Model on Demand Software Debuts– Bringing Consistency to Data Inputs

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The Midwest ISO (MISO) recently went live with their implementation of Siemens Power Transmission & Distribution, Inc., Power Technologies International’s (Siemens PTI) Model on Demand (MOD™web) software application. In so doing, MISO’s Regulatory & Economic Standards Department became the first to use the newest and greatly enhanced MOD™web release for their members to create time-based planning models.

Chetty Mamandur, Manager, Standard Topology Modeling, explains: “When the Midwest ISO asks for data sets we may get them in many different ways. This poses a challenge for both stakeholders and Midwest ISO’s planners. What was missing was an interface that standardized the process so that all model analysts could work with consistent data sets,” he said. “With this new software we are now working on the same page.”

With the software, Midwest ISO’s model analysts are now able to create various planning scenarios – secure in the knowledge that the data inputs are consistent. The MOD™web database and the web-based user-friendly graphical user interface provide a one-stop-shop for all planning-related time-referenced model data. One of the biggest benefits is that the Midwest ISO and its members are now better able to manage the multiple models that are used by the Midwest ISO companies. Using MOD™web, the Midwest ISO and its members are able to create system planning models for any point in time.
Here’s how MOD™web works:

• Users log on to the web-based application and submit projects, profiles and rating data sets to update the model. The projects represent changes in topology and equipment and are marked with an effective date. Profiles represent operational conditions and regulating equipment set points for different years, seasons or other operating scenarios. An unlimited number of rating sets can be stored and applied to cases. Once imported, analysts can build models by specifying a target date/time and profiles and rating sets that should apply.

• MOD™web also connects to the PSS™E software to pre-solve the created power flow case to help ensure that the data set is producing a valid model. This efficiency alone streamlines the study process because it assures better models to all users who can then spend their time performing studies instead of correcting models.

• MOD™web is expected to enhance the model accuracy and increase study efficiency at the Midwest ISO by enabling users with better access to models, streamlining model updates and making the model building effort more efficient.

The first models to be developed with the new system were the Midwest Reliability Organization’s (MRO) 16 series pass-1 models. MRO members submitted all the modeling data for the effort to MOD™web and Sr. Modeling Analyst, Loren Mayer, assembled the required project files within the MOD™web to create the 16 seasonal power flow models for the MRO. MOD™web is then being used to develop NERC MMWG models and MISO series models.

This was the first real test of the radically new MOD™web software and the initial task of building 16 season models was complex with more than 1,500 project files (sets of system modifications tracked by MOD™web) being submitted for the effort.

The MISO project team, led by Chetty Mamandur and Joe Smith, worked closely with Siemens PTI to improve the original design of MOD™web software, and devoted substantial effort to test the interim versions of the software during its development.

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