Guaranteed Load Drop Measurement and Verification

Load Management
Task Force

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Monitoring Analytics

Test Measurement and Verification

- **MA supports more objective, empirical M&V protocol for GLD testing**
- **To establish an accurate baseline, must identify and model variables affecting load levels.**
- **Regression analysis is the only option in current state which meets this requirement**

Regression Analysis

- **Regression analysis should be applied to all GLD customers to determine factors affecting load**
- **Null hypothesis should be that load is weather sensitive**
  - **Currently, less than 3 percent of customers in the Economic Program opt for a weather sensitive adjustment**
- **Regression results will reveal if significant relationship exists**

Proposal

- **MA proposal involves two phases:**
  - **Pilot Program for regression analysis in 2010/2011 delivery year. MA will collect data and perform analysis for a sample of customers**
  - **Report back on accuracy, feasibility of wide scale implementation and timeline**
- **Depending on results, develop a proposal for review and implementation in the 2011/2012 DY**

Pilot Program

- **Randomly selected CSPs provide MA with hourly customer load data for the period June 1 through September 30 2010**
- **Data should indicate any “event” days**
- **MA will perform regression analysis and compare results to other available and proposed methods**
- **MA will also track time to perform calculation and identify any administrative obstacles**

Pilot Program

- **Pilot program should represent:**
  - **At least 3 CSPs**
  - **At least 30 customers**
  - **Multiple customer types (industrial, commercial, residential)**
- **Results will not be used to calculate compliance.**
- **Purpose is to test results against other methods and identify implementation issues**

Minimum Requirements

- **Any baseline method must assume customer's load is weather sensitive**
- **Further improvement would consider day of week and draw from more than a single day in developing a baseline**
- **With implementation target of 2011/2012 DY, no method should be fully incorporated into business rules without back-testing utilizing 2010/2011 DY data**

Alternative Proposal for Comparable Day

- **Applied to all GLD customers**
- **PJM identifies maximum daily Temperature or THI by weather station or zone.**
- **PJM bundles days into evenly distributed quartiles according to maximum THI or temperature to define “weather group”**
- **Each day is also grouped by day of week across weather group, resulting in 20 day types (no load data yet)**

Alternative Proposal for Comparable Day

weekday	< 75 ^{0}	< 82 ^{0}	< 89 ^{0}	> 89 ^{0}
M	2	2	8	2
T	2	2	6	2
W	1	3	7	2
TH	3	4	4	1
F	1	3	7	1

weekday	< 75 ^{0}	< 82 ^{0}	< 89 ^{0}	> 89 ^{0}
M	6/1, 8/31	6/15, 6/22	6/8,6/29,7/6,7/13,7/20, 7/27, 8/3, 8/24	8/10, 8/17
T	6/16, 7/21	6/9, 6/23	6/2, 6/30, 7/7, 7/14, 8/4, 8/25	7/28, 8/18
W	6/17	6/3, 6/10,7/8	6/24, 7/1, 7/15, 7/22, 8/5, 8/12, 8/26	7/29, 8/19
TH	6/4,6/11,6/18	7/9, 7/23, 8/6, 8/13	6/25, 7/2, 7/30, 8/27	8/20
F	6/5	6/19, 8/7, 8/28	6/12, 7/3, 7/10, 7/17, 7/24, 7/31, 8/14	8/21

Alternative Proposal for Comparable Day

- **Customer submits metered load data from test day**
- **After September 1, PJM identifies all comparable days by zone, weather group and day type and requests corresponding hourly load values**
- **The average hourly load for all comparable days serves as consumption baseline.**
- **Acts as a CBL which reflects load fluctuation due to ambient conditions and day of the week.**

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