

APPROVED MEETING MINUTES
MIDWEST RELIABILITY ORGANIZATION
Model Building Subcommittee
Holiday Inn Select, Bloomington, MN
July 17th, 2007 – 9:00 AM – 4:00 PM

1. Call to Order

Chairman Burbach called the meeting of the Midwest Reliability Organization (MRO) Model Building Subcommittee (MBS) to order at 9:00 AM.

2. Determination of Quorum

The following members and guests were present:

Members Present:

Alan Burbach, LES Chairman	Dan Custer, MEC
Adam Flink, MRO Secretary	Dave Kempf, GRE
Gerry Lane, MH	Dan Burns, (CIPC) RTC Liaison
Kristian Samoila, SPC	Hamish Wong, WPS
Kerry Marinan, ATC	Holli Krizek, WAPA
Srinivas Vemuri, XEL	Dustin Betz, NPPD
Abul Shuvo, ALTW	Rao Konidena, MISO Liaison
Dan Jesberg, MRO Alt. Secretary	

Guests:

Loren Mayer, MISO	Wayne Roelofs, GRE
Raja Srinastava, TranServ	

Guests on Phone:

Lynn Dong, MISO	Hari Singh, ATC
Joe Smith, MISO	Dave Rudolf, BEPC
Wayne Haidle, BEPC	

3. Standards of Conduct and Anti-Trust Guidelines

Chairman Burbach presented the MRO and NERC Committee Membership Policy #4 and the Standards of Conduct and Anti-trust Guidelines.

4. Consent Agenda

- a. *Approve Meeting Minutes from May 15, 2007*
Modification submitted by Mr. Burbach.
Modification submitted by Mr. Burbach.

Upon motion duly made by Mr. Lane and seconded by Mr. Custer, the Model Building Subcommittee approved the May 15, 2007 minutes as amended.

- b. *Approve Meeting Minutes from June 12, 2007*
Modification submitted by Mr. Custer.
Modification submitted by Mr. Wong.

Upon motion duly made by Mr. Lane and seconded by Mr. Marinan, the Model Building Subcommittee approved the June 12, 2007 minutes as amended.

5. MBS Membership Issues – Alan Burbach

- a. *Information only: Holli has contacted Dave Rudolph, BEPC, about replacing Wayne Haidle as a Dakotas member on the MBS. Dave is currently reviewing what subcommittees are best served with his time, and will keep Holli informed on his status.*

Action Item: Dave Rudolph and Wayne Haidle to be added to the MBS exploder.

6. Status Report on MRO 2007 Series Models – Rao Konidena

- a. *Wrap-up on Power Flow & Dynamic Model Development*

Dynamics:

MMWG 2006 Series Base Models: Lynn Dong reported that dynamic simulation with the original NERC 2006 series MMWG case in PSS/E V30 produced good results for a 20 second flat STRT. When the model was converted to PSS/E V29 it still results in a problem (large Dstate) due to a DC line and subsequent case crash at 4 seconds when attempting a flat STRT.

Lynn also noted bus numbers were different in the MH DC dynamics model in the base MMWG case compared to the MRO 2006 series model.

Lynn Dong reported that she solved a 2006 series summer NERC case with a high mismatch in PSSE V30 and it would not solve in PSSE V29.

MRO 2007 Series Models: Lynn Dong reported she could not solve four of the new cases in PSS/E V30 at default parameters but could solve with a tolerance of 1.0 as noted by Adam Flink with the final case posting. It was also noted that different results were obtained whether solving through the GUI pull downs or via the command line. This caused problems when trying to run solve.ipl to get a good initialization in dynamics. Kerry Marinan noted some external zero impedance branches need to be bumped above the zero impedance threshold to reduce solution mismatch.

Action Item: Lynn Dong to send the NERC 2006 series base case used for attempting V29 dynamics testing to Adam Flink for posting on the MRO website so that MBS members, particularly WAPA and MH, can review it. DC data must be checked.

Action Item: Holli Krizek to work with Loren Mayer to reapply WAPA DC ties idev to address MMWG base case problems in V29.

Action Item: Lynn Dong will supply the test case (MMWG) to Adam for posting on website.

Action Item: Lynn Dong will send MH the changed MH dynamics data found in the NERC 2006 series model for their review.

Action Item: Kerry Marinan to send zero impedance idev to Lynn Dong to run on 4 MRO models w/ solution issues in V30.

The MBS decided that if the v29 case will not STRT and run clean, then the dynamics will be converted to v30.

Action Item: MBS member Area Appraisals are due by August 3, 2007 to Adam.

- b. *Solution expectation –should models solve with loss of a generator in the 600 MW class? Is this an implied criterion? Should it be part of the model benchmarking?*
This item was not covered during the meeting.

7. Development of the MRO 2008 Series Models

Action Item: *Outline and Approve a Process for Developing the MRO 2008 Series Models*

- a. *MISO and MRO scope of work proposals*
1. *Update MOD base case – Rao Konidena*
 2. *Update Project files (i.e. ,including new bus numbers)*
 3. *Creation of Profiles, Device, and Rating files*

MISO staff requested that MOD project files submitted for the 2008 series be broken down into individual projects in order to better organize the database.

MISO staff is working with PTI to provide enhancements to MOD in time for the 2008 series process. Included are:

- Capability to upload individual company profiles into MOD (preferred over sending IDEV's to MISO who would create single composite profiles),
- bulk data upload feature, and
- retention of phase dependant rating files when the project file is temporarily removed from MOD for revision..

Action Item: Joe Smith to work with Adam Flink to update MOD base case with new bus, area, owner and zone numbers.

Action Item: MISO to issue a request to the data submitting companies for a security person associated with the MOD model building process.

- b. *MRO-MISO Model Build Proposed Schedule*

The MBS decided to adopt a new model building schedule for the 2008 model series. The Data Request will be sent out after January 1, 2008 and data will be due by approximately April 1, 2008. The Data Request will make it very clear that the pass 1 data must be very nearly final as the compressed schedule will not allow for extensive modifications following the initial data submittal.

Some supporting factors for the new schedule included:

- The proposed schedule would put the MRO schedule closer to alignment with the MMWG process.
- For MRO members who are members of MISO, this would put the MRO model building schedule in parallel with the MISO model updating schedule; although the two model series do not include a one for one match of cases. Synergies are anticipated with this year's MRO and MISO processes allowing parallel development of both series.
- The proposed case list (see following page) covers all models required by the ERAG MMWG ensuring MRO compliance, and by foregoing the operating cases the MRO minimizes the number of unique cases that are built. Four unique cases must still be built to satisfy internal MRO study needs. Note that the MRO will ask ERAG MMWG to consider building summer shoulder-peak cases, which are equivalent to the MRO off-peak cases.
- A later start date for the MRO model building process will allow more time for companies to complete their revised load forecasts based on the loads experienced during the prior summer.
- Many model users do not start using the latest series as soon as it is released. In the past, this provided some slack as to when the annual MRO model series was completed. This new approach takes advantage of this by delaying the process start time such that the models would be completed just in time for submission to ERAG MMWG.

Potential Drawbacks of proposed schedule are:

- The shorter schedule with a later completion date introduces risk in meeting the MMWG data submission deadline.
- The current year (operating) cases will no longer be built with each MRO model series; however, historically the MRO models have not been released in time for that year's summer operating studies requiring studies to be completed with older series models. Additionally, MMWG builds/updates summer and winter peak (operating) cases for seasonal studies 2 to 4 months before the presumed start of the peak season.

c. Interchange control – Tie Lines and Loads.

The MBS was in favor of building the 2008 MRO model series using the Lines and Loads method of solving area interchange.

d. Use the MMWG DC tie numbering for the next series.

A table was provided by Alan Burbach summarizing DC line numbering. Gerry Lane noted the table should include DC lines 48 and 49 as reserved by Manitoba Hydro for their future Bipole 3.

e. Short Circuit model – see item b under Old Business

Not covered at this meeting

8. MRO Model Building Procedural Manual

a. Action Item: review and approve any changes to this manual

The MBS began to go through the document and accept changes and review comments, but ran out of time to finish this process. The manual is to be sent out to the MBS for

review before accepting all changes. A clean copy will then be sent out for another round of revisions by the MBS.

9. Reports

a. WGMTF – Gerry Lane

1. Approval of Data Collection Spreadsheet

The MBS approved the Wind Data Collection Spreadsheet.

2. Review Wind Generator Modeling Manual Draft

The document will be available for the MBS to review until September 17. The document has been sent to industry experts for further review, due August 6. The WGMTF will target completion of a revised draft manual by October 7, 2007 for review/approval at the next MBS meeting.

3. Approval of Wind Gen. Data Request

The MBS approved the Wind Data Request for wind plants modeled in the MRO 2007 model series.

Action Item: Adam Flink to send out Wind Data Request by July 20 with a data submission due date of September 30, 2007.

4. Convention for Wind Generator ID

The MBS approved a Wind Generator ID scheme: last character is a 'W'.

5. PSSE compatibility for generic wind models

It was recommended that the 2008 model series be built with PSS/E version 30.3.1 or later to ensure compatibility with the latest wind models.

6. Wind dispatch levels

The manual includes generation dispatch levels and associated model changes for the various models proposed for the upcoming model series.

7. Availability of the wind turbine/wind farm data.

Recognizing that it may be difficult to obtain all the requested data for existing wind plants, it was agreed there would not be a non-compliance penalty for a partial or incomplete response.

8. Discussions with MISO regarding benefits of updating MOD to include the wind farm data

Upon motion duly made by Mr. Custer and seconded by Mr. Wong, the MBS voted unanimously to extend the life of the WGMTF until the summer 2008 MBS meeting.

b. ERAG MMWG – Kerry Marinan

Report: MMWG model submission deadlines have been met.

Action Item: Kerry will get clarification from the MMWG of what load to model in the various cases..

Action Item: Kerry will request the MMWG to consider adding shoulder cases to their case list.

10. Other Business

- a. SPC requested written documentation to justify the reliability need for adding cases to the MMWG case list, and the use of 70% of summer peak load as the summer off-peak load level. There is currently no standardized process or criteria for the addition of extra cases to the MMWG series.

Action Item: Gerry Lane will provide draft wording for the MBS manual and for use by Kerry Marinan in his request to MMWG to build shoulder cases.

11. Old Business

- a. *Enhancement of the MOD data submitter/documentation manual including the possible addition of a summary action list from the data submitter perspective. – Gerry Lane*

Gerry Lane provided an overview of the structure and content of an updated version of the manual he had provided for the meeting.

Action Item: MBS members to review document and provide changes by August 31.

Action Item: Alan Burbach and Adam Flink to start work on updating the General MOD Training Manual.

12. Next meeting

- a. *MBS: October 17th, 2007 – Holiday Inn Select, Bloomington, MN (Last meeting for 2007)*
- b. *RAC: September 5th, 2007 – Holiday Inn Select, Bloomington, MN (Other meetings November 6th)*

13. Adjourn

The meeting was adjourned at 4:15 PM.