Day-Ahead Demand Reduction Program

Calculating Customer Baseline Load

Calculation Procedure - Weekdays:

Performance in satisfaction of a bid for hours h_i to h_j in day d_n would be assessed against a CBL determined by:

1. Calculating the energy consumption during similar hours over the past 10 weekdays, excluding days where curtailment due to participation in the EDRP or the Day-Ahead programs occurred.
   $kwh_k = sum(h_i...h_j)$ for each day $k = d_{n-1}...d_{n-10}$

2. Selecting the 5 highest values of kwh_k and use those days d_l, $l = 1...5$ to calculate the CBL.

3. Calculating the CBL for each hour h_i as the average of the five h_i values for days d_l, $l = 1...5$.

4. If more than 5 of the past 10 days have been excluded due to Emergency Demand Response Program (EDRP) and/or Day-Ahead Demand Response Program (DADRP) participation, look back beginning with day d_{n-11} until 5 non-excluded days are found. In no cases will the process go back further than day d_{n-30}.

Calculation Procedure - Weekend Days:

Saturday and Sunday CBLs will be computed separately.

1. Calculate the energy consumption during similar hours over the past 3 Saturdays/Sundays, excluding days where curtailment due to participation in the EDRP or the DADRP occurred.

2. Select the 2 highest values of kwh and use those days to calculate the CBL.

3. Calculate the CBL for each hour h_i as the average of the values for the 2 highest days.

4. Don't look back any more than 3 weekends to select the 2 highest periods (i.e, don't extend the window if exclusions occur).

Sample CBL Calculation

As an example, assume a 4-hour bid from 12 noon to 4 pm was accepted. The past 10 days Mwh consumption for similar hours was:

	Day $_{n-1}$	Day $_{n-2}$	Day $_{n-3}$	Day $_{n-4}$	Day $_{n-5}$	Day $_{n-6}$	Day $_{n-7}$	Day $_{n-8}$	Day $_{n-9}$	Day $_{n-10}$
12-1	10	8	9	7	10	12	5	7	7	8
1-2	11	6	12	8	11	8	8	8	6	10
2-3	7	9	9	6	9	9	8	8	6	9
3-4	5	6	7	6	7	7	6	7	5	6

Steps 1 and 2: sum the Mwh for the appropriate hours each day and select the 5 highest totals:

	Mwhr $_{n-1}$	Mwhr $_{n-2}$	Mwhr $_{n-3}$	Mwhr $_{n-4}$	Mwhr $_{n-5}$	Mwhr $_{n-6}$	Mwhr $_{n-7}$	Mwhr $_{n-8}$	Mwhr $_{n-9}$	Mwhr $_{n-10}$
	33	29	37	27	37	36	27	30	24	33
selected ?	Y		Y		Y	Y				Y

Step 3: Calculate the CBL for each hour using the five highest days selected:

	Day $_{n-1}$	Day $_{n-3}$	Day $_{n-5}$	Day $_{n-6}$	Day $_{n-10}$	CBL
12-1	10	9	10	12	8	9.8
1-2	11	12	11	8	10	10.4
2-3	7	9	9	9	9	8.6
3-4	5	7	7	7	6	6.4

Additional Documentation

Documentation on the Day-Ahead Demand Response Program can be found in the following technical bulletins:

TB1 - Program Overview
TB2 - Registration Procedures
TB3 - Bidding Instructions
TB4 - Calculating Customer Baseline Load
TB5 - Reporting and Verifying Customer Baseline Load and Meter Data
TB6 - Incentive Credits, Demand Reduction Payments and Non-Performance Penalties
TB7 - Performance and Payment Examples
TB8 - Day-Ahead Load Curtailment Program Cost Allocation