Load Analysis Subcommittee
Teleconference / Web conference
Wednesday, March 25, 2015
9:30 a.m. – 12:00 p.m. EPT

Administration

Mr. Reynolds opened the meeting and reviewed the agenda.

Ms. Mooney performed roll call.

The Load Analysis Subcommittee reviewed and approved the draft minutes from the November 24, 2014 meeting. Minutes will be posted as final.

An additional agenda item to discuss the impact of the possibility of FERC ruling against keeping Demand Response (DR) and Energy Efficiency (EE) in capacity markets and how PJM will handle this in the forecast was added.

Load Forecast Model Development

1. Peak Load Model Enhancements

Mr. Gledhill reviewed peak model work focused on potential model changes and enhancements. Peak model improvements were grouped into four categories and discussed. First, PJM will review existing model specifications and decide if any variables should be removed because of multicollinearity. Second, PJM will incorporate customer usage and efficiency variables into the peak model using data Itron compiles at a census division level from the US Energy Information Administration (EIA). It was noted that heating and cooling equipment will be interacted with weather to produce the impact of weather with the particular type of equipment. Third, PJM will revisit the weather specification in the peak model. One possible change could be using splines to represent distinct ranges of weather variables differently. Fourth, PJM plans to investigate using an autoregressive error term to address the negative residual pattern in recent years.

The subcommittee discussed the desire for more information on what the EIA’s reference case represents. The idea of shortening the model estimation time horizon was raised with PJM mentioning that they want to explain changes that are impacting the data and only reject/hold out data as a last resort.

Mr. Gledhill reviewed two housekeeping items for the load model. First, there are new and updated metropolitan areas as a result of the Office of Management and Budget redefinition. PJM will review changes and make appropriate updates to MSAs within a zone. Second, PJM is asking zones to review current weather station mappings and weights included in Manual M19 and inform PJM of any possible changes.
2. Distributed Generation

Ms. Cummings reviewed the potential impacts of distributed solar photovoltaic generation on long term load forecast. PJM plans to investigate data from the Generator Attribute Tracking System (GATS) which reports renewable solar resources collecting solar RECs in the PJM region. Ms. Cummings noted that the investigation of growth in solar will include state mandates, subsidies, cost of technology and installation, and saturation levels. PJM will work with our state liaisons to provide appropriate state level activities related to solar resources.

3. Next Steps

The final model changes will be reviewed and discussed at a future LAS meeting. Manual M19 changes will be made and reviewed with LAS, the PC, and the MRC. PJM plans to have model changes in effect for the 2016 Load Forecast.

4. Impact of Potential Removal of Demand Response and Energy Efficiency from Capacity Market on PJM Load Forecast

If a court decision results in Demand Response and Energy Efficiency resources being removed from PJM’s forward capacity market, changes in the load forecast model will be part of a coordinated PJM response.

Future Meeting Dates

April 30, 2015 9:30 a.m. – 12:00 p.m. Webex

In Attendance

<table>
<thead>
<tr>
<th>Name</th>
<th>Company</th>
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<tbody>
<tr>
<td>Randy Holliday</td>
<td>American Electric Power</td>
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<tr>
<td>Lisa McAlister</td>
<td>American Municipal Power, Inc.</td>
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<tr>
<td>David Bloom</td>
<td>Baltimore Gas and Electric Company</td>
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<tr>
<td>John McDaniel</td>
<td>Baltimore Gas and Electric Company</td>
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<td>Dennis Kelter</td>
<td>Commonwealth Edison Company</td>
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<td>Ran Zhang</td>
<td>Constellation</td>
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<td>Guy Filomena</td>
<td>Customized Energy Solutions, Ltd</td>
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<tr>
<td>Jonathan Sasser</td>
<td>Customized Energy Solutions, Ltd</td>
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<tr>
<td>Mike Hurd</td>
<td>Dayton Power and Light Company</td>
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<tr>
<td>Yohannes Mariam</td>
<td>DC Office of People's Counsel</td>
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<tr>
<td>John Farber</td>
<td>Delaware Commission Staff</td>
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<tr>
<td>Billy Coyle</td>
<td>Dominion Resources</td>
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<td>Mike Jesensky</td>
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<td>Abhijit Rajan</td>
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<td>Karim Siamer</td>
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<tr>
<td>Kelly Zhang</td>
<td>Dominion Resources</td>
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Leon Brunson
James Habberfield
Sally Witt
Malcolm Ainspan
Rebecca Stadelmeyer
Martin Bolan
Deb Kanner
Bill Moll
Derek Hagaman
David Pratzon
Dave Mabry
Jennifer Chen
Allison Clements
Rick Alston
Greg Carmean
Kimberly Golden
Kenneth Reif
Matt Webb
James Jablonski
John Citrolo
Stephen Wreschnig
Joel Yu
James Wilson

Duke Energy Ohio, Inc.
Duquesne Light Company
East Kentucky Power Cooperative, Inc.
Energy Curtailment Specialists, Inc.
Exelon
FirstEnergy Solutions Corp.
FirstEnergy Solutions Corp.
FirstEnergy Solutions Corp.
GT Power Group
GT Power Group
McNees Wallace & Nurick LLC
NRDC
NRDC
Old Dominion Electric Cooperative
OPSI
PPL Electric Utilities Corp.
PPL Electric Utilities Corp.
PPL Electric Utilities Corp.
Public Power Authority of New Jersey
Public Service Electric & Gas Company
Public Service Electric & Gas Company
Rockland Electric Company
Wilson Energy Economics

PJM Staff

John Reynolds, Chairman
Bridgid Cummings
Tom Falin
Andrew Gledhill
Jason Quevada
Patricio Rocha Garrido
Molly Mooney, Secretary

PJM Interconnection, L.L.C.
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