NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Meeting Notes for Project 2006-02
Assess Transmission Future Needs SDT

May 4, 2009

1. Administrative Items

a. Introductions and Quorum

The Vice Chair called the meeting to order at 1:00 p.m. CDT on Monday, May 4, 2009 at the offices of Mid-American Energy in Davenport, IA. The meeting participants were:

Darrin Church	Bill Harm	Doug Hohlbaugh	Bob Jones
Ron Mazur	Tom Mielnik	Bob Millard, Vice Chair	John Odom, Chair
Bernie Pasternack	Bob Pierce	Jim Useldinger	Dana Walters
Ray Kershaw, Observer	Charles Long, Observer	Bob Snow, FERC Observer	Curt Stepanek, Observer
Terry Harbor, MidAmerican Energy, Guest	Ed Dobrowolski, NERC		

b. NERC Antitrust Compliance Guidelines — Ed Dobrowolski

There were no questions raised on the NERC Antitrust Compliance Guidelines.

c. Meeting Agenda and Objectives — John Odom

The goal of the meeting was for the SDT to reach resolution on the items brought up by FERC staff in the recent meeting on Project 2006-02 in Washington, DC.

2. Discuss Possible Roadmap Changes from FERC Staff Meeting

a. R1.1

FERC staff had asked about considering sensitivity conditions that showed potential problems in a study being included as base conditions in the next year's studies. On the last conference call, the SDT questioned why only sensitivities were being spelled out as there are other items that probably should be included as well. The use of the term 'consider' was also brought up as it was felt that more than consideration was required. One member brought up the concept of peer reviews catching these things but it was pointed out the peer reviews are not requirements.

The intent of the SDT was that if problems were shown in an Assessment that they would make their way into the CAP and thus into next year's starting point for analysis. This was clearly shown in the diagram produced in the Houston meeting to show the flow of data throughout the Assessment process. It was designed to be a loopback process. While some SDT members are still questioning how you do this if your base already includes the sensitivities, it was evident that some sort of loopback mechanism was needed.

The SDT added words to Requirement R1 to require the loopback into the model.

b. R1.1.1

FERC staff expressed the opinion that the requirement needs to be expanded to specifically cite Protection Systems. It also needs to explicitly include maintenance outages. Everything must be maintained and the plans should include any item that has a maintenance cycle that will come up in the time period in question for the Assessment. The MISO/Ameren interpretations may show guidance in this area. The basic premise being pursued is that one must plan for maintenance and Protection System maintenance must be included.

The SDT agreed that Requirement R1.3.12 of the current standards specifically include Protection Systems. However, the SDT also felt that Protection System outages weren't typically planned in the Planning Horizon and should be addressed in the Operating Horizon. The overarching concern however is that you need to protect against the condition where maintenance can't be performed on a piece of equipment. If Protection System outages are known, they will appear in the Assessment, if they are not known then they won't show up.

The SDT added new Requirement R5 to specifically address this issue. Requirement R5 was also included in the introductory language of Requirements R3 and R4. Measures, data retention, and VSLs will be added later.

c. R1.1.6 — Generation tripping

This item was deferred to the next meeting/conference call.

d. R2.1.3 — Sensitivities

FERC staff felt that it seems that the Transmission Planner or Planning Coordinator doesn't really have to do anything to resolve concerns found in sensitivity studies and this is seen as skirting the Order 693 directives. The SDT didn't feel that any fix was required for a problem found with a single sensitivity and that 'bigger' issues would be fleshed out in the newly required peer reviews. However, it is clear that there is no formal requirement associated with fixing problems associated with peer review findings. So, how do you include fixes found in multiple sensitivities or repeated sensitivity runs? It was suggested that

this could be fixed by adding language in Requirement R1 to require consideration of sensitivity results from previous studies.

The adjustments made to Requirement R1 above forces a loopback process from this year's CAP into next year's plan. Order 693 is looking to make sure that any deficiencies found in 'critical' sensitivities are being addressed in the CAP.

The SDT added new Requirement R2.7.2 to capture the concept that 'critical' sensitivities must be included in this year's CAP. Wording was placed in Requirement R2.7 to make it clear that the language "developed solely to meet" only applied to single sensitivities.

e. R2.1.5 — Spare strategy (now R2.1.4)

FERC staff didn't feel that this requirement really stated that the lack of a spare was only allowed if you can ride through the worst case scenario while maintaining performance as per Order 693. However, it was pointed out that Requirement R2.1.5 is part of Requirement R2.1 which is covered in Requirement R3. But then does P6 say what the SDT intended? Does this imply that the spare is in the base case so that P6 is a second transformer plus a third element? Or, is the spare the first transformer cited?

The SDT confirmed that the language in this requirement applied to all of Table 1. No further action is required on this topic.

f. R2.2 — Worst year scenario

FERC staff asked why this requirement doesn't require the worst year to be studied. The existing standard has language that addresses this issue in requirement R1.3.1.

The SDT re-worded Requirement R2.2 to be consistent with Requirement R2.1. Words were also place in Requirement R2.2 to provide a rationale for why a certain year was selected. Requirement R2.2.2 was deleted as the definition of Long-Term Transmission Planning Horizon already includes the need to extend the time period if necessary.

g. R2.3 — Short circuit studies

Maximum short circuit duty rating implies that the largest magnitude of short circuit current should be evaluated. FERC staff questioned whether this is what was really meant for this requirement and if transient recovery voltage was included.

The SDT discussion was centered on what was a design issue versus what was a planning issue. Transient recovery voltage was never intended to be part of this requirement.

Maximum duty terminology was deleted from Requirement R2.3 and new wording was added to emphasize that what was really needed was interrupting capability.

h. R2.4 — Long-term Stability

FERC staff questioned why there isn't any long-term requirement for Stability. If you have a new nuclear unit going into service, the transmission requirements will extend into the long-term horizon and should be studied as they will almost certainly affect reliability and Stability.

The example cited is covered by the LGIA and the FAC standards. The lack of quality dynamic models in the long-term timeframe was mentioned as a reason for not providing this in the standard. However, the current standards include a long-term Stability requirement.

The SDT added Requirement R2.5 to address this issue and included wording in Requirement R4 to tie back to Requirement R2.5.

i. R2.5.2 (now R2.4.3 with bulleted list)

FERC staff stated that Load forecasts should be explicitly spelled out and a bandwidth to show how much load forecasts could change before the study was not valid would be appropriate.

Any discussion of Requirement R2.4.3 must be duplicated for Requirement R2.1.3 for steady state.

The SDT changed the wording of the requirement to require that you stress the System within a credible range while demonstrating measurable impacts on performance.

This change pointed out a discrepancy between Requirement R2.7.2 and Requirements R2.1.3 and R2.4.3. In Requirement R2.7.2, multiple sensitivity runs are assumed while in Requirements R2.1.3 and R2.4.3, only a single run is required. Fixing this problem was tabled until a later meeting. .

j. R3.3.3 — Correspondence to Stability

FERC staff questioned why there doesn't seem to be a corresponding element requiring consideration of relay loadability for Stability analysis in Requirement R5 (now Requirement R4).

A question was raised as to whether relay loadability is truly a concern in the Stability timeframe. After some discussion it was decided that certain relay settings could impact Stability results.

The SDT added Requirement R4.3.3 to address this concern.

While reviewing Requirement 4.3.3 for this issue, it was determined that the wording of the bulleted items was not consistent. The same problem was found in the corresponding steady state requirement.

AI — Ed will fix the wording of Requirements R3.3.3 and R4.3.3 to make them consistent.

k. Header note 'b'

FERC staff asked why Supplemental Load could be used to resolve a Stability concern.

Supplemental Load Loss was not considered due to the Stability timeframe. After some discussion, the SDT decided that Header note 'i' described the condition correctly but there was no transient voltage response requirement in the text.

The SDT decided that a new requirement was needed on transient voltage response. This will be located as Requirement R4 and may include criteria with defined boundaries. A sub-team of Bob Jones, Tom Mielnik, and Ron Mazur will draft wording for the new requirement prior to the next conference call.

AI — A sub-team of Bob Jones, Tom Mielnik, and Ron Mazur will draft wording for the new requirement (R4) on transient voltage response prior to the next conference call.

l. Header note 'c' — High speed reclosing

FERC staff stated that high speed reclosing should be considered for Stability analysis. If this is allowed for in the design, then it should be included in the note as the order wants everything that will really happen to be modeled. This may spill over to Requirement R5.3.3.

The SDT added wording to Requirement R4.3.1 to address this issue.

3. Next Steps — John Odom

The posting has become contingent on a review by NERC Compliance staff on the mitigation plan issue in the Implementation Plan. The next steps for the project are on hold until a firm posting date is known.

4. Next Meetings

There will be a conference call scheduled to complete the work on FERC staff issues. This will include the deferred discussion on item 'c' above — R1.1.6: Generation tripping as well as the resolution on item 'k' above based on the sub-team work. This call may also be used to capture any needed changes to the Implementation Plan based on the Compliance review. Ed will poll the SDT on available dates.

AI — Ed will poll the SDT for available dates for the next conference call.

The date for the 3rd posting Web Ex is on hold but it will be scheduled for 3 to 4 weeks into the 45 day posting.

5. Action Items and Schedule — Ed Dobrowolski

The following action items were developed at this meeting:

- Ed will revise the wording of Requirements R3.3.3 and R4.3.3 to make them consistent.
- A sub-team of Bob Jones, Tom Mielnik, and Ron Mazur will draft wording for the new requirement (R4) on transient voltage response prior to the next conference call.
- Ed will poll the SDT for available dates for the next conference call.

This project is well behind schedule. This may necessitate an accelerated work plan for responding to comments from the 3rd posting.

6. Adjourn

The Chair adjourned the meeting at 11:30 a.m. CDT on Wednesday, May 6, 2009 after thanking Mid-American for their hospitality.