



NORTH AMERICAN ELECTRIC RELIABILITY COUNCIL

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

Distribution Factor Working Group

February 6, 2006

Conference Call Minutes

Administrative Matters

Chairman Jim Busbin called the Distribution Factor Working Group (DFWG) conference call to order at 10 a.m. EDT on February 6, 2006. The attendance list is affixed as **Exhibit A**.

Roster

Hardeep Kandola was added to the DFWG roster as the IESO representative. Mr. Kandola will be replacing Kannan Sreenivasachar.

Minutes

The DFWG approved the following minutes:

- September 7–8, 2005 meeting minutes — St. Louis, MO
- October 12, 2005 conference call
- November 9, 2005 conference call
- November 11, 2005 conference call (No quorum)
- December 14, 2005 conference call
- January 20, 2006 conference call

DFWG Web Site Postings

The files listed below will be updated by Friday, February 10, 2006. Note that these files were not updated in December 2005 or January 2006, due to problems upgrading the IDC from PSS/E Rev. 26 to Rev. 28.

- Reference Base Case
- Book of Flowgates
- MUST Files

Winter Base Case

The next base case update is scheduled for March 8, 2006. This update will coincide with the IESO name change to ONT.

Book of Flowgates Rewrite

The Book of Flowgates rewrite team will write a system specification on February 7, 2006 in Little Rock, Arkansas. The DFWG members are encouraged to attend, or send their feedback to Chairman Busbin.

IDC Change Order - 151

Originally the DFWG requested CO-151 due to the creation of the MISO Marginal Zones. The DFWG voted to recommend evaluating the proposed MISO marginal zones with the condition that the IDCWG review changes to the IDC zone representation. The IDCWG now requests that the DFWG determine if this change order is still necessary. Jason Marshall moved that Mr. Busbin obtain the opinion of the Operating Reliability Subcommittee regarding the pitfalls of terminating CO-151. Mr. Busbin will notify the DFWG if the Operating Reliability Subcommittee recommends the termination of CO-151. The motion was approved.

Testing/Validation Process for Loading IDC Models

The DFWG noted several instances when the base case model could not be solved over the last few years, which has resulted in the DFWG reviewing the validation checks that are used by IESO and OATI prior to loading a new model into the IDC. The DFWG reviewed the document entitled "IDC Validation Process at IESO" (**Exhibit B**). Members noted that the TDFs that are calculated by IESO are never compared against the TDFs calculated by the IDC. Mr. Marshall moved to have the DFWG compare the TDFs calculated by IESO against the TDFs calculated by the IDC for all seasonal models. This will be accomplished by either:

- Loading all seasonal models to the IDC test server before a model is approved, or
- Requiring that OATI provide their calculated TDFs to the DFWG prior to loading a seasonal model on the IDC production server.

Mr. Busbin amended the motion to include the following additions to the IESO validation process:

1. All transformer windings must be checked for zero impedance, because the zero impedance value for one-winding of a modeled three-winding transformer can cause TDF calculations to fail. The DFWG representative who submitted the model will flag for modification those windings that have zero impedance.
2. Identify the three-winding transformers that share two buses with other two- and three-winding transformers in the model. The check will then determine if the delta transformation of the three-winding transformer will result in a "duplicate" transformer entry. If so, the transformer will be flagged for modification by the DFWG representative that submitted the model.

In addition, IESO pre-validation test number 2 will be changed to the following:

Mbase of Zero: This test lists the generators that have an Mbase value of zero. It is expected that entities will confirm the units listed here are appropriate and that all nuclear units are included in this list.

The final vote on this motion will be recorded at the next meeting of the DFWG.

The DFWG will also conduct a review of the OATI validation document after the document is received by NERC.

Three-Winding Transformers — TDF Calculation Issues

Mr. Busbin is comparing the TDFs calculated by MUST with the TDFs that the IDC is calculating for three-winding transformers. He will report the test results during the March 17, 2006 DFWG conference call.

DFWG-IDCWG Merger

Dave Mabry will collect feedback from the DFWG members and then assemble a workload analysis to determine if merging the DFWG and IDCWG will improve the overall workflow. The workload analysis will also include a list of the technical expertise needed by each working group member. The analysis will be completed and distributed to the DFWG, prior to the March 17, 2006 conference call.

Next Call/Meeting

What	Date	Time	Location
Conference Call	March 17, 2006	10–12 p.m. EST	Conference Call

Adjournment

The conference call meeting was adjourned at 12 p.m. EST.

Exhibit A

Attendance

Name	Representing	E-Mail
Jim Busbin, Chairman	SOCO	jybusbin@southernco.com
Patrick Shanahan	ATC	pshanahan@atcllc.com
Jason Smith	SPP	jsmith@spp.org
Jason Marshall	MISO	jmarshall@midwestiso.org
Hardeep Kandola	IESO	hardeep.kandola@ieso.ca
Evan Burnett	EES	mmcneec@entergy.com
Dave Mabry	PJM	mabry@pjm.com
Paul Graves	FRCC	paul.graves@pgnmail.com
Phillip Shafeei	NYISO	pshafeei@nyiso.com
Cheryl Mendrala	ISO-NE	cmendrala@iso-ne.com
Jeff Norman	NERC	jeff.norman@nerc.net