NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Meeting Notes
Project 2010-17 Definition of Bulk Electric System Standard Drafting Team

February 21-23, 2012

Pacific Gas & Electric
San Francisco, CA

Administrative

1. **Introductions**

   The Chair brought the meeting to order at 1:00 p.m. PT on Tuesday, February 21, 2012 at the office of Pacific Gas & Electric in San Francisco, CA. Meeting participants were:

Members		
Jennifer Dearing, NYPA	Brian Evans-Mongeon, Utility Services	Phil Fedora, NPCC
Ajay Garg, Hydro One	Pete Heidrich, FRCC, Chair	John Hughes, ELCON
Barry Lawson, NRECA, Vice Chair	Jeff Mitchell, RFC	Rich Salgo, Sierra Pacific
Jason Snodgrass, GTC	Jennifer Sterling, Exelon	Jonathan Sykes, PG&E
Ed Dobrowolski, NERC Coordinator		
Observers		
Paul Cummings, Redding	Richard Dearman, TVA	Jeff Gindling, Duke
Bill Harm, PJM	Jonathan Hayes, SPP	John Martinsen, Snohomish
Roni Mejia, SCE	Susan Morris, FERC	Alain Pageau, HQ
Ken Shortt, PacifiCorp	Tim Soles, Occidental	Phil Tatro, NERC

2. **Determination of Quorum**

   A quorum was established.

3. **NERC Antitrust Compliance Guidelines and Public Announcement**

   The NERC Antitrust Compliance Guidelines and public announcement were delivered. No questions were raised.

4. **Review Current Team Roster**

   There were no changes to the roster.

5. **Review Meeting Agenda and Objectives**

   The main objective of this meeting was to resolve any issues with comment responses so that the Standard Authorization Request (SAR) can be finalized.

   John Hughes requested an addition to the agenda to discuss the Member Representatives Committee (MRC) survey on standards initiatives. This was added to the agenda as item #5.

Agenda

1. **Update on NERC Operating Committee(OC)/Planning Committee (PC) Assistance with Phase 2 – Pete Heidrich**

   Mr. Heidrich, Barry Lawson, and Ed Dobrowolski took part in a conference call on February 3, 2012 with the Chairs and Vice Chairs of the NERC OC/PC. Mark Lauby of NERC also participated.

   Mr. Heidrich provided an overview of the Phase 2 SAR and project scope as well as the general timeline for the project. The target for project completion is 18 months following SAR approval. Mr. Heidrich reviewed the direction the SDT received from the NERC Standards Committee in terms of seeking assistance from the NERC OC/PC for technical justifications of thresholds established in Phase 1 of the project.

   Four issues were cited for technical assistance from the NERC committees:

   - 100 kV bright-line
   - Generation thresholds
   - Reactive Power sizing
   - Local network flows

   Mr. Lauby requested a problem statement from the SDT. Mr. Heidrich and Mr. Lawson provided this on February 17, 2012 with the proviso that the document might change based on the comments received on the Phase 2 SAR. Mr. Lauby will use this document to create a project outline and both the outline and the problem statement will be discussed at the joint OC/PC/CIPC meeting in early March. The goal for completion of the committee work is the end of calendar year 2012.

   SDT members requested a copy of the project outline prior to the joint meeting in order to review it for accuracy and completeness. Mr. Heidrich will contact Mr. Lauby to obtain a copy and then distribute it to the SDT.

   Action Item – Mr. Heidrich will contact Mr. Lauby to obtain a copy of the technical assistance project outline and then will distribute it to the SDT so that SDT members can review it for accuracy and completeness prior to the joint OC/PC/CIPC meeting.

   SDT members will be asked to volunteer to be embedded in the teams working on these issues.

The problem statement was updated to reflect changes to the SAR brought about by industry comments. This did not result in any change in the items being forwarded to the committees.

The White Paper that the SDT started work on in Phase 1 regarding generation thresholds will be attached to the problem statement.

2. **Develop Responses to SAR Comments**

   a. Q1 – Brian Evans-Mongeon

   There was an approximate 50/50 split on the scope in the comments. Some thought the scope was too broad and an equal number thought it was not broad enough. Some of the main issues mentioned were:

   - Consistent implementation of the definition is required – The SDT agrees. That was the goal of the revised definition. Interconnection-wide thresholds may be employed (if justified) but they will be consistent throughout the Interconnection with no regional discretion allowed.
   - The definition needs to be coordinated with the ERO Statement of Compliance Registry Criteria – This is a stated goal in the Phase 2 SAR.
   - The term "non-retail" needs to be clarified – This is a stated goal in the Phase 2 SAR.
   - An Implementation Guide is needed – The proposed guidance document should resolve this issue, but this document will not be finalized until a final order is issued from FERC on the Phase 1 BES definition.
   - Cost-benefit analysis should be employed – This is beyond the scope of the SDT and SAR.
   - The Cranking Path issue was already resolved in Phase 1 – There were a sufficient number of minority comments on this issue in Phase 1 to justify asking the question again in Phase 2. The issue will be resolved in the responses to question 6.
   - A definition of distribution is needed – The SDT is defining the BES. What is not BES, is non-BES. There is already a statement in the definition that local distribution is not included.

   The recommendation is that no change to scope is required.

   b. Q2 – Jennifer Dearing

   The majority of commenters agreed that technical justification of the thresholds should be performed. Some of the main issues mentioned were:

   - There is a reliability gap introduced between Inclusion I2 and Exclusion E1 – The SDT does not agree and pointed out previously that Exclusion E1 is handling transmission issues and not generation.

- Is MVA the correct unit of measurement? Some suggested percentages or per unit – Moving away from MVA will create problems in terms of establishing a true bright-line. However, the SDT will make certain that the committee work is not biased in terms of searching for answers.
- Cost-benefit analysis should be employed – This is beyond the scope of the SDT and SAR.
- Can a Reactive Power device truly be solely for the owner's use? – This will be answered in the responses to question 13.
- Connection voltage should be considered as well as unit size – This would create major problems in terms of establishing a true bright-line.
- ISONE and Snohomish suggested sources for input to the analysis – These references will be placed in the problem statement document.

The bullet item in the SAR was changed slightly to clarify the SDT's intent but no contextual change was necessary.

c. Q3 – Jeff Mitchell

The comments here were widely varied. The wording of the question may have implied a pre-disposition of the issue but that was not the SDT's intent. There were a sufficient number of respondents who thought the contiguity issue should be investigated that the bullet item will remain in the SAR. Several suggestions were made as to possible sources of technical justification but after reviewing them the SDT found that they were not pertinent to the issue.

The wording of the bulleted item was altered to better show the SDT's intent and to clarify that there was no pre-disposition of the final answer on the issue.

d. Q4 – Jason Snodgrass

The response to this question on support equipment was an overwhelming "no". No one really understands what "support" means and this raised questions as to how the issue could be addressed. Delving into this area was seen as muddying the bright-line and unnecessary as it has already been determined by NERC that reliability standards could be written to handle such equipment when, and if, required.

This bullet was deleted from the SAR.

e. Q5 – Jonathan Sykes

The majority response to this question on automatic interrupting devices was not to pursue it in Phase 2. The reasons cited included:

- Taps are studied in planning so there is no need to address the issue here
- Protection Systems take the tap point into consideration so there is no need to address the issue here

- The area in question is not under FERC jurisdiction so it should not be part of the definition
- There may be a conflict between this position and ERO Statement of Compliance Registry Criteria Appendix 5b
- It would muddy the bright-line

Even those who responded with a "yes" indicated that while there may be a need for a disconnect, it didn't necessarily have to be an automatic interrupting device.

This bullet was deleted from the SAR.

f. Q6 – Phil Fedora

The divide here was about 3-2 with the majority stating that this item on Cranking Paths and Blackstart Resources shouldn't be pursued. Respondents stated that Cranking Paths reach down into distribution and thus shouldn't be included in the definition. They also pointed out that this issue was debated in Phase 1 and resolution was obtained so the issue shouldn't be brought up again. There were a fairly equal number of responses that said that Cranking Paths were only needed when an entity was in restoration mode so it wasn't needed in the definition and those that said the same thing but indicated that this was a reason to have it in the definition. Others suggested to let the answer to a contiguous BES effectively answer this question since an answer to contiguity would necessarily have to encompass Cranking Paths.

The SDT decided to delete the Cranking Path reference in the SAR. If a particular Cranking Path was deemed necessary for the reliable operation of the BES, it can always be addressed through the exception process.

There were few mentions of Blackstart Resources in the comments. This led the SDT to believe that the Phase 1 resolution on this issue was correct and that there was no further need to explore it in Phase 2. Therefore, the bullet on Blackstart Resources and Cranking Paths was deleted from the SAR. This means that Inclusion I3 will remain intact as developed in Phase 1.

There was no mention of any studies to help with possible technical justification of these issues.

g. Q7 – Ajay Garg

The majority of commenters want the issue studied in Phase 2. Most comments indicated that the bright-line should be raised and that this will be shown to be the case in studies. The SDT agreed that the issue should be studied but cautions commenters that any studies will not be pre-disposed to a higher value and could result in a lower value.

References to the other methods of looking at the problem, such as, surge impedance loading and WECC studies, will be added to the problem statement for possible use in the committee work.

The wording of the bullet item in the SAR was changed slightly to clarify the SDT's intent.

h. Q8 – Rich Salgo

The responses here were an overwhelming "yes" to studying the flow issues surrounding local networks. The feeling of the industry is that a zero flow constraint unnecessarily constrains the proper classification of local networks. What value of flow should be allowed was not something that respondents could agree on but the commenters felt that the committee work could spell this out. Several commenters asked that a duration value be assigned to such flows.

Nothing concrete was submitted by commenters on available study information.

The bullet item in the SAR was changed to introduce the concept of "duration".

i. Q9 – Barry Lawson

The only issue to arise from the question 9 responses was for consideration in Exclusion E3 to clarify the language about flowgates. This item will be added to the list of general issues to be discussed by the SDT.

Action Item – The SDT will consider clarifying the use of flowgates in Exclusion E3.

j. Q10 – Pete Heidrich

The comments in question 10 did not raise any new issues for consideration. The majority of the comments here will be answered by the issuance of the guidance document and a discussion of the hierarchy of inclusions and exclusions as presented in Phase 1.

k. Q11, Q12, Q13 – Ed Dobrowolski

The only new item arising from these questions was whether "ownership" was necessary in Exclusion E4.

Action Item – The SDT will consider clarifying the language surrounding "ownership" in Exclusion E4.

3. **Phase 2 Schedule**

The SDT needs to produce a schedule so that industry can see when the work will be posted.

The SDT is requesting that the committee work be completed by the end of the calendar year. However, prior to the joint and committee meetings in early March, it isn't known if this is feasible. After the joint and committee meetings the Planning Committee and Operating Committee leadership will communicate with the SDT leadership their proposed time needed to complete the work we are asking them to undertake.

The SDT agreed to a nine-month period after receipt of the committee work results for completing its posting and balloting work. This would allow for one successive ballot.

Ed Dobrowolski will produce a draft schedule based on these concepts for approval by the SDT. The results will not be posted on the project web site until the committee work deadline is accepted and approved.

Action Item – Mr. Dobrowolski will produce a preliminary schedule for Phase 2 for SDT approval.

Update on Guidance Document for Phase 1 – Pete Heidrich

To date, Mr. Heidrich has returned revisions to Inclusions I1 and I2. The SDT reviewed those documents and had the following suggestions and comments:

- Inclusion I1:
  - Figures I1a and I1c – need better differentiation on the voltages shown for secondary and tertiary.
  - Figure I1b – The dotted line for BES/non-BES should be as close as possible to the bus to avoid confusion. This is a generic comment for all figures.
  - Figure I1c – The SDT agreed to the suggested text changes.
  - Additional considerations section – As situated, they appear to be solely for Figure I1d, but this is not the case. They are generic and should be placed within the document so that this is clear.
- Inclusion I2:
  - Figure I2b – The dotted line should "point" up rather than down since the unit is 19 MVA.
  - Figure I2c – Change the unit sizes to 19 MVA to avoid confusion.
  - Figure I2e – The section coming down from between the H-J bus and the transformer are non-BES.
  - In general, all generators should have explicit labels to allow for better understanding of the text.

Jonathan Sykes presented a revised diagram for Exclusion E1 to show the concept of looped system below 100 kV. The SDT commented that the two radial systems shown in the diagram must be described separately to avoid confusion. Mr. Sykes will revise the diagram and re-distribute the document.

- ***Action Items*** – Mr. Sykes will revise the E1 diagram and document to reflect SDT concerns expressed at the meeting.

4. **MRC Standards Survey – John Hughes**

Mr. Hughes provided an overview of the reasoning for the survey and the scope of the effort which is described in the documentation. He provided the link to the survey in an e-mail to the plus list. All individuals are encouraged to participate. The deadline for responses is Friday, March 2, 2012.

5. **Next Steps**

   SDT members with responsibility for replying to comments are to have their responses completed and sent to Ed Dobrowolski and the plus list mail server by Friday, March 2, 2012. Mr. Dobrowolski will compile the results.

   Action Item – SDT members with responsibility for replying to comments are to have their responses completed and sent to Mr. Dobrowolski and the plus list mail server by Friday, March 2, 2012.

6. **Future Meeting(s)**

   It was suggested that there is no urgent need to continue monthly face-to-face meetings at this time. The SDT can utilize conference calls with web access to discuss individual items for the next two or three months. At that time, a face-to-face meeting will probably be needed to summarize the work that has transpired as well as to continue work on the guidance document and to complete it as much as possible as we await a final order from FERC.

   The SDT was reminded that the goal is to have a "final" guidance document ready to post once FERC rules on Phase 1. It won't be posted prior to that in case changes need to be made due to FERC directives.

   Pete Heidrich, Barry Lawson, and Ed Dobrowolski will determine what SAR items can be handled through conference calls and solicit viable dates and times through Doodle polls. When it appears that a need for a face-to-face meeting is required, notice will be sent out and dates, times, and locations set up to agree with the SDT's availability.

   It was suggested that Mr. Heidrich and Mr. Lawson make a point to participate in MRC/BOT meetings to provide updates on SDT progress and to raise any issues such as committee work prioritization to the surface as soon as possible. Mr. Heidrich and Mr. Lawson will plan to attend MRC/BOT meetings.

7. **Action Item Review**

   The following action items were developed during the meeting:

   - Pete Heidrich will contact Mark Lauby to obtain a copy of the technical assistance project outline and then will distribute it to the SDT so that SDT members can review it for accuracy and completeness prior to the joint OC/PC/CIPC meeting.
   - The SDT will consider clarifying the use of flowgates in Exclusion E3.
   - The SDT will consider clarifying the language surrounding "ownership" in Exclusion E4.
   - Ed Dobrowolski will produce a preliminary schedule for Phase 2 for SDT approval.
   - Jonathan Sykes will revise the E1 diagram and document to reflect SDT concerns expressed at the San Francisco meeting.

- SDT members with responsibility for replying to comments are to have their responses completed and sent to Mr. Dobrowolski and the plus list mail server by Friday, March 2, 2012.

8. **Adjourn**

   The SDT thanked Pacific Gas & Electric for their hospitality and the Vice Chair adjourned the meeting at Noon PT on Thursday, February 23, 2012.