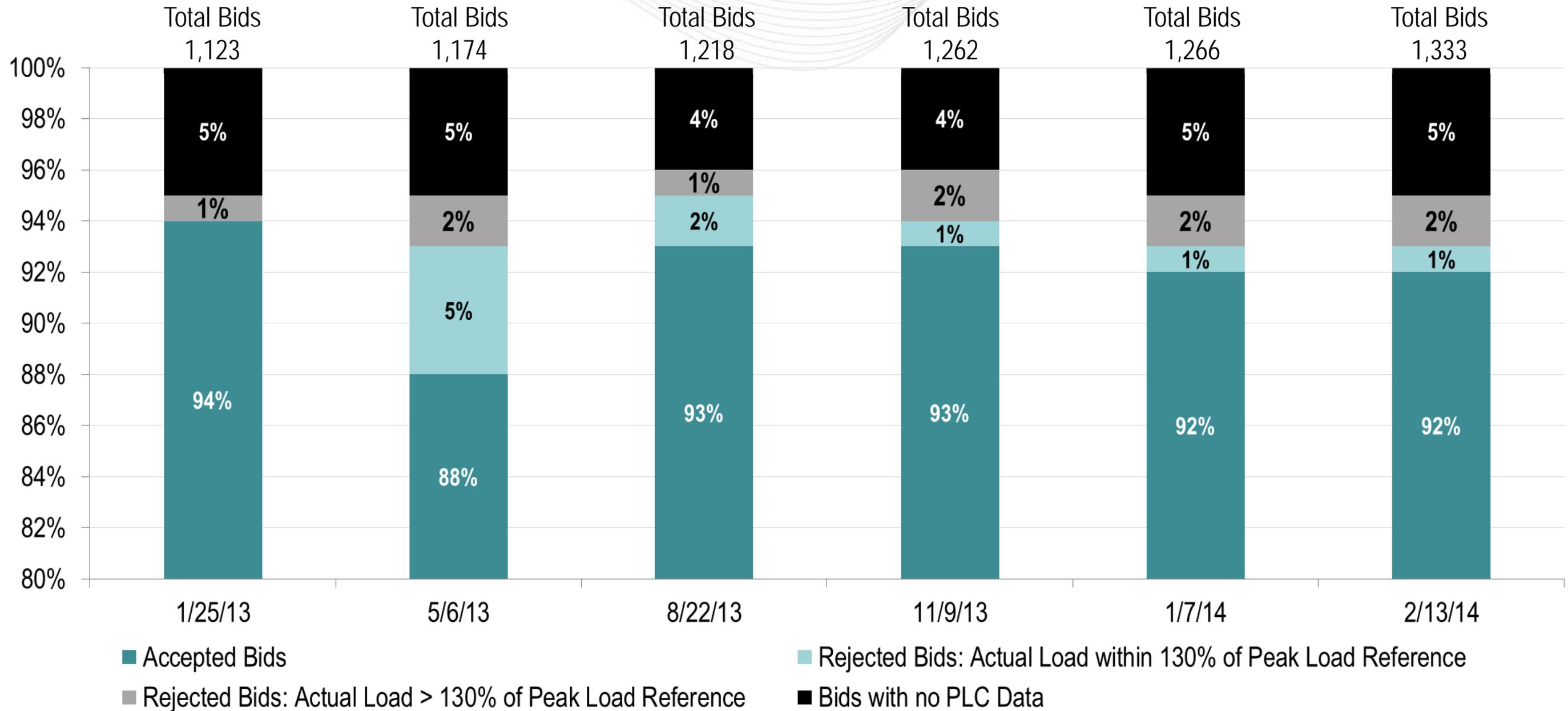


# Potential Demand Bid Volume Limits

Credit Subcommittee  
June 10, 2014  
Suzanne Daugherty

# Results of Sample Days' Analyses

(Based on PLC Share Per Zone and Two-Day Ahead Zonal Peak Forecast)



# Revised Demand Bid Volume Limit Concept

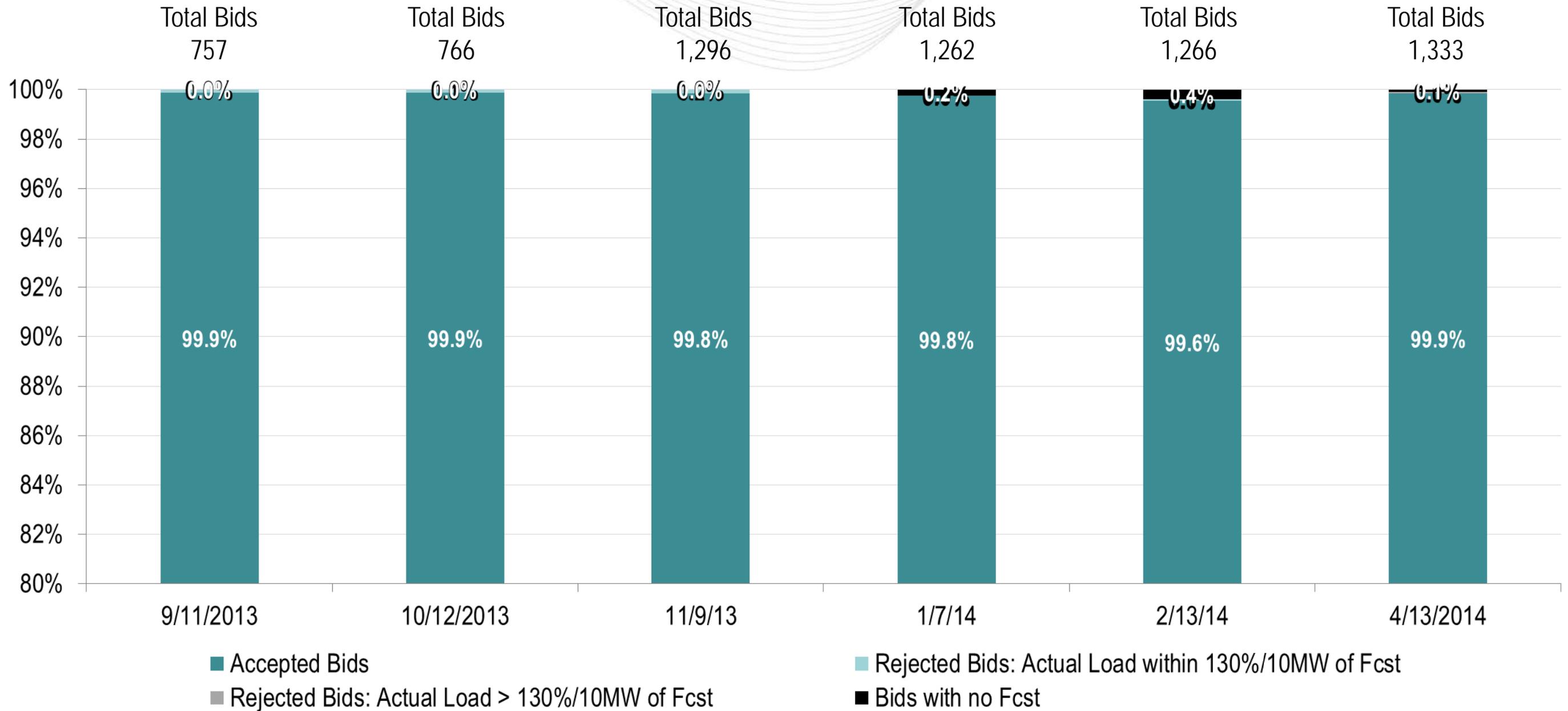
(Based on Highest Recent Share Per Zone and Two-Day Ahead Zonal Peak Forecast)

- Objective – Reduce the risk of material costs accruing on demand bids in excess of the load-serving commitments of the load-serving entities (LSEs) entering those demand bids
- Potential Limit – Demand Bids will be rejected if  $> 30\%$  and  $> 10$  MWs above the LSE's calculated peak load forecast reference point for the operating day
- Potential peak load forecast reference point:
  - Each LSE's highest one-hour share of the actual load contributions for each transmission zone in the most recent available seven days, times PJM's peak load forecast for each zone
  - For transparency, intend to have a file of calculated peak load forecasts by LSE by transmission zone available daily two days prior to the applicable operating day
- Demand bids in excess of limit would not be accepted into the day-ahead market system
- Exception requests could be authorized



# Results of Sample Days' Analyses

(Based on Highest Recent Share Per Zone and Two-Day Ahead Zonal Peak Forecast)





# Results of Sample Days' Analyses

(Based on Highest Recent Share Per Zone and Two-Day Ahead Zonal Peak Forecast)

| Date       | Total Bids | Bids Accepted | Bids Rejected    |                 |             |
|------------|------------|---------------|------------------|-----------------|-------------|
|            |            |               | Actual Under Cap | Actual Over Cap | No Baseline |
| 9/11/2013  | 757        | 99.9%         | 0.1%             | 0.0%            | 0.0%        |
| 10/12/2013 | 766        | 99.9%         | 0.1%             | 0.0%            | 0.0%        |
| 11/9/2013  | 1262       | 99.8%         | 0.2%             | 0.0%            | 0.0%        |
| 1/7/2014   | 1266       | 99.8%         | 0.0%             | 0.0%            | 0.2%        |
| 2/13/2014  | 1333       | 99.6%         | 0.1%             | 0.0%            | 0.4%        |
| 4/13/2014  | 1296       | 99.9%         | 0.0%             | 0.1%            | 0.1%        |



# Results of Sample Days' Analyses

(Based on Highest Recent Share Per Zone and Two-Day Ahead Zonal Peak Forecast)

| Date       | Total Bids | Bids Accepted | Bids Rejected    |                 |             |
|------------|------------|---------------|------------------|-----------------|-------------|
|            |            |               | Actual Under Cap | Actual Over Cap | No Baseline |
| 9/11/2013  | 757        | 756           | 1                | 0               | 0           |
| 10/12/2013 | 766        | 765           | 1                | 0               | 0           |
| 11/9/2013  | 1262       | 1260          | 2                | 0               | 0           |
| 1/7/2014   | 1266       | 1263          | 0                | 0               | 3           |
| 2/13/2014  | 1333       | 1327          | 1                | 0               | 5           |
| 4/13/2014  | 1296       | 1294          | 0                | 1               | 1           |

- Status Quo – No volume limits on LSE demand bids in day-ahead energy market
- Reference points and calculation of peak load reference point
  - Based on PLC share and zonal peak load forecast data
  - Based on share of recent actual load served and zonal peak load forecast data
  - Single calculated reference point or higher of two calculated peak load reference points
- Member visibility to calculated peak load reference points
- Magnitude of “cushion” above peak load reference point before demand bids are rejected
  - Percentage component
  - Nominal megawatt component
  - Combination of percentage and nominal megawatt component
- Ability for PJM to authorize exceptions

# Reference Slides from May 6, 2014 CS Presentation

| Type of Day-Ahead Market Bid   | Screens / Bid Requirements   |
|--------------------------------|--|
| Increment / Decrement          | Screen of calculated potential net charges against available credit  |
| Up-to-Congestion               | Screen of calculated potential net charges against available credit  |
| Load-Serving Entity Demand Bid | <ul style="list-style-type: none"> <li>• Must have a related InSchedule load contract</li> <li>• No volume limits</li> </ul> |

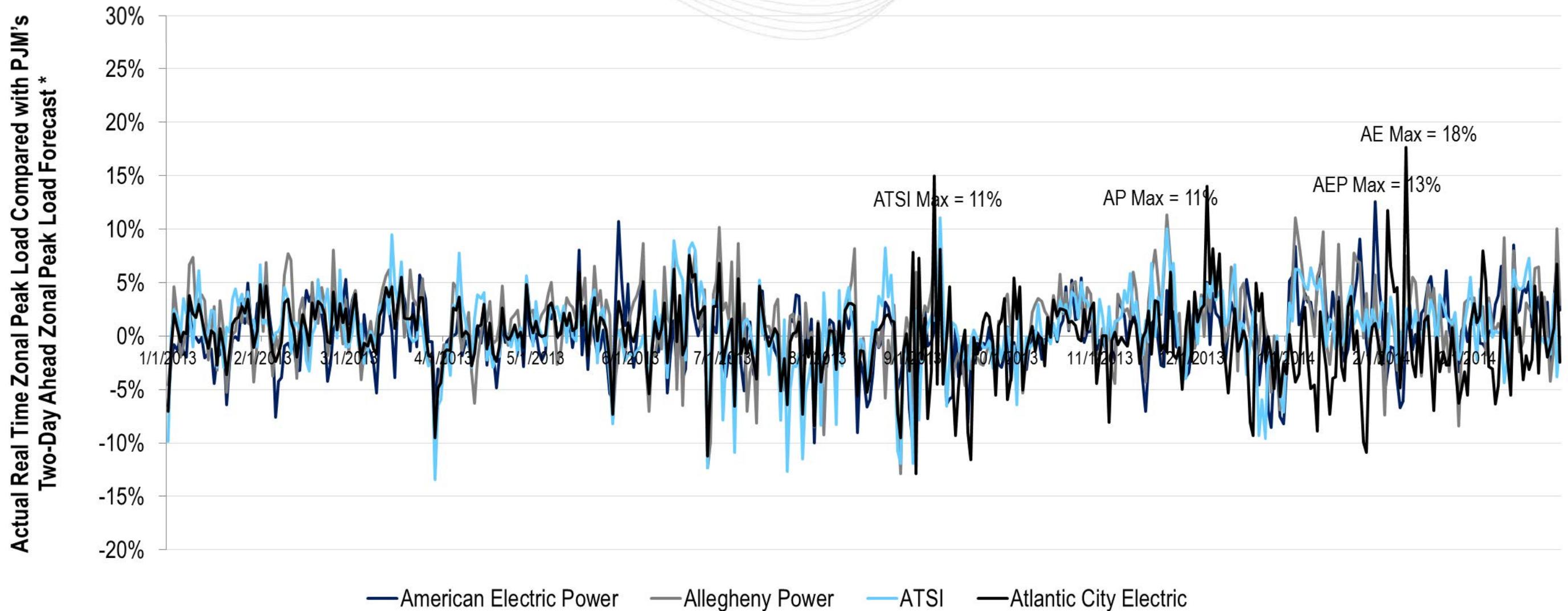
*For all these types of Day-Ahead buy bids, each member can establish its own voluntary bidding limits.*

# Timeline for Calculating Potential Daily Zonal Peak Load Reference Points by LSE



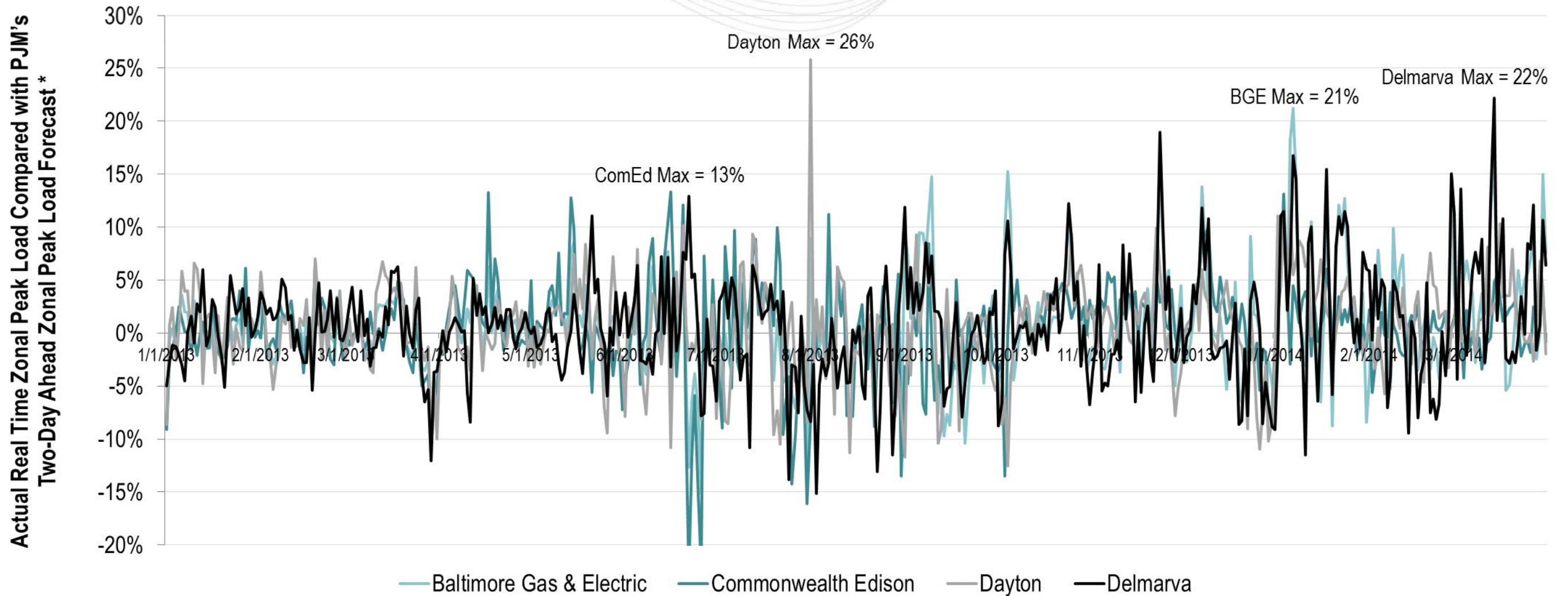


# PJM Historical Two-Day Ahead Zonal Peak Load Forecast Accuracy (Group 1: January 1, 2013 – March 31, 2014)



\* Positive percentages represent days in which the actual real-time zonal peak exceeded PJM's two-day ahead zonal peak load forecast.

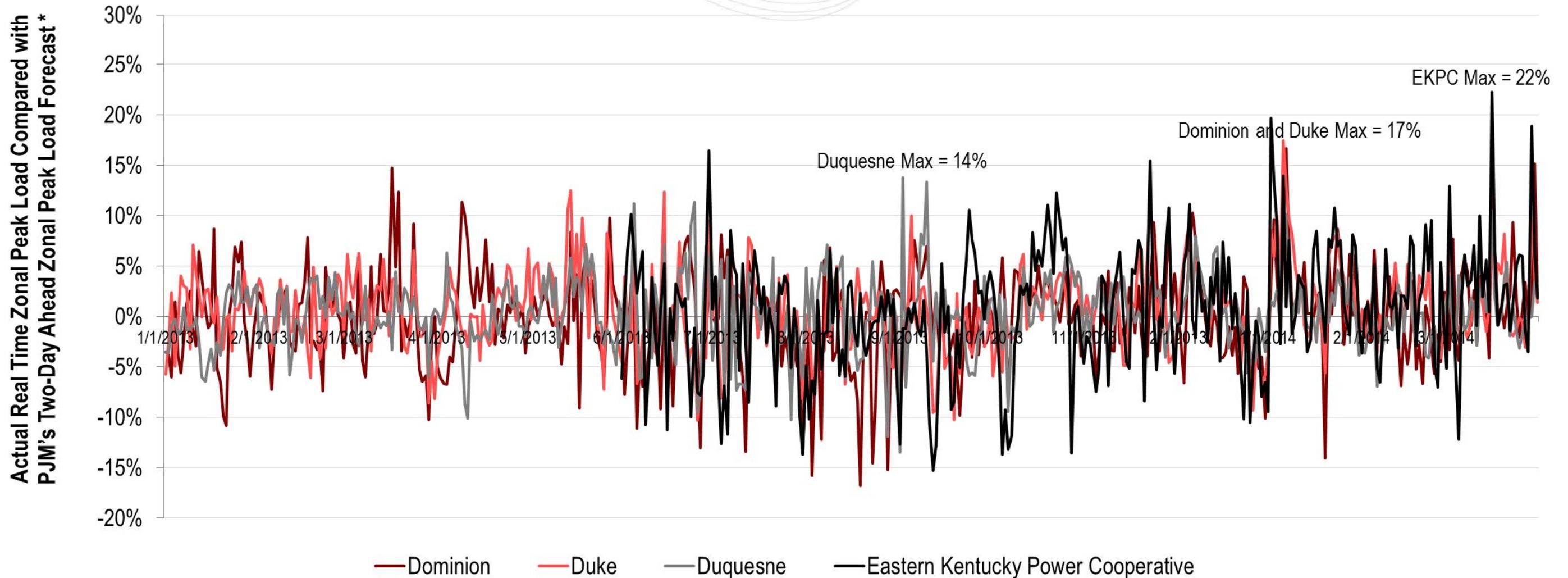
# PJM Historical Two-Day Ahead Zonal Peak Load Forecast Accuracy (Group 2: January 1, 2013 – March 31, 2014)



\* Positive percentages represent days in which the actual real-time zonal peak exceeded PJM's two-day ahead zonal peak load forecast.

# PJM Historical Two-Day Ahead Zonal Peak Load Forecast Accuracy

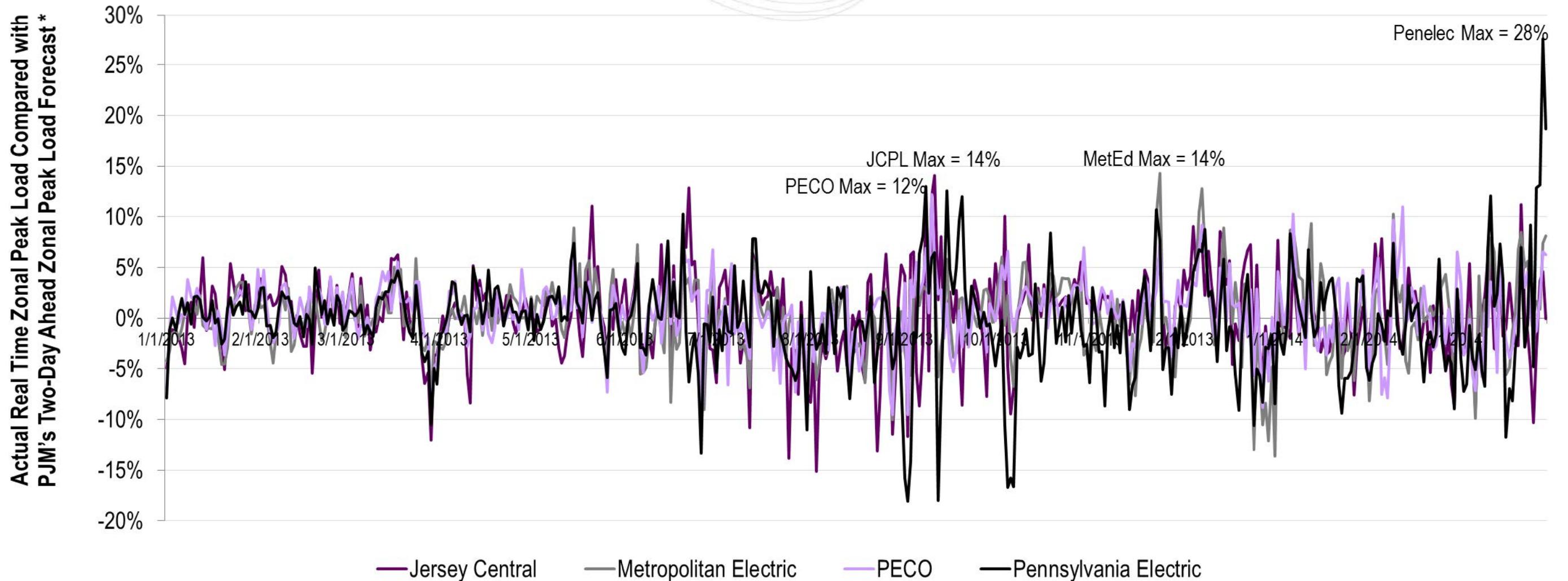
(Group 3: January 1, 2013 – March 31, 2014)



\* Positive percentages represent days in which the actual real-time zonal peak exceeded PJM's two-day ahead zonal peak load forecast.

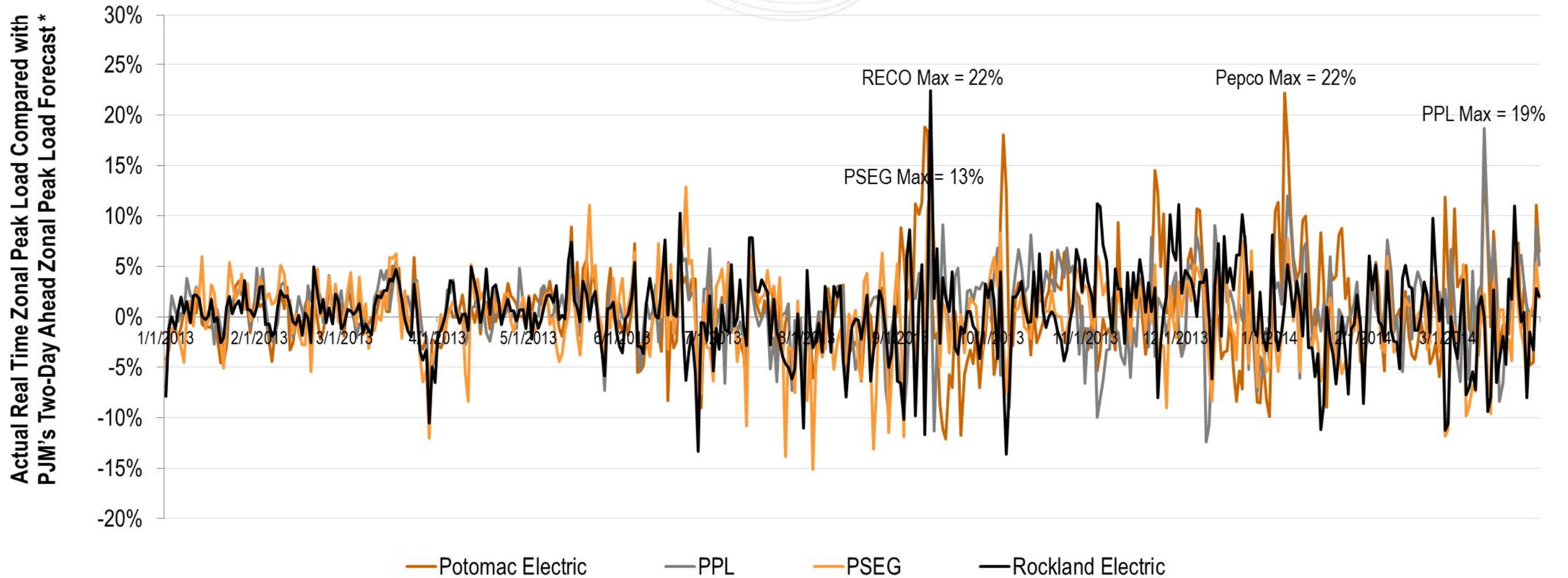


# PJM Historical Two-Day Ahead Zonal Peak Load Forecast Accuracy (Group 4: January 1, 2013 – March 31, 2014)



\* Positive percentages represent days in which the actual real-time zonal peak exceeded PJM's two-day ahead zonal peak load forecast.

# PJM Historical Two-Day Ahead Zonal Peak Load Forecast Accuracy (Group 5: January 1, 2013 – March 31, 2014)



\* Positive percentages represent days in which the actual real-time zonal peak exceeded PJM's two-day ahead zonal peak load forecast.