five *Event Type Numbers*) should not add a significant reporting burden. It will require the Transmission Owners to collect sufficient internal information so they can separate the current five event types into the ten event types as specified in the TADS Data Instruction Manual. On average, each Transmission Owner will need to review and re-categorize 6.3 outages per year from *Event Type Number 50 – “Other”* to one of the proposed new *Event Type Numbers*.

Sincerely,



Michael J. Pakeltis, P.E.
Chair, TADSWG

Attachment 1 - Proposed TADS Event Type Numbers

Five Current Event Type Numbers

Event Type Number	Description
10	Automatic Outage of an AC Circuit or Transformer with Normal Clearing.
20	Automatic Outage of a DC Circuit with Normal Clearing.
30	Automatic Outage of two ADJACENT AC Circuits on common structures with Normal Clearing.
40	Automatic Outage of two ADJACENT DC Circuits on common structures with Normal Clearing.
50	Other

Ten Proposed Event Type Numbers

Events with Normal Clearing¹

Event Type Number	Description
05	Single bus section fault or failure (200kV or above) resulting in one or more Automatic Outages.
06	Single internal circuit breaker fault (200kV or above) resulting in one or more Automatic Outages ² .
11	Automatic Outage of a single Element.
13	Automatic Outage of two or more Elements within one Normal Clearing Circuit Breaker Set (NCCBS).
31	Automatic Outages of two or more TADS adjacent AC Circuits or DC Circuits on common structures. To qualify as Event Type Number 31, the Automatic Outages must be the direct result of the circuits occupying common structures ³ .
49	Automatic Outage(s) with Normal Clearing not covered by Event Type Numbers 05 through 31 above ⁴ .

Events with Abnormal Clearing⁵

Event Type Number	Description
60	Breaker Failure: One or more Automatic Outages with Delayed Fault Clearing due to a 200kV and above circuit breaker being stuck, slow to open or failure to interrupt current.
61	Dependability (failure to operate): One or more Automatic Outages with Delayed Fault Clearing due to failure of a single Protection System (primary or secondary backup) under either of these conditions: failure to initiate the isolation of a faulted power system Element as designed, or within its designed operating time, or In the absence of a fault, failure to operate as intended within its designed operating time. (Item b is a very rare type of event.)
62	Security (unintended operation): One or more Automatic Outages caused by improper operation (e.g. overtrip) of a Protection System resulting in isolating one or more TADS Elements it is not intended to isolate, either during a fault or in the absence of a fault.
90	Automatic Outage(s) with Abnormal Clearing not covered by Event Type Numbers 60 through 62 above ⁶ .

Notes:

- 1) Event Type Numbers 05 to 49 are Events with Normal Clearing. These Event Type Numbers apply only when the Automatic Outages are the result of Protection Systems and controls disconnecting the elements that are expected to be automatically disconnected for a single event. Normal Clearing is defined in the NERC *Glossary of Terms Used in Reliability Standards*: “A protection system operates as designed and the fault is cleared in the time normally expected with proper functioning of the installed protection systems.”
- 2) TADS Event Type Number 06 corresponds to the TPL Standard (Table 1 Draft #4) event Category P2, item 3 & 4, footnote 8. Footnote 8 reads as follows; “An internal breaker fault means a breaker failing internally, thus creating a system fault which must be cleared by protection on both sides of the breaker.”
- 3) The TPL multi-circuit structure contingency (Table 1 Draft #4 category P7) excludes circuits that share common structures for one mile or less and applies only to application of the TPL Standard. That one mile exclusion does not apply to reporting events in TADS. As stated in the TADS definition of Multi-Circuit Structure Mile “. . . If a line section contains two or more Multi-Circuit Structures which form one or more multi-circuit spans, the total span length can be measured and the associated mileage should be reported in the ‘Multi-Circuit Structure Mile’ total inventory. If multiple circuits are connected to only one common structure, that structure should be ignored for outage and inventory mileage purposes.”
- 4) Event Type Number 49 also includes Automatic Outage(s) initiated by normal operation of a Special Protection System (SPS) or Remedial Action Scheme (RAS). SPS (a.k.a. RAS) are defined in the NERC Glossary of Terms. For convenience this SPS definition has also been added to TADS Appendix 7 Definitions, Section B item 19.
- 5) Event Type Numbers 60 to 90 are Events with Abnormal Clearing. These Event Type Numbers apply when Normal Clearing (see Note 1) does not occur for any one or more Automatic Outage associated with the Event.
- 6) Event Type Number 90 also includes Automatic Outage(s) initiated by abnormal operation of a Special Protection System (SPS) or Remedial Action Scheme (RAS).

Event Type Mapping

Current Event Type Numbers	Proposed Event Type Numbers
10	11
20	11
30	31
40	31
50	Two separate categories: Normal Clearing – 05, 06, 13, and 49; Abnormal Clearing - 60, 61, 62 and 90

APPENDIX A

Request for Public Comment on the Transmission Availability Data System (TADS) Proposed Revision to the TADS Event Type Data Collection

July 7, 2010

TO: TRANSMISSION OWNERS
INDUSTRY STAKEHOLDERS

**RE: Request for Public Comment on the Transmission Availability Data System (TADS)
Proposed Revision to the TADS Event Type Data Collection**

Ladies and Gentlemen:

The North American Electric Reliability Corporation (NERC) requests public comment by **12:00 Noon EDT, August 23, 2010** on its proposed revision to the TADS *Event Type Number* data definitions and associated portions of the *TADS Data Instruction Manual*. This request only applies to Automatic Outages. Comments must be submitted in a Word document to tadscments@nerc.net.

In accordance with Section 1600 of the NERC Rules of Procedure,¹ NERC may request data or information that is deemed necessary to meet its obligations under Section 215 of the Federal Power Act, as authorized by Section 39.2(d) of the Federal Energy Regulatory Commission's (FERC) regulations. This is a proposal for such a request. Section 1600 requires NERC to provide the proposed data request to FERC's Office of Electric Reliability at least twenty-one days prior to posting the data request for public comment. NERC provided this proposed data request to FERC on June 15, 2010. Accordingly, NERC is hereby posting this proposed data request for public comment. After consideration of comments received, NERC will present this proposed data request to the NERC Board of Trustees for approval, as required by Section 1602 of the NERC Rules of Procedure. Upon NERC Board of Trustees' approval, this data request will become mandatory.

The TADS effort began with the establishment of the Transmission Availability Data System Task Force (TADSTF) under the NERC Planning Committee in October 2006. On October 27, 2007, the NERC Board of Trustees approved the collection of TADS Phase I data beginning in calendar year 2008. On October 29, 2008, the NERC Board of Trustees approved the collection of Non-Automatic Outage data beginning in calendar year 2010 (Phase II).²

¹ NERC's Rules of Procedure are available at: <http://www.nerc.com/page.php?cid=1|8|169>.

² Two reports, available at <http://www.nerc.com/page.php?cid=4|62>, describe the TADs Phase 1 and Phase 11 data collection efforts.

The proposed *Event Type Number* data definitions (Appendix 7 dated May 10, 2010, Section B.15 to B.22), which are part of the draft *TADS Data Instruction Manual* (dated May 10, 2010), were endorsed by NERC's Planning Committee on June 15, 2010. The associated changes are highlighted in yellow. See Appendix 7 – Section B from definition “15. Normal Clearing” to “22. Event Type Number” and Data Reporting Instruction Manual Section 5 (Form 5). These documents dated May 10, 2010 may be downloaded at <http://www.nerc.com/filez/tadswg.html> and comments are requested on both draft documents.

- During review of the TADS 2008 Automatic Outage statistics, TADSWG found the existing TADS five event types to be inadequate. The available TADS information for *Event Type Number* 50 – “Other” outages does not present a clear picture of event types within “Other”. Therefore the TADS Working Group voted to revise the *Event Type Number* categories to provide additional clarity.
- This proposal requests that beginning January 1, 2012 Transmission Owners (TOs) utilize the new TADS *Event Type Numbers* when coding Events in TADS based on the proposed definitions. This is a revised TADS data request, not a Reliability Standard, and therefore, this request for public comment is pursuant to Section 1600 – Requests for Data or Information of NERC's *Rules of Procedures*. The information required for a data request is defined in Section 1602.1.1 and is provided in Section A of this document.

Summary of TADS Statistics Regarding Event Types

Both the 2008 NERC-wide statistical report called; *NERC – Updated 2008 Report* dated June 14, 2010 and the *NERC– 2009 Report* can be found at <http://www.nerc.com/filez/tadswg.html>. The event type statistics described below are based on Table NERC 2-3 which can be found in both of the above reports. This table summarizes the Events (Form 5 data), and associated Outages (Form 4.x data) which were reported for each *Event Type Number*.

Existing TADS Event Types

The existing five *Event Type Numbers* are summarized below;

- *Event Type Number* 10 is an Automatic Outage of an AC Circuit or Transformer with Normal Clearing.
- *Event Type Number* 20 is an Automatic Outage of a DC Circuit (single pole) with Normal Clearing.
- *Event Type Number* 30 is an Automatic Outage of two adjacent AC Circuits on common structures with Normal Clearing.
- *Event Type Number* 40 is an Automatic Outage of two adjacent DC Circuits (both poles) on common structures with Normal Clearing.
- *Event Type Number* 50 is “Other”. All other Events which do not qualify as *Event Type Number* 10 to 40 are reported as “Other”. *Event Type Number* 50 is a mixture of other Normal Clearing and abnormal clearing Events.

Event Type Number 50 Examples:

1. Abnormal delayed clearing of a single circuit.
2. Normal Clearing of two or more Automatic Outages resulting from as designed substation circuit breaker topology; such as a 230kV bus outage or outage of a 500kV line and a 500/230kV transformer which is tapped on the 500kV line side of a substation circuit breaker.
3. Delayed clearing of one or more circuits due to a stuck circuit breaker.
4. Multiple Automatic Outages due to a major disturbance (blackout).

For example, in the *NERC – Updated 2008 Report* on page NERC-16, Table NERC 2-3, out of the 5,101 Outages of TADS reportable AC and DC elements 1,335 Outages (26%) were associated with *Event Type Number 50 - “Other”*. In other words, on a NERC-wide average basis, three out of four outages were associated with Normal Clearing *Event Type Numbers 10 to 40*. One out of four outages (26%) were associated with *Event Type Number 50 – “Other”*. In addition, on a statistical basis that 26% one year average varies among the NERC Regions from approximately 15% to 40%. Such variability reinforces the need to have a number of years of data before meaningful long term averages for NERC and each Region can be identified.

The available TADS information for event type “Other” outages does not present a clear picture of *Event Types* within “Other.” Therefore, the TADSWG has proposed a revision to the *Event Type Numbers* to provide additional clarity.

Attachment #1 to this document describes the proposed TADS *Event Type Numbers*. These TADS event types are compatible with the event categories described in the current TPL Standards Table 1 and TPL draft #4. However, the implementation of this data request does not depend upon approval of the TPL draft #4 Standard.

A. Proposed *Event Type Number* Data Request Information

The italicized language is information that must accompany a data request.

1. *A description of the data or information to be requested, how the data or information will be used, and how the availability of the data or information is necessary for NERC to meet its obligations under applicable laws and agreements.*

Our response is provided in subparts. Capitalized terms are definitions that are contained in Appendix 7 of the TADS Data Instruction Manual.

- a. *A description of the data or information requested.*

Instead of the current five TADS *Event Type Numbers*, the ten proposed *Event Type Numbers* are shown on Attachment #1. These proposed *Event Type Numbers* are to be collected for Automatic Outage(s) for the transmission facilities listed below, beginning with data for the 2012 calendar year:

- AC Circuits ≥ 200 kV
- DC Circuits with $\geq +/-200$ kV DC voltage
- Transformers with ≥ 200 kV low-side voltage
- AC/DC Back-to-Back Converters with ≥ 200 kV AC voltage, both sides

A detailed description and definitions of the *Event Type Number* data that is being requested is described in draft Section 5, Appendix 5 (Form 5), and Appendix 7 of the TADS Data Instruction Manual. The draft manual including a separate file for Appendix 7 TADS Definitions can be found at the link <http://www.nerc.com/filez/tadswg.html> and are dated May 10, 2010.

b. *How the data or information will be used.*

NERC will use the information to develop statistics regarding the TADS events which occur on the transmission system. The TADS Phase I report *Transmission Availability Data System Revised Final Report* dated September 26, 2007, which may be downloaded at <http://www.nerc.com/filez/tadstf.html>, discusses the intended uses of the data. A portion of Section 2.6 is provided below:

“ . . . We believe that the greatest use of TADS data will be for outage cause analysis and outage Event analysis. Event analysis will aid in the determination of credible contingencies and will result in better understanding, and this understanding should be used to improve planning and operations. Ultimately, these improvements should result in improved transmission system performance. In addition, trending each Regional Entity’s performance against its own history will show how that region’s performance is changing over time. It will take a number of years of data collection (five years was suggested by several commenters) before the data can be useful for trend analysis. A through-time comparison is appropriate for evaluating a region’s performance. . . .”

c. *How the availability of the data or information is necessary for NERC to meet its obligations under applicable laws and agreements.*

As stated in TADS Phase I Report, Section 2.6, “Since becoming the Electric Reliability Organization, NERC has taken on the role of being an independent source of reliability performance information, thereby fulfilling one of the recommendations in the April 2004 U.S.-Canada Power System Outage Task Force Report on the August 14, 2003 blackout. . . .” Also, pursuant to Section 215 of the Federal Power Act, NERC develops Reliability Standards. Whether a new standard is needed or whether an existing standard needs to be modified, sound data is needed. While the vast majority of Automatic Outages will probably be categorized as *Event Type Number* 11 – “Single Automatic Outage resulting in a single Element outage”, other Events do occur, and approximately 25% of the Events are currently lumped into *Event Type Number* 50 – Other. A better understanding of actual event information could allow for improved system analysis by bridging gaps between the operating environment and planning assumptions and may, therefore, influence the development of future standards. For example, Transmission Planners could compare historical transmission outage Events to their own system performance expectations and assumptions.

Section 215(g) of the Federal Power Act, requires NERC to make periodic assessments on the reliability of the bulk power system in North America. We view TADS *Event Type Number* data as part of the information needed in meeting this obligation.

2. *A description of how the data or information will be collected and validated.*

The data collection and validation process is described in Section 5.2 of the TADS Phase I Report. The event type information will be collected following the same process as other TADS data collection and validation. Data will be entered by TOs into the TADS software system. After software checks for errors, data will be further validated by the Regional Entities and finally by NERC as described in Section 5.3.2 of the Phase I Report.

In addition, Section 5.1 of the Phase II Report permits NERC to review the data and conduct data validation reviews of *all* TADS data submissions with the submitting TOs. To the extent that a review indicates systematic data entry errors, data entries for previous years may need to be revised.

3. *A description of the entities that will be required to provide the data or information (“reporting entities”).*

The submission of Phase I TADS data is mandatory for all U.S. Transmission Owners who are on the NERC Compliance Registry. Non-U.S. Transmission Owners who are also NERC members are required to comply with NERC’s *Rules of Procedure*, and because the proposed Event type data is being requested in accordance with Section 1600, non-U.S. Transmission Owners as NERC members are to provide the revised TADS *Event Type Number* data.³

4. *The schedule or due date for the data or information.*

For calendar year 2012 Automatic Outages, the proposed revised *Event Type Number* data must be submitted by March 1, 2013. During the remainder of 2010 and 2011, Transmission Owner (TO) internal business system protocols will need to be revised to collect the revised *Event Type Number* data beginning January 1, 2012.

5. *A description of any restrictions on disseminating the data or information (e.g., “confidential,” “critical energy infrastructure information,” “aggregating” or “identity masking”).*

The treatment of confidential information for *Event Type Number* information is the same as Phase I TADS. NERC’s treatment of confidential information is governed by Section 1500 of NERC’s *Rules of Procedures*. TADS public reports will not inadvertently release confidential information by the display of regional or NERC information from which a Transmission Owner’s confidential information could be ascertained. For example, if the Transmission Owner in a region is the only owner of assets in a particular Voltage Class, the metrics on that data would not be released if the Transmission Owner’s name and its confidential information could be identified. Section 2.4.7 of the Phase I Report addresses data confidentiality, while Section 5.4 addresses data access policies.

³ Phase I was approved by the NERC Board of Trustees prior to the addition of Section 1600 to the *Rules of Procedure*. Because NERC’s Phase I TADS approval relied upon Section 39.2(d) of the Federal Energy Regulatory Commission’s regulations, 18 C.F.R. § 39.2(d), it is mandatory on all U.S. Transmission Owners. However, most non-U.S. Transmission Owners have indicated that they will voluntarily comply with Phase I.

6. *An estimate of the relative burden imposed on the reporting entities to accommodate the data or information request.*

Based on 2008 and 2009 NERC-wide historical data, it is anticipated that the vast majority of Automatic Outages (approximately 65-70%) will be a simple *Automatic Outage of a Single Element* with Normal Clearing. In addition, approximately 5% of the outages are multi-circuit structure Automatic Outages based on this recent history. The analysis burden for these *Event Type Numbers* will not change. These types of events have been analyzed and reported in 2008 and 2009. Therefore, no additional resources will be necessary to determine the *Event Type Numbers* for 70-75% of the outages.

The TADS Data Instruction Manual, Section B, contains guidelines on *Event Type Number* determination. This analysis guideline clarifies the step-by-step process to separate the TADS events into the ten proposed *Event Type Numbers*. The guideline contains a sample of logical questions and answers to quickly determine the appropriate *Event Type Number*. Several examples are included in this instruction manual. While not all possible situations could be covered, the examples are complete enough to illustrate *Event Type Number* determination. A pilot test of the proposed event types was conducted among the members of the TADSWG. In general, there was no difficulty in understanding the new codes and descriptions. After the pilot test, several clarifications were added to the instruction manual.

Therefore, the implementation of the ten *Event Type Numbers* (instead of the current five *Event Type Numbers*) should not add a significant reporting burden. However, it will require the TOs to collect sufficient internal TO information, so the Transmission Owner can separate the current five event types into the ten event types as specified in the TADS Data Instruction Manual.

B. Comment Questions

While commenters are not restricted in the format of their comments, we would appreciate your answers to the following questions:

1. *If you are a Transmission Owner, do you currently collect event type transmission outage data similar to the proposed event type data? If “yes,” please explain.*
2. *Is the data being requested reasonable and obtainable? See Section 5, Appendix 5 (Form 5) and Appendix 7 Event Type Number definitions contained in the draft Data Instruction Manual. If “no,” please explain.*
3. *Are the proposed TADS Event Type Numbers appropriate? If “no,” please explain.*

4. *Is the implementation schedule for the proposed Event Type Number data for 2012 reasonable? If “no,” please explain.*
5. *Are there ambiguities in the draft Data Instruction Manual that need clarification? If “yes,” please explain.*

Comments are due on August 23, 2010 by 12 Noon EDT, and must be submitted in a Word document to tadscomments@nerc.net. If you have any questions, please contact Jim Robinson at (610) 841-3362 or by e-mail at Jim.Robinson@nerc.net.

Sincerely,



Mark Lauby
Director of Reliability Assessment & Performance Analysis

ATTACHMENT #1 -- Proposed TADS Event Type Numbers

Five Current Event Type Numbers

Event Type Number	Description
10	Automatic Outage of an AC Circuit or Transformer with Normal Clearing.
20	Automatic Outage of a DC Circuit with Normal Clearing.
30	Automatic Outage of two ADJACENT AC Circuits on common structures with Normal Clearing.
40	Automatic Outage of two ADJACENT DC Circuits on common structures with Normal Clearing.
50	Other

Ten Proposed Event Type Numbers

<u>Events with Normal Clearing¹</u>	
Event Type Number	Description
05	Single bus section fault or failure (200kV or above) resulting in one or more Automatic Outages.
06	Single internal circuit breaker fault (200kV or above) resulting in one or more Automatic Outages ² .
11	Automatic Outage of a single Element.
13	Automatic Outage of two or more Elements within one Normal Clearing Circuit Breaker Set (NCCBS).
31	Automatic Outages of two or more TADS adjacent AC Circuits or DC Circuits on common structures. To qualify as Event Type Number 31, the Automatic Outages must be the direct result of the circuits occupying common structures ³ .
49	Automatic Outage(s) with Normal Clearing not covered by Event Type Numbers 05 through 31 above ⁴ .

<u>Events with Abnormal Clearing⁵</u>	
Event Type Number	Description
60	Breaker Failure: One or more Automatic Outages with Delayed Fault Clearing due to a 200kV and above circuit breaker being stuck, slow to open or failure to interrupt current.
61	Dependability (failure to operate): One or more Automatic Outages with Delayed Fault Clearing due to failure of a single Protection System (primary or secondary backup) under either of these conditions: failure to initiate the isolation of a faulted power system Element as designed, or within its designed operating time, or In the absence of a fault, failure to operate as intended within its designed operating time. (Item b is a very rare type of event.)
62	Security (unintended operation): One or more Automatic Outages caused by improper operation (e.g. overtrip) of a Protection System resulting in isolating one or more TADS Elements it is not intended to isolate, either during a fault or in the absence of a fault.
90	Automatic Outage(s) with Abnormal Clearing not covered by Event Type Numbers 60 through 62 above ⁶ .

Notes:

- 1) Event Type Numbers 05 to 49 are Events with Normal Clearing. These Event Type Numbers apply only when the Automatic Outages are the result of Protection Systems and controls disconnecting the elements that are expected to be automatically disconnected for a single event. Normal Clearing is defined in the NERC *Glossary of Terms Used in Reliability Standards*: “A protection system operates as designed and the fault is cleared in the time normally expected with proper functioning of the installed protection systems.”
- 2) TADS Event Type Number 06 corresponds to the TPL Standard (Table 1 Draft #4) event Category P2, item 3 & 4, footnote 8. Footnote 8 reads as follows; “An internal breaker fault means a breaker failing internally, thus creating a system fault which must be cleared by protection on both sides of the breaker.”
- 3) The TPL multi-circuit structure contingency (Table 1 Draft #4 category P7) excludes circuits that share common structures for one mile or less and applies only to application of the TPL Standard. That one mile exclusion does not apply to reporting events in TADS. As stated in the TADS definition of Multi-Circuit Structure Mile “. . . If a line section contains two or more Multi-Circuit Structures which form one or more multi-circuit spans, the total span length can be measured and the associated mileage should be reported in the ‘Multi-Circuit Structure Mile’ total inventory. If multiple circuits are connected to only one common structure, that structure should be ignored for outage and inventory mileage purposes.”
- 4) Event Type Number 49 also includes Automatic Outage(s) initiated by normal operation of a Special Protection System (SPS) or Remedial Action Scheme (RAS). SPS (a.k.a. RAS) are defined in the NERC Glossary of Terms. For convenience this SPS definition has also been added to TADS Appendix 7 Definitions, Section B item 19.
- 5) Event Type Numbers 60 to 90 are Events with Abnormal Clearing. These Event Type Numbers apply when Normal Clearing (see Note 1) does not occur for any one or more Automatic Outage associated with the Event.
- 6) Event Type Number 90 also includes Automatic Outage(s) initiated by abnormal operation of a Special Protection System (SPS) or Remedial Action Scheme (RAS).

Event Type Mapping

Current Event Type Numbers	Proposed Event Type Numbers
10	11
20	11
30	31
40	31
50	Two separate categories: Normal Clearing – 05, 06, 13, and 49; Abnormal Clearing - 60, 61, 62 and 90

Rev. 5/10/2010

APPENDIX B

TADSWG Response to Comments on Proposed Revision to TADS Event Type Data Collection

APPENDIX B - TADSWG Response to Comments on Proposed Revision to TADS Event Type Data Collection

Transmission Availability Data System Working Group (TADSWG) Response to Comments on the Proposed Revision to the TADS Event Type Data Collection

On July 7, 2010 NERC sent a letter (see Appendix A) to Transmission Owners and Industry stake holders requesting Public Comments by August 23, 2010 on the Proposed Revision to the TADS Event Type Number definitions and data collection. The stakeholders were asked to provide feedback and answer five questions. NERC thanks all commenters who submitted feedback and comments. There were 15 sets of comments, including comments from more than 47 different individuals from over 30 companies.

On NERC's behalf, the TADSWG has reviewed all the responses and has included its response to those comments in this document.

Index

to this document is noted below;

Section 1 Questions

The list of Questions is noted below. See Section 1 on next page for Comments and Responses

- 1. If you are a Transmission Owner, do you currently collect event type transmission outage data similar to the proposed event type data? If "yes," please explain.**
- 2. Is the data being requested reasonable and obtainable? See Section 5, Appendix 5 (Form 5) and Appendix 7 Event Type Number definitions contained in the draft Data Instruction Manual. If "no," please explain.**
- 3. Are the proposed TADS Event Type Numbers appropriate? If "no," please explain.**
- 4. Is the implementation schedule for the proposed Event Type Number data for 2012 reasonable? If "no," please explain.**
- 5. Are there ambiguities in the draft Data Instruction Manual that need clarification? If "yes," please explain.**

Section 2 Summary of Yes/No Responses

See **Table 1** in Section 2 of this document.

Section 3 Responses Submitted - Organization Names

See **Table 2** list of organization names and affiliated Region in Section 3 of this document.

APPENDIX B - TADSWG Response to Comments on Proposed Revision to TADS Event Type Data Collection

Section 1 - Questions, Comments and Responses

1. If you are a Transmission Owner, do you currently collect event type transmission outage data similar to the proposed event type data? If “yes,” please explain.

TADSWG Summary Consideration:

After careful consideration of all the comments received, TADSWG acknowledges that the majority of responding Transmission Owners (TOs) do collect data at this level of granularity in their outage reporting systems.

It is recognized that outage information may not be currently collected and categorized in a manner similar to the proposed Event Type Number categories. Some additional effort will be necessary to analyze, categorize and report to TADS one of the ten proposed Event Type Numbers.

Organization	Yes or No	Question 1 Comment
Allegheny Power	No	
Response: The TADSWG thanks you for your comment.		
Arizona Public Service Company	Yes	<p>a) Under the “root causes” for outages on the transmission lines, APS (Outage Information System Database - OIS) has a category called “substation related” --- which has a category called “equipment failure – APS”, which lists such equipment as bus, circuit breaker, relay, etc. This will provide outage data for the new NERC event type numbers 05, 06, 13, 60 and 61.</p> <p>b) Under the “root causes” for outages on the transmission lines, APS (Outage Information System Database - OIS) has a category called “substation related” --- which has a category called “human element – incorrect protection settings”. This will provide outage data for the new NERC event type number 62</p>

APPENDIX B - TADSWG Response to Comments on Proposed Revision to TADS Event Type Data Collection

Organization	Yes or No	Question 1 Comment
		c) New event type numbers 11 and 31 are the old event type numbers 10, 20 and 30, 40. Similarly, new event numbers 49 and 90 is the old type number 50.
Response: The TADSWG thanks you for your comment.		
Bonneville Power Administration	Yes	Bonneville Power Administration has no formal comments, the request is reasonable and can be implemented according to the proposed schedule.
Response: The TADSWG thanks you for your comment.		
CenterPoint Energy	Yes	CenterPoint Energy currently collects similar information in its outage database in several text fields that characterize the type of event.
Response: The TADSWG thanks you for your comment.		
Commonwealth Edison Company	Yes	Every Automatic Operation is analyzed to determine if the device operated normally or abnormally. Additionally, each outage is categorized by a cause code, which would include events that were initiated by a breaker failure operation, bus fault, and/or system protection failure to operate or an unintended operation.
Response: The TADSWG thanks you for your comment.		
Dominion	Yes	Yes, we presently collect similar data. Some features of our collection is automated. However, using the new Event Types will require more manual manipulation of the data in order to be consistent and to insure that events are categorized appropriately.
Response: The TADSWG thanks you for your comment. Please see the above TADSWG Summary to Question 1.		
Duke Energy	No	
Response: The TADSWG thanks you for your comment.		
National Grid	Yes	We collate detailed information on operation of all TADS Elements and other key assets.

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Organization	Yes or No	Question 1 Comment
Response: The TADSWG thanks you for your comment.		
Oncor Electric Delivery	Yes	Our outage data consists of outage causes for all of our line outages, automatic and nonautomatic outage types. Our System Protection group tracks all abnormal clearing events due to breaker failures, failure to operate and unintended operations on our transmission system.
Response: The TADSWG thanks you for your comment.		
PECO Energy	Yes	Every Automatic Operation is analyzed to determine if the device operated normally or abnormally. Additionally, each outage is categorized by a cause code, which would include events that were initiated by a breaker failure operation, bus fault, and/or system protection failure to operate or an unintended operation.
Response: The TADSWG thanks you for your comment.		
PPL Electric Utilities	Yes	We do collect similar data; however it is not currently in an easily accessible format.
Response: The TADSWG thanks you for your comment.		
SERC Operating Committee (OC) Standards Review Group	Yes	Most Transmission Owners in the SERC region collect data at this level of granularity in their standard outage reporting systems. Some manual intervention, along with the entry of additional data, will be required to categorize this data according to the new scheme.
Response: The TADSWG thanks you for your comment. Please see the above TADSWG Summary to Question 1.		
South Texas Electric Cooperative	No	
Response: The TADSWG thanks you for your comment.		
Tennessee Valley Authority (TVA)	Yes	TVA collects three Event Types applicable to pure AC Elements as defined in the Transmission Availability Data System Revised Final Report dated September 26, 2007. These three Event Types are similar to the proposed Event Types, but there are an additional eight Event Types included in the proposal. The additional eight Event Type codes increases the number of reporting options by 266% and the associated burden of collecting, analyzing,

APPENDIX B - TADSWG Response to Comments on Proposed Revision to TADS Event Type Data Collection

Organization	Yes or No	Question 1 Comment
		and reporting Event Types will increase.
Response: The TADSWG thanks you for your comment. Please see the above TADSWG Summary to Question 1		
Western Area Power Administration	No	Automatic outages are analyzed but the data is not currently collected and categorized in a similar manner as the proposed event type data.
Response: The TADSWG thanks you for your comment. Please see the above TADSWG Summary to Question 1.		

APPENDIX B - TADSWG Response to Comments on Proposed Revision to TADS Event Type Data Collection

2. Is the data being requested reasonable and obtainable? See Section 5, Appendix 5 (Form 5) and Appendix 7 Event Type Number definitions contained in the draft Data Instruction Manual. If "no," please explain.

TADSWG Summary Consideration:

After careful consideration of all comments, TADSWG has concluded that the data being requested is reasonable and obtainable.

The data that is currently collected may not be categorized in exactly the same manner to the proposed Event Type Number categories, with the current five Event Type Number categories increasing to a total of ten Event Type Number categories. However, two of the ten proposed categories are very similar to four of the five existing categories, with four of the existing categories to be consolidated into two categories. The fifth existing category is Event Type# 50 – Other. Approximately one fourth of the automatic outages reported in 2008 and 2009 were reported as Event Type# 50 - Other. Although the proposed Event Type Numbers increase the number of category choices, in general the Transmission Owner supporting information needed to analyze and re-categorize the outages is currently available in their existing manual or automated TO business systems. However, the information may not be centralized within the TO for analysis and determination of a TADS Event Type Number category.

In 2008, 25% of outages within NERC were identified as Event Type #50 and in 2009, 26% were so identified. For these two years, on average 1,208 outages per year were Event Type# 50. There are approximately 192 registered Transmission Owners with 200 kV and above circuits. On average each Transmission Owner will need to review and re-categorize 6.3 outages per year from Type# 50 to one of the proposed new Event Type Numbers. On a NERC wide basis the additional analysis to re-categorize one fourth of the automatic outages and choose one of the proposed Event Type Number categories will not create an unreasonable burden on the Transmission Owners.

During 2008 and 2009 TADS, approximately 75% of the TADS outages were single Element AC or DC outages with Normal Clearing (70% average of 2008 & 2009) or multi-circuit structure related circuit outages (4.6%). The analysis burden for these simple Events (75% of outages) will not change. The Event Type# 50 category will continue to be used during Calendar Year 2010 and 2011 outage data collection. The proposed categories will not go into effect until January 1, 2012.

APPENDIX B - TADSWG Response to Comments on Proposed Revision to TADS Event Type Data Collection

Classifying outages as Event Type# 50 beyond 2011 would be a waste of TO, Regional, and NERC resources. As stated in the original TADS Phase I report . . . “we believe that the greatest use of TADS data will be for outage cause analysis and outage Event analysis”. If we delay changing the proposed Event Type Numbers for several more years, approximately one fourth of the TADS Event characteristics will continue to be unidentified on a NERC wide basis. As expected three quarters of the outages were simple Events with very little new information. However for one quarter of the outages, the proposed Event Type Number categories will aid in the determination of credible contingencies and will result in a better NERC wide understanding of the “Other” Events. This NERC wide understanding by all users and operators of the bulk electric system should be available to improve planning and operations which will result in improved bulk electric system performance.

After January 1, 2012 implementation of the proposal and several years of subsequent data collection, trending each Regional Entity’s performance against its own history will show how that region’s underlying performance is changing over time. It will take a number of years of data using the proposed Event Type Number categories before the data can be useful for Regional trend analysis. As noted above on a NERC 2008-2009 average basis, 25% of the outages are associated with Event Type Number 50 – “Other”. On a statistical basis that average varies among the NERC Regions from approximately 15% to 40%. Such variations indicate the need to have a number of years of data before meaningful long term averages for each Region can be identified. A through-time comparison (approximately five years was suggested by several commenters) is appropriate for evaluating a region’s performance.

The increased granularity of the data can be used in evaluating any need for developing new NERC standards or modifying existing NERC standards. A better NERC wide understanding of actual events could allow for improved system analysis by bridging gaps between the operating environment and planning assumptions and may, therefore, influence the development of future standards.

Organization	Yes or No	Question 2 Comment
Allegheny Power	Yes	
Response: The TADSWG thanks you for your comment.		

APPENDIX B - TADSWG Response to Comments on Proposed Revision to TADS Event Type Data Collection

Organization	Yes or No	Question 2 Comment
Arizona Public Service Company	Yes	
Response: The TADSWG thanks you for your comment.		
Bonneville Power Administration	Yes	Bonneville Power Administration has no formal comments, the request is reasonable and can be implemented according to the proposed schedule.
Response: The TADSWG thanks you for your comment.		
CenterPoint Energy	Yes	CenterPoint Energy's current outage data collection process includes the necessary information to map to the proposed Event Type Numbers.
Response: The TADSWG thanks you for your comment.		
Commonwealth Edison Company	Yes	The data being requested is reasonable and obtainable.
Response: The TADSWG thanks you for your comment.		
Dominion	No	The purpose of the Transmission Availability Data System Working Group (TADSWG) was to "implement a uniform approach to reporting and measuring transmission availability, performance and other related reliability data." The existing Event Types have only been collected since beginning 2008. From a reasonability standpoint, there should be a stated benefit for changing at this time and the value that is achieved by making this change. More data is not always better and increased granularity could lead to misinterpretation or improper classification. When a data collection system is first implemented, there should be a period of time that is established before changes are introduced (ie 5 years). The data collection is obtainable but the cost of retrieving data could be significant and will vary depending on the size of utility and number of elements. Experience has shown that whenever system data requirements increase, the demand on the workforce and tools to maintain the data increase.
Response: The TADSWG thanks you for your comment. Please see the above TADSWG Summary to Question 2.		
Duke Energy	Yes	Yes, but individual research on each outage will be required.

APPENDIX B - TADSWG Response to Comments on Proposed Revision to TADS Event Type Data Collection

Organization	Yes or No	Question 2 Comment
<p>Response: The TADSWG thanks you for your comment. Please see the above TADSWG Summary to Question 2.</p>		
National Grid	Yes	For our systems the data is reasonable and obtainable.
<p>Response: The TADSWG thanks you for your comment.</p>		
Oncor Electric Delivery	Yes	
<p>Response: The TADSWG thanks you for your comment.</p>		
PECO Energy	Yes	The data being requested is reasonable and obtainable.
<p>Response: The TADSWG thanks you for your comment.</p>		
PPL Electric Utilities	Yes	
<p>Response: The TADSWG thanks you for your comment.</p>		
SERC Operating Committee (OC) Standards Review Group	No	Although the data is obtainable, the benefits of collecting this data have not been specifically stated. Until the value of the data is proven, the electric utility industry should not be required to collect and report the data. In addition, the cost of retrieving this data may be quite significant, varies among utilities and may border on unreasonableness. The burden of collecting this data may be excessive for smaller entities. The SERC OC Standards Review Group would be concerned about the significant increase in volume if the collection level should drop to below 200 kV.
<p>Response: The TADSWG thanks you for your comment. Please see the above TADSWG Summary for Question 2. In addition, regarding the issue of data collection below 200 kV, see below for the TADSWG ongoing position on this matter.</p> <p>As outlined in the request for comment letter (Appendix A above, Section A.1.a) a description of the proposed Event Type Number data request is noted below:</p> <p>“ . . . These proposed Event Type Numbers are to be collected for Automatic Outage(s) for the transmission facilities listed below, beginning with data for the 2012 calendar year:</p>		

APPENDIX B - TADSWG Response to Comments on Proposed Revision to TADS Event Type Data Collection

Organization	Yes or No	Question 2 Comment
<ul style="list-style-type: none"> • AC Circuits \geq 200 kV • DC Circuits with \geq +/-200 kV DC voltage • Transformers with \geq 200 kV low-side voltage • AC/DC Back-to-Back Converters with \geq 200 kV AC voltage, both sides” <p>The proposed Event Type Number data collection (TADS Form 5) does not include Automatic Outages below 200 kV. Even if the bulk electric system definition is changed to be uniform within all Regions at the 100 kV and above level, TADSWG has not recommended individual outage data collection for 100-199 kV facility outages. Since these facilities have significantly different characteristics than 200 kV and above facilities, TADSWG has not reached any conclusions regarding the applicability of Form 4 (Automatic Outage), Form 5 (Event Type Number), or Form 6 (Non-Automatic Outage) data collection. It is premature to conclude the outcome of such deliberations. As stated in the TADSWG request for comments (Appendix A, Section A.1.a above), the proposed Event Type Number data collection (TADS Form 5) is only applicable to 200 kV and above facilities.</p>		
South Texas Electric Cooperative	Yes	
<p>Response: The TADSWG thanks you for your comment.</p>		
Tennessee Valley Authority (TVA)	No	<p>The requested data is obtainable, as is most data, but at a cost of additional resources. The required resources include, but are not limited to additional personnel, time, and the cost of IT support. In light of limited resources, the value of the data collected in the proposed Event Types does not justify the additional expense.</p> <p>The requested data is not reasonable. The benefits of collecting the requested data have not been stated. The Request for Comment Letter states in Section A.1.c “a better understanding of actual event information could allow for improved system analysis...” (emphasis added). Rather than demonstrate how the data will improve system analysis, the Request for Comments Letter attempts to demonstrate “how the data or information will be used” by restating a generic paragraph from the original TADS Final Report which is insufficient justification. Detailed explanations and illustrations should be given proving how the proposed Event Type Codes will benefit the electric utility industry and its customers. The benefit to the customer should be explicitly stated as it is the customers who will ultimately be paying for the additional data.</p> <p>The requested data is not reasonable or justifiable when the potential of expanding the TADS reporting criteria to Elements with a voltage greater than or equal to 100-kV is considered. In this scenario, the amount of additional resources required will be significantly higher to satisfy a request for data which has no proven</p>

APPENDIX B - TADSWG Response to Comments on Proposed Revision to TADS Event Type Data Collection

Organization	Yes or No	Question 2 Comment
		benefit. Currently, there is little proven benefit associated with the known cost required to implement and report the proposed Event Types at either the 200-kV voltage level or the potential 100-kV voltage level.
Response: The TADSWG thanks you for your comment. Please see the above TADSWG Summary to Question 2 and above response to SERC Operating Committee (OC) Standards Review Group.		
Western Area Power Administration	Yes	However, it's still going to take time and resources to analyze events and determine what the correct event type number should be.
Response: The TADSWG thanks you for your comment. Please see the above TADSWG Summary to Question 2.		

APPENDIX B - TADSWG Response to Comments on Proposed Revision to TADS Event Type Data Collection

3. Are the proposed TADS Event Type Numbers appropriate? If “no,” please explain.

TADSWG Summary Consideration:

After careful consideration of all the comments below, TADSWG has concluded that the proposed TADS Event Type Numbers and associated definitions are appropriate.

Please see the TADSWG Summary to Question 2 above regarding how the data will be used and expected benefits.

Please see the TADSWG Summary to Question 4 below regarding training needs.

For the other Question 3 specific comments below, see the TADSWG response to each entity’s comments.

Organization	Yes or No	Question 3 Comment
Allegheny Power	Yes	
Response: The TADSWG thanks you for your comment.		
Arizona Public Service Company	Yes	
Response: The TADSWG thanks you for your comment.		
Bonneville Power Administration	Yes	Bonneville Power Administration has no formal comments, the request is reasonable and can be implemented according to the proposed schedule.
Response: The TADSWG thanks you for your comment.		
CenterPoint Energy	Yes	CenterPoint Energy participated in the TADSWG beta test of the proposed Event Type Numbers and found that it matched well to our existing event type data details and provided more granularity than the prior code “50” for “Other” events.

APPENDIX B - TADSWG Response to Comments on Proposed Revision to TADS Event Type Data Collection

Organization	Yes or No	Question 3 Comment
Response: The TADSWG thanks you for your comment.		
Commonwealth Edison Company	Yes	The proposed TADS Event Type Numbers are appropriate.
Response: The TADSWG thanks you for your comment.		
Dominion	No	For measuring availability and reliability, there is uncertainty as to whether this change has any impact on these measures. By increasing the event types, there may be inconsistency of how outages are recorded from one utility to the other. Subjectivity should be kept to a minimum and the Event Types need to be clearly defined for all users. Definitions may have to be modified but the proposed events are not unreasonable.
Response: The TADSWG thanks you for your comment. Please see the above TADSWG Summaries to Question 2 and 4.		
Duke Energy	Yes	The new NERC proposed event types are not inappropriate for the NERC to request.
Response: The TADSWG thanks you for your comment.		
National Grid	Nearly	The data is appropriate as far as it goes, but with data needs growing from other work within NERC, it may not be granular enough. As an example within the past few months both the RMWG and EAWG separately indicated that they had need for data on RAS/SPS operations. We believe that it would be easy and appropriate to identify new event codes for both proper and improper operations of such schemes and would recommend that they be added to the proposed Event Type Numbers.
Response: The TADSWG thanks you for your comment. Please see the above TADSWG Summary to Question 2 and 4. TADSWG has decided not to include RAS/SPS as an event type. However, TADSWG will place this issue on a future TADSWG Agenda to consider adding RAS/SPS as one of the choices for "Outage Initiation Code" for data entry on Form 4. Currently the five "Outage Initiation Code" choices are; "Element-Initiated", or "Other Element-Initiated", or "AC Substation-Initiated", or "AC/DC Terminal-Initiated", or "Other Facility-Initiated". Consideration will be given to adding a sixth code called "RAS/SPS-Initiated".		
Oncor Electric Delivery	Yes	
Response: The TADSWG thanks you for your comment.		

APPENDIX B - TADSWG Response to Comments on Proposed Revision to TADS Event Type Data Collection

Organization	Yes or No	Question 3 Comment
PECO Energy	Yes	The proposed TADS Event Type Numbers are appropriate.
Response: The TADSWG thanks you for your comment.		
PPL Electric Utilities	Yes	
Response: The TADSWG thanks you for your comment.		
SERC Operating Committee (OC) Standards Review Group	No	<p>The SERC SRG views this set of outage categories as reasonable. However, we are not at all certain the capture of this data could or would lead to an improvement in the reliability of the bulk electric system. SERC SRG is concerned that proper categorization at this new level of granularity will require subjective analyses that will produce inconsistent reporting across the continent, which necessarily reduces the ability to use the outage data and associated metrics to accurately gauge the performance of the bulk electric system.</p> <p>One obvious example of possible data inconsistency will be the reporting of outage data on a tie line by the two or more utilities involved. Although only one utility reports the outage, all utilities involved in the outage have to agree on the event type of the outage.</p>
<p>Response: The TADSWG thanks you for your comment. Please see the above TADSWG Summary to Question 2 and 4.</p> <p>Regarding tie lines, TADSWG agrees that possible data inconsistency may occur for on a tie line owned by the two or more utilities involved. TADSWG agrees that only one utility should report the outage (on Form 4) and Event Type Number (on Form 5). For that reason TADS created Form 2 to identify the cooperation needed among multiple owners. During normal analysis of a tie line outage, we would expect all utility owners involved in the outage to agree on the outage data (Form 4) and Event Type Number (Form 5). Such multi-owner analysis and agreement should be normal business practice for tie line Automatic Outages.</p>		
South Texas Electric Cooperative	Yes	
Response: The TADSWG thanks you for your comment.		
Tennessee Valley Authority (TVA)	No	<p>The proposed TADS Event Type Codes are not appropriate.</p> <p>A pilot study is mentioned, but the results are not published or shared with Transmission Owners unless the TO has a representative on the TADS Working Group. Both the pilot study and the results should be</p>

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Organization	Yes or No	Question 3 Comment																																												
		<p data-bbox="737 321 1829 347">published so TOs can draw their own conclusions concerning the validity of the data request.</p> <p data-bbox="737 367 1982 423">The anticipated year end distribution of the proposed Event Types within the total number of outages was calculated, and the results are shown in the table below.</p> <table border="1" data-bbox="743 444 1940 967"> <thead> <tr> <th data-bbox="743 444 1041 594">Proposed Event Type Number</th> <th data-bbox="1041 444 1346 594">Pilot Test Distribution of Event Type 50 Outages</th> <th data-bbox="1346 444 1644 594">Current Distribution of Event Type 50 within Total Outages</th> <th data-bbox="1644 444 1940 594">Anticipated Year End Distribution of Proposed Event Types within Total Outages</th> </tr> </thead> <tbody> <tr> <td data-bbox="743 594 1041 630">5</td> <td data-bbox="1041 594 1346 630">9%</td> <td data-bbox="1346 594 1644 630">26%</td> <td data-bbox="1644 594 1940 630">2.34%</td> </tr> <tr> <td data-bbox="743 630 1041 665">6</td> <td data-bbox="1041 630 1346 665">1%</td> <td data-bbox="1346 630 1644 665">26%</td> <td data-bbox="1644 630 1940 665">0.26%</td> </tr> <tr> <td data-bbox="743 665 1041 701">13</td> <td data-bbox="1041 665 1346 701">17%</td> <td data-bbox="1346 665 1644 701">26%</td> <td data-bbox="1644 665 1940 701">4.42%</td> </tr> <tr> <td data-bbox="743 701 1041 737">49</td> <td data-bbox="1041 701 1346 737">3%</td> <td data-bbox="1346 701 1644 737">26%</td> <td data-bbox="1644 701 1940 737">0.78%</td> </tr> <tr> <td data-bbox="743 737 1041 773">60</td> <td data-bbox="1041 737 1346 773">1%</td> <td data-bbox="1346 737 1644 773">26%</td> <td data-bbox="1644 737 1940 773">0.26%</td> </tr> <tr> <td data-bbox="743 773 1041 808">61</td> <td data-bbox="1041 773 1346 808">4%</td> <td data-bbox="1346 773 1644 808">26%</td> <td data-bbox="1644 773 1940 808">1.04%</td> </tr> <tr> <td data-bbox="743 808 1041 844">62</td> <td data-bbox="1041 808 1346 844">49%</td> <td data-bbox="1346 808 1644 844">26%</td> <td data-bbox="1644 808 1940 844">12.74%</td> </tr> <tr> <td data-bbox="743 844 1041 880">90</td> <td data-bbox="1041 844 1346 880">6%</td> <td data-bbox="1346 844 1644 880">26%</td> <td data-bbox="1644 844 1940 880">1.56%</td> </tr> <tr> <td data-bbox="743 880 1041 915">11</td> <td data-bbox="1041 880 1346 915">9%</td> <td data-bbox="1346 880 1644 915">26%</td> <td data-bbox="1644 880 1940 915">Existing</td> </tr> <tr> <td data-bbox="743 915 1041 967">31</td> <td data-bbox="1041 915 1346 967">0%</td> <td data-bbox="1346 915 1644 967">26%</td> <td data-bbox="1644 915 1940 967">Existing</td> </tr> </tbody> </table> <p data-bbox="737 989 2028 1230">The pilot study indicated that 9% of Event Type 50 events were not properly categorized and should have been reported as Event Type 10. This can be addressed by correcting or clarifying the existing definition of Event Type 10. The pilot study results show that most of the proposed Event Types would be underutilized. Six of the eight additional Event Types are anticipated to each have less than 2.5% of the total year end outages. Consequently, Event Types 5, 6, 49, 60, 61, and 90 do not have a sufficient percentage of events to be useful in data analysis. This indicates that the addition of only Event Type, 13, with an anticipated 4.42% of outages, and Event Type 62, with an anticipated 12.74%, may be sufficient to differentiate the current 26% of total outages classified as Type 50 events.</p> <p data-bbox="737 1252 2028 1367">A large set of Event Type options and underutilized Event Types lead to confusion and subsequent discrepancies in reported data that reduces the ability to use the outage data and metrics to accurately gauge the performance of the transmission system. Additional training between NERC and utilities and training within utilities will be needed to attempt reaching a standardized application of the proposed Event Types to</p>	Proposed Event Type Number	Pilot Test Distribution of Event Type 50 Outages	Current Distribution of Event Type 50 within Total Outages	Anticipated Year End Distribution of Proposed Event Types within Total Outages	5	9%	26%	2.34%	6	1%	26%	0.26%	13	17%	26%	4.42%	49	3%	26%	0.78%	60	1%	26%	0.26%	61	4%	26%	1.04%	62	49%	26%	12.74%	90	6%	26%	1.56%	11	9%	26%	Existing	31	0%	26%	Existing
Proposed Event Type Number	Pilot Test Distribution of Event Type 50 Outages	Current Distribution of Event Type 50 within Total Outages	Anticipated Year End Distribution of Proposed Event Types within Total Outages																																											
5	9%	26%	2.34%																																											
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49	3%	26%	0.78%																																											
60	1%	26%	0.26%																																											
61	4%	26%	1.04%																																											
62	49%	26%	12.74%																																											
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31	0%	26%	Existing																																											

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Organization	Yes or No	Question 3 Comment
		<p>specific events to limit data discrepancies. Additional resources are required to record, analyze, and check the additional information captured in the set of proposed Event Types. Coordinating the information associated with outages on inter-tie transmission line between the Reporting TO and other TOs will be more difficult and require more time with added Event Types. For a number of utilities, IT support is required to develop, implement, and test computer applications and databases used to collect transmission outage data.</p> <p>The “excessive” percentage of Event Type 50 outages could be corrected by adding the two Event Types (13 and 62) that are anticipated to have year-end percentages of Event Types Codes greater than 2.5%, correcting or clarifying the existing definitions of Event Types 10, 20, 30, 40, and leaving the existing Event Type 50 definition unaltered. Implementing these changes as an alternate approach would be simpler, easier and require fewer resources than the proposed approach. The alternate approach would result in an anticipated 6.24% of outages being classified as Event Type 50, and no one Event Type will have an “excessive” percentage of outages or be underutilized.</p> <p>Splitting the Event Type Codes into values that are less than 5% makes utility comparisons and trend analysis nearly impossible because the Event Types are defined too narrowly. Therefore, no useful conclusion or action plan can be built on the data because the values very small. Assume Region A reports 630 outages of which 0.25% are Event Type 60, and assume Region reports 510 outages of which 0.50% are Event Type 60[1]. In this case, Region A had ~ 1.6 Event Type 60 outages, and Region B had ~ 2.6 Event Type 60 outages. The difference is only one outage. Trending will not be meaningful on these types of values because the number of instances is representative of isolated occurrences rather than consistent performance.</p> <p>Section A.1.c in the Request for Comment letter states “Transmission Planners could compare historical transmission outage Events to their own system performance” as a reason the availability of the proposed Event Type data is necessary for NERC to meets its obligations. This is not an accurate statement. Assume the electric transmission industry reports 4300 outages of which 0.26%, or 11 outages, are due to Event Type 60 (breaker failure). Also assume a Transmission Planner from Utility C examines learns that 0.39% of Utility C outages are breaker failure outages. If Utility C reports 50 outages, then 0.39% would equal 0.195 outages. This case gives three illustrations of the problems associated with the minuscule amounts of data associated with most of the proposed Event Types.</p> <ol style="list-style-type: none"> 1) Even though Utility C has a rate of Event Type 60 outages that is 50% higher than the industry average, it cannot be stated that Utility C has a serious problem with breaker failure outages. 2) Utility C would have to report 260 outages, or 6% of total industry outages, in order for 0.39% to equal

APPENDIX B - TADSWG Response to Comments on Proposed Revision to TADS Event Type Data Collection

Organization	Yes or No	Question 3 Comment
		<p>one outage.</p> <p>3) If Utility C experienced 1-2% of its outages consistently due to breaker failures, it would not be necessary to compare the rate of breaker failures to an industry average to identify a problem.</p> <p>Also, Section A.1.c it states that “a better understanding of actual event information... may influence the development of future standards” (emphasis added). Most likely, this is not a reasonable statement. The proposed Event Types are aligned with the proposed types in the draft TPL 001-1 protection standard. Also, even though the percentage values associated with most of these Event Types are very small, and will most likely remain very small, the protection standards classify breaker failures and bus interruptions as high priority because they are significant power system issues. Thus, it is unlikely that the TADS proposed Event Types will influence any NERC standard. The TADS proposed Event Types would have some merit only in the highly unlikely situation in which the TADS proposed Event Types investigate an issue unknown to the protection group and included Event Types beyond those Event Types proposed by the protection group.</p> <p>Footnote [1] Example numbers of outages are taken from the 2009 TADS Outage Metric and Data Reports.</p>
<p>Response: The TADSWG thanks you for your comment. Please see the above TADSWG Summary to Question 2 and 4.</p> <p>The TADS event types are compatible with the event categories described in the current TPL Standards Table 1 and TPL draft #4. However, the implementation of this data request does not depend upon approval of the TPL draft #4 Standard. TADSWG recognizes that some of the proposed event types may have a very low event frequency rate. However, on a NERC wide basis, very little historical information is publicly available on the frequency rate of the proposed Event Type Number categories. As stated in the original TADS Phase I report . . . “we believe that the greatest use of TADS data will be for outage cause analysis and outage Event analysis”. If we delay changing the proposed Event Type Numbers for several more years, approximately one fourth of the TADS Event characteristics will continue to be unidentified on a NERC wide basis. As expected three fourths of the outages were simple Events with very little new information. However for one fourth of the outages, the proposed Event Type Number categories will aid in the determination of credible contingencies and will result in a better NERC wide understanding of the “Other” Events. This NERC wide understanding by all users and operators of the bulk electric system should be used to improve planning and operations. Ultimately, this NERC wide understanding and improvement should result in improved bulk electric system performance.</p> <p>In addition to improved system performance, whether a new standard is needed or whether an existing standard needs to be modified, sound NERC wide data is needed for performance based standards. While the vast majority of Automatic Outages will be categorized as the</p>		

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Organization	Yes or No	Question 3 Comment
		<p>proposed Event Type Number 11 – “Single Automatic Outage resulting in a single Element outage”, other Events do occur, and approximately one fourth of the Events are currently lumped into Event Type Number 50 – Other. A better NERC wide understanding of actual events could allow for improved system analysis by bridging gaps between the operating environment and planning assumptions and may, therefore, influence the development of future standards.</p> <p>In addition to the 2008 data, the TADSWG reviewed the 2009 TADS Event statistics published on the TADSWG website on June 16, 2010. This proposal is not based on one year of data. The 2009 Event statistics (Table NERC 2-3) are very similar to 2008. In 2009 25% of the outages within NERC are Event Type# 50. In 2008 26% of the outages are Event Type# 50. On average 1,208 outages per year are Event Type# 50. There are approximately 192 Transmission Owners with 200 kV and above circuits. On average each Transmission Owner will need to review and re-categorize 6.3 outages per year from Type# 50 to one of the proposed new Event Type Numbers. On a NERC wide basis the additional analysis to re-categorize one fourth of the automatic outages and choose one of the proposed Event Type Number categories will not create an unreasonable burden on the Transmission Owners.</p> <p>TADSWG agrees percentage of total outages broken down by Event Type Number may not be comparable from one year to the next. In addition to these statistics, a new item will be placed on a TADSWG Agenda to consider normalizing the Event Type Number statistics based on NERC and Region wide total inventory circuit-years. Over a several year period such an approach would provide trending capability of Event Type Number category frequency rate. Such a metric will be considered by the TADSWG in addition to the existing percent of total outage table. Thank you for the above comments.</p>
Western Area Power Administration	Yes	
Response: The TADSWG thanks you for your comment.		

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4. Is the implementation schedule for the proposed Event Type Number data for 2012 reasonable? If “no,” please explain.

TADSWG Summary Consideration:

After careful consideration of all the comments below, TADSWG agrees implementation is appropriate for January 1, 2012. TO business practices will need to be modified as necessary to capture appropriate data and determine the Event Type Number category. To support this process, the draft TADS Data Instruction Manual for Calendar Year 2012 data collection was posted for comment and will be finalized based on all comments. User training will be conducted by OATI and NERC during fourth quarter of 2011. Final TO submittal of Calendar Year 2012 data is scheduled to be completed by March 1, 2013.

TADSWG has concluded that the proposed schedule provides adequate implementation time to include the transition and learning curve for each reporting utility.

Organization	Yes or No	Question 4 Comment
Allegheny Power	Yes	
Response: The TADSWG thanks you for your comment.		
Arizona Public Service Company	Yes	
Response: The TADSWG thanks you for your comment.		
Bonneville Power Administration	Yes	Bonneville Power Administration has no formal comments, the request is reasonable and can be implemented according to the proposed schedule.
Response: The TADSWG thanks you for your comment.		
CenterPoint Energy	Yes	CenterPoint Energy appreciates the lead time provided in the implementation schedule to allow for changes to its outage data collection system to incorporate the new Event Type Numbers.

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Organization	Yes or No	Question 4 Comment
Response: The TADSWG thanks you for your comment.		
Commonwealth Edison Company	Yes	The proposed implementation schedule is reasonable.
Response: The TADSWG thanks you for your comment.		
Dominion	No	The implementation of the change can be accomplished in 2012 for the reporting period in 2013. There will be a transition and learning curve period for the utility. The feeling is that any data collection process should be established for a period of time before significant changes are made in order to establish trends and develop an understanding of the collection system and interpretation of event types.
Response: The TADSWG thanks you for your comment. Please see the above TADSWG Summary to Question 4.		
Duke Energy	Yes	
Response: The TADSWG thanks you for your comment.		
National Grid	Yes	Furthermore we also believe that it would be useful to users to have as a resource some FAQs and answers available that could assist if any ambiguities arise. This applies to any questions and answers relating to TADS data entries.
Response: The TADSWG thanks you for your comment. Please see the above TADSWG Summary for Question 4.		
Oncor Electric Delivery	Yes	
Response: The TADSWG thanks you for your comment.		
PECO Energy	Yes	The proposed implementation schedule is reasonable.
Response: The TADSWG thanks you for your comment.		

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Organization	Yes or No	Question 4 Comment
PPL Electric Utilities	Yes	
<p>Response: The TADSWG thanks you for your comment.</p>		
SERC Operating Committee (OC) Standards Review Group	No	<p>The SERC SRG does not feel that an implementation date of 2012 is reasonable. This data collection effort may not be ready for prime time. These new categories were based on a single year of data that likely does not represent the universe of outage categorization. Couple that with the obvious learning curve incurred in this first year of data capture and we likely will be changing categories yet again in the near future resulting in the inability to compare results in a year over year basis. A trend should be established before the reporting requirements are redesigned. The outage data set that is produced over time as a result of the TADS effort will only be valuable if it is consistently defined year over year.</p>
<p>Response: The TADSWG thanks you for your comment. Please see the above TADSWG Summary to Questions 1, 2, 3 and 4.</p> <p>TADSWG has reviewed both 2008 and 2009 statistics. The deficiencies of the existing TADS Event Type Number categories are clear. The proposed Event Type Number categories have been thoroughly vetted including this comment process. TADSWG does not see any benefit in delaying the proposed changes beyond January 1, 2012. See the Summary response to Question 2. Further implementation delay beyond January 1, 2012 will only delay the learning process.</p> <p>In addition to the 2008 data, the TADSWG reviewed the 2009 TADS Event statistics published on the TADSWG website on June 16, 2010. The 2009 Event statistics (Table NERC 2-3) are very similar to 2008. In 2009 25% of the outages within NERC are Event Type# 50. In 2008 26% of the outages are Event Type# 50. On average 1,208 outages per year are Event Type# 50. There are approximately 192 Transmission Owners with 200 kV and above circuits. On average each Transmission Owner will need to review and re-categorize 6.3 outages per year from Type# 50 to one of the proposed new Event Type Numbers. On a NERC wide basis the additional analysis to re-categorize one fourth of the automatic outages and choose one of the proposed Event Type Number categories will not create an unreasonable burden on the Transmission Owners.</p>		
South Texas Electric Cooperative	Yes	
<p>Response: The TADSWG thanks you for your comment.</p>		

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Organization	Yes or No	Question 4 Comment
Tennessee Valley Authority (TVA)	No	The implementation schedule for the proposed Event Types is not reasonable. NERC should collect TADS data for a minimum of five years before implementing additional Event Types. Accurate conclusions cannot be drawn from the first year of a data collection effort, nor can accurate conclusions be reliably drawn from one year of outage data. The proposed Event Types have been developed using only one year of data and that year is the first year of the data collection effort. Five years would be a sufficient amount of time to collect a sufficient amount of data for the TADS WG to analyze how the existing Event Types are used and for utilities to be trained and correct misclassifications. After five years, the percentage of events in each Event Type can be re-evaluated to determine if additional Event Types would provide meaningful benefit to the TADS Metrics and Data Report. New Event Types should not be proposed until 2013 for implementation in 2014.
<p>Response: The TADSWG thanks you for your comment. Please see the above TADSWG Summary to Questions 1, 2, 3 and 4.</p> <p>In addition to the 2008 data, the TADSWG reviewed the 2009 TADS Event statistics published on the TADSWG website on June 16, 2010. The 2009 Event statistics (Table NERC 2-3) are very similar to 2008. In 2009 25% of the outages within NERC are Event Type# 50. In 2008 26% of the outages are Event Type# 50. On average 1,208 outages per year are Event Type# 50. There are approximately 192 Transmission Owners with 200 kV and above circuits. On average each Transmission Owner will need to review and re-categorize 6.3 outages per year from Type# 50 to one of the proposed new Event Type Numbers. On a NERC wide basis the additional analysis to re-categorize one fourth of the automatic outages and choose one of the proposed Event Type Number categories will not create an unreasonable burden on the Transmission Owners.</p>		
Western Area Power Administration	Yes	
<p>Response: The TADSWG thanks you for your comment.</p>		

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5. Are there ambiguities in the draft Data Instruction Manual that need clarification? If "yes," please explain.

TADSWG Summary Consideration:

After careful consideration of all the comments below, TADSWG has concluded that the Data Instruction Manual is adequate, and in general the manual is clear and concise for its stated purpose. TADSWG welcomes TadsComments@nerc.net at any time regarding specific suggestions for instruction manual clarification or user training. The instruction manual and user training are the best ways to remove subjectivity and provide consistent coding of TADS data. Each of the suggestions below will be placed on a TADSWG Agenda and considered for inclusion in the TADS 2012 Data Instruction Manual.

Organization	Yes or No	Question 5 Comment
Allegheny Power	No	
Response: The TADSWG thanks you for your comment.		
Arizona Public Service Company	No	
Response: The TADSWG thanks you for your comment.		
Bonneville Power Administration	No	Bonneville Power Administration has no formal comments, the request is reasonable and can be implemented according to the proposed schedule.
Response: The TADSWG thanks you for your comment.		
CenterPoint Energy	No	The Data Instruction Manual is adequate for its intended purpose.
Response: The TADSWG thanks you for your comment.		
Commonwealth Edison Company	No	The draft Data Instruction Manual is clear and concise.

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Organization	Yes or No	Question 5 Comment
Response: The TADSWG thanks you for your comment.		
Dominion	No	However the manual could be streamlined and the wording could be improved.
Response: The TADSWG thanks you for your comment. Please see the above TADSWG Summary to Question 5. TADSWG welcomes TadsComments@nerc.net at any time regarding specific suggestions for instruction manual clarification or user training. Each of the suggestions will be placed on a TADSWG Agenda and considered for inclusion in the TADS 2012 Data Instruction Manual.		
Duke Energy	Yes	<p>One example would be the Event Type "05". Is this strictly an "in the fence" bus or does it include the "out of the fence" circuitry? If not, is type "11" to apply to an "out of the fence" fault?</p> <p>Duke Energy recommends training time for clarification of this and other changes that have occurred to ensure everyone has all the same understandings.</p>
Response: The TADSWG thanks you for your comment. Please see the above TADSWG Summary to Question 5. TADSWG welcomes TadsComments@nerc.net at any time regarding specific suggestions for instruction manual clarification or user training. The above item will be placed on a TADSWG Agenda and considered for inclusion in the TADS 2012 Data Instruction Manual.		
National Grid	No	Not at this time.
Response: The TADSWG thanks you for your comment.		
Oncor Electric Delivery	No	
Response: The TADSWG thanks you for your comment.		
PECO Energy	No	The draft Data Instruction Manual is clear and concise.
Response: The TADSWG thanks you for your comment.		
PPL Electric Utilities	No	

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Organization	Yes or No	Question 5 Comment
Response: The TADSWG thanks you for your comment.		
SERC Operating Committee (OC) Standards Review Group	No	
Response: The TADSWG thanks you for your comment.		
South Texas Electric Cooperative	No	
Response: The TADSWG thanks you for your comment.		
Tennessee Valley Authority (TVA)	Yes	<p>“Normal Clearing” is defined in Appendix 7 as “...Protection System operates as designed, and the fault is cleared in the time normally expected with proper functioning of the installed Protection System.” Therefore, any deviation from designed operation within the Protection System would be classified as “abnormal”. Any deviation would include any problem with Protection System components which includes reclosing relays, communication systems, voltage and current sensing devices, station batteries, DC control circuitry, etc. This results in a large number of outages being classified as ‘abnormal’.</p> <p>“Normal Clearing Circuit Breaker Set (NCCBS)” is defined in Appendix 7 as “the set of circuit breakers that would open to isolate a fault on a given Element under Normal Clearing. For each Element by design, a given set of circuit breakers trip in order to interrupt fault current.” It is not made clear that the given set of circuit breakers may change during abnormal configuration situations.</p>
<p>Response: The TADSWG thanks you for your comment. Please see the above TADSWG Summary to Question 5.</p> <p>Regarding the reclosing issue noted above, as previously requested, TADSWG is providing an example in the TADS 2011 Data Instruction Manual to clarify the failed reclosing issue. TADSWG previously decided not to wait until 2012 to clarify the failed reclosing issue. However, the TADS existing Protection System definition (Appendix 7) is intended to include the following items; protection communication systems, voltage and current sensing devices used by the protection system, station batteries, DC control circuitry, etc. If “Normal Clearing” does not occur due to the failure of one or more of these items, the outage should be coded as abnormal clearing. This</p>		

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Organization	Yes or No	Question 5 Comment
<p>was an intentional decision by the original TADSTF. TADSWG does not recommend any changes to that decision.</p> <p>Regarding the “Normal Clearing Circuit Breaker Set (NCCBS)” during abnormal configuration situations, this item will be placed on a TADSWG Agenda for further discussion. This is a new item for TADSWG consideration. Thank you for your comments.</p>		
Western Area Power Administration	No	However, while the examples and the event type number determination step-by-step process are helpful, in actual practice and in some cases, it may still be confusing when trying to arrive at the correct event number.
<p>Response: The TADSWG thanks you for your comment. Please see the above TADSWG Summary to Question 5.</p>		

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OTHER comments

TADSWG Summary Consideration: TADSWG thanks all the entities who provided comments. Please see the TADSWG responses below.

Organization	Other Comments
CenterPoint Energy	<p>Comments to TADS Proposed Revision to the TADS Event Type Number Data Definitions:</p> <p>CenterPoint Energy's current outage data collection process includes the necessary information to map to the proposed Event Type Numbers; therefore, we can accommodate the recommended change to expand the selection of Event Type Numbers in webTADS. We will have to adapt our outage database to include the new Event Type Number codes as a minor change; however, NERC has provided sufficient lead time to make such change prior to implementation.</p> <p>Comments to Associated Portions of the TADS Data Instruction Manual:</p> <p>The Date Instruction Manual is adequate for its intended purpose and the examples included are helpful to mapping outage events to the new Event Type Numbers.</p> <p>In summary, CenterPoint Energy finds the proposed revision to the TADS Event Type Number data definitions acceptable.</p>
<p>Response: The TADSWG thanks you for your comment.</p>	
National Grid	<p>A) We believe that it would be a useful resource to have a flow diagram / decision tree that summarizes / has an output the new Event Types.</p> <p>B) We understand that the TADSWG will soon be undertaking some supplemental data analysis. Within this analysis it is suggested that it may be useful to include some "peak" data on numbers of simultaneous events across NERC (this could later be extended when Phase 2 is operational).</p>
<p>Response: The TADSWG thanks you for your comment. Please see the above TADSWG Summary to Question 5.</p> <p>The draft TADS Data Instruction Manual for Calendar Year 2012 data collection has been prepared and will be finalized based on all comments. In addition to item A) above, we have also received comments that the Data Instruction Manual should be more concise. TADSWG will be reviewing all TADS Comments during final preparation of the Manual for Calendar Year 2012. Regarding item B) above,</p>	

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Organization	Other Comments
	<p>although it is not applicable to the Event Type Number proposal, we will submit item B) as a TADS Comment for preparation of the Calendar Year 2010 reports. Please also see the TADS Phase II final report regarding metrics to be published for 2010 Non-Automatic outages.</p>
<p>Tennessee Valley Authority (TVA)</p>	<p>Executive Summary:</p> <p>While the collection of Automatic Outage data may be useful, there is little value for the collection of additional Event Types as it relates to improving the bulk power system reliability other than to divide an “excessive” 26% of Event Type 50 events into smaller categories. The 26% value is calculated from the first year of data rather than five years of data which would provide a more indicative analysis of events as the data collection efforts becomes more established. A pilot study did not confirm the proposed Event Types will correct the issue in a satisfactory manner. Without proof of the proposed Event Types’ value, it is difficult to justify the cost of the additional resources required to implement the proposed Event Types. Details are provided in the answers to the questions [above].</p>
	<p>Response: The TADSWG thanks you for your comment. Please see the above TADSWG Summary to Questions 1, 2 and 3.</p> <p>In addition to the 2008 data, the TADSWG reviewed the 2009 TADS Event statistics published on the TADSWG website on June 16, 2010. The 2009 Event statistics (Table NERC 2-3) are very similar to 2008. In 2009 25% of the outages within NERC are Event Type# 50. In 2008 26% of the outages are Event Type# 50. On average 1,208 outages per year are Event Type# 50. There are approximately 192 Transmission Owners with 200 kV and above circuits. On average each Transmission Owner will need to review and re-categorize 6.3 outages per year from Type# 50 to one of the proposed new Event Type Numbers. On a NERC wide basis the additional analysis to re-categorize one fourth of the automatic outages and choose one of the proposed Event Type Number categories will not create an unreasonable burden on the Transmission Owners.</p>

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Section 2 - Summary of Yes/No Responses to the Questions:

Most entities provided answers to the five questions we asked. While we received primarily “Yes” or “No” responses, some responses were qualified, and for those we categorized them as “Partial”. As an example, if someone did not answer Yes or No but stated that they collected the data except for transformer events, we labeled that as a “Partial” yes. The resulting summary of responses is shown on Table 1 below. The first line shows the number of responses and the second shows the percentage of responses to each question. A total of 15 responses (see entities listed on Table 2) were tabulated for each question.

Table 1
Summary of Yes/No Responses to the Questions

The table below represents a tabulation of the responses received. It should not be viewed as a vote on the proposal. Various individuals and groups took the time to provide comments. There were 15 sets of comments including comments from more than 47 different individuals from over 30 companies. As seen in the table below, the numerical sum equals 15 responses to each question. However, it should be noted the responses do not represent a quorum of the NERC sector representatives. Other NERC entities chose not to provide comments. The summary below is provided for informational purposes only and is not a vote for or against the Proposed Event Type Numbers.

<u>Question</u>	<u>Yes</u>	<u>Partial</u>	<u>No</u>
1. If you are a Transmission Owner, do you currently collect event type transmission outage data similar to the proposed event type data? If “yes,” please explain.	11		4
	73%		27%
2. Is the data being requested reasonable and obtainable? See Section 5, Appendix 5 (Form 5) and Appendix 7 Event Type Number definitions contained in the draft Data Instruction Manual. If “no,” please explain.	12		3
	80%		20%
3. Are the proposed TADS Event Type Numbers appropriate? If “no,” please explain.	11	1	3
	73%	7%	20%
4. Is the implementation schedule for the proposed	12		3

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Event Type Number data for 2012 reasonable? If “no,” please explain.	80%		20%
5. Are there ambiguities in the draft Data Instruction Manual that need clarification? If “yes,” please explain.	2		13
	13%		77%

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Section 3

Table 2
Responses Submitted – Organization Names
 (Listed in alphabetical order by name of Organization)

The table below represents a tabulation of the organizations which responded to the July 7th request for comments. There were 15 sets of comments including comments from more than 47 different people from over 30 companies.

Submittal Comments		Organization	Region
1.	Entity	Allegheny Power	RFC
2.	Entity	Arizona Public Service Company	WECC
3.	Entity	Bonneville Power Administration	WECC
4.	Entity	CenterPoint Energy	TRE
5.	Entity	Commonwealth Edison Company	RFC
6.	Entity	Dominion	SERC
7.	Entity	Duke Energy	SERC
8.	Entity	National Grid	NPCC
9.	Entity	Oncor Electric Delivery	TRE
10.	Entity	PECO Energy	RFC
11.	Entity	PPL Electric Utilities	RFC
12.	Group	SERC Operating Committee (OC) Standards Review Group	SERC

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Submittal Comments		Organization	Region
		Organization	Region
12a.		Entergy	SERC
12b		Ameren	SERC
12c		AECI	SERC
12d		PowerSouth	SERC
12e		Dominion VP	SERC
12f		TVA	SERC
12g		E.ON.US	SERC
12h		SCE&G	SERC
12i		Mississippi Power	SERC
12j		Southern	SERC
12k		GASOC	SERC
12L		Santee Cooper	SERC
12m		EKPC	SERC
12n		Entegra Power	SERC
12o		Dynegy	SERC
12p		Big Rivers EC	SERC
12q		SERC RRO	SERC
13.	Entity	South Texas Electric Cooperative	TRE
14.	Entity	Tennessee Valley Authority (TVA)	SERC
15.	Entity	Western Area Power Administration	WECC