

Projects and Model Development

1. **Book of Flowgates Overview/Testing** — Mohammad Yassin reported on the feedback received from the November 2007 Book of Flowgates (BoF) test session. Chairman Busbin suggested the formation of a test team to finalize the BoF testing. He appointed Cheryl Mendrala, Phillip Shafeei, Vic Howell, Mona Soliman, Hardeep Kandola, Jason Davis, and himself to the test team. The test team scheduled a BoF WebEx test session on January 24, 2008 from 9 a.m. until 5 p.m. EST.

The working group discussed the vetting of BoF users. Mohamad Yassin and Brian Nolan will address how to notify current BoF users of the change in Web site address.

2. **BoF Flowgate Ranges** — The working group reviewed the current flowgate ranges identified in the BoF. Nelson Muller reported that the BoF test team changed the spreadsheet at its November 2007 test session (**Exhibit D**).
3. **Overview of Model Development Process** — Chairman Busbin reviewed member responsibilities related to model development (**Exhibit E**). He encouraged members to perform the identified checks prior to sending updates to IESO. This will minimize the number of errors that are corrected by IESO before making the model available to the IDC and the SDX. Chairman Busbin also noted that OATI also performs a series of IDC model validation checks.
4. **2007/08 Winter Model** — Larry Kezele reported that IDC and SDX vendors uploaded the 2007/08 winter model to their respective systems on December 1, 2007.
5. **Conversion to PSS/E Version 30** — Nelson Muller reported that conversion to PSS/E Version 30 may also require a change to the Book of Flowgates project, particularly if the flowgate name is changed. He suggested that this issue could be addressed by developing a mapping from the old names to the new names.

Chairman Busbin stated that the PSS/E Version 30 conversion will impact the IDC and SDX models as well as the back-end systems of some entities. Larry Kezele suggested that the IDCWG and the SDX SDWT develop test plans for CO-250 and CoS-018, respectively.

The working group discussed the formation of a special information technology (IT) task force to address implementation issues with this conversion effort. Chairman Busbin and SDX SDWT Chairman Subakti agreed to jointly form the IT task force. In addition, Chairman Busbin suggested that this conversion process continue until a show-stopper is discovered, especially since the industry has been aware of this model conversion for approximately one year.

6. Member Comments

IDC CO-245 (Manitoba and Minnesota PAR Modeling) — Tim Babcock stated that the implementation of IDC CO-245 may require changing the current phase angle regulator (PAR) model within the IDC. A preliminary analysis conducted by IESO indicates that the use of the

current modeling results in transfer distribution factors that do not add to 100 per cent. Dede Subakti reported that correcting this potential issue may require creating an IESO pseudo balancing authority within the IDC model.

- 7. Flowgate Administration Reference Document** — Chairman Busbin reviewed the current version of the Flowgate Administration Reference Document. The working group discussed changes required to support implementation of the BoF project and IDC CO-229. The working group also proposed eliminating commercial flowgates. Chairman Busbin will reissue the reference document to the working group for additional comments. He will present the revised reference document to the Operating Reliability Subcommittee at its February 2008 meeting.

Adjournment

The meeting was adjourned at 5:12 p.m. on January 8, 2008.

Larry Kezele

Larry Kezele
Secretary

Angie Nicastro

From: Angie Nicastro
Sent: Monday, December 10, 2007 1:55 PM
To: Angie Nicastro
Subject: MEETING: January 2008 Distribution Factor Working Group
Attachments: NERC Distribution Factor Working Group.vcs

Exhibit A

Meeting Announcement: Distribution Factor Working Group

January 8, 2008 | Houston, TX

Register online today: <http://www.nerc.net/meetingregistrations/Committee.aspx?meetingdate=1/8/2008&meetingtype=DFWG>

Meeting Group and Dates	
Group Name	Distribution Factor Working Group
Dates	1/8/2008 1:00:00 PM 5:00:00 PM
Hotel	
Hotel	JW Marriott
Address	5150 Westheimer
City	Houston
State	TX 77056
Phone	713-961-1500
Fax	713-961-5045
Cut Off Date	12/18/2007
Attending Staff	
Staff	Larry Kezele
Miscellaneous	
Notes	<p>PLEASE CALL IN TO BOOK RESERVATIONS</p> <p>Hotel Location- map</p> <ul style="list-style-type: none"> • Room Block Code: NERC • Room rate: \$179 single/double occupancy • Room block: Nights of January 7-8, 2008- (Limited amount of rooms are available) • Check-in: 3 p.m., Check-out: noon • Hotel cut-off date: December 18, 2007. NOTE: After the cut off date the hotel will release this block of rooms and only accept reservations on a space-available basis at the prevailing room rate. • Dress code: Business casual

When making your hotel reservation, please be sure to mention the "NERC" to get the preferred rate and ensure your reservation is credited to the NERC room block. The hotel will charge NERC a penalty if the total rooms blocked for this event are not picked up. Also, if you use a travel agency for your travel plans, please make sure the agency mentions NERC. For more information or assistance, please contact Angie Nicastro, Administrative Assistant, at angie.nicastro@nerc.net or at (609) 452-8060.

1/18/2008

Attached please find an outlook meeting invitation. If you would like to add it to your schedule, just double click on the attachment, select "Open" from the pop up screen, and then hit the "Save & Close" button at the upper left hand of the meeting screen to add to your calendar.

North American Electric Reliability Corporation
116-390 Village Blvd.
Princeton, NJ 08540
609.452.8060 | www.nerc.com

Agenda Distribution Factor Working Group

January 8, 2008 | 1–5 p.m.
JW Marriott
5150 Westheimer
Houston, Texas

Administrative

1. Arrangements
2. Review NERC Antitrust Compliance Guidelines (**Attachment 1**).
3. Determination of Quorum: The rule for NERC working groups is that half of the members (that are entitled to vote) of the working group constitutes a quorum, and a motion passes if it receives two-thirds affirmative votes of the votes cast.
4. Summary of Parliamentary Procedures (**Attachment 2**).
5. Approve and Set Timing for this Agenda. (Closed sessions will be conducted as required.)
6. Review DFWG Roster (**Attachment 3**).
7. Future meetings and conference calls.
 - A. None scheduled.
 - B. Schedule future meetings/conference calls.

Projects and Model Development

1. Book of Flowgates Overview/Testing.
 - A. Project Lead – Mohamad Yassin.
2. Overview of Model Development Process
 - A. Model Development and Validation Process at Ontario.
 - B. Model Validation Process at OATI.
 - C. DFWG Web site and Web site Postings.

3. 2007/08 Winter Model – Implemented on December 1, 2007
 - A. Review implementation issues.
4. Conversion to PSS/E Version 30
 - A. Review IDC CO-250 (Conversion of IDC Data Format to PSS/E Version 30).
 - B. Review SDX CoS-019 (SDX Changes to Support PSS/E Version 30).
5. Flowgate Administration Reference Document
 - A. Version 3 is current version.
 - B. Red-lined for Version 4 as a result of IDC Change Order 229.
6. Member Comments
7. Other

**Distribution Factor Working Group
(January 18, 2008)**

Exhibit C

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RC Flowgate Ranges

<u>RC</u>	<u>Start</u>	<u>Stop</u>
PJM	1	999
TVA	1000	1099
VACS	1100	1299
ICTE	1300	1399
VACS	1400	1499
SOCO	1500	1599
TVA	1600	1699
PJM	1700	1799
VACS	1800	1803
ICTE	1900	1999
PJM	2000	2399
MISO	2400	2849
PJM	2400	2849
TVA	2400	2849
MISO	2850	3199
PJM	3200	3299
TVA	3300	3799
MISO	3800	3809
FPL	4000	4999
SWPP	5000	5999
MISO	6000	6999
NYIS	7000	7099
ONT	7100	7199
ISNE	7200	7249
NBSO	7250	7299
NYIS	7400	7401

IDC Validation Process at IESO

IDC (Interchange Distribution Calculation) basecases are prepared twice a year, one in June to coincide with the summer and the other in December to coincide with the winter season. The process of building the IDC basecase starts with one of the planning models to which all members of the DFWG agree to. Initial modifications are applied to the basecase and sent out to members for review. Further updates to the model are sent in by the members and through a number of trials the IDC basecase is built to the satisfaction of all members.

Together with the IDC basecase is important information called the Book of Flowgates (BOF) that goes along with it. The BOF contains sensitive information about the transmission system of the Eastern Interconnection that provides a safe and reliable operation of the power system. IESO has the contract for providing the IDC Basecase support and for maintaining the BOF.

The IDC Basecase and the BOF are sent to OATI for validation and subsequent loading on to the IDC server for operations. Prior to validation of the IDC Basecase and the BOF by OATI, the IESO conducts a number of pre-validation tests to reduce the number of errors and time for upload. The pre-validation tests are listed below.

1. Duplicate Bus Names test: This test lists the buses that have duplicate bus names. It is mandatory that bus names be unique.
2. Duplicate Generator Names: This test lists the generators that have duplicate bus names. It is mandatory that generator names be unique.
3. Nuclear Mbase Zero: This test lists the nuclear generators that have zero Mbase.
4. Pmax &Pmin test: This test lists the generators that have Pmax = 9999 or Pmin = -9999. It is required that no generator have Pmax = 9999 or Pmin = -9999.
5. Tie-Line check: This test lists the ties connecting different areas. Differences in the tie lines are reported and members are required to correct them by sending the necessary changes to the IESO.
6. Branch check: This test lists the differences of branches between the models. Seasonal or monthly network updates are recorded and reported to members. This should also include updates to the network impedance and reported.
7. Generator check: This test lists the generators that have changed status or have been added between seasons or during monthly IDC basecase updates.

8. BOF Flowgate check: The BOF and the IDC basecase need to be in sync with respect to flowgate definition. This test helps in identifying the list of flowgates that invalid with respect to flowgate definition.
9. BOF TDF check: This test helps in identifying/tracking the changes in Transfer Distribution Factor (TDF) values between seasons or monthly changes in the IDC basecase. Any significant changes in TDFs need to be reported for further investigation by the DFWG members.