Update on Distributed Solar Generation

Load Analysis Subcommittee

September 2, 2015

Summary of Approaches

- Forecast approaches
  - Model Directly
    - Best method, however more difficult and much more data required
  - Reconstitute the load
    - Second best method, however, PJM does not have underlying hourly data of the BTM solar generation like we do for demand response and load losses
  - Ex Post Bias Adjustment
    - Reasonable approach, can be transparent to participants

Investigated Data Sources

- EIA SEDS and EIA 861
  - Public data but out of date
- GATS data
  - Public data and much more up to date
  - Location specific
  - Validated against state information
- State Mandates
  - Compiled by the Renewable Services group via DSIRE
  - Complications with using this data include:
    - May not be location specific as some mandates don’t require the resource to be physically located in the state
    - Some states don’t have any solar mandates

Concerns

- Other areas of concern not captured by state mandates include:
  - Impacts of the Investment Tax Credit
  - Net Metering Policies
  - Cost of Solar Installations
  - Improvement in solar efficiencies over time

- Work was started in other areas of PJM to develop a BTM solar forecast as well, however, the work is preliminary and inputs are still being determined.

IHS North America Renewable Power Market Forecast

- Doing research to find additional sources, we came across a North America Renewable Power Market Forecast by IHS Energy
  - IHS has a history of publishing renewable forecasts and reports
  - Their forecasts consider multiple scenarios with variations in distributed solar generation market indicators

- PJM is in talks with IHS on how best to leverage their forecasts to assist us with determining future distributed solar additions