Preliminary 2016 Load Forecast

Load Analysis Subcommittee
November 30, 2015
• 2016 Load Forecast Review
  – Model Parameters
  – Results
  – Decomposition of Change
• Next Steps
This slide is from the September LAS meeting.

Shows the impact of the model changes endorsed by PC/MRC.
Model Parameters

- Estimation Period: January 1998 through August 2015
- Weather Simulation: 1994 to 2014 (273 Scenarios)
- Economics: October 2015 vintage from Moody’s Analytics
- Equipment Indices: Based on Itron’s 2015 release
  - Reflect the EIA’s 2015 Annual Energy Outlook
- PJM Solar Addbacks & IHS Solar Forecast (zonal & peak allocation by PJM)
- Forecast Adjustments
  - Dominion: Revised adjustment related to data center growth
  - APS: Adjustment related to gas processing facilities
### 2019 Comparison

- **2015 Forecast to 2016 Prelim**
  - = Down 3.5%

- **2015 Forecast (New Model) to 2016 Prelim**
  - = Up 0.9%

### 2021 Comparison

- **2015 Forecast to 2016 Prelim**
  - = Down 5.1%

- **2015 Forecast (New Model) to 2016 Prelim**
  - = Up 0.5%
**2019 Comparison**

- 2015 Forecast to 2016 Prelim = Down 0.6%
- 2015 Forecast (New Model) to 2016 Prelim = Up 2.3%

**2021 Comparison**

- 2015 Forecast to 2016 Prelim = Down 1.5%
- 2015 Forecast (New Model) to 2016 Prelim = Up 1.9%
PRELIMINARY PJM RTO Forecast - Decomposition of Changes

PJM RTO - Decomposition of 2019 Forecast Changes

- Preliminary 2016 forecast
- Old Forecast Adjustments
- Weather Scenarios (1973-2013)
- Economics (October 2014)
- Estimation Period (Through August 2014)
- W/o Solar Adjustment
- Equipment Index (2014 Vintage)
PJM RTO Economic Index (1998Q1 = 1.0)
Source: Moody's Analytics

2019 Comparison
October 2014 to October 2015
= Up 1.4%

2021 Comparison
October 2014 to October 2015
= Up 1.6%
2019 Comparison

2014 Vintage to 2015 Vintage
= Down 3.6%

2021 Comparison

2014 Vintage to 2015 Vintage
= Down 4.6%
PRELIMINARY PJM RTO Forecast – Heating Equipment Index

2019 Comparison
2014 Vintage to 2015 Vintage
= Up 1%

2021 Comparison
2014 Vintage to 2015 Vintage
= Up 0.1%
PRELIMINARY PJM RTO Forecast – Other Equipment Index

2019 Comparison

2014 Vintage to 2015 Vintage
= Down 0.1%

2021 Comparison

2014 Vintage to 2015 Vintage
= Down 0.3%
• PJM received supplemental data on appliance saturation from 10 zones
  – AEP, APS, ATSI, COMED, DUKE, EKPC, JCPL, METED, PENLC, VEPCO

• PJM evaluated whether to use zonal supplied information using a bright-line test of whether or not its use improved accuracy.
  – Two zones failed to meet this threshold (JCPL & METED)
Mean Absolute Percent Error on Top 10 Days
By Three Year Out Forecast

AEP  APS  ATSI  COMED  DUKE  EKPC  JCPL  METED  PENLC  VEPCO

With Zonal Input  Without Zonal Input
Forecast Adjustments in 2019

2015 Official Forecast
Total = 370
Dominion = 370

2016 Preliminary Forecast
Total = 960
Dominion = 680
APS = 280
• Review with Planning Committee (12/3/2015)
• Publish final report in late December
  – Unrestricted Loads Spreadsheet
  – Statistical Appendix
  – Economic Variable and Equipment Index Data
  – Moody’s Analytics Economics Report