



NORTH AMERICAN ELECTRIC RELIABILITY COUNCIL

Princeton Forrestal Village, 116-390 Village Boulevard, Princeton, New Jersey 08540-5731

CONTROL CRITERIA TASK FORCE MEETING

Thursday, July 17, 1997 — 8 a.m.–noon.

Hyatt Regency Vancouver
Vancouver, B.C.

MINUTES

A regular meeting of the North American Electric Reliability Council Performance Subcommittee's Control Criteria Task Force was held on July 17, 1997 at the Hyatt Regency, Vancouver, British Columbia, Canada. Chair Alan Oneal presided. The meeting agenda is attached as Exhibit A.

Administrative Matters

The October 31, 1996 CCTF meeting minutes were approved with a few minor corrections.

The CCTF reviewed the roster and decided to divide it into two lists: active and corresponding members.

Inadvertent Task Force

ITF Chair Bart McManus summarized the previous day's ITF meeting:

- Noted that the group readdressed the decomposition of inadvertent.
- Don Badley presented the issue of "selling" inadvertent
- Nathan Cohn's Inadvertent de-composition presentation by Mike Potishnak
- The group also discussed the addition of firm dates into the Policy 1: Inadvertent for the previous month shall be submitted to the Regional Rep by the 10th; to NERC staff by 20th.

Mike Potishnak presented the inadvertent decomposition work of Nathan Cohn. Mike felt that this essentially defines the "good" and "bad" inadvertent that the ITF discussed at its last meeting. He also did a one-month study in 1985 of WSCC and the Eastern Interconnection. The Cohn study discusses various categories of inadvertent based on formulas of actual versus scheduled interchange and time error. Cohn defines Primary as self-caused inadvertent and Secondary as the amount of frequency support. In addition, there are Import and Export components of the Primary and Secondary categories. Cohn also categorized the Primary and Secondary as having the following financial "payback" properties:

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<u>Quantity</u>	<u>Benefit/Penalty</u>
Primary Import	Pay a lot
Primary Export	get paid a little
Secondary Import	pay a little
Secondary Export	get paid a lot

Primary: $(.964 * Inadv) + (33.3 * \bullet * F)$

Secondary: $(.036 * Inadv) - (33.3 * \bullet * F)$

For example, a system with a B value of 207, the following cases were discussed.

Case	Actual Net Inter	Sched Net Inter	Actual Freq	Sched Freq	ACE	Primary	Secondary
1	100	100	60	60	0	0	0
2	120.7	100	59.99	60	0	0	20.7
3	100	100	59.99	60	-20.7	-20	0
4	115	100	59.99	60	-5.7	-5.5	20.5
5	135	100	59.99	60	14.3	13.8	21.2
6	110	100	60	60	10	9.64	0.36

Mike Potishnak noted that additional work was needed here to complete the analysis, plus testing (possibility of ERCOT) including the infusion of other technical support (i.e., outside consultants). Other issues such as setting limits and/or thresholds on the penalties.

Dominik Maratukulam noted that the patent for this work now resides with EPRI, and he will check with EPRI on its implications to any related future Performance Subcommittee efforts.

Bart McManus noted that Mike Potishnak has offered to distribute all background materials on this item to the ITF. The ITF will then meet in mid-August to continue researching the issue. He also recommended that a consultant be brought on board before the August meeting to serve as a technical guide and a validation process. The group then expects to have a draft standard developed by October.

Chair Oneal noted that the concept of a monetary penalty must be discussed with the CPWG as soon as possible. Don McInnis recommended that the new standard be completed before presenting it to the CPWG. Mr. McInnis also noted that this falls right in line with the recommendations of the IOSWG.

Don McInnis noted that ERCOT's recent monthly inadvertent submittals might already contain useable test results, which can be used for validation of this theory.

Chair Oneal recommended continued develop of a straw man document.

Ray Vice commented that Lou VanSlyck has noted that CPS can be directly correlated with inadvertent decomposition; this may be the initial area of work for Lou to analyze (what linkages there are between CPS and inadvertent). Mirek Horenovsky suggested that technical validation is not needed, but a high-level analysis of the correlation would be necessary. Lou may be able to tell us what extensions of CPS may solve this same issue. Don McInnis noted that CPS3, as was previously defined by PCE, might already contain these features. Alan agrees that there may be some relationship to primary inadvertent, but not to secondary.

The CCTF would like Lou VanSlyck to analyze the Primary and Secondary inadvertent theorems defined in the ITF report as the correct direction in developing a standard, or does an extension of CPS contain the correct approach.

Action: The ITF agreed to draft a straw man and a scope of the efforts needed to proceed.

Reserves Task Force

Wayne Smith reported on the RTF meeting. Wayne noted that the newly rewritten Policy 1 was distributed. Essentially, it contains two requirements for reserves: 1) an area must continually balance load and resources, and 2) an area shall acquire and utilize operating services it has determined are necessary.

Wayne asked the group to review the Reserve Sharing Group section 2.1.1 and 2.1.2 on his new write-up and to get comments back to him by August 15.

Wayne noted that the RTF is recommending that the use of time error corrections is not needed, but that the time error should be monitored as an indicator of problem areas. Don Badley has noted that the West has zeroed time error in the past, with little or no repercussions. He was concerned that with this step, we might lose some system monitoring functionality.

The Chair requested that Regional input would be essential. Wayne supported the Chair's comment and made this an action item.

Action: The RTF would incorporate the CCTF and PS comments and issue another Policy 1 straw man for review before the next PS meeting.

Frequency Task Force

FTF Chair Don McInnis reported on the FTF meeting. Support data for standard development for the Eastern Interconnection may be hard to find, due to the lack of survey data. ERCOT and Western data should be readily available. Penalty issues were also discussed. In summary, the Task Force will ask NERC to collect historical event data for analysis.

Wayne Smith also noted that the newly proposed standard limits should be slightly larger than the current expected response. To analyze the latest draft, Wayne suggested that the FTF hold a one day meeting. Chair McInnis agreed.

Howard Illian needs to get a large sample of frequency data for the ERCOT area. Colin Wright noted that Dennis Hogan of ERCOT has provided close to 200 days of data.

Action: The FTF will continue frequency standard development, including an in-depth analysis of the Eastern Interconnection.

Operator Interface Task Force

Charles Sanders presented an update on the PICA panel session from the May 16, Columbus meeting. Charles noted that about 40–50 people attended including some vendors. Some vendors were concerned about the amount of data storage required. The group asked Colin Wright to post the presentation slides to the NERC web side and to also organize the Subcommittee page and FTP sites into TF-related divisions.

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Terry Bilke and Charles reviewed an initial outline of the report. The OITF expects to publish the draft as soon as possible, post it on the web for comments, and have a draft report by October 1. Chair Oneal asked that the draft be e-mailed to the group.

The group also suggested a CCTF e-mail exploder forum be used to share information.

Action: The OITF will distribute a revised report outline draft to the PS for comment.

CPS and DCS Matters

Don Badley summarized the WSCC CPS/DCS Workshop. Don noted that 80 people attended. The DCS was a hot item, due to its newness and the reserve sharing group issues. August 1 is the set goal for implementation.

Chair Oneal surveyed the control areas of MAPP for CPS/DCS implementation and now knows which areas are, will be, and won't be on CPS/DCS by February 1, 1998.

Charles noted that SPP had a half-day workshop for EMS folks on June 12. About 25 attended. Based on feedback, Charles felt that the workshop was very successful.

Terry Bilke reviewed a Disturbance Control Standard Performance analysis he did on ERCOT. The report notes that the ERCOT and Eastern Interconnection meet the proposed DCS. Terry suggested that his methods should also be used to analyze WSCC. Chair Oneal thanked Terry for his analysis.

The group discussed the VACAR note to Al DiCaprio on how VACAR is handling the DCS implementation regarding reserve sharing.

AIE Compliance Issues

The CCTF continued the AIE compliance issues discussed at the Performance Subcommittee meeting. With the implementation of CPS & DCS, the limit of 150% of L_d was re-examined as a threshold for compliance, especially since L_d will no longer be a computed value. Chair Oneal questioned the basis of the limit: is it a threshold for "compliance" or for "explanation." Mirek Horenovsky noted that the AIE is a diagnostic tool — not necessarily a compliance tool. Don McInnis noted that in the past the AIE was not a punitive tool but an aid to show control problems. Wayne noted that the AIE could be used as an indicator of control.

Chair Oneal offered to draft a document showing limits for a threshold for control problems with explanations and not for compliance with supporting standards.

Chair Oneal asked if a standard should be developed as to when the PS should call a survey. Don McInnis proposed a frequency error of 0.025 Hz or greater for over three hours as the standard limit for calling and AIE survey. Ray Vice also noted that this limit could also be tied back to the standard deviations of frequency error. The group agreed to table the issue and discuss it at the next meeting.

Adjournment

The meeting was adjourned at 4:45pm on Thursday, July 17, 1997.



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AGENDA

1. Administrative Matters

- a. Introductions
- b. Arrangements — Colin L. Wright
- c. Approval of Minutes of April 24, 1997 Meeting — Colin L. Wright
- d. Approval of Agenda
- e. Roster*

2. Task Force Reports

- a. Reserves Task Force — Wayne R. Smith
 - i. Policy 1 draft*
- b. Frequency Task Force — Howard F. Illian
- c. Inadvertent Task Force — Bart McManus
- d. Operator Interface Task Force — Edward R. Riley

3. Schedule of completion for new Standards development

4. CPS and DCS Matters

- a. Noteworthy Experiences with CPS or DCS
- b. Implementation Reports/Problems
- c. Issues with DCS: SERC & MAPP
- d. CPS Epsilon limits - discussion of new findings (e.g., WSCC)