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Power Market Analysis (PMA)

Comparison of 2013 vs. 2014 Base Case

March 26th 2014

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Actual document comes in high-resolution along with supporting excel tables.
Certain parts are redacted. Please do consider subscribing to PMA.

David K. Bellman

"Know where to find the information and how to use it - that's the secret of success." ~ Albert Einstein

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Summer Analysis

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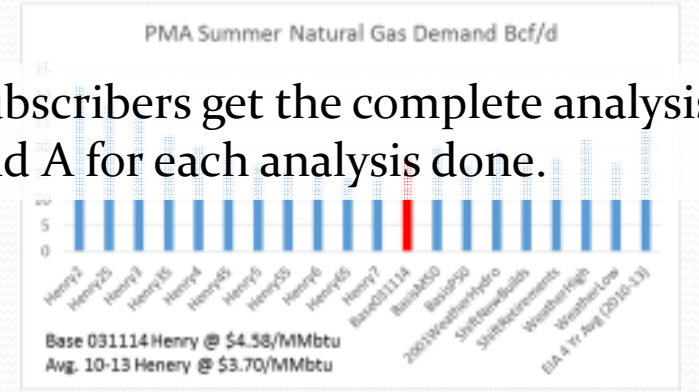
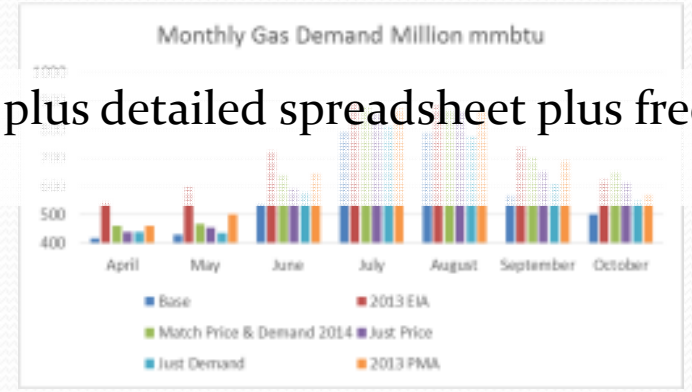
- Our Summer 2014 outlook indicated a potentially large drop in power sector gas demand compared to the past few years if gas forwards stay in the elevated $4.6 range and weather is normal.



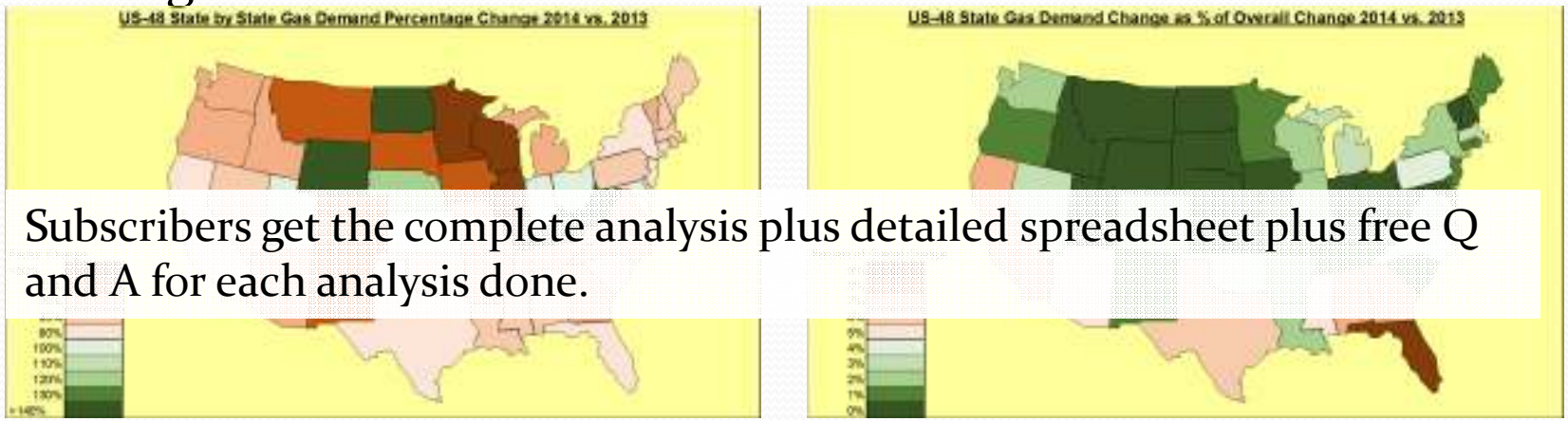


Subscribers get the complete analysis plus detailed spreadsheet plus free Q and A for each analysis done.

- A breakdown of the two large components were investigated by running 2014 with 2013 prices and 2013 demand both separately and together.
- As expected prices are the majority reason for the gas demand drop this year. The negative basis spreads this year is making an impact of reducing the drop in gas demand. "Normal" demand does represent a significant portion of the demand drop.
- Subscribers to PMA received the analysis with spreadsheets on Monday 24th and also was presented with a question and answer call.

Where is the gas demand falling?

- A comparison to 2013 benchmark run and the 2014 Base run was done. Graphical state by state figures made. A spreadsheet was also supplied to PMA subscribers.
- State comparison to the state total and to the overall total changes were examined.



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- The typical "coal" states are not the major coal/gas demand swing states as many would think.
- The negative basis in the region is keeping those states in check.
- Renewable policies will have an impact on natural gas demand.

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Appendix

Validation Charts

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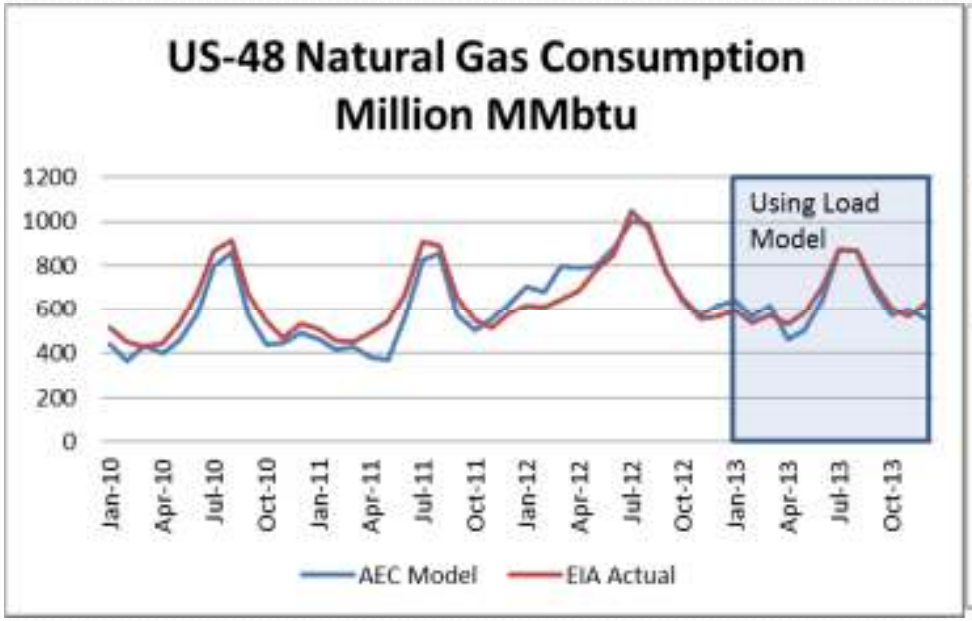
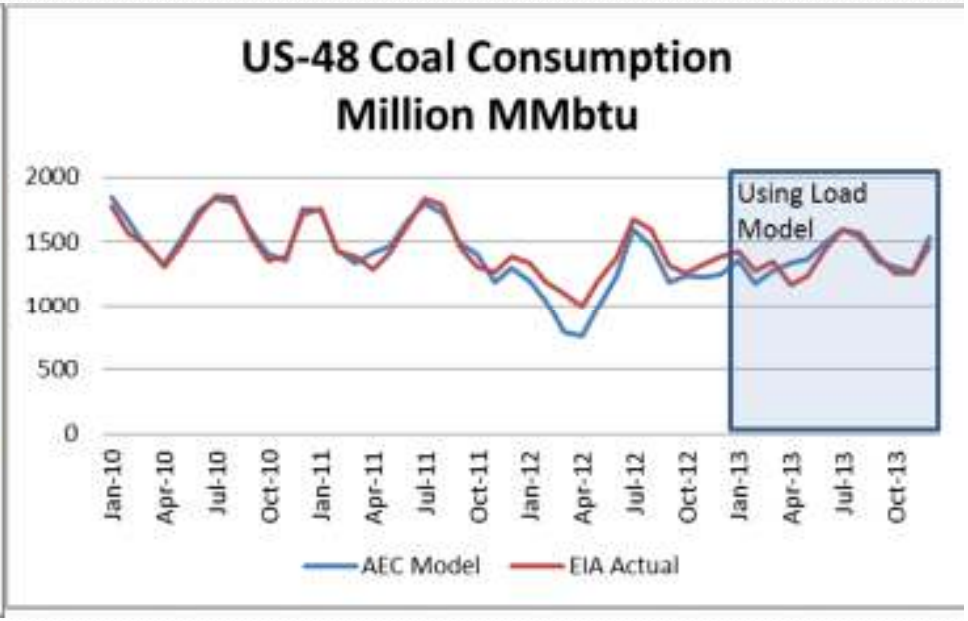
Fuel Consumption Validation





Late 2011 -early 2012 divergence as a result of coal running uneconomical due to coal plants large inventory.

- Accounting for load and actual gas prices – still leaving other parameters subject to general assumption (outages – bidding factors – operations)
- 2013 is using the load forecasting model based on CDD & HDD and economic indicators.
- 2013 proves the methodology plus the efficacy of the load model.
  - 2013 Gas Deviation less than 3%
  - 2013 Coal Deviation less than 1.5%

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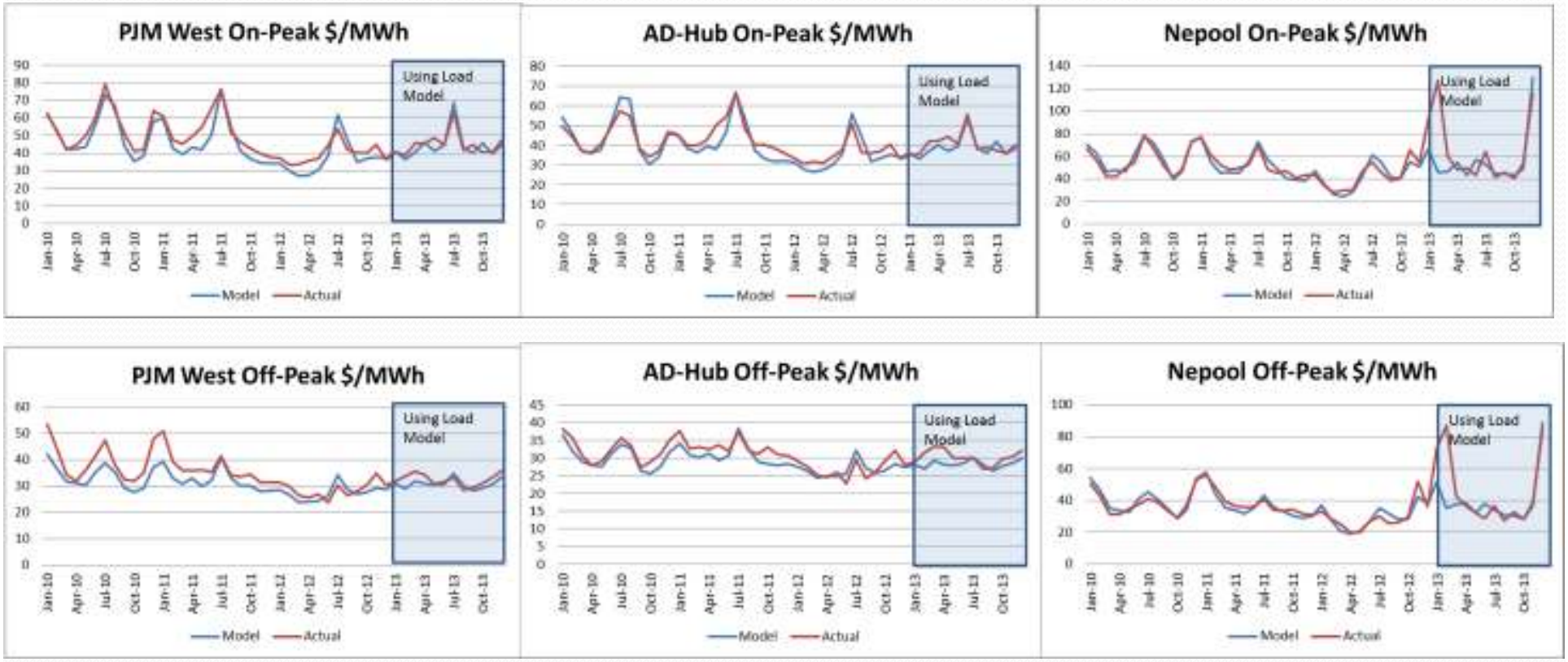
Power Price Validation



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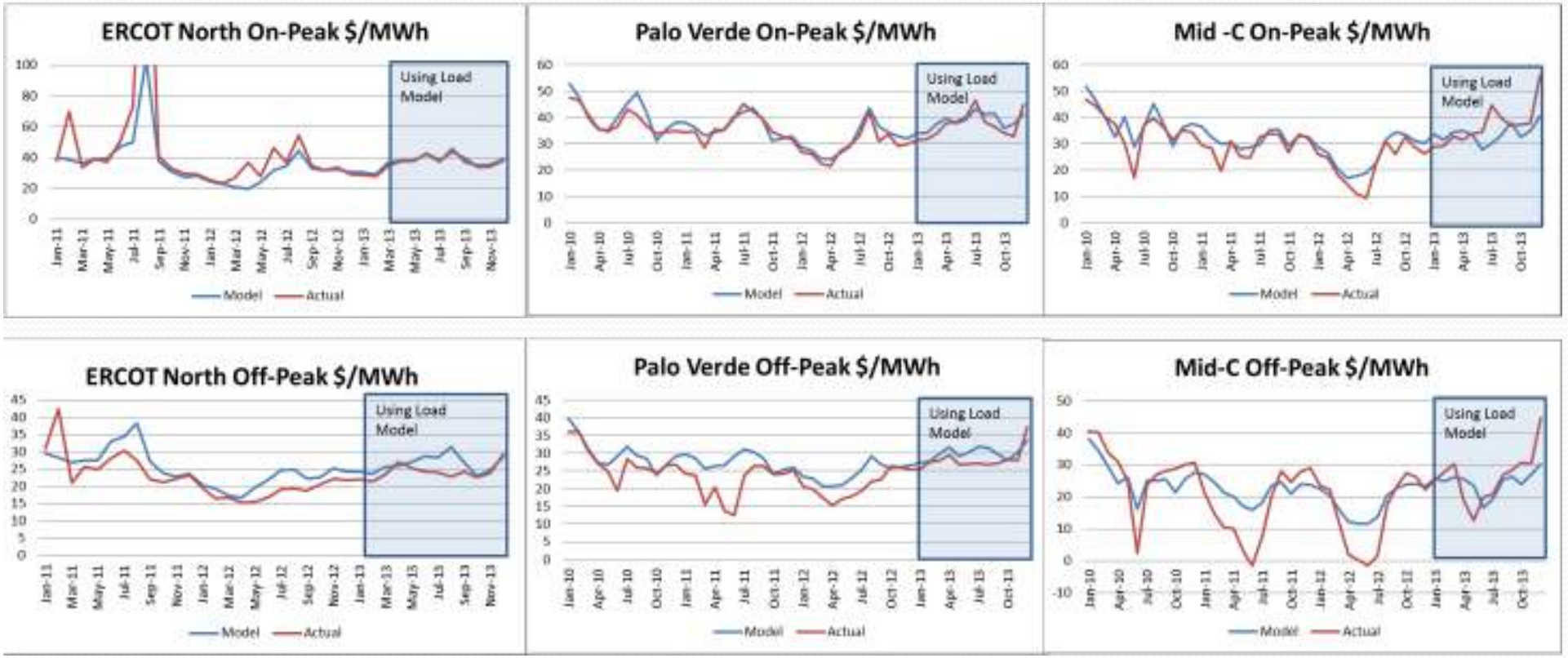
Power Price Validation



- More experience in the East, but we're now spending more time improving the West.
- 2013 is using the load forecasting model based on CDD & HDD and economic indicators

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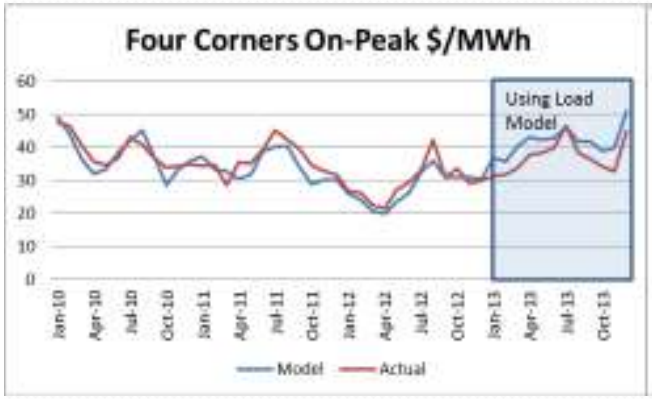
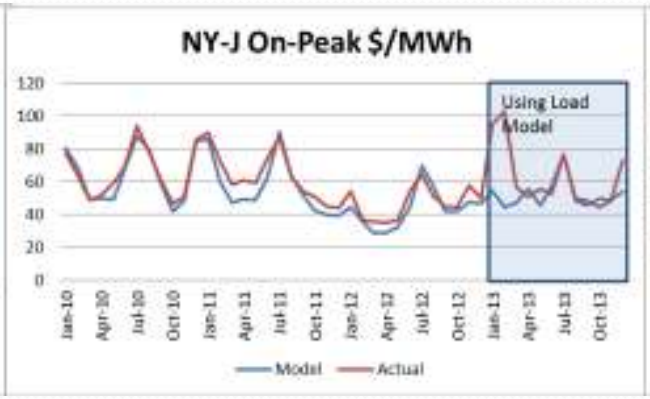
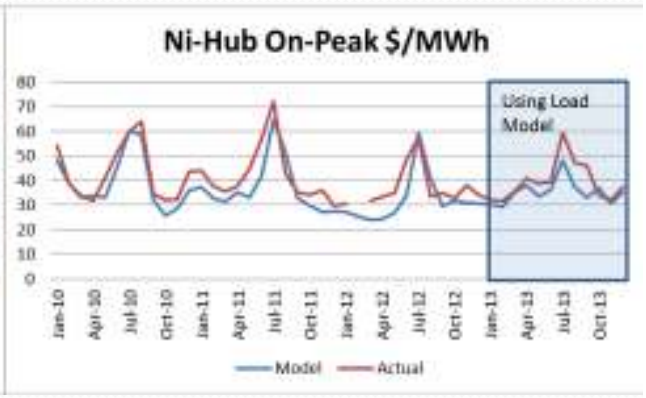
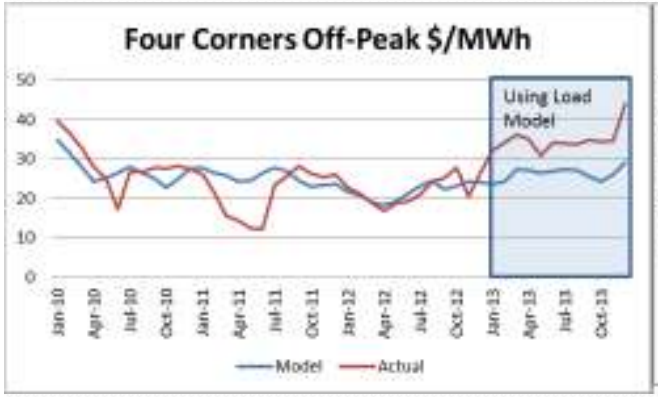
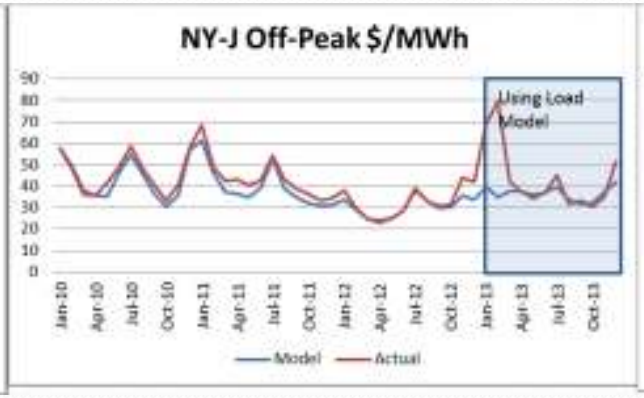
Power Price Validation

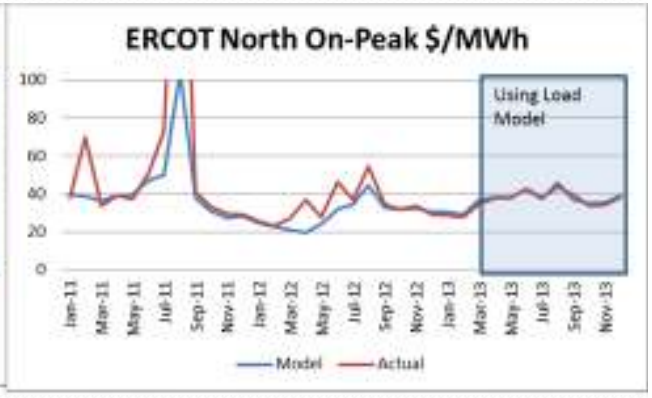












- Adding region validation graphs upon request.
- 2013 is using the load forecasting model based on CDD & HDD and economic indicators

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