Load Analysis Subcommittee
Teleconference / Web conference
Wednesday, October 19, 2016
9:30 a.m. – 12:00 p.m. EPT

Administration

1. Mr. John Reynolds opened the meeting and reviewed the agenda. Ms. Molly Mooney performed roll call.

2. The Load Analysis Subcommittee reviewed and approved the draft minutes from the December 10, 2015 meeting. No changes were requested. Minutes will be posted as final.

Education

3. Review of Summer 2016 Load

Ms. Mooney reviewed the peak loads and weather from Summer 2016. The August 11, 2016 unrestricted peak of 151,945 MW was 5.9% above the actual 2015 peak and 0.1% below the 2016 forecast. The weather experienced across the RTO on August 11, 2016 was in line with 50 percentile weather.

4. PJM Weather Normalization Methodology

Ms. Mooney reviewed the weather normalization procedure for non-coincident peak (NCP) and coincident peak (CP) loads. The regression method and data that gets included in the NCP was presented. An average zonal diversity is applied to each zone’s NCP WN value to produce CP WN values. All PJM weather-normalized peaks are now information-only items. The CP WN values are used by EDCs to allocate customer peak load contributions (PLCs) but capacity obligations are set by the coincident peak forecast. A spreadsheet with details of the Winter 2015/16 and Summer 2016 weather normalization results was posted with the LAS meeting materials.

5. Load Forecast Accuracy

Mr. Andrew Gledhill discussed forecast model accuracy. The method used to evaluate model accuracy is to solve the model using up-to-date information and actual weather. This solved load is compared to the value the model would predict to calculate mean percent error (MPE) and mean absolute percent error (MAPE). Summer and Winter MPE and MAPEs on the 10CP days were shown for zero to five years out in the forecast.

6. Economic Forecast Accuracy

Mr. Gledhill presented a comparison of economic forecast accuracy from the two vendors that PJM acquires economic data from, Moody’s Analytics and IHS Markit (formerly Global Insight). Mr. Gledhill reviewed the challenges of changing economic series and a complete redefinition of Metro areas in the analysis. The results show both vendors perform with a similar level of accuracy for the economic index.
that PJM uses in the forecast model in a zero, three, and five year out timeframe. PJM will continue with the status quo (using Moody’s Analytics) and continue to monitor performance periodically.

**2017 Load Forecast Development**

### 7. Solar Forecast Methodology Update

Ms. Bridgid Cummings provided an update on the methodology PJM uses to estimate historical and forecasted solar generation. Ms. Cummings detailed PJM’s work on cloud cover measurement and using more weather stations in the back-casting analysis. PJM has contracted with IHS to produce the 2017-2032 distributed solar generation forecast that will be used in the 2017 Load Forecast Report. IHS will be providing scenario forecasts this year, which will give stakeholders a better understanding of how different factors and assumptions impact the solar generation forecast. The IHS analysis and results will be presented at the November 18, 2016 LAS meeting.

### 8. Load Forecast Assumptions Review

Mr. Gledhill reviewed the input parameters and assumptions for the 2017 load forecast. A comparison of economics, equipment indices, and updated load forecast adjustments for Dominion were discussed. PJM will review the 2017 preliminary forecast with the Load Analysis Subcommittee at the November 18, 2016 meeting. The preliminary forecast will be reviewed with the Planning Committee at their December meeting and the final forecast will be published in late December.

**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>Marek Kaczanowski</td>
<td>Baltimore Gas and Electric Company</td>
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<td>John McDaniel</td>
<td>Baltimore Gas and Electric Company</td>
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<td>Sara Bishop</td>
<td>Calpine</td>
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<td>Dennis Kelter</td>
<td>Commonwealth Edison Company</td>
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<td>Rob Zacher</td>
<td>Commonwealth Edison Company</td>
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<td>Rehan Gilani</td>
<td>ConEdison Energy, Inc.</td>
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<td>Tiffany Smith</td>
<td>Constellation Energy Services</td>
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<td>Guy Filomena</td>
<td>Customized Energy Solutions, Ltd</td>
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<td>Carl Johnson</td>
<td>Customized Energy Solutions, Ltd</td>
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<td>Jonathan Sasser</td>
<td>Customized Energy Solutions, Ltd</td>
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<td>John Farber</td>
<td>DE Public Service Commission</td>
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<td>David Hastings</td>
<td>Dhapsto, LLC</td>
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<tr>
<td>Dana Gullquist</td>
<td>Dominion Virginia Power</td>
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<td>Jeff Matzen</td>
<td>Dominion Virginia Power</td>
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Abhijit Rajan               Dominion Virginia Power
Karim Slamer                Dominion Virginia Power
Leon Brunson                Duke Energy Ohio, Inc.
Maida Mayfield              Duke Energy Ohio, Inc.
Sally Witt                  East Kentucky Power Cooperative, Inc.
Malcolm Ainspan             Energy Curtailment Specialists, Inc.
Eric DeBellis               Environmental Law & Policy Center
Jim Benchek                 FirstEnergy Corporation
Martin Bolan                FirstEnergy Corporation
Lou D’Alessandris           FirstEnergy Corporation
David Marton               FirstEnergy Corporation
Bill Moll                   FirstEnergy Corporation
Jon Schneider               FirstEnergy Corporation
Derek Hagaman               GT Power Group
David Pratzon               GT Power Group
Kenneth Foladare            IMG Midstream LLC
Dave Mabry                  McNees Wallace & Nurick LLC
George Kogut                New York Power Authority
Claude Martin               North Carolina Electric
Stephen Wreschnig           Public Service Electric & Gas Company
Damon Xenopoulous           Stone Mattheis Xenopoulous & Brew, PC
Max Servera                 Unicia Energy, LP
Brian Hamilton              Unknown

PJM Staff
John Reynolds, Chairman     PJM Interconnection, L.L.C.
Bridgid Cummings            PJM Interconnection, L.L.C.
Tom Falin                   PJM Interconnection, L.L.C.
Andrew Gledhill             PJM Interconnection, L.L.C.
Jason Quevada               PJM Interconnection, L.L.C.
Patricio Rocha-Garrido      PJM Interconnection, L.L.C.
Ken Schuyler                PJM Interconnection, L.L.C.
Mike Ward                   PJM Interconnection, L.L.C.
Molly Mooney, Secretary     PJM Interconnection, L.L.C.

Author: Molly Mooney
CERA #42050061