

March 3, 2025

Demand and Distributed Energy Market
Integration Working Group

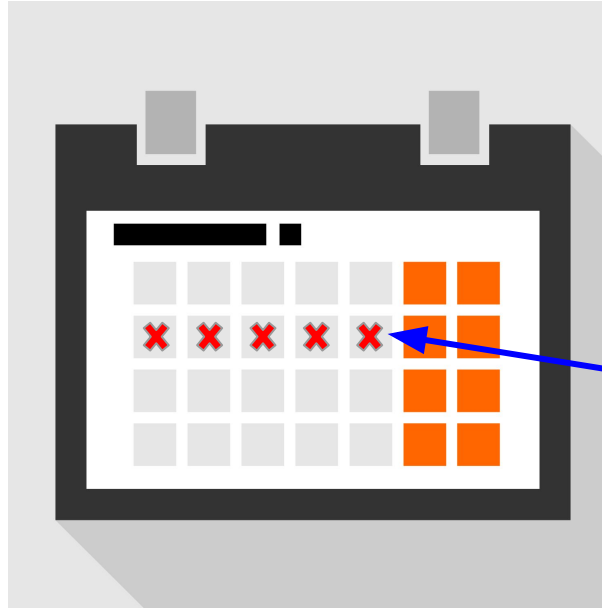
Prescriptive Baselines in CAISO

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Current 5-in-10 baseline methodology reduces DER dispatch capabilities by over 10%

Works well for commercial loads that dispatch infrequently, but creates a significant limitation for new DERs that can dispatch more often (e.g. batteries, EVs, smart thermostats)



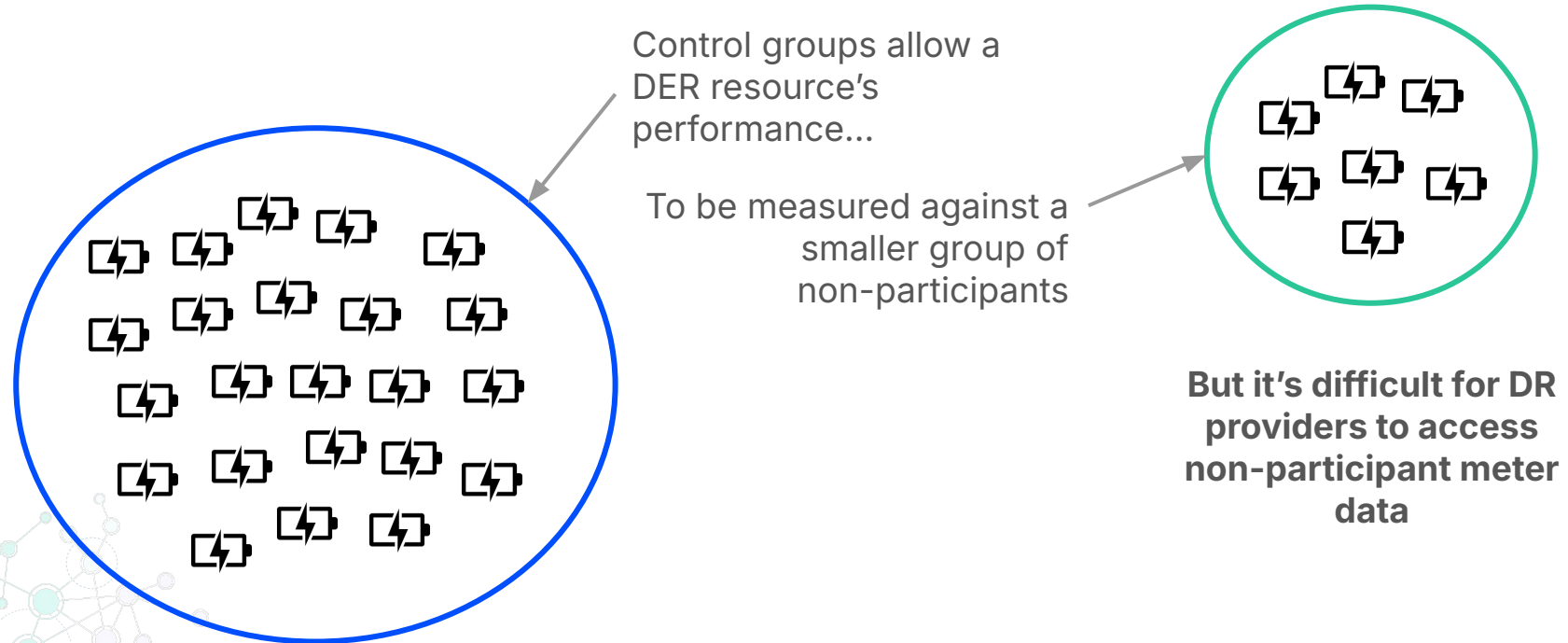
Example Battery Dispatch:

Batteries dispatched on a weekday must use baseline data from at least five of the last 45 non-event weekdays to build a baseline

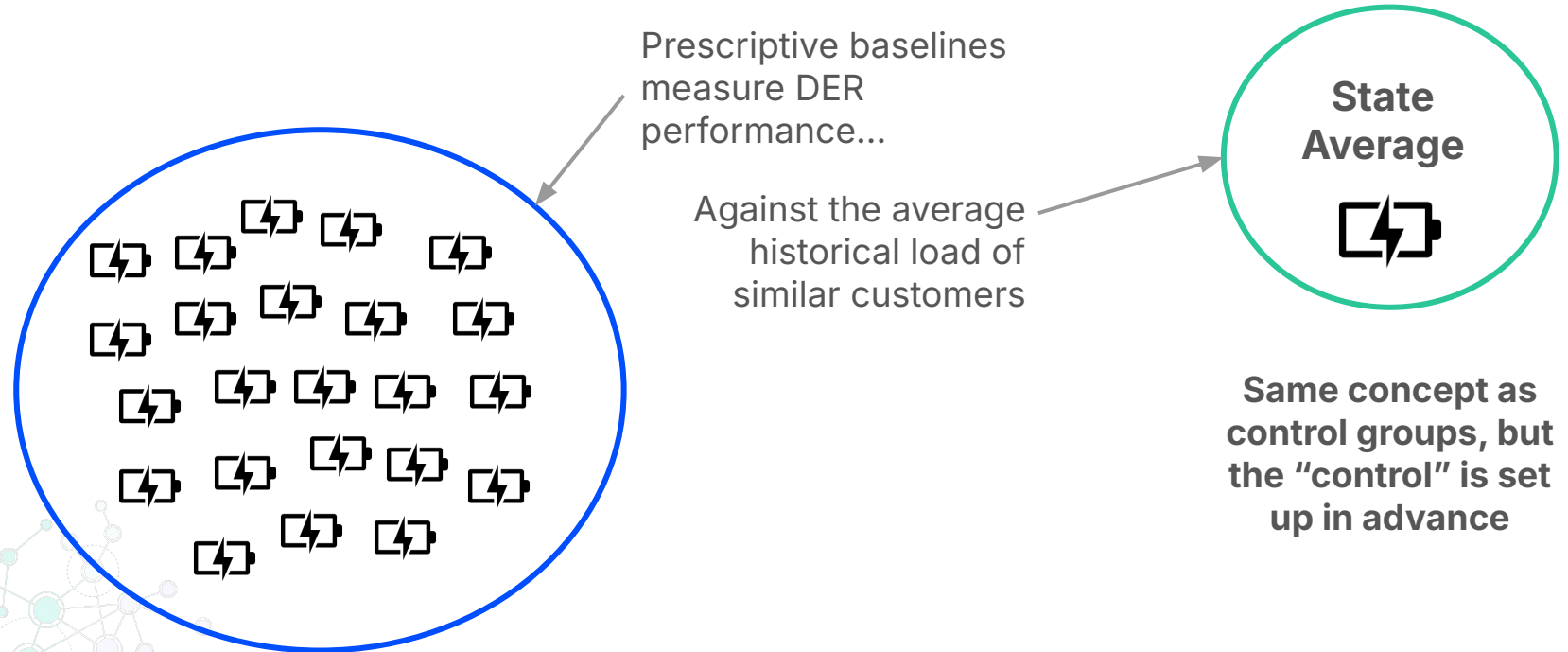
Resources must avoid dispatching for at least five days to establish baseline for measurement

Note: 9th week in 45-day cycle not shown for simplicity

Control Group Methodology provides an alternative but is difficult to implement



Prescriptive baselines offer a promising middle ground



Prescriptive baselines have been tested successfully in other California state programs

From CEC's Demand Side Grid Support Program:

2. Prescriptive Baseline

For stationary battery resources receiving self-generation incentive program (SGIP) funding or with a host utility permission-to-operate date before July 1, 2023, an hourly prescriptive baseline shall be applied to battery discharge:

A. Residential: $0.074 NCapacity_{kWh}$

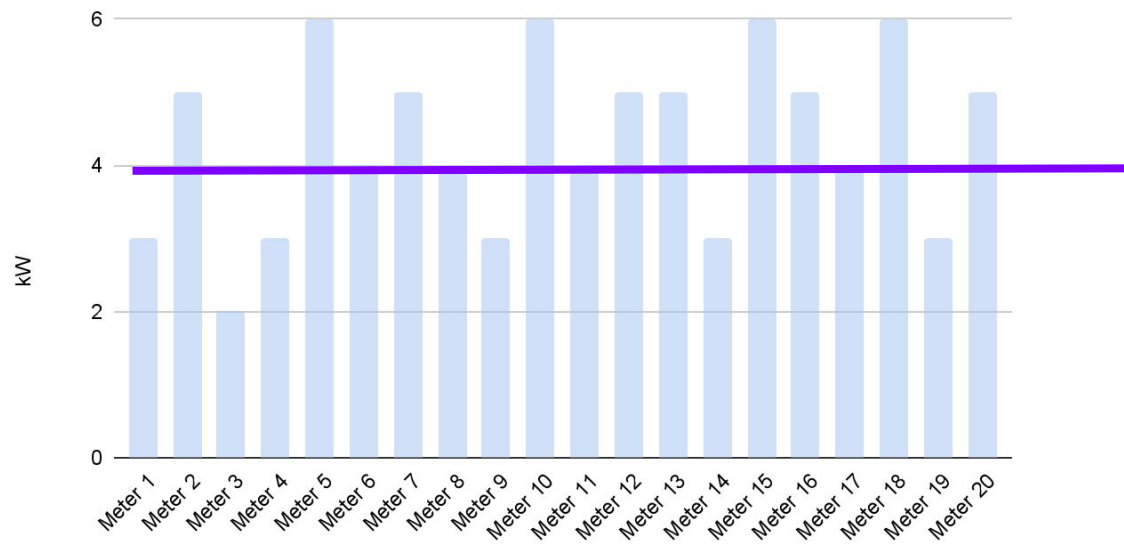
B. Nonresidential: $0.028 NCapacity_{kWh}$

Where $NCapacity_{kWh}$ is the nameplate energy storage capacity (kWh) of the battery as defined on the specification sheet for the battery. The resulting baseline value is in kWh per hour.

Most recent guidelines specify that baselines can be updated every two years to make sure they accurately reflect CEC's analysis of average load forecasts

Prescriptive Baseline should provide an accurate measure of DER performance at the aggregate level

Individual Meter Performance (Hypothetical)



Resource Performance

Like with control groups, individual meters may perform above or below prescriptive baseline, but aggregated performance measurement will remain accurate

Implementation is feasible and would provide several benefits

Steps to Implement:

1

DR baseline methodologies are moved from CAISO tariff to BPM

2

Prescriptive baselines are calculated (e.g. in IEPR)

3

Baselines are updated regularly in BPM (e.g. every 2 years)

Benefits:

- Allows DERs to dispatch more frequently, moving from “emergency” to “baseload” resources
- Streamlines baseline calculation process, reducing operational costs for DR providers
- Makes baseline calculations easier to audit and reduces opportunities for baseline manipulation



Questions?

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