

CRITICAL PEAK PRICING PY 2025 STATEWIDE EVALUATION (PG&E, SCE, SDG&E)

DRMEC PRESENTATION, MAY 5, 2026



Demand Side Analytics
DATA DRIVEN RESEARCH AND INSIGHTS



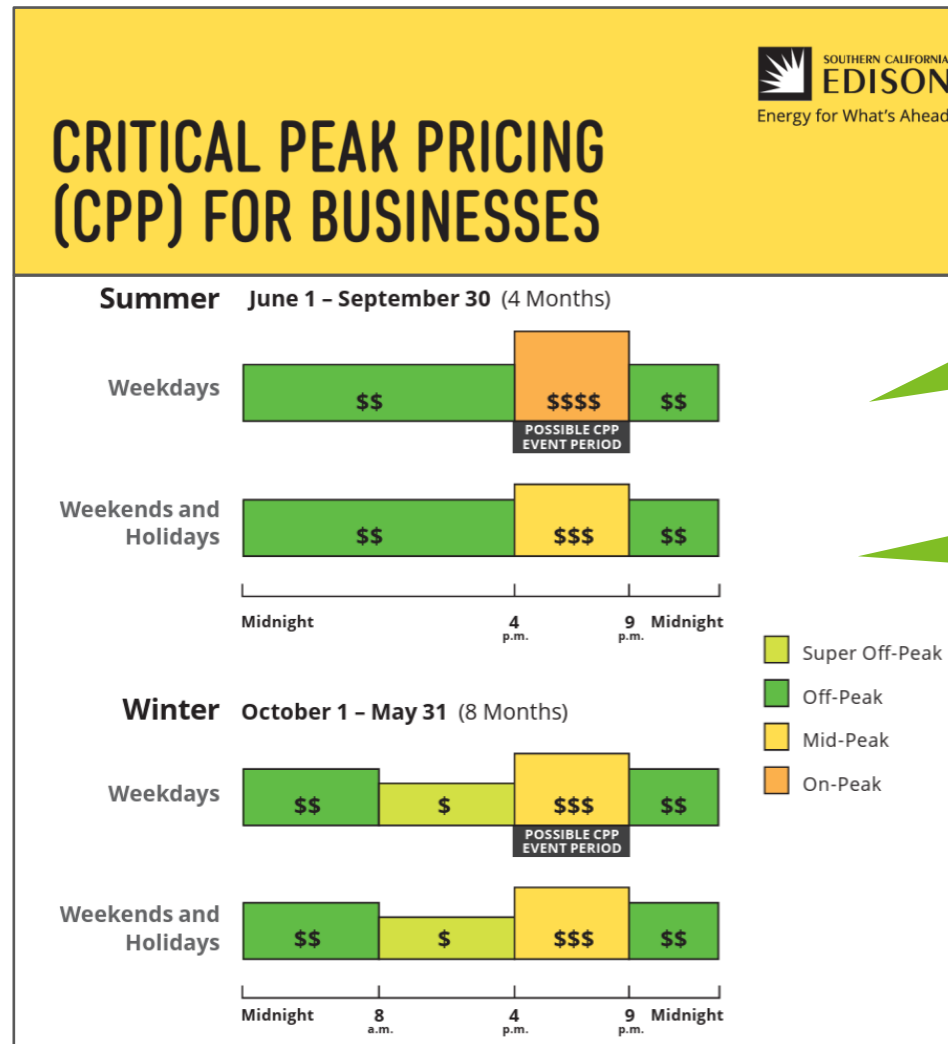
OUTLINE

- CPP Rates Overview
- Summary of PY 2025 Impacts
- Ex Post
 - Methodology: Differences-in-differences
 - Results
- Ex Ante
 - Methodology
 - Results
- Key Findings & Recommendations

CPP RATES OVERVIEW & PY 2025 EXECUTIVE SUMMARY

CPP INCREASES PEAK-HOUR PRICES ON EVENT DAYS IN EXCHANGE FOR LOWER PRICES THE REST OF THE SUMMER

- **Price example: SCE TOU-GS-1 (small sites)**
 - Summer: ~\$0.65 on peak, \$0.11 off peak
 - Without CPP, this would be \$0.78 vs. \$0.25
 - Event day adder (12 events per year): **\$0.80**
- **Larger sites: CPP → \$7-\$8 per kW discount on monthly demand charge**
 - Also much lower prices per kWh than the base TOU rate
 - Price adder still **\$0.80**
- **Lots of CPP rate structures across the 3 IOUs**
 - But this is generally how they generally work



Price adders provide significant incentive to curtail on days with peak system loads

But Peak-to-Off-Peak price ratios still substantial for all summer weekdays

CPP RATE DETAILS FOR PG&E, SCE, AND SDG&E

	PG&E	SCE	SDG&E
PY2025 Events	9	12	0
Event Window	4 – 9 p.m.	4 – 9 p.m.	4 – 9 p.m.
Min./Max. Possible Events	Min. 9, Max. 15	Min. 12, Max. 15	Max. 18 (no Min.)
Event Triggers	Day ahead with high temps, high demand, or short supply	Forecasted system emergencies/extreme weather conditions, day-ahead prices, or CAISO Energy Emergency Alerts	Day-ahead system load forecast > 4,000 MW Can also be triggered for high temp.'s, extreme conditions, emergencies <i>(These conditions not met in PY 2025)</i>
CPP Rate Adder	\$0.60 per kWh for < 75 kW, \$0.90 per kWh for > 75 kW	\$0.80 per kWh	\$2.58 per kWh (most common rate for Medium/Large, less for Small sites)
Any insurance against CPP prices?	Bill protection for first year	Bill protection for first year	Bill protection for first year; Customers can pay to reserve capacity (\$ per kW)
CCAs included?	No	No	No

CCA'S NOT INCLUDED IN CPP RATES

- Footprint for the 3 IOUs' CPP customers is different from their overall customer base
 - For example, few CPP customers in Bay Area, most in Central Valley for PG&E

Green areas in map are current CCAs

The California Community Choice Association's mission is to support the development and long-term sustainability of locally-run CCA electricity providers throughout California.

Areas of Service:

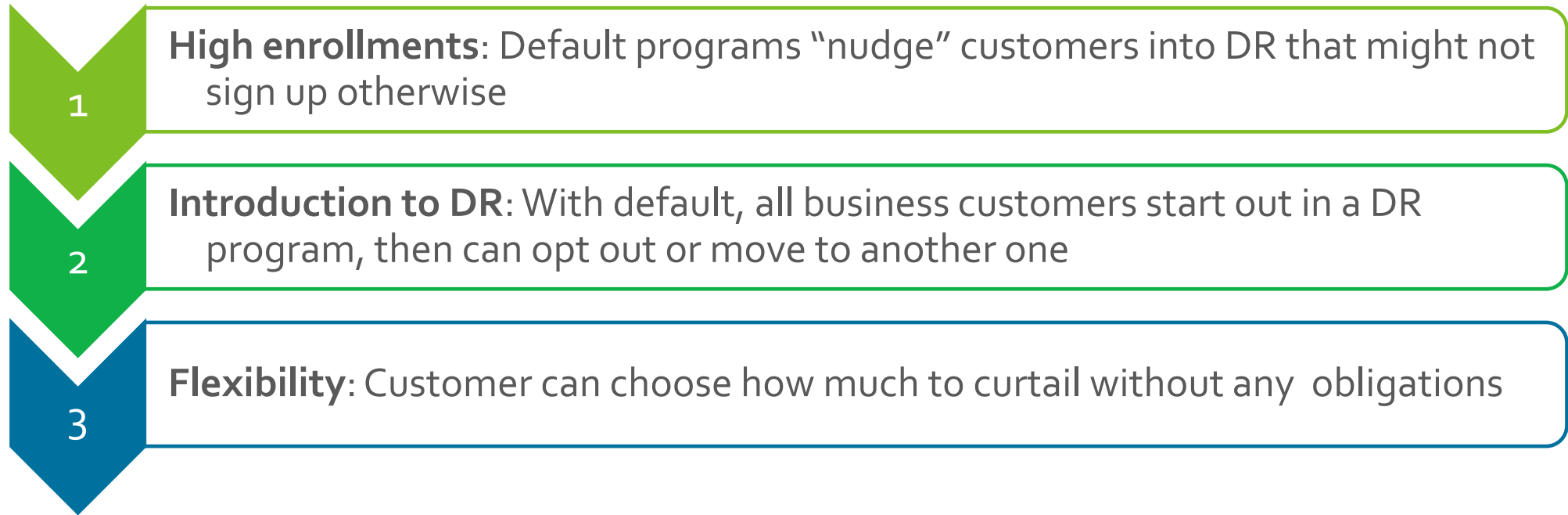
- Apple Valley Choice Energy**
City of Apple Valley
- Ava Community Energy**
Unincorporated Alameda County & 16 cities
- Central Coast Community Energy**
Unincorporated Monterey, San Benito, San Luis Obispo, Santa Barbara, & Santa Cruz Counties & 30 cities
- Clean Energy Alliance**
7 cities
- Clean Power Alliance**
Unincorporated Ventura & Los Angeles Counties & 36 cities
- CleanPowerSF**
San Francisco County
- Desert Community Energy**
City of Palm Springs
- Energy for Palmdale's Independent Choice**
City of Palmdale
- King City Community Power**
King City
- Lancaster Energy**
City of Lancaster
- MCE**
Unincorporated Marin, Napa, Solano, & Contra Costa Counties & 34 cities
- Orange County Power Authority**
3 Cities
- Peninsula Clean Energy**
Unincorporated San Mateo County & 21 cities
- Pico Rivera Innovative Municipal Energy**
City of Pico Rivera
- Pioneer Community Energy**
Unincorporated El Dorado & Placer Counties & 8 cities
- Pomona Choice Energy**
City of Pomona
- Rancho Mirage Energy Authority**
City of Rancho Mirage
- Redwood Coast Energy Authority**
Unincorporated Humboldt County and 7 Cities
- San Diego Community Power**
Unincorporated San Diego County and 6 cities
- San Jacinto Power**
City of San Jacinto
- San José Clean Energy**
City of San José
- Santa Barbara Clean Energy**
City of Santa Barbara
- Silicon Valley Clean Energy**
Unincorporated Santa Clara County & 12 cities
- Sonoma Clean Power**
Unincorporated Sonoma & Mendocino Counties & 11 cities
- Valley Clean Energy**
Unincorporated Yolo County & Cities of Winters, Woodland & Davis



* Not all towns/cities within a county are served by the local CCA program. Please visit individual agency websites for more detailed service area information. To learn more about CalCCA please visit our website at cal-cca.org.

TOU RATES WITH A CPP RIDER ARE THE DEFAULT COMMERCIAL RATES AT ALL 3 IOUS

- Benefits of a default TOU-CPP rate:



CHALLENGES IN EVALUATING CPP RATES

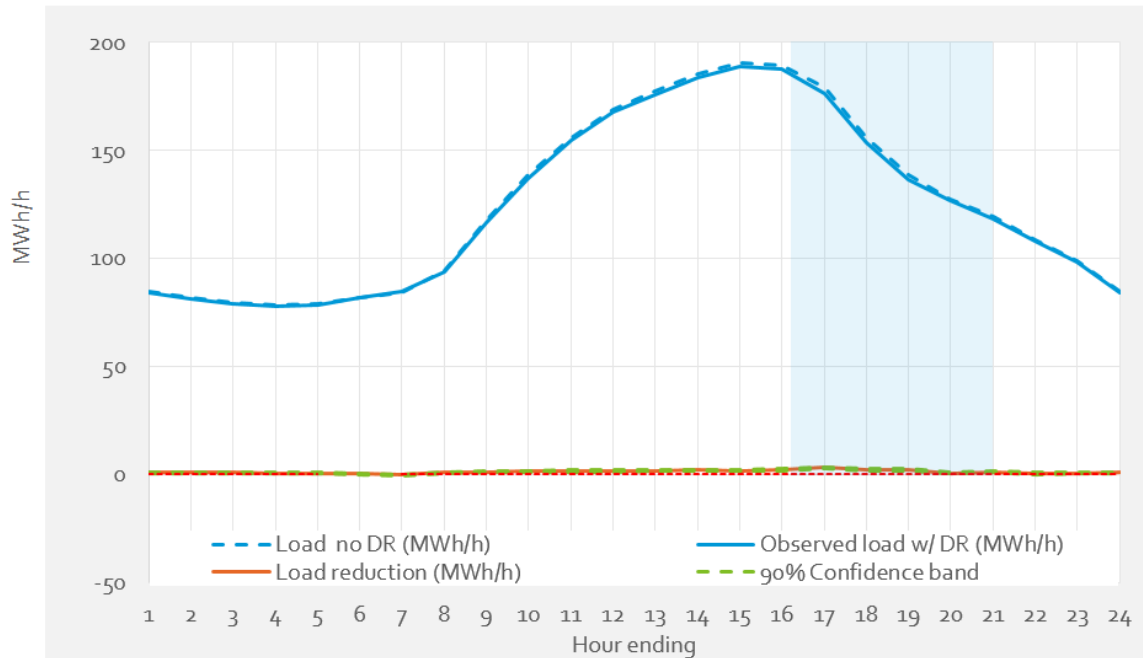
- Behavioral programs generally have smaller impacts (though enrollments are large)
- Enrollments
 - High turnover as customers opt out, new customers defaulted on to the rates
 - Very large sites tend to move to other programs or opt out
 - Most are small customers with less load to shift
 - Insurance provided against charges such as first-year bill protection
- Customer awareness
 - All three IOUs do send day-ahead notifications
- Customers may not have flexible loads from 4 to 9 p.m.
- Difficulty in responding to varying four-tiered rates (three-tiered TOU rates plus CPP adders announced one day ahead)
 - Especially for smaller customers

Most of these are not issues for the rates themselves, just for detecting event-day impacts amidst a lot of noise

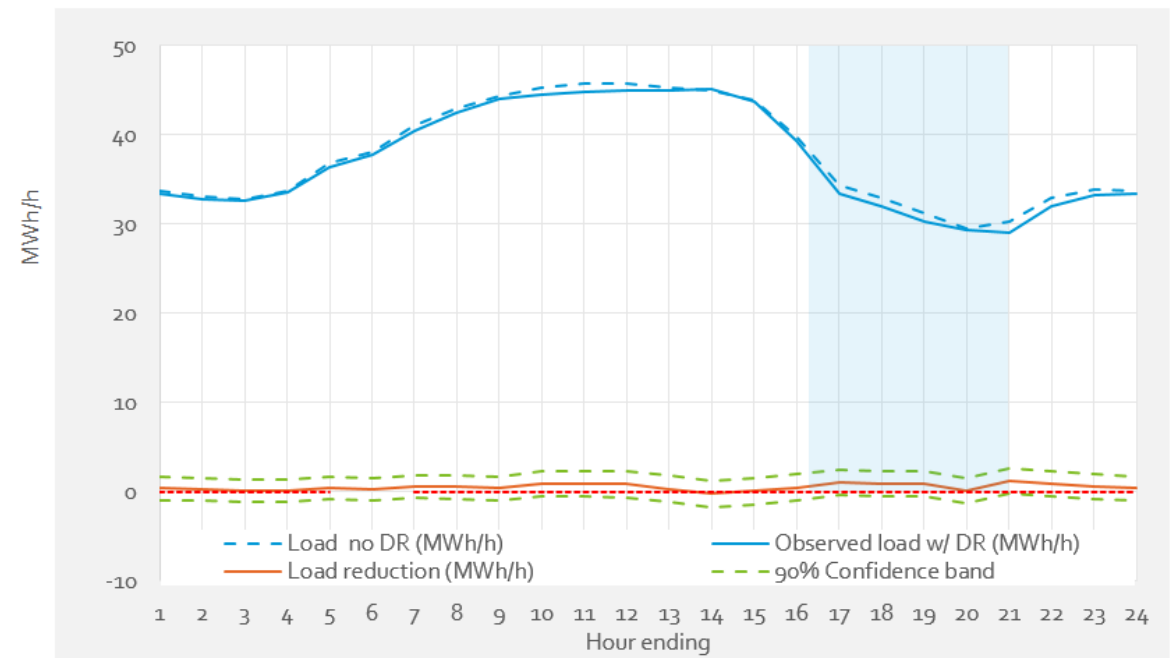
KEY CHALLENGE: SHIFTING ON EVENT DAYS MUST BE GREATER THAN SHIFTING FOR THE TOU RATE ON NORMAL DAYS

Dotted lines = Baseline on similar days, including control group

PG&E Small Commercial Sites (n= 73,334)



SCE Large Ag. Sites (n = 220)

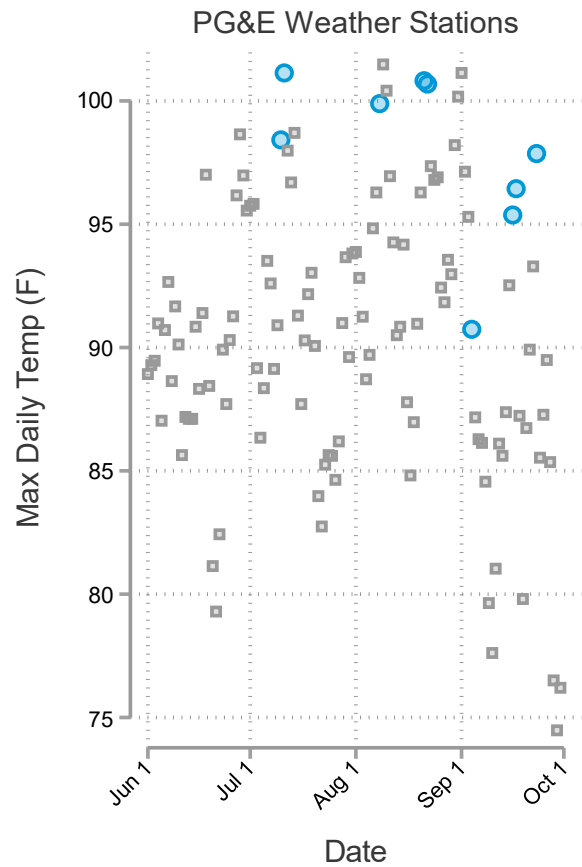


Small sites drop loads sharply from 4 to 9 p.m. regardless of the day

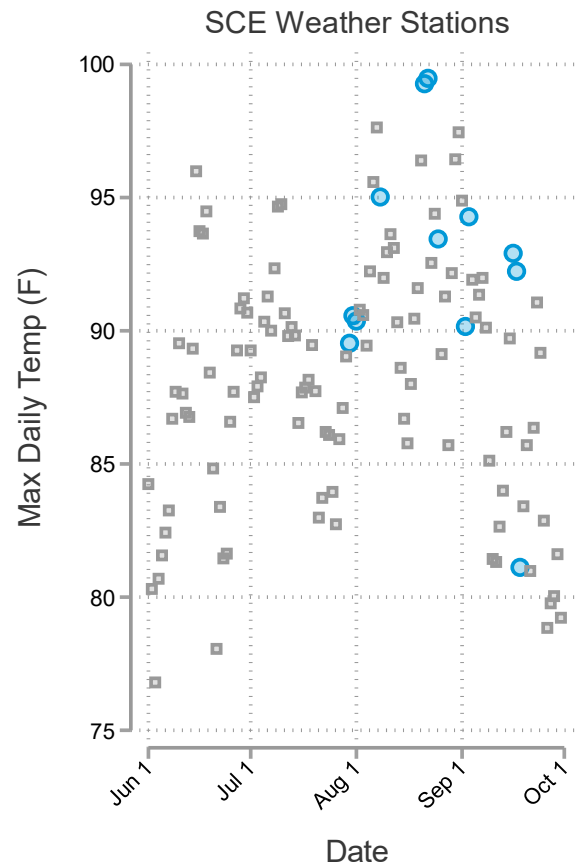
Ag. sites optimize pumping around TOU rates every day

SUMMARY OF PY 2025 IMPACTS

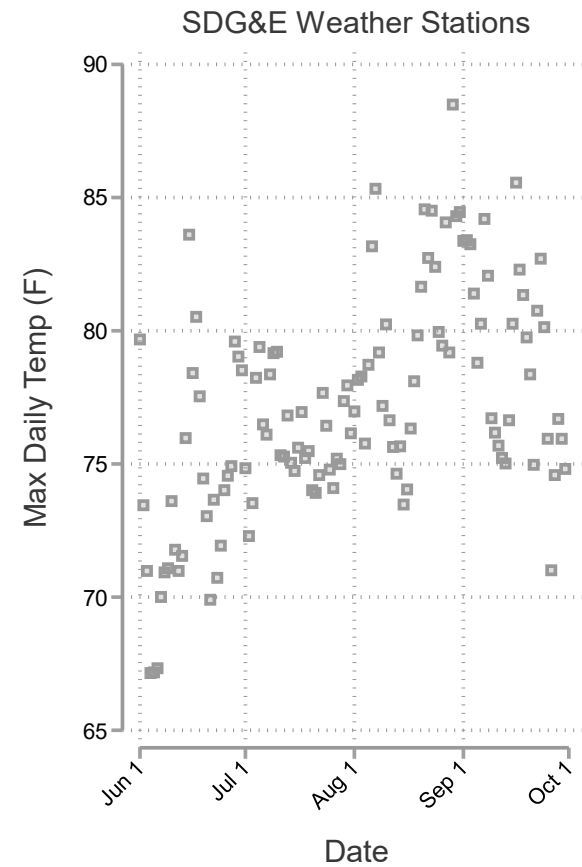
SCE HAD 12 EVENTS IN 2025, PG&E HAD 9



■ Non-Event ● Event



■ Non-Event ● Event

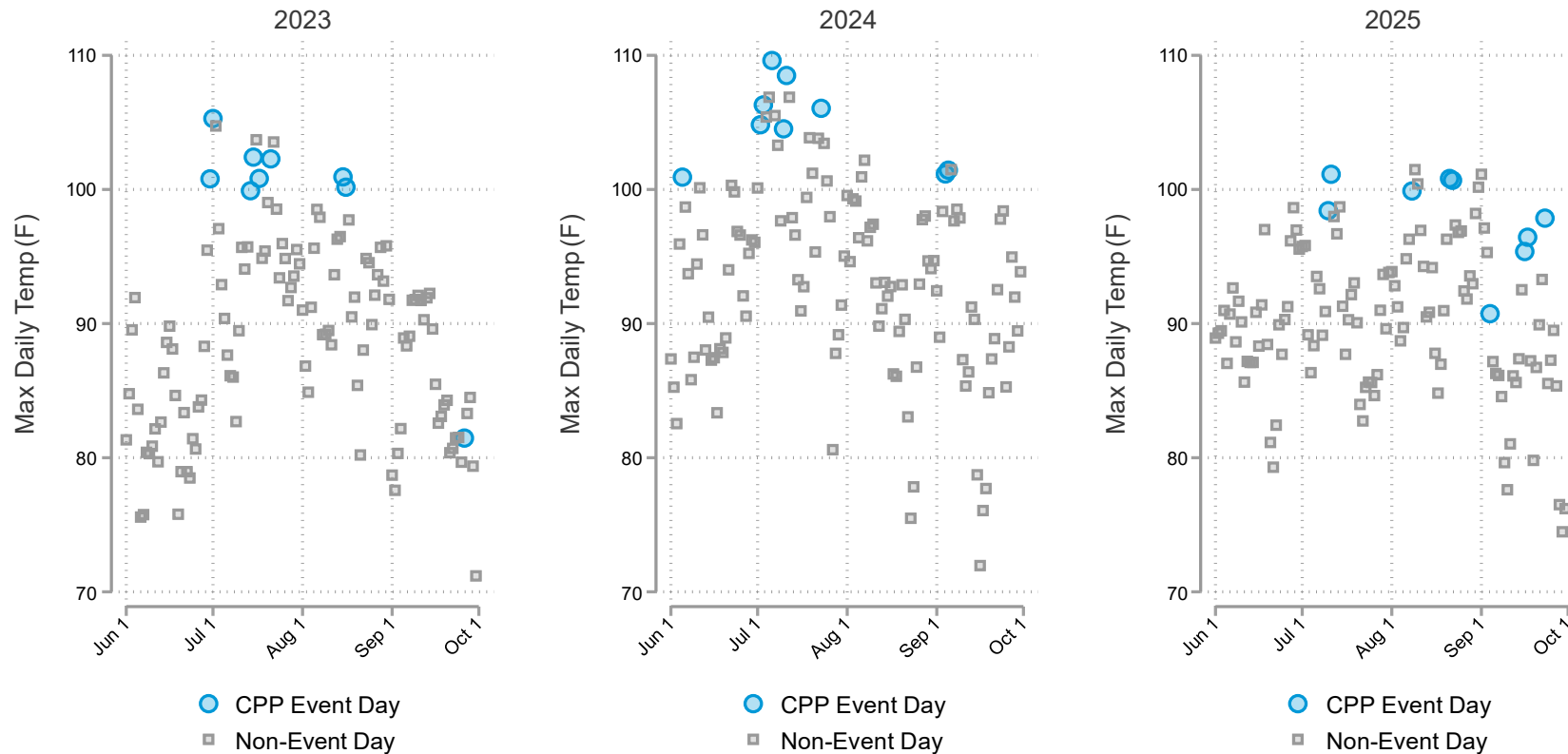


■ Non-Event ● Event

SUMMER 2025 WAS RELATIVELY MILD

- Example: PG&E CPP events by avg. max temperature, 2023-2025 (graphs for SDG&E, SCE look similar)

CPP Event Days and Max. Daily Temp., 2023-2025



2025 EX POST ESTIMATES

IOU	Sites	Load without DR (MW)	Load Reduction (MW)	% Load Reduction	Significant (10% level)	Significant (5% level)
PG&E (All Groups)	88,671	660.90	7.91	1.2%	Yes	Yes
SCE (All Groups)	233,334	1165.83	-1.80	-0.2%	No	No

- 0 to 1% impacts
 - Not uncommon in recent years
- Responses noisy, large standard errors
 - Only PG&E statistically significant
- SCE impacts should be interpreted as zero
- No events, impact estimates for SDG&E

2025 EX POST ESTIMATES SIMILAR TO 2022-2024

Utility	Measure	2022	2023	2024	2025
PG&E	Impact	1.4%	1.1%	0.9%	1.2%
	Participants	111,974	107,258	103,577	88,671
SCE	Impact	0.8%	0.6%	0.3%	-0.2%
	Participants	225,258	226,193	220,658	233,334
SDG&E (Medium & Large)	Impact	-0.3% (Weekday) 2.7% (Weekend)	3.2%	-1.1%	n/a
	Participants	4,859	2,861	2,286	2,234

- Generally small impacts in other years (~1%)
- SDG&E estimates:
 - 2022: 4 weekday events (-0.3%), 1 weekend (2.7%)*
 - 2023: One event day*
 - 2024: At least one site with large impacts in previous years did not receive event notifications*
 - 2025: No events called*

EX ANTE IMPACTS SLIGHTLY HIGHER FOR PG&E, LOWER FOR SCE

Utility	Measure	PY 2024 Evaluation	PY 2025 Evaluation
PG&E	2025 Ex Ante Impact Estimate	7.1	7.6
	2025 Forecasted Enrollment	103,622	90,018
SCE	2025 Ex Ante Impact Estimate	4.2	2.8
	2025 Forecasted Enrollment	220,655	233,049
SDG&E (Medium & Large)	2025 Ex Ante Impact Estimate	0.8	0.8
	2025 Forecasted Enrollment	2,257	2,234

- Table compares August system 1-in-2 ex ante forecast for 2025 from PY 2024 evaluation vs. same calculation in 2025 evaluation
- Estimates slightly higher for PG&E
- Ex ante lower for SCE due to no ex post impacts this year

EX ANTE HOURLY IMPACTS OVER TIME (SYSTEM 1-IN-2 WEATHER)

Year	PG&E	SCE	SDG&E (Med. & Large)
2025	7.6	2.8	0.8
2026	7.8	2.7	0.8
2027	8.0	2.7	0.8
2028	7.2	2.7	0.8
2029	7.0	2.8	0.8
2030	6.9	2.8	0.8
2031	6.7	2.8	0.8
2032	6.6	2.9	0.9
2033	6.4	2.9	0.9
2034	6.3	2.9	0.9
2035	6.2	3.0	0.9
2036	6.1	3.0	0.9

- Ex ante impacts generated from PY 2023, PY 2024 ex post impacts
 - Blend of current and historical impact estimates
- Enrollment changes over time
 - PG&E Declining forecast after 2027
 - New CCA's to come online
 - SCE: Slightly increasing enrollments over time
 - Pending any program changes
 - SDG&E: Slightly increasing enrollments over time

EX POST METHODOLOGY

EX POST IMPACTS ESTIMATED WITH DIFFERENCES-IN-DIFFERENCES

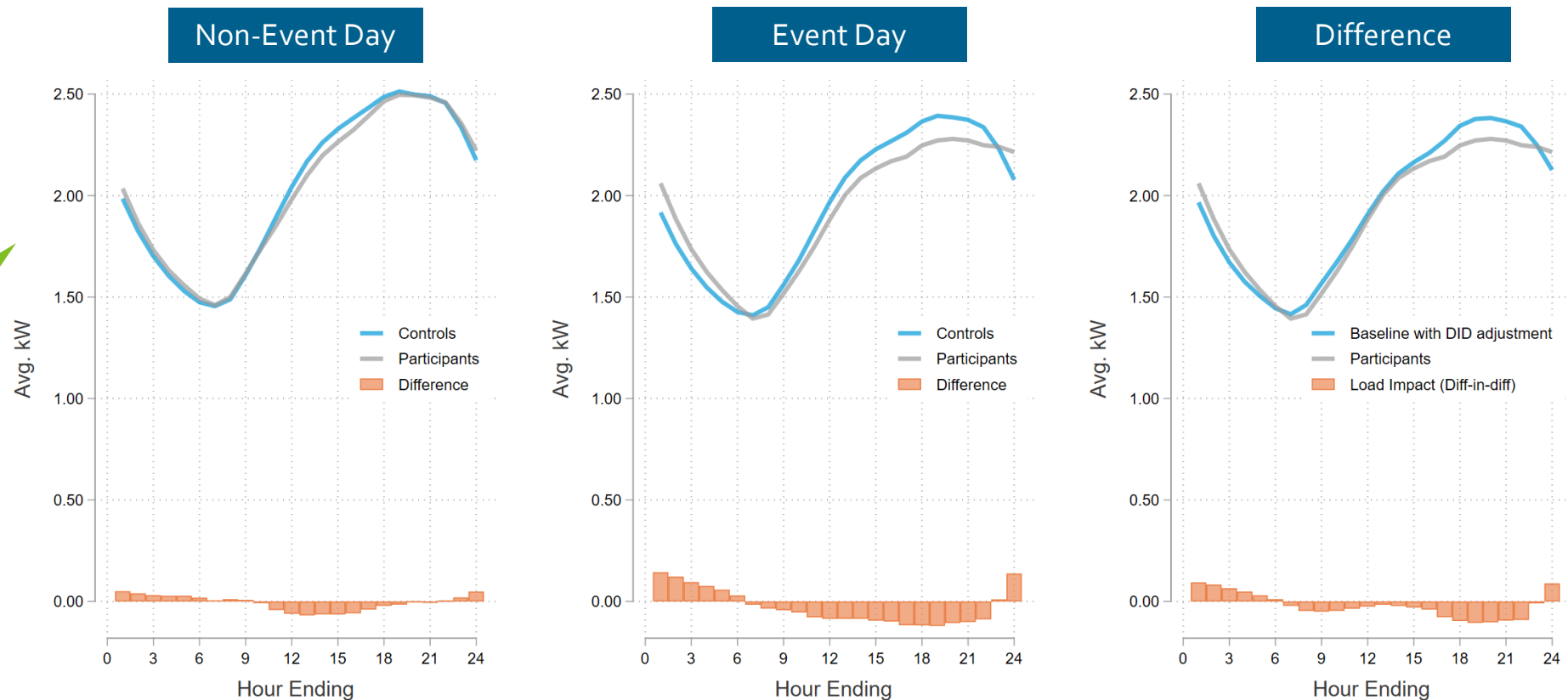
Ex post estimation process:

1. Find **proxy days** to compare across event days/non-event days
2. Match CPP sites to similar non-CPP sites (**matched control group**)
 - Drew samples for large groups (e.g. Small CPP for PG&E, SCE), so plenty of non-CPP sites to match to
 - Tournament for best matching model, Avg. pct. bias very close to zero, then take lowest RRMSE among
3. **Diff-in-Diff:** Compare across event/non-event days + participants/non-participants
 - Almost all participants estimated with simple differences-in-differences
4. Individual customer regressions for smaller number of sites
 - Applied if insufficient sample size in that site's industry/size/climate zone, if site had unique loadshape, etc.
 - Regression models determined via tournament, individually for relevant sites

DIFFERENCES-IN-DIFFERENCES USED FOR MOST IMPACT ESTIMATES

- Match each participant to a similar non-participant site \Rightarrow Create a **matched control group** for comparison
- Compare hourly usage on event days to similar non-event days for both groups, take the difference:

$$(kWh_{CPP,Event} - kWh_{CPP,No\ Event}) - (kWh_{Control,Event} - kWh_{Control, No\ Event})$$



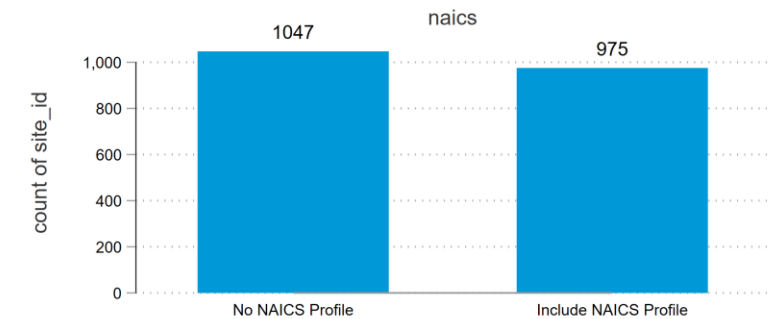
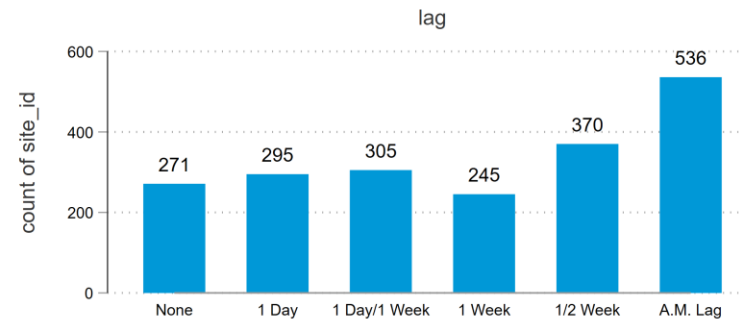
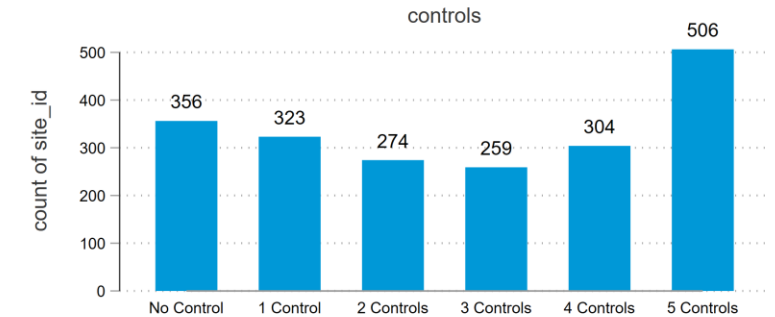
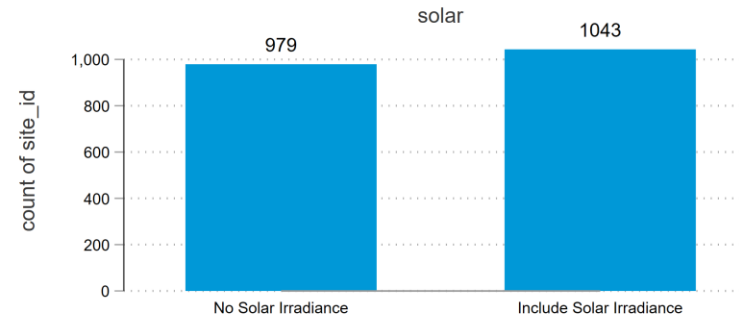
Participants, matched control group should have similar loads on non-event days

Impacts are the differences in Panel 2 ("Event Day"), minus any differences between the groups on non-event days

SOME SITES MODELED USING INDIVIDUAL CUSTOMER REGRESSIONS

- We ran individual regressions for very large customers
 - Also customers with poor matches, in remote areas, etc.
- Each site had a tournament to fit the best model based on non-event days
- Example: Figure shows variables included in winning models for PG&E

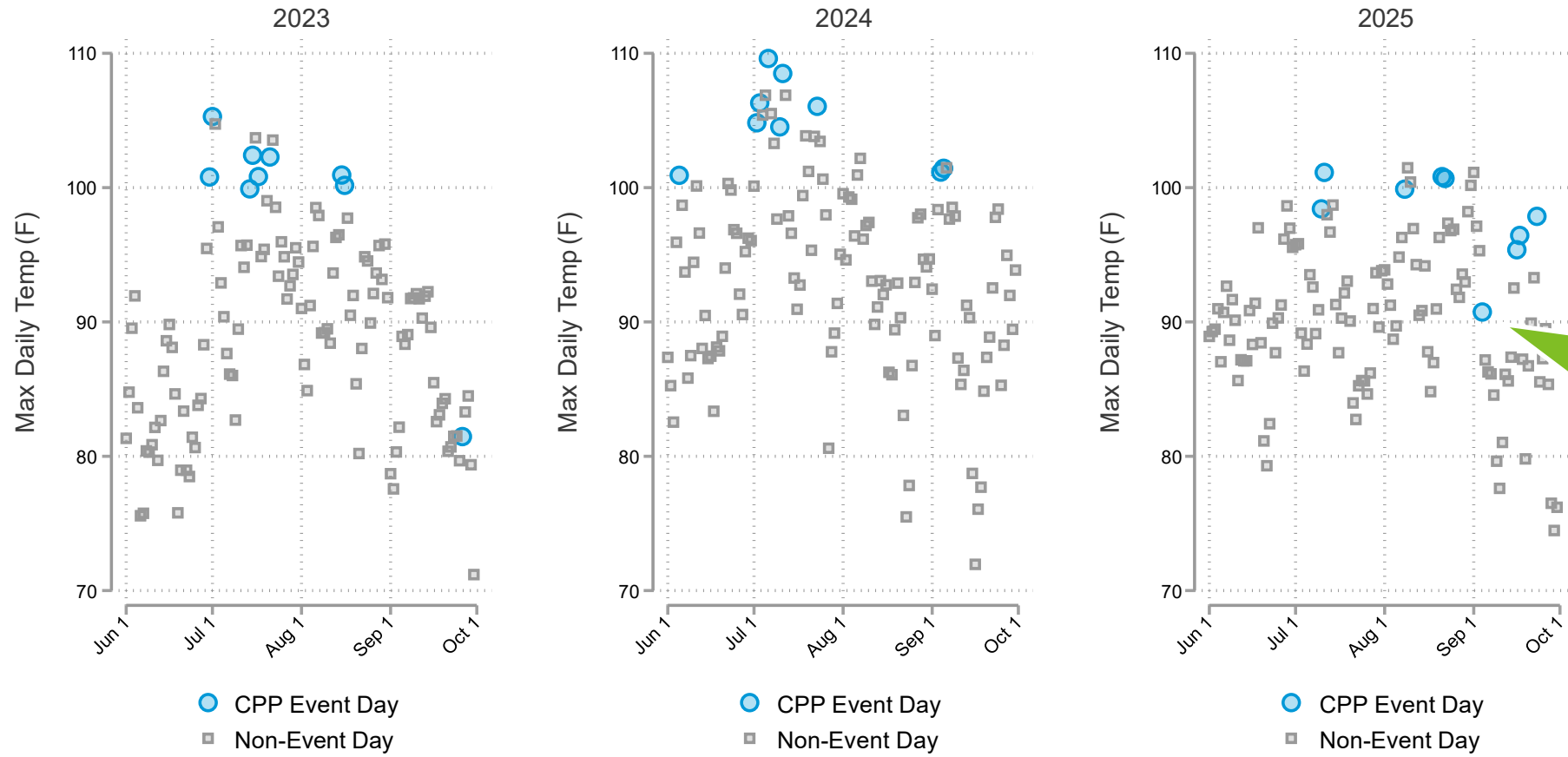
Variables Included in Individual Customer Regressions for PG&E (Counts)



EX POST RESULTS

PG&E HAD 9 EVENTS IN PY 2025, MOST IN COOLER WEATHER THAN 2023-24

CPP Event Days and Max. Daily Temp., 2023-2025



This event called for "minimum dispatch" (target of 9 total events), not representative of PG&E's planning conditions so not included in ex ante

PG&E: EX POST IMPACT ESTIMATES

Group	Sites	Load without DR (MW)	Load reduction (MW)	% Reduction	Significant (90% CI)	Significant (95% CI)
Large (200 kW and Above)	1,300	214.02	2.79	1.3%	No	No
Medium (20 to 199.99 kW)	13,033	291.25	3.36	1.2%	Yes	Yes
Small (Below 20 kW)	74,338	145.10	1.76	1.2%	Yes	Yes
Total	88,671	650.37	7.91	1.2%	Yes	Yes

- Similar percent impacts for all three groups
- Large often has greatest MW impacts
 - Medium was slightly higher this year
 - Large sites not so large (need 200 kW max demand to be in the group)

PG&E: IMPACTS BY EVENT DAY

- Most individual event days had significant impacts (for combined groups)
- The non-representative event did not
 - 9/4 – “Minimum Dispatch”

Event date	Total enrolled sites	Avg temp (F, site weighted)	Load reduction (MWh/h)	% Load reduction	Std. error	t-stat	Sig. 90%
7/10/2025	89,430	95.6	3.8	0.6%	3.2	-1.2	No
7/11/2025	89,410	98.1	14.1	2.1%	3.1	-4.5	Yes
8/8/2025	88,812	98.0	10.3	1.6%	3.0	-3.4	Yes
8/21/2025	88,651	96.6	10.0	1.5%	3.2	-3.1	Yes
8/22/2025	88,629	98.2	12.0	1.8%	3.2	-3.8	Yes
9/4/2025	88,394	88.4	-2.4	-0.4%	3.1	0.8	No
9/16/2025	88,260	92.8	7.5	1.2%	3.1	-2.4	Yes
9/17/2025	88,254	93.2	6.1	1.0%	3.2	-1.9	Yes
9/23/2025	88,199	93.9	10.1	1.6%	3.2	-3.1	Yes
Avg Weekday 4-9 pm	88,671	95.0	7.9	1.2%	2.8	-2.8	Yes

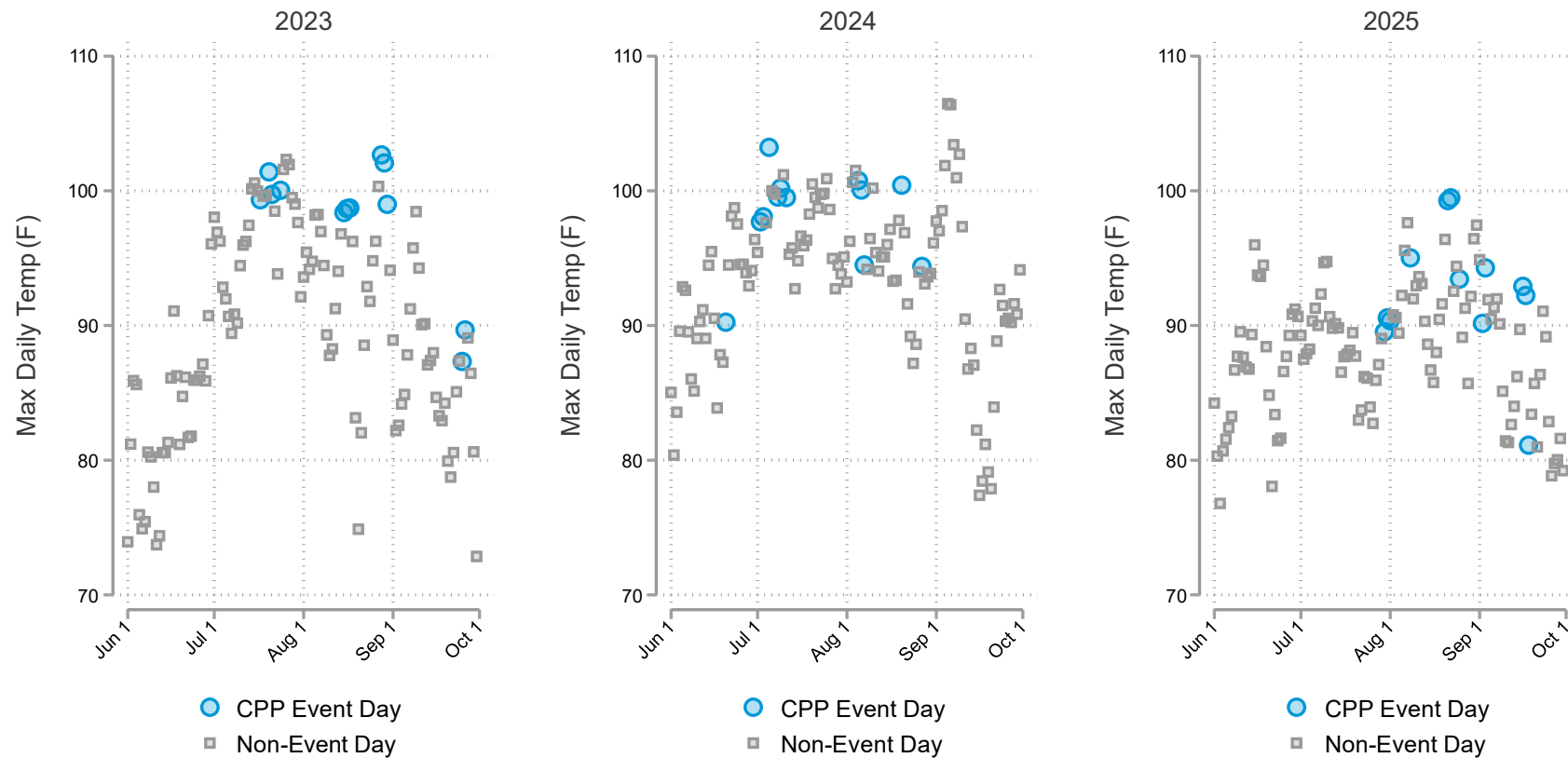
PG&E: IMPACTS VARY BY INDUSTRY, BUT SIMILAR TO PREVIOUS YEARS

- Manufacturing lower than usual
- Other groups similar to previous years (schools, retail usually close to zero)

Subcategory	Total enrolled sites	Reference load (MWh/h)	Load w/ DR (MWh/h)	Load reduction (MWh/h)	% Load reduction	Avg temp (F, site weighted)	Std. error	t-stat	Sig 90%
Agriculture, Mining & Construction	6,834	82.89	79.68	3.21	3.9%	95.8	1.4	-2.3	Yes
Institutional/Government	10,971	87.29	86.27	1.01	1.2%	95.3	0.5	-2.2	Yes
Manufacturing	3,209	54.94	54.20	0.74	1.3%	94.7	1.4	-0.5	No
Offices, Hotels, Finance, Services	35,442	204.14	203.45	0.70	0.3%	94.8	0.7	-1.0	No
Other/Unknown	5,345	16.37	16.30	0.07	0.4%	94.6	0.3	-0.2	No
Retail Stores	8,512	81.62	81.18	0.44	0.5%	95.3	0.2	-2.1	Yes
Schools	1,636	25.43	25.69	-0.26	-1.0%	94.7	0.2	1.2	No
Wholesale, Transport, Other Utilities	16,718	96.89	94.88	2.01	2.1%	94.9	1.2	-1.7	Yes

SCE: 12 EVENT DAYS IN 2025 TO MEET TARGET DESPITE COOLER TEMPERATURES

CPP Event Days and Max. Daily Temp., 2023-2025



SCE: EX POST IMPACTS WERE ESSENTIALLY ZERO

Group	Sites	Load without DR (MW)	Load reduction (MW)	% Reduction	Significant (90% CI)
Large (200 kW and Above)	1,835	358.16	-0.98	-0.3%	No
Medium (20 to 199.99 kW)	21,982	530.12	0.45	0.1%	No
Small (Below 20 kW)	208,602	277.55	-1.27	-0.5%	Yes
Residential	915	0.710	0.00	-0.1%	No
Total	233,334	1,166.50	-1.80	-0.2%	No

- Impacts essentially zero
 - Noisy estimates, cannot be distinguished from zero
 - These customers were almost certainly shifting loads on the event days
 - Just not over and above similar weekdays from 4 – 9 p.m.
- Somewhat lower than in previous years
 - But not statistically different
 - Combined with 2023, 2024 estimates in ex ante
- Residential group is new this year
 - No significant impacts
 - Not clear what future enrollments will be in this group

SCE HAS IDENTIFIED “NON PERFORMERS” BASED ON BILLING DATA, WOULD LIKE TO MOVE THESE CUSTOMERS IN FUTURE PROGRAM YEARS

These sites have not saved more than \$20 with the CPP option in either of the last 2 years (in shadow bill comparison)

Non-Performers

Group	n	Reference load (MWh/h)	Load reduction (MWh/h)	% Load reduction	Avg temp (F, site weighted)	Sig. 90%
200 kW and Above	563	151.45	-1.72	-1.1%	84.2	Yes
20 to 199.99 kW	8,639	303.32	-0.72	-0.2%	84.5	Yes
Below 20 kW	108,494	43.33	-0.61	-1.4%	83.5	No
All groups	117,696	498.10	-3.04	-0.6%	83.6	Yes

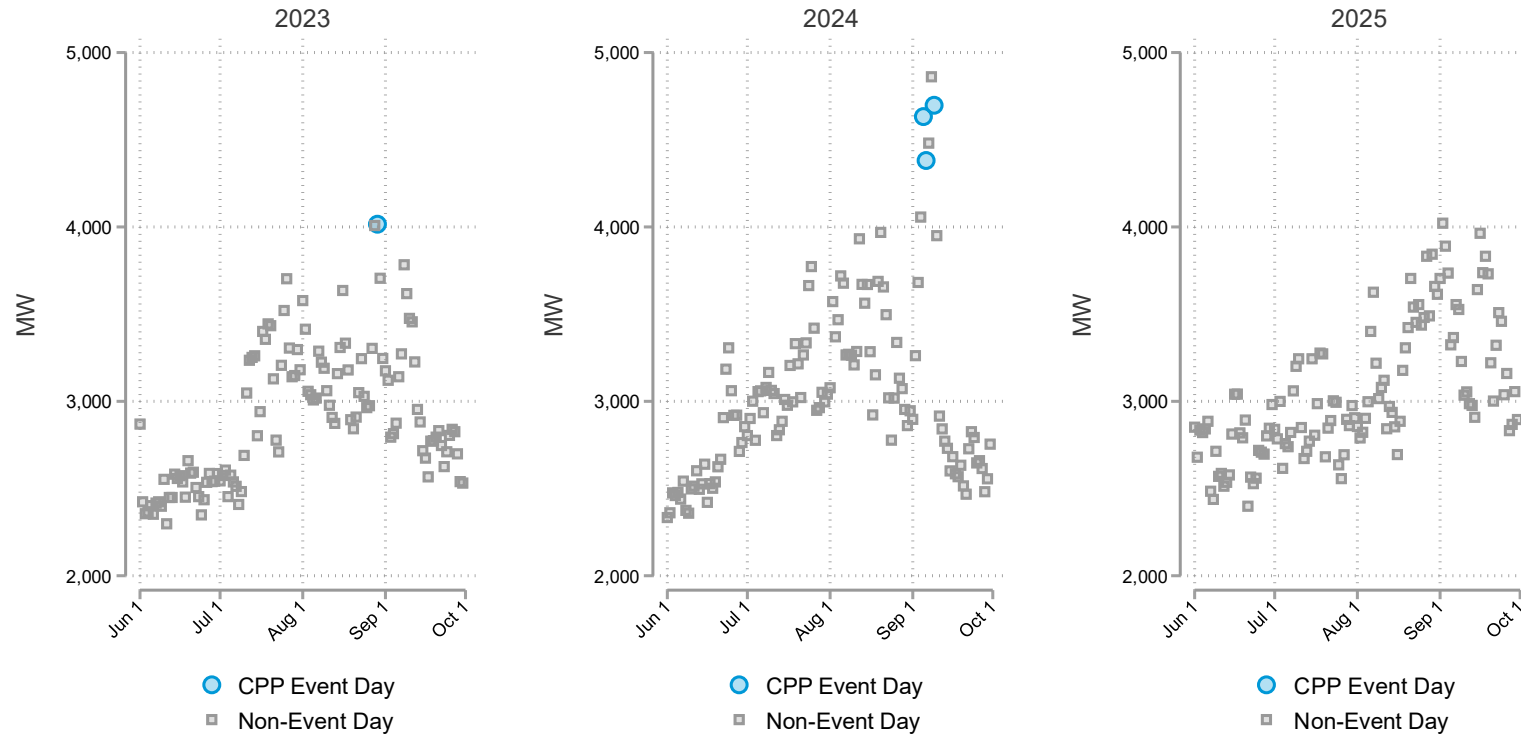
Other Sites

Group	n	Reference load (MWh/h)	Load reduction (MWh/h)	% Load reduction	Avg temp (F, site weighted)	Sig. 90%
200 kW and Above	1,273	205.88	0.68	0.3%	85.1	No
20 to 199.99 kW	13,342	227.01	0.64	0.3%	84.3	Yes
Below 20 kW	100,108	237.45	-0.22	-0.1%	84.4	No
Residential	915	0.71	0.00	-0.3%	84.3	No
All groups	115,634	671.04	1.10	0.2%	84.4	No

Residential sites don't have 2 years of data so none flagged as non-performers yet

SDG&E: NO EVENTS IN PY 2025 SINCE CONDITIONS WERE NOT MET

CPP Event Days and SDG&E System Demand, 2023-2025



SDG&E protocol: "A CPP Event may be triggered if the day-ahead system load forecast for the potential event day is greater than 4,000 MW. Events may also be triggered in response to high forecasted temperatures, extreme conditions, and emergencies."

EX ANTE METHODOLOGY

IMPACT ASSUMPTIONS FOR EX ANTE

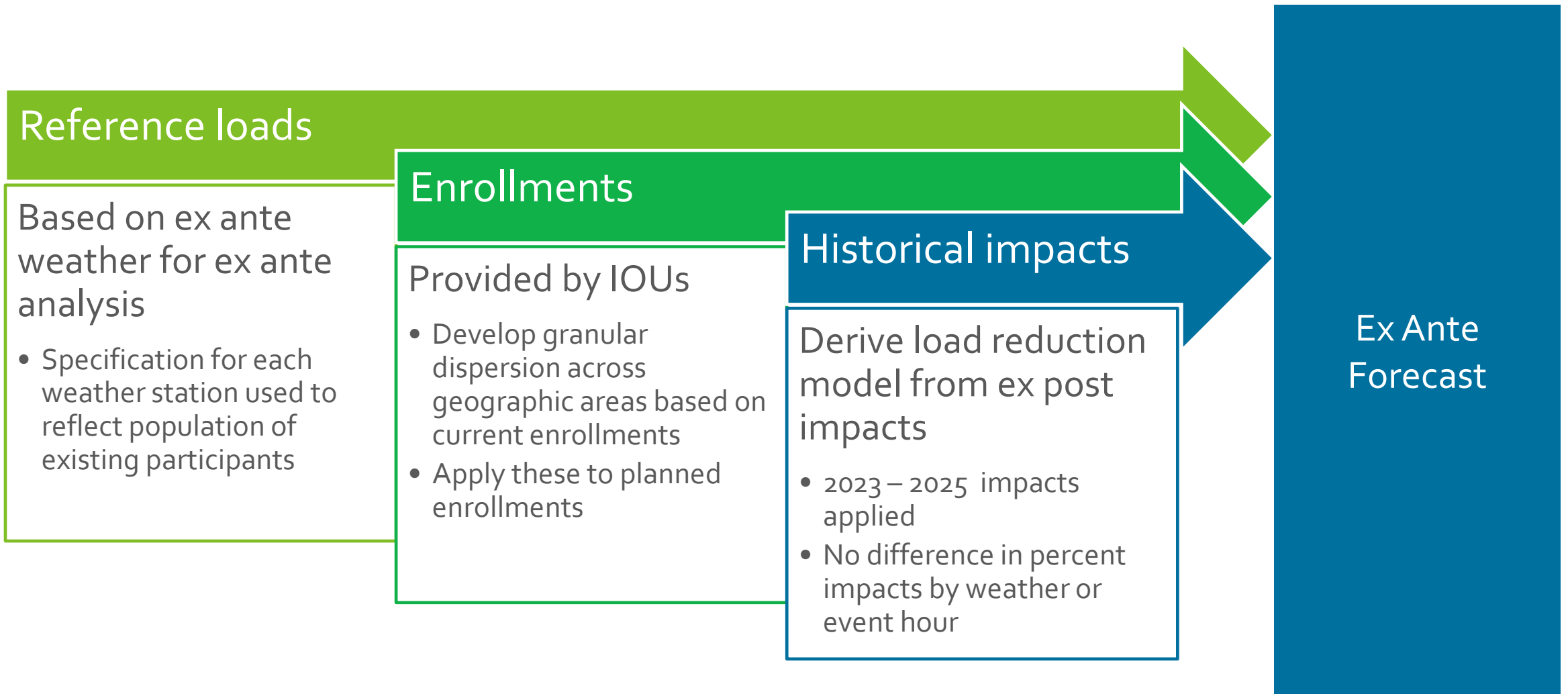
Apply Ex Post Estimates

- Apply impacts from past three years' events
 - Includes both PY 2023, PY 2024, and PY 2025
 - No impacts outside of the peak hours (4 to 9 p.m.)
- Percent impacts scaled to aggregate with enrollment forecast
 - Provided by each IOU's CPP program team
- 1-in-2 conditions
 - Separately for CAISO and each IOU's systems

Not Included in Models

- Weather
 - ***No significant trend in impacts by temperature***
 - Consistent with recent PY evaluations
 - Only SCE Small has had temp. gradient in recent years
 - MW impacts still larger on hotter days since reference loads are higher
- Event Hour
 - ***No significant difference in event hour impacts***

EX ANTE METHODOLOGY OVERVIEW



EX ANTE EXAMPLE: PG&E SLICE OF DAY

Hour Ending	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	5.33	5.34	5.35	6.75	7.62	8.50	8.52	8.33	8.03	6.90	5.54	5.54
18	5.01	5.02	5.03	6.34	7.15	7.98	8.00	7.81	7.53	6.46	5.19	5.19
19	4.86	4.87	4.88	6.13	6.89	7.71	7.73	7.54	7.26	6.24	5.06	5.06
20	4.83	4.84	4.85	6.01	6.72	7.48	7.50	7.33	7.06	6.12	5.03	5.03
21	4.81	4.82	4.83	5.89	6.55	7.24	7.26	7.09	6.85	5.99	5.01	5.01
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

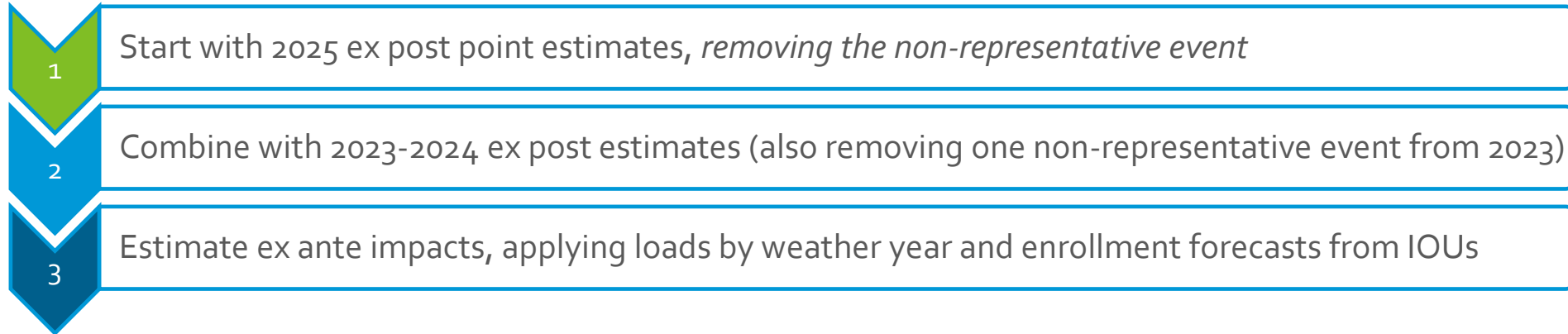
Demand reductions are positive (Blue)

Load increases are negative (Orange)

Percent impacts don't vary by temp. or event hour, but reference loads still larger in summer, hour 17

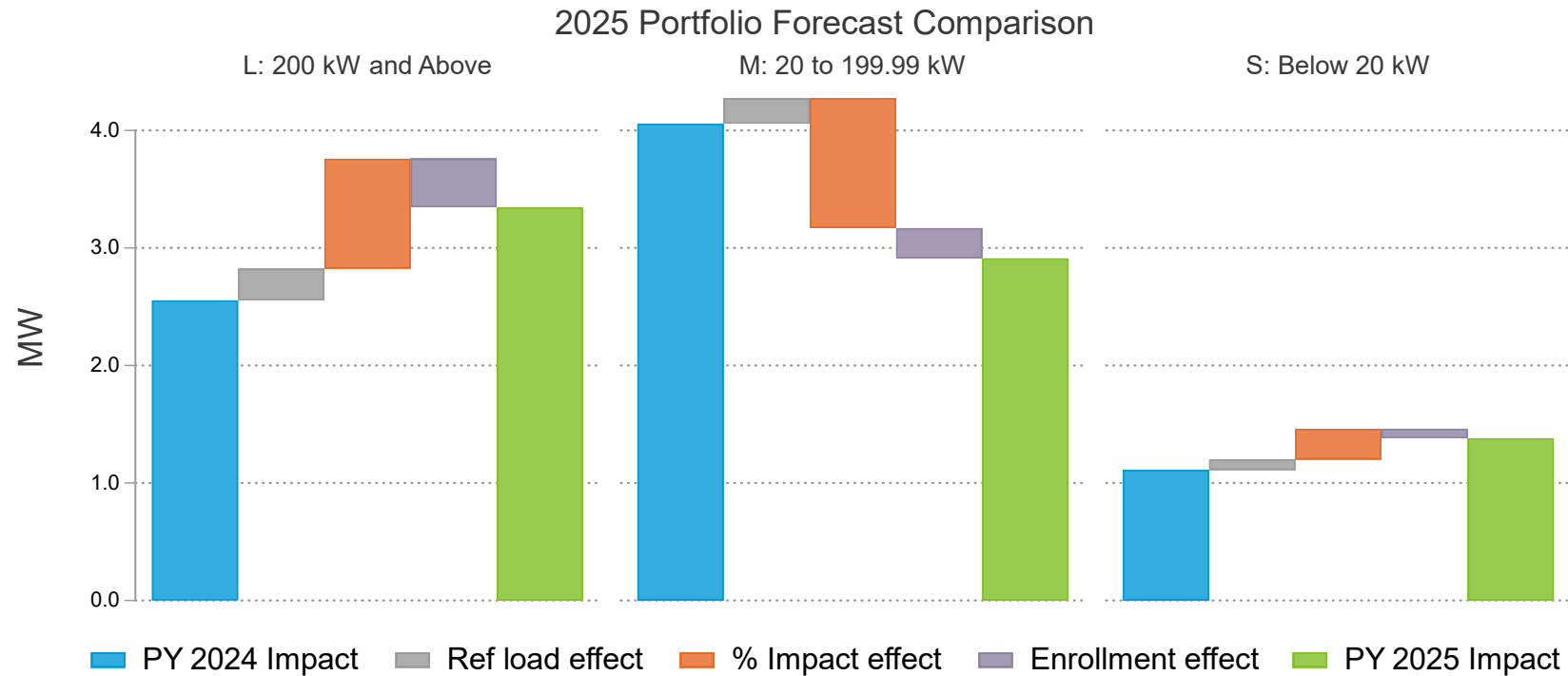
EX ANTE RESULTS

PG&E LARGE: GETTING FROM 2025 EX POST ESTIMATES TO EX ANTE



Result Type	Day Type	Load without DR (avg site kWh/h)	Load Reduction (avg site kWh/h)	% Reduction	Event Avg Temp (F)
Ex Post- 2023 - 2025	Avg. Weekday Event	173.75	2.78	1.6%	98.5
Ex Ante (CAISO)	Aug. Worst Day, 1-in-2	165.76	2.41	1.5%	94.2
Ex Ante (PG&E)	Aug. Worst Day, 1-in-2	172.23	2.50	1.4%	98.0

PG&E: EX ANTE REDUCTIONS SIMILAR TO PY 2024 FORECAST



Graphs decompose change from 2024 (blue) to 2025 (green) into changes in 1) Reference Loads, 2) Estimated percent impacts, and 3) Enrollments

PG&E: EX ANTE FORECASTS INITIALLY ~8 MW PER YEAR

Enrollments

Year	Large	Medium	Small	Total
2025	1,340	13,275	75,403	90,018
2026	1,208	13,967	80,940	96,115
2027	1,234	14,504	82,730	98,468
2028	1,181	12,436	68,016	81,633
2029	1,169	12,070	65,526	78,765
2030	1,157	11,730	63,140	76,027
2031	1,145	11,403	60,875	73,423
2032	1,133	11,111	58,694	70,938
2033	1,121	10,826	56,594	68,541
2034	1,109	10,550	54,553	66,212
2035	1,097	10,299	52,620	64,016
2036	1,085	10,056	50,755	61,896

Enrollments decrease over time due to new CCAs

Impacts – Portfolio

Year	Large	Medium	Small	Total
2025	3.3	2.9	1.4	7.6
2026	2.9	3.6	1.4	8.0
2027	3.0	3.7	1.5	8.1
2028	2.9	3.2	1.2	7.3
2029	2.8	3.1	1.2	7.1
2030	2.8	3.0	1.1	7.0
2031	2.8	3.0	1.1	6.8
2032	2.7	2.9	1.1	6.7
2033	2.7	2.8	1.0	6.6
2034	2.7	2.7	1.0	6.4
2035	2.7	2.7	1.0	6.3
2036	2.6	2.6	0.9	6.2

Most impacts from Large & Medium

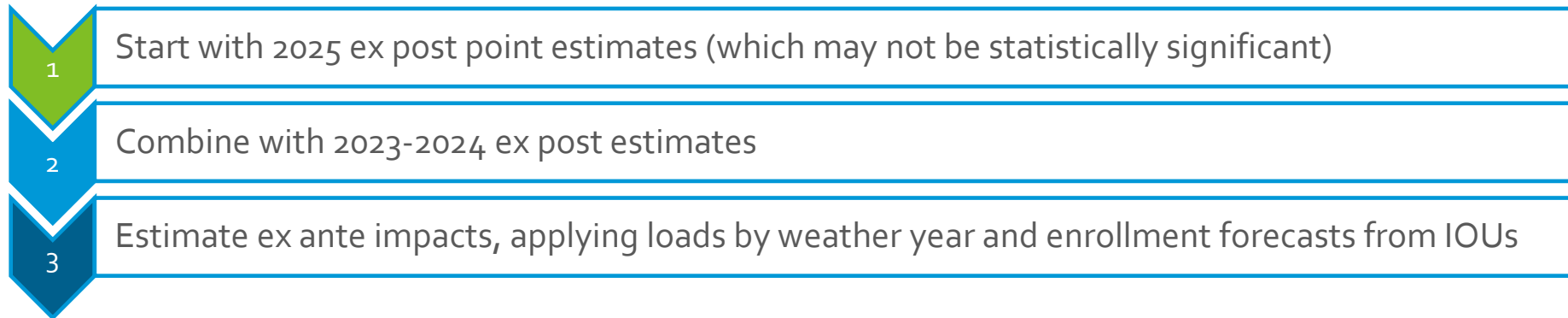
PG&E: SLICE OF DAY – GREATER REDUCTIONS IN SUMMER, 4 – 5 P.M.

Hour Ending	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	5.33	5.34	5.35	6.75	7.62	8.50	8.52	8.33	8.03	6.90	5.54	5.54
18	5.01	5.02	5.03	6.34	7.15	7.98	8.00	7.81	7.53	6.46	5.19	5.19
19	4.86	4.87	4.88	6.13	6.89	7.71	7.73	7.54	7.26	6.24	5.06	5.06
20	4.83	4.84	4.85	6.01	6.72	7.48	7.50	7.33	7.06	6.12	5.03	5.03
21	4.81	4.82	4.83	5.89	6.55	7.24	7.26	7.09	6.85	5.99	5.01	5.01
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Demand reductions are positive (Blue)

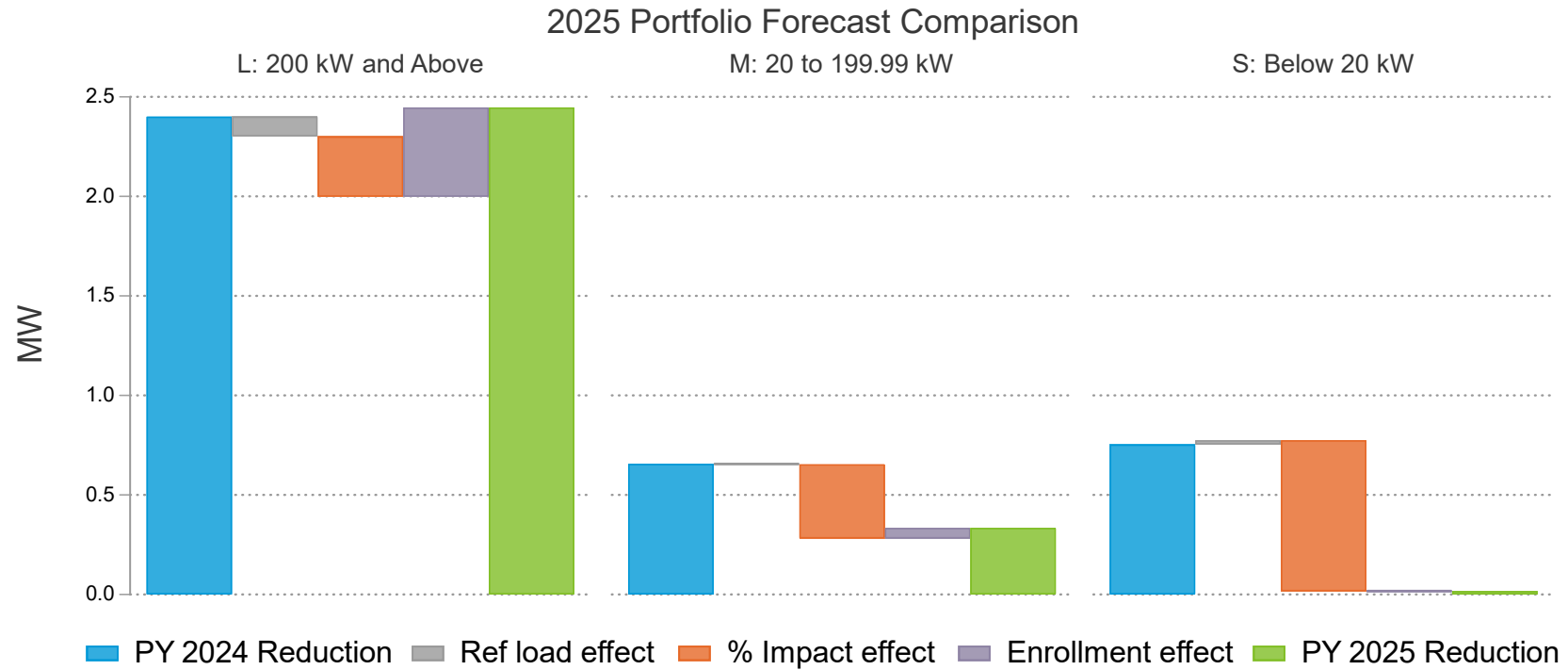
Load increases are negative (Orange)

SCE LARGE: GETTING FROM 2025 EX POST ESTIMATES TO EX ANTE



Result Type	Day Type	Load without DR (avg site kWh/h)	Load Reduction (avg site kWh/h)	% Reduction	Event Avg Temp (F)
Ex Post- 2023 - 2025	Avg. Weekday Event	214.77	1.03	0.5%	85.6
Ex Ante (CAISO)	Aug. Worst Day, 1-in-2	217.41	1.25	0.6%	87.6
Ex Ante (SCE)	Aug. Worst Day, 1-in-2	221.36	1.27	0.6%	89.9

SCE: IMPACTS LOWER THAN PY 2024 FORECAST DUE TO LOWER PERCENT REDUCTIONS



Graphs decompose change from 2024 (blue) to 2025 (green) into changes in 1) Reference Loads, 2) Estimated % impacts, and 3) Enrollments

SCE: EX ANTE FORECASTS THROUGH 2036 ARE ~3 MW PER YEAR, BUT THIS IS SUBJECT TO CHANGE WITH PROGRAM CHANGES

Enrollments

Year	Large	Medium	Small	Residential	Total
2025	1,827	21,936	208,374	912	233,049
2026	1,847	22,199	231,774	1,517	257,337
2027	1,868	22,458	234,495	1,517	260,338
2028	1,890	22,714	237,209	1,517	263,330
2029	1,906	22,972	239,927	1,517	266,322
2030	1,927	23,234	242,647	1,517	269,325
2031	1,947	23,496	245,361	1,517	272,321
2032	1,968	23,496	245,361	1,517	272,342
2033	1,992	23,496	245,361	1,517	272,366
2034	2,012	23,496	245,361	1,517	272,386
2035	2,034	23,496	245,361	1,517	272,408
2036	2,052	23,496	245,361	1,517	272,426

Impacts – Portfolio

Year	Large	Medium	Small	Residential	Total
2025	2.4	0.3	0.0	0.0	2.7
2026	2.3	0.3	0.0	0.0	2.7
2027	2.4	0.3	0.0	0.0	2.7
2028	2.4	0.3	0.0	0.0	2.7
2029	2.4	0.3	0.0	0.0	2.8
2030	2.4	0.3	0.0	0.0	2.8
2031	2.5	0.3	0.0	0.0	2.8
2032	2.5	0.3	0.0	0.0	2.9
2033	2.5	0.3	0.0	0.0	2.9
2034	2.6	0.3	0.0	0.0	2.9
2035	2.6	0.3	0.0	0.0	3.0
2036	2.6	0.3	0.0	0.0	3.0

With program changes, enrollments might be much lower, but aggregate impacts likely similar

Most impacts from Large

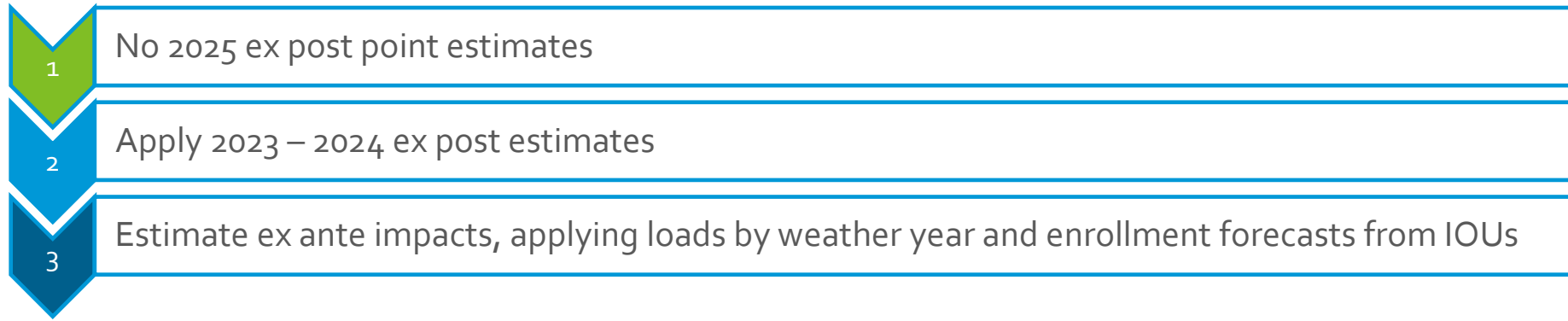
SCE: SLICE OF DAY – GREATER REDUCTIONS IN SUMMER, 4 – 5 P.M.

Hour Ending	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	2.25	2.21	2.22	2.65	2.64	2.91	2.96	2.98	3.02	2.83	2.59	2.18
18	2.15	2.14	2.14	2.53	2.52	2.76	2.81	2.82	2.86	2.69	2.48	2.10
19	2.08	2.07	2.07	2.40	2.39	2.58	2.62	2.62	2.64	2.51	2.34	2.04
20	2.03	2.04	2.04	2.33	2.32	2.50	2.54	2.54	2.57	2.43	2.28	2.00
21	2.01	2.02	2.02	2.26	2.26	2.42	2.45	2.45	2.46	2.34	2.21	1.99
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Demand reductions are positive (Blue)

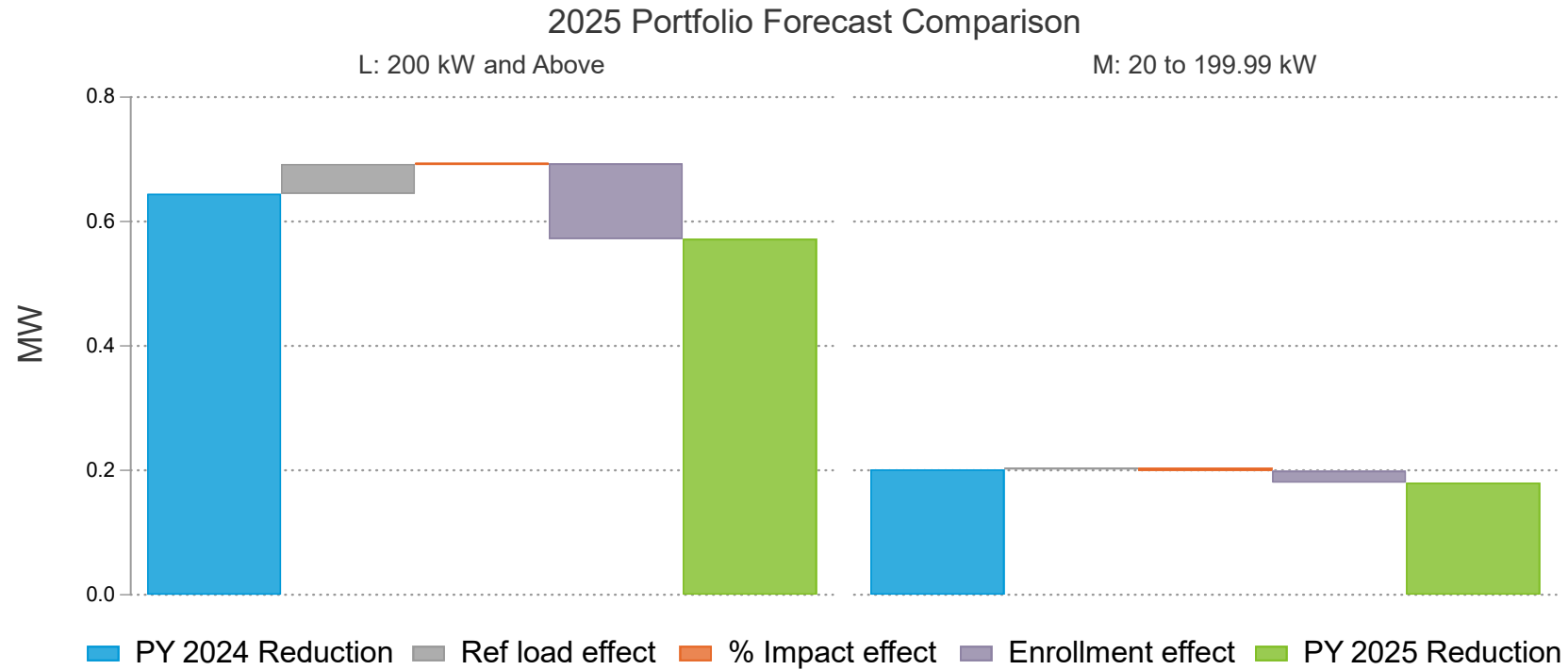
Load increases are negative (Orange)

SDG&E LARGE: GETTING FROM 2025 EX POST ESTIMATES TO EX ANTE



Result Type	Day Type	Load without DR (avg site kWh/h)	Load Reduction (avg site kWh/h)	% Reduction	Event Avg Temp (F)
Ex Post- 2023 & 2024	Avg. Weekday Event	302.12	3.54	1.2%	84.3
Ex Ante (CAISO)	Aug. Worst Day, 1-in-2	223.69	2.76	1.2%	82.4
Ex Ante (SDG&E)	Aug. Worst Day, 1-in-2	227.40	2.80	1.2%	84.7

SDG&E: EX ANTE IMPACTS SLIGHTLY LOWER THAN IN PY 2024 WITH LOWER ENROLLMENTS IN LARGE CPP



Graphs decompose change from 2024 (blue) to 2025 (green) into changes in 1) Reference Loads, 2) Estimated % impacts, and 3) Enrollments

SDG&E: EX ANTE FORECASTS THROUGH 2034 ~1 MW PER YEAR

Enrollments (Commercial Only)		
Year	Large	Medium
2025	203	2,011
2025	197	1,930
2026	198	1,958
2027	202	1,998
2028	205	2,040
2029	209	2,085
2030	213	2,142
2031	221	2,202
2032	227	2,273
2033	236	2,352
2034	246	2,448

Impacts – Portfolio			
Year	Large	Medium	Total
2025	0.6	0.2	0.8
2026	0.6	0.2	0.8
2027	0.6	0.2	0.8
2028	0.6	0.2	0.8
2029	0.6	0.2	0.8
2030	0.6	0.2	0.8
2031	0.6	0.2	0.8
2032	0.7	0.2	0.9
2033	0.7	0.2	0.8
2034	0.7	0.2	0.9
2035	0.7	0.2	0.9

Relatively stable over time

SDG&E LARGE: SLICE OF DAY

Hour Ending	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.46	0.46	0.47	0.56	0.56	0.58	0.64	0.66	0.69	0.63	0.56	0.46
18	0.45	0.45	0.45	0.52	0.52	0.54	0.59	0.62	0.65	0.58	0.53	0.45
19	0.43	0.43	0.43	0.49	0.50	0.51	0.55	0.58	0.60	0.55	0.50	0.43
20	0.40	0.41	0.41	0.45	0.46	0.47	0.50	0.51	0.52	0.49	0.46	0.40
21	0.38	0.39	0.39	0.42	0.42	0.44	0.46	0.48	0.49	0.45	0.42	0.38
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Demand reductions are positive (Blue)

Load increases are negative (Orange)

SDG&E MEDIUM: SLICE OF DAY

Hour Ending	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.12	0.12	0.13	0.17	0.17	0.18	0.21	0.22	0.24	0.21	0.18	0.13
18	0.12	0.12	0.12	0.16	0.15	0.16	0.19	0.20	0.21	0.19	0.16	0.12
19	0.11	0.11	0.11	0.14	0.14	0.15	0.17	0.17	0.19	0.16	0.15	0.12
20	0.11	0.11	0.11	0.13	0.13	0.14	0.16	0.16	0.17	0.15	0.14	0.12
21	0.10	0.10	0.11	0.12	0.12	0.13	0.14	0.14	0.15	0.14	0.13	0.11
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Demand reductions are positive (Blue)

Load increases are negative (Orange)

KEY TAKEAWAYS

1

Ex Post: 1.2% impacts for PG&E, 0% for SCE, and no events for SDG&E

2

Summer 2025 was relatively mild for all three IOUs, but PG&E (9) and SCE (12) still targeted a pre-determined number of events

3

Responses to event-day pricing are generally small and noisy – difficult to distinguish from daily shifting for the underlying TOU rate

4

PG&E Ex Ante: ~8 MW initially, decreasing over time with CCA expansion

5

SCE Ex Ante: ~3 MW currently, but program rules may change going forward

6

SDG&E Med./Large Ex Ante: ~ 1 MW going forward, enrollments stable

RECOMMENDATIONS FOR PY 2026

1

All: Survey customers to identify or understand barriers to shifting on event days (awareness, flexibility of loads, business conditions, cost of shifting loads, etc.)

2

All: Understand program composition by customer types: we see enrollments go up/down from year to year, but lots of churn underneath – what types of customers are staying, opting out after a year, etc.?

3

PG&E: Expand communication with customers. PDP billing reports or other customer contact could be used to discuss load shifting, gain feedback on events, notifications, etc.

4

SCE: Move Non-performers to other TOU rates, where Non-Performers are defined as sites with 2 consecutive years of non-performance, measured by bill impacts)

5

SDG&E: Test events, given that no events were called for PY 2025. Future evaluations may benefit from at least one annual data point in the form of a test event. This could also ensure smooth event dispatches later in the season.

6

SDG&E: Test notifications (holdover recommendation from PY 2024, but no events were called in 2025)

QUESTIONS?



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