Assess Transmission Future Needs Standard Drafting Team

April 25–27, 2007

Hilton Chicago O'Hare Airport
P.O. Box 66414
Chicago, Illinois

Meeting Notes

1. Administrative Items

a. Introductions and Quorum

The meeting was called to order by John Odom, Chair, at 1300 on April 25, 2007. Meeting participants were:

Darrin Church	Tom Gentile	Doug Hohlbaugh
Bob Jones	Brian Keel	Tom Mielnik
John Odom, Chair	Bernie Pasternack	Bob Pierce
Paul Rocha	Chifong Thomas	Yuri Tsimberg
Jim Useldinger	Bob Williams	Bill Harm, Observer
Doug Powell, Observer	Hari Singh, Observer	Tony Jablonski, RFC, Guest
Eric Mortenson, Exelon, Guest	Ed Dobrowolski, NERC	

The team sent out best wishes to Bob Millard, Vice Chair, who was undergoing surgery and could not attend the meeting.

b. NERC Antitrust Compliance Guidelines – Ed Dobrowolski

There were no questions on the antitrust compliance guidelines.

c. Review Meeting Agenda & Objectives – John Odom

The main objective for this meeting was to drive toward consensus language for the first posting of the standard.

2. Definition of 'Transmission Planning Area'

NERC received a request from industry for a definition of 'Transmission Planning Area' that was forwarded to the team for possible action. After some deliberation, the team decided that

'Transmission Planning Area' is not a required term in the TPL standards. Therefore the request for definition has been handed over to the Planning Committee.

3. Discuss Status of Supplemental SAR — Ed Dobrowolski

The Supplemental SAR was accepted by the Standard Committee (SC) so TPL-005 and TPL-006 are now officially in scope for the team.

Gerry Adamski sent out a memo addressing how drafting teams are to handle the items in FERC Order 693. Basically, if an SDT decides not to address a FERC-raised issue or to propose an alternative approach, the SDT must justify its actions in writing to NERC.

4. Sub-team Reports

a. Language – Bill Harm

Bill Harm and Darrin Church led the group through a high-level review of the Language Sub-team work to date that was distributed prior to the meeting. It was mentioned that a Frequently Asked Questions (FAQ) document might be a good idea for this project where we explained the actions of the drafting team.

b. Steady State Table – Chifong Thomas

Chifong presented the work on the steady state table that was distributed prior to the meeting. The work supports the decisions made at the Houston meeting. The statistics provided are simply to gather the information required to present the final groupings in the actual table that will appear in the standards. It was mentioned that more rows/columns than what appears in the existing standard may be required in the new table.

c. Stability Table – Bob Jones

This team provided both words and a table and distributed it prior to the meeting. Bob Jones provided a high level overview that resulted in the following comments:

- PS R1: This should probably be assigned to the TP as per the Functional Model.
- D7 – D10 were eliminated from the existing table when this table was created. There was some disagreement within the SDT as to the correctness of this approach. The sub-team was requested to review FERC Orders 693 & 890 for relevant comments in these areas.
- There are too many footnotes in this table. However, the general feeling is that the footnotes are required since many people will use the table as a stand-alone 'document' for operator reference. As long as the footnotes are clear and not open to interpretation, we should be okay, but the sub-team should look to see if they can eliminate some of the footnotes by changing row/column headings or including appropriate text in the table itself.
- Items such as three phase fault, single element, etc., need to be defined clearly.
- The Language Sub-team should use the words provided by the Stability Sub-team.

AI – The Stability Sub-team is to review Orders 693 & 890 for relevance concerning the proposed deletion of the current D7 – D10.

5. Develop Consensus Language for First Draft

A detailed review of the rough draft provided by the Language Sub-team provided the following comments/issues:

- What is the level of detail required for modeling data in this standard? Most of the detailed information for modeling requirements is contained in the MOD standards and it was the general feeling of the group that any modeling data requirements for TPL standards should reside in MOD for consistency. However, in some cases, the details required for TPL do not currently exist in MOD. The MOD standards will be revised as part of the work plan effort, but the work will probably take place after the TPL project is complete. Therefore, the group decided that for now, details on modeling data requirements will need to be in TPL with a note to move them to MOD when those standards are revised. An example of this type of data is load forecasting. Tom Gentile and Doug Hohlbaugh will draft language on these requirements.
- When can you drop non-consequential load? Order 693 states that non-consequential load can't be dropped for the loss of a single element. The current draft wording would seem to allow the loss of non-consequential load as long as the reliability of the BES is not compromised. Tom Gentile e-mailed the NPCC performance based documents defining bulk facilities as a guide in the determination of this issue. The group decided that the loss of non-consequential load would not be allowed upon the loss of any single element rated 100 KV or higher.
    - The following more extreme single events were also discussed: What if a tornado comes through an area and completely wipes out a 500 KV substation? Should loss of non-consequential load be allowed? The overwhelming response was 'Yes'. A similar response was obtained for the example situation where a plane comes into contact with four 500 KV lines.
    - There are other single events that would be treated differently than single elements:
        - Bus tie breaker faults – this type of fault will take out both bus sections. Should this be considered comparable to the loss of a single line/generator? The group stated 'No'. This situation would be treated differently than a loss of a single line/generator but it must be studied. A similar response was obtained for a breaker and a half scheme when you lose the "middle" breaker.
    - The bottom line is that not all single events get treated the same as single elements.
    - A transformer will get the same treatment as a generator or line.
    - Determinations need to be made as to the treatment for a single tower failure and a single conductor failure at a crossing point.
    - For Category "B" events, no loss of non-consequential load is allowed although this decision is based on system design considerations where the second element is linked to the first.
- How long does it take before a Category "B" becomes a Category "A", e.g., when you lose an auto transformer without an on site spare available? If a "B" condition remains in place for one month, then should you be allowed to lose non-consequential load for the next contingency? It should be studied the same as any other n-1-1 condition. A long lead time (considered to be one year or longer) will require a mitigation strategy.
- You must model firm transactions, but you can always do more. We will need to evaluate the way flowgates are modeled and studied in WECC. You will need to plan for

firm transmission service requests, generation to cover load, and other transactions approved by regulatory bodies to meet your customer demand in your basecase.
    - Firm transfers could be considered as simply a subset of a larger picture. Interchange schedules are covered in MOD-011-0, R1.7. However, we need something additional in R2 of our language to include firm transfers as per Order 693. We will need a specific requirement for both firm transfers and resources and will need to document information in the studies for both. We will need to capture the idea of how to take raw data from MOD and format it for TPL needs.
- Plant stability: Should it be included in the standards? Does the TP have the data? MOD requires submittal of the data in general and the GO is within our scope. Who pays for fixes found in studying the problem will not be covered in this standard. Delegation agreements may be one way to get around this. The decision was to make the TP responsible for evaluating the impact of generators on the system in the standard.
- Timing of assessment: Do we need to state when the annual assessment must be completed? Is "when" a true requirement? The group felt that the answer to both of these questions was 'No'. What documentation is required for assessments? What degree of coordination is required? The operations time horizon is not included. Near-term and long-term transmission planning horizons need to be in our definitions with a clear statement of what Year One is. We need to be consistent in our use of near-term/long-term vs. using a number of years. Studies are required yearly.
- Projects in basecase: A basecase has firm projects included and the planner should be required to include a completed study case showing no problems. The planner should start an assessment with only firm projects and end with a clean case that includes corrective action plans. Do we need to define what goes into a basecase? We should document any project in our cases that hasn't been completed. What is in the ground definitely needs to be in the basecase. We should define what projects are proposed and/or committed. We must state the criteria for what is in a plan – it must be open and transparent. You can't remove committed projects without a detailed explanation.
    - Each TP defines committed and proposed projects.
    - Projects that are in the basecase but are not constructed need to be listed by category by the TP.
    - Each TP should list corrective action plans with status.
- Purpose & title: The Language Sub-team will handle this using the guidelines in the supplemental SAR and starting with the current statement.
- Design/extreme testing titles: New classifications were suggested by the sub-team with different performance for each classification.
    - "Design" must be met.
    - The old "A", "B", & "C" are in design.
    - Extreme contingencies don't have a requirement to fix the problem.
        - The group generally agrees with these concepts, i.e., performance can be different for different events within Design. The final arrangement of the categories can still change based on the findings of the Steady State Sub-team. We could add a column to specify what is allowed and we need to work on definitions of design and extreme – we might want to use different titles such as planned and testing for extreme events.
- What does "reliability margin" in R1.1.3 mean?
- Is "asset condition assessment" in R2.8 the same as spare mitigation strategy?
- What is the requirement for "new technologies" as mentioned in R2.8.1? – This topic is mentioned in Order 693.

- How do you measure the customer expectations mentioned in CR 1.1 & 2.2? What if expectations are unrealistic? The Language Sub-team needs to review if these are appropriate words for a standard.
- The Stability Sub-team needs to discuss the generator low voltage ride through requirement (Order 661).
- UFLS & UVLS are cited in the current draft wording as SPS in R2.5, but this is not consistent with NERC standards.
    - Define GR.
- Extreme testing: It was suggested that new facilities should be designed so that problems described as extreme are not present. However, it is hard to place this type of requirement only on new facilities while legacy facilities get a free pass. Perhaps we could put this in a white paper on best practices but it won't be added to the standard.
- Sensitivity: Much more detail is needed.
- Project certainty for compliance: How do you define noncompliance for a planner, especially in the long-term, when plans may change? A planner may work in good faith, but projects may not materialize as planned. Some proposed methods could be: (1) An executive signs off on the plan signifying corporate acceptance of what it contains; and/or (2) A measure could be developed based on the completion of proposed projects; and/or (3) When the plan is handed off to the operator it must meet performance requirements as specified in the tables. The standard should be written so that planners don't just put projects in the plan that they don't expect to build – the original SAR said to measure implementation.

AI **-** Tom Gentile & Doug Hohlbaugh will work on defining detailed modeling data requirements for the TPL standards.

Other issues were raised but were not discussed due to time constraints:

- Project lead times
- Study shelf life
- Restrictions on manual adjustments
- Transmission Reliability Margin
- Sharing corrective action plans
- Use of SPS language in this standard

6. Continuing Work Assignments — John Odom

The Steady State Sub-team needs to work on the final table look and feel. We want a common look and feel between steady state and stability. This sub-team will look at coming up with column/row headings and titles for both tables.

AI **-** The Steady State Sub-team needs to work on the final table(s) look and feel.

The Stability Sub-team should be working on finalizing their table. They should not be producing any more text as the Language Sub-team will handle that topic. This table should only include footnotes as absolutely necessary.

AI **-** The Stability Sub-team will work on finalizing their table.

The Language Sub-team will work on correcting the text as per the discussion at this meeting.

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WebEx and conference calls are suggested for all sub-teams in order to conclude their tasks as expeditiously as possible. We are coming to a crucial point in the project schedule and all of the sub-teams need to stay focused on the end goal.

All of the sub-teams should have their material distributed to the group as a whole no later than close of business on Thursday, May 17th so that the group can review the material for discussion at the next face-to-face meeting.

Remember that TPL-005 and TPL-006 are now officially in scope.

7. Schedule Next Meetings

a. Wednesday, May 2, 2007 – Conference call from 1100 to 1400 EDT
b. Tuesday, May 22, 2007, starting at 0800 through Wednesday, May 23, 2007 at noon in Tampa, Florida – Please be prepared to attend the entire meeting.
c. Wednesday, July 18, 2007, starting at 0800 PDT through Thursday, July 19, 2007 at 1700 PDT in San Francisco, California, hosted by PG&E. Please be prepared to attend the entire meeting. Hotel information has been distributed. There is no block of rooms set aside at any of the hotels so you are encouraged to make your reservation early. Remember to ask for the PG&E rate.

8. Review Action Items and Schedule — Ed Dobrowolski

The following action items were developed at this meeting:

- The Stability Sub-team is to review Orders 693 & 890 for relevance concerning the proposed deletion of the current D7 – D10.
- Tom Gentile & Doug Hohlbaugh will work on defining detailed modeling data requirements for the TPL standards.
- The Steady State Sub-team needs to work on the final table(s) look and feel.
- The Stability Sub-team will work on finalizing their table.
- The Language Sub-team will work on correcting the text as per the discussion at this meeting.

All action items are due by the close of business on Thursday, May 17, 2007.

The original schedule showed the group completing work for the first posting at this meeting. Obviously, this didn't happen. A revised schedule based on the thoughts brought out in Chicago is attached to these notes as Attachment A. It is critical to the long-term schedule that we meet or exceed the revised dates.

9. Adjourn

The meeting was adjourned by John Odom, Chair, at 1200 on April 27, 2007

ATFNSDT Schedule

ATFNSDT Schedule					
Major work division	**Action**	**Duration**	**Scheduled date**	**Actual date**	Comments
Prepare 1st posting	Initial meeting	2d	1/15/07	1/15/07	
	Conference call	1d	2/7/07	2/7/07	
	2nd meeting	2d	3/1/07	3/1/07	
	Conference call	1d	3/15/07	3/16/07	Assign std.
	Conference call	1d	3/27/07	3/27/07	SAR comments
	3rd meeting	2d	4/3/07	4/4/07	85% of std.
	Conference call	1d	4/17/07	4/16/07	work on std.
	4th meeting	3d	4/25/07	4/25/07	Finish std.
	Conference call	1d	5/2/07		Continue work on documents
	5th meeting	2d	5/22/07		Finalize documents
	Clean-up documents	1w	4/24/07		Handoff to PM
	Submit to Process Mgr. for initial review	1w	4/25/07		
	Respond to PM comments	1w	5/2/07		Conference call
	Submit for posting	2d	5/9/07		
	Post for comments	6w	5/11/07		
Prepare 2nd posting	Gather comments	1w	6/25/07		
	Meeting	2d	7/10/07		
	Conference call 1	1d	7/24/07		
	Conference call 2	1d	8/8/07		
	Clean-up documents	1d	8/10/07		
	Process Mgr. review and clean-up for posting	2d	8/13/07		
	Submit for posting	1d	8/15/07		
	Post for comments	4w	8/16/07		
Prepare 3rd posting	Gather comments	1w	9/13/07		
	Meeting	2d	9/20/07		
	Conference call 1	1d	10/4/07		
	Conference call 2	1d	10/18/07		
	Clean-up documents	1d	10/19/07		
	Process Mgr. review and clean-up for posting	2d	10/22/07		
	Submit for posting	1d	10/23/07		

Updated: 1 May 2007

	Post for comments	4w	10/24/07
Prepare for ballot	Gather comments	1w	11/21/07
	Meeting	2d	11/28/07
	Conference call	1d	12/12/07
	Clean-up documents	1d	12/13/07
	Process Mgr. review	2d	12/14/07
	Submit for posting	1d	12/18/07
Membership ballot	Notice	1m	12/18/07
	1st Ballot	2w	12/18/07
	Gather comments	1w	1/8/08
	Conference call	1d	1/15/08
	Clean-up documents	2d	1/16/08
	2nd ballot	2w	1/17/08
	Posting for BOT	1d	1/31/08
Board action	Submit to BOT	1d	1/31/08