Economic Forecast Accuracy

Load Analysis Subcommittee
October 19, 2016
• PJM acquires economic data from two separate vendors: Moody’s Analytics and IHS Markit (formerly Global Insight)
• PJM currently uses data from Moody’s Analytics and has since it began load forecasting.
• Periodically, performance of the two vendors will be reviewed. This was last examined in 2011, when the decision was made to continue to use Moody’s Analytics.
• PJM uses an economic index as a driver in its model, a weighted variable composed of six different economic series
  – Households
  – Population
  – Real Personal Income
  – Non-Manufacturing Employment
  – Gross Domestic Product
  – Gross Metropolitan Product
Method

- Gather data from each vendor (back to 2005).
- Zonal indexes are created and then load-weighted to create an RTO measure for each economic series and the cumulative economic index.
- Vintage forecasts are compared to the September 2016 forecasts from each vendor (considered as actual).
- Observe performance at zero, three, and five years out.
Economic Forecast Performance (Zero Years Out)
Mean Absolute Percent Error

- GMP
- HH
- NMF
- POP
- RPI
- GDP
- INDEX

Moody's Analytics
IHS Markit
Economic Forecast Performance (Zero Years Out)
Mean Absolute Percent Error

Economic Accuracy – Zero Years Out
Economic Accuracy – Three Years Out

Economic Forecast Performance (Three Years Out)
Mean Absolute Percent Error

- GMP
- HH
- NMF
- POP
- RPI
- GDP
- INDEX

Moody's Analytics
IHS Markit
Economic Forecast Performance (Three Years Out)
Mean Absolute Percent Error

Forecast Vintage

2005 2006 2007 2008 2009 2010 2011 2012

Moody’s Analytics  IHS Markit
Economic Accuracy – Five Years Out

Economic Forecast Performance (Five Years Out)
Mean Absolute Percent Error

Moody's Analytics  IHS Markit

GDP
INDEX
POP
NMF
HH
GDP
INDEX
• Our analysis shows negligible performance difference between the two vendors.
• PJM will continue with the status quo (using Moody’s Analytics) and continue to monitor performance periodically.