



California ISO

# Demand Response Customer Partnership Working Group

April 22, 2021

Web Conference

# Agenda

- Issue of under-valuation of demand response performance
- Tariff compliant options addressing issue
  - Track 1 – exploring use of comparison/control group methodology
  - Track 2 – establishing process/criteria for approved use of load adjustment factors outside of the min/max caps for summer 2021
- Obtaining ISO approval for use of different min/max adjustment
  - Request/approval template and process
  - Conditions for approval
  - DR Business Practice Manual updates
- Additional data submission requirements
  - Use of MRI-S for new data submission
  - Example
- Next Steps

# CAISO DR Evaluation Methodologies

## ISO supports three baseline types for DR supply side resource performance measurement

- 1. Control Groups** – Establishes baseline of load patterns during curtailment event using non-dispatched customers with similar profiles
- 2. Day Matching** – Estimates what electricity use would have been in absence of DR dispatch, using electricity use data on non-event but similar days
- 3. Weather Matching** – Estimates what electricity use would have been in absence of dispatch during non-event days with most similar weather
  - Day and Weather matching baselines employ use of adjustment factors with caps

# Integrated Demand Response Issue Statement

- Multiple DR providers have articulated significant under valuation of demand load reductions during the August 14-19 heat events attributed to current ISO day matching baselines use of adjustment caps.
- Communicated that actual energy deliveries were, on average greater, when compared against no adjustment cap, than energy deliveries calculated using the 40% day-of adjustment cap.
- This issue affects energy/capacity compensation across ISO (energy compensation), CPUC (QC valuation) and Utilities (DRAM contract evaluation).

## Track 1: Explore and pilot expanded use of comparison/control group methodology

- Control groups were found to outperform day and weather matching baselines in the 2017 baseline working group study
  - DRPs lack a sufficiently large customer base to develop a control group
- Contracted with Recurve to conduct analysis on viability of accessing a control group by all DRPs and use of comparison methodology used in DOE pilot
- Begin summer 2021 with evaluation for long term solution

## Track 2: Approve DRPs request for change to adjustment factor cap ratio

### Allowing use of alternate load adjustment factor cap ratio from May – October 2021

- Tariff authority exists for DRPs to request use of a different load adjustment factor
- ISO approval required
  - Conditions for approval of request established and included in DR BPM
  - Eligible for May – October trade months
- Requests must be approved prior to beginning of month
  - Example: for use from June to Sept, approved prior to June 1
- Requires submission of additional data from DRPs using this option
  - Allows for further analysis on its impact over summer 2021

# Demand Response Business Practice Manual



# New Business Process

- Demand Response Business Practice Manual
  - **\*\*NEW\*\*** Appendix G – Request for use of adjustment factors outside established min/max values
  - New request form & approval process
  - Where to access the request form
  - Additional data submittal requirements

# Request Process

# Request Process

- Request Form

- Visit [www.caiso.com](http://www.caiso.com) – Participate – Demand Response and Load – Proxy demand resource agreements information request sheets – Load Cap Adjustment Request Form
- Return completed form to [PDR@caiso.com](mailto:PDR@caiso.com)
- ISO requires 5 Business days to approve
- Requests received after the first of month will be approved to begin using the adjustment for the following Trade Month
- CAISO will execute the Load Cap Adjustment Request Form through DocuSign
  - DocuSign document will be sent to Scheduling Coordinator and Demand Response provider for signature
- **NOTE: If you would like to be approved for the May Trade Month, please submit your request NO LATER THAN Friday, April 23 2021**

# New Data Submittal Requirements

# Additional and new data submittals required as condition of approval to allow ISO to evaluate adjustment factors used during May - October

Four changes to DR meter monitoring data submission:

## **For BASE measurement type:**

1. Provide measurement data for 4 hours before and 4 hours after the hour for which a bid is submitted. Currently, submission is required only for the hour there is a bid.
2. Include “Percent Residential” values for the data being submitted.

## **For CBL measurement type:**

3. Provide data for the day of the DR event in addition to the data being provided for 90 days prior.
4. Include “Percent Residential” values for the data being submitted.

# Additional data submissions required for monitoring purposes

## Additional hours for the BASE and CBL Measurement Types

Measurement Type	Adjusted/Unadjusted	Periods Covered
<b>BASE</b>	Adjusted for intervals where TEE>0; Unadjusted for all other hours	<p>Current requirement:</p> <p>Calculated customer load baseline (CLB) values used to derive DREM. BASE data represents the customer load baseline used to calculate the DREM attributed to the pure load reduction only.</p> <p>BASE data is submitted for trade dates when the resource/registration is being actively bid into the market for the hours in which it is bid.</p> <p>New requirement:</p> <p>In addition to the above BASE data submittal time frames, data will be required for 4 hours preceding and 4 hours after a demand response event if they fall outside the hours in which the resource/registration is being actively bidding into the market.</p> <p>Data Granularity: Hourly</p> <p>By resource ID</p>
<b>CBL</b>	N/A	<p>Current requirement:</p> <p>Underlying load data used in the customer load baseline calculation</p> <p>90 days of historical data prior to the day of the event is required.</p> <p>New requirement:</p> <p>Provide data for the day of the DR event in addition to the data being provided for 90 days prior.</p> <p>Data Granularity: Hourly</p> <p>By resource ID</p>

# New data submissions required

Applicable to resource IDs using the Day Matching Combined performance methodology.

- Submission of, hour by hour, the percent of BASE (unadjusted baseline) and CBL (intra-day load) that is attributed to the residential service accounts within the aggregation.

Measurement Type	% Residential	
BASE	<p>Data Granularity: Hourly</p> <p>% of Calculated customer load baseline (CLB) values used to derive DREM attributed to residential customer load baseline.</p>	
CBL	<p>Data Granularity: Hourly</p> <p>% of underlying Load (CBL) for DAY OF Event and 90 days historically serving residential customer</p>	<p>For resources using the Day Matching Combined methodology</p> <p>By resource ID</p>

# Additional Data Requirements

- Example:

Type of event	Res ID	Trade Date	Trade Hour	Measurement Type	Meas Qty (MW)	Percent Residential
<b>BASE Scenario</b>						
	PDR_ResA	3/1/2021	12	BASE	10	20
	PDR_ResA	3/1/2021	13	BASE	9.2	20
	PDR_ResA	3/1/2021	14	BASE	8.6	23
	PDR_ResA	3/1/2021	15	BASE	8.9	24
Market Bid	PDR_ResA	3/1/2021	16	BASE	4.2	25
Market Bid	PDR_ResA	3/1/2021	17	BASE	4	25
	PDR_ResA	3/1/2021	18	BASE	5.6	24
	PDR_ResA	3/1/2021	19	BASE	5.7	25
	PDR_ResA	3/1/2021	20	BASE	7.9	23
	PDR_ResA	3/1/2021	21	BASE	8.9	22
<b>CBL Scenario</b>						
	PDE_ResB	1/7/2021	All hours	CBL	7	87
	PDE_ResB	to		CBL	6.5	87
	PDE_ResB	4/7/2021	13	CBL	6.9	86
	PDE_ResB			CBL	7.8	87
	PDE_ResB			CBL	7.8	87
DR Event	PDE_ResB	4/7/2021	14	CBL	2.3	89
DR Event	PDE_ResB	4/7/2021	15	CBL	2.4	89
	PDE_ResB	4/7/2021	16 to 24	CBL	4.9	85



## Next Steps

- This effort is being tracked under the Market Enhancements for 2021 Summer Readiness initiative
- Please attend the Technical User Group (TUG) and Release User Group (RUG) calls for further information on:
  - New Technical Specifications and Artifacts availability
  - Deployment timelines
  - Link to the CAISO Calendar:  
<http://www.caiso.com/Pages/Calendar.aspx?IsDlg=true>
- Please submit questions through our Customer Inquiry, Dispute & Information (CIDI) ticket process, or to [initiativecomments@caiso.com](mailto:initiativecomments@caiso.com), by end of day May 6