

DOCKETED

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Project Title:	Reliability Reserve Incentive Programs
TN #:	268985
Document Title:	Demand Side Grid Support Program Staff Workshop Presentation Slides 2026-03-09
Description:	Presentation slides for DSGS Program Staff Workshop held on March 9, 2026. Purpose of Workshop: review proposed modifications to DSGS Program Draft Guidelines.
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Organization:	California Energy Commission
Submitter Role:	Commission Staff
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DSGS Program Staff Workshop

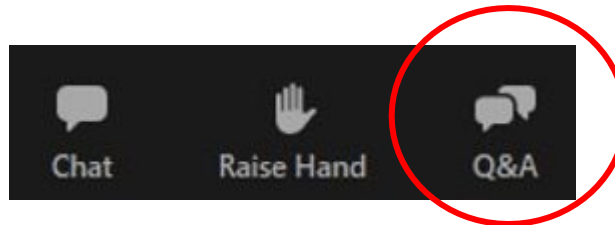
Draft Demand Side Grid Support (DSGS) Program Guidelines, Fifth Edition

March 9, 2026



Housekeeping

- This workshop will be recorded and posted to the CEC website.
- Attendees will be muted during the presentation. Please submit your questions using the Q&A window.



- There will be several opportunities for Q&A and a public comment at the end of this workshop.
- Workshop slides and recording will be posted at the event page for today's workshop at: <https://www.energy.ca.gov/programs-and-topics/programs/demand-side-grid-support-program>

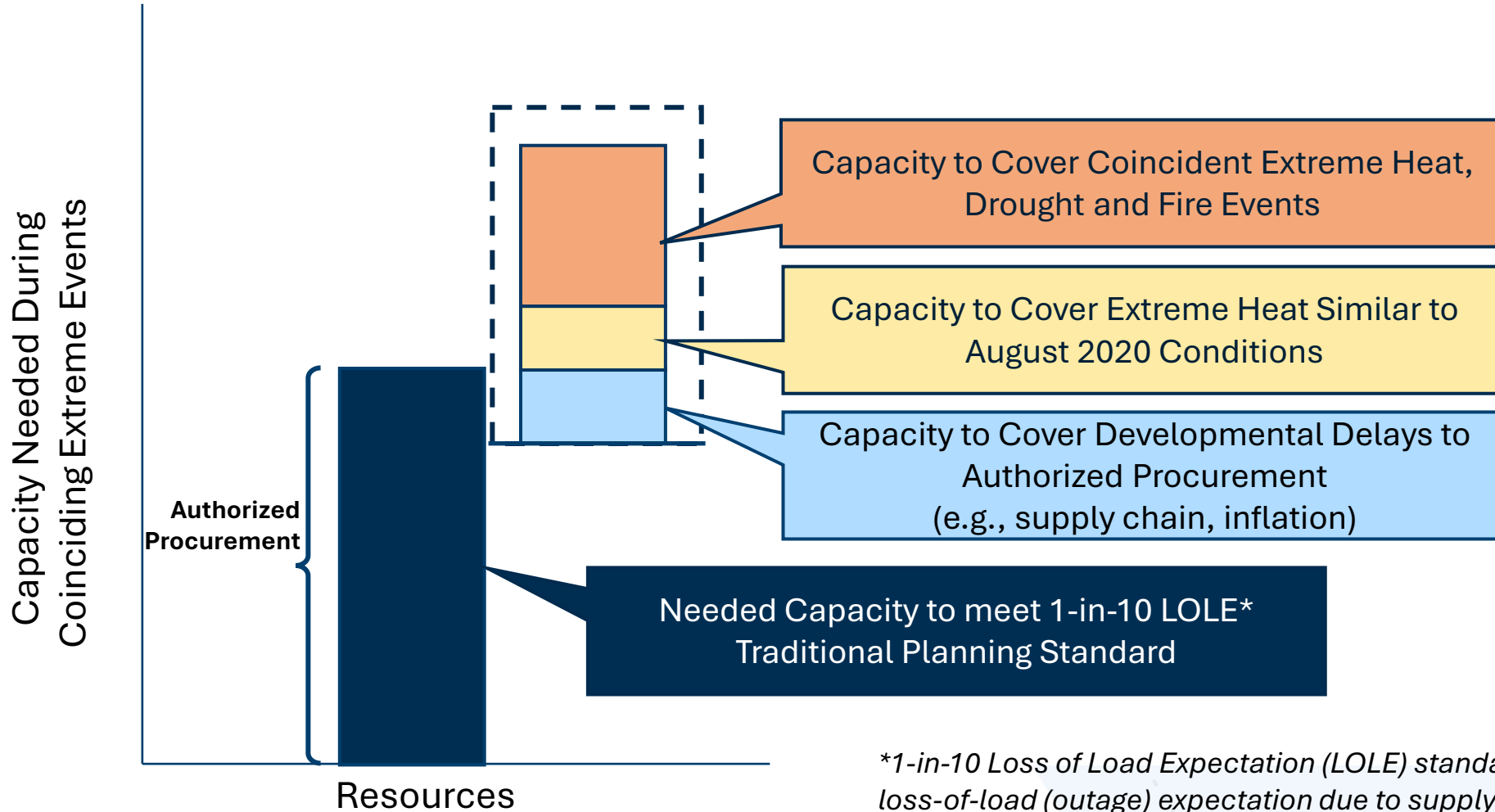


Agenda

- Program Background
- Overview of Proposed Modifications to DSGS Program Guidelines
- Next Steps
- Public Comment



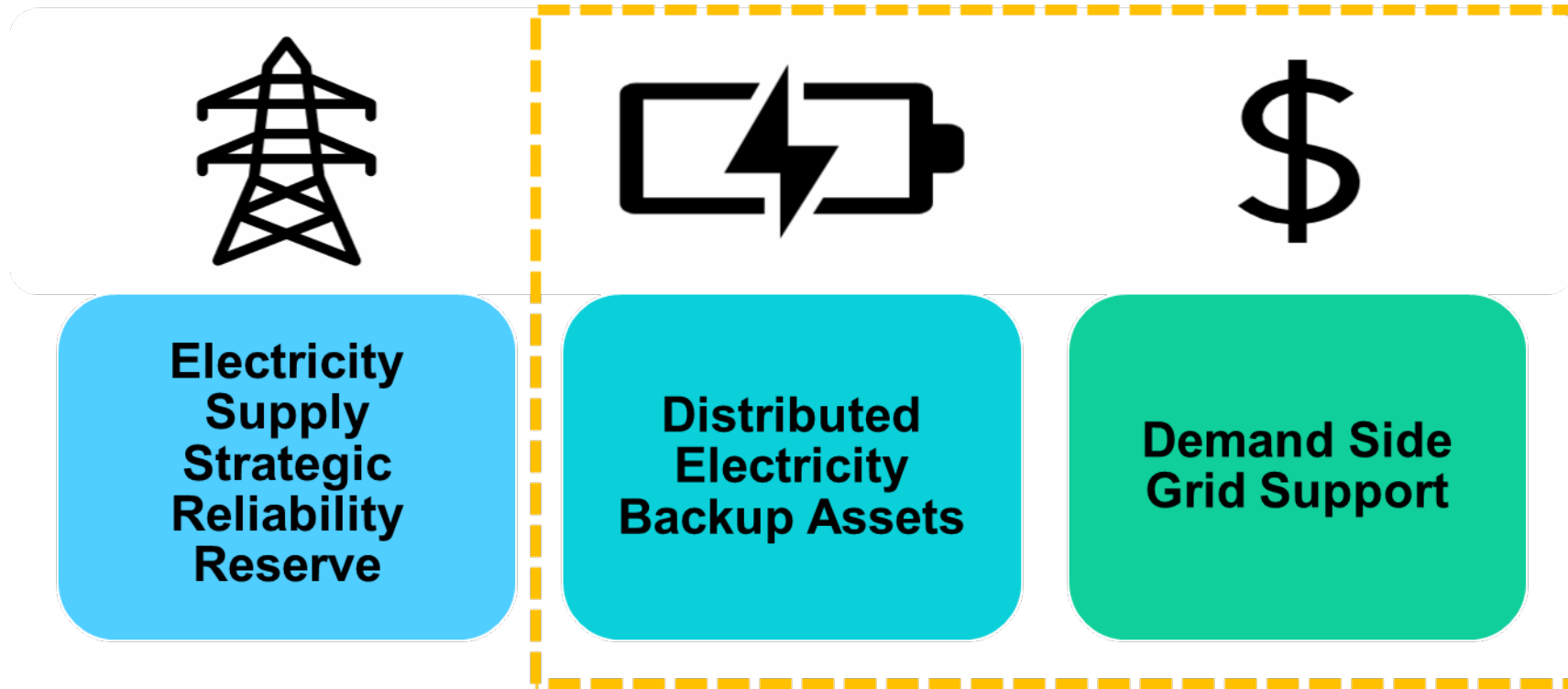
Why a Strategic Reliability Reserve?



**1-in-10 Loss of Load Expectation (LOLE) standard is a loss-of-load (outage) expectation due to supply shortfall maximum of once in ten years.*



Strategic Reliability Reserve Portfolio



- *Grow clean Strategic Reliability Reserves that are incremental to Resource Adequacy (RA), without interfering with RA market*
- *Pilot new initiatives to help scale demand flexibility*



DSGS Development Timeline



Current DSGS Participation Options

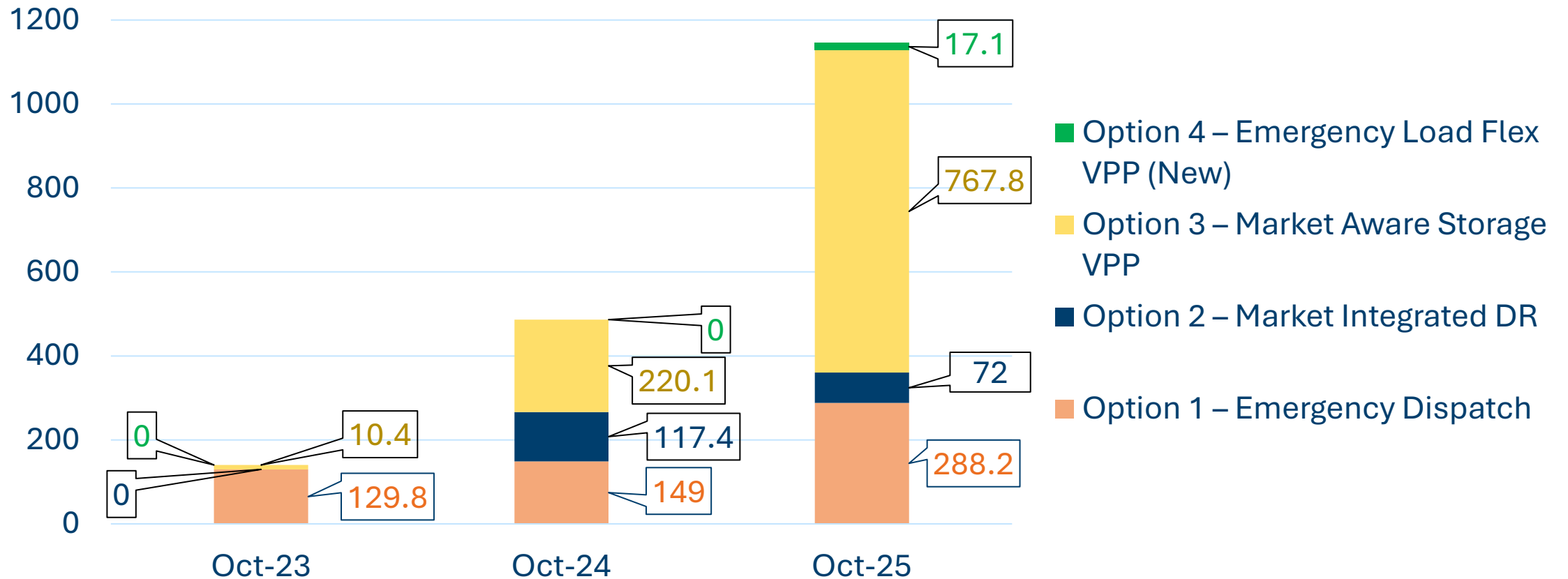


	Option 1 – Emergency Dispatch	Option 2 – Market Integrated Demand Response (DR) Pilot	Option 3 – Market Aware Storage Virtual Power Plant (VPP) Pilot	Option 4 – Emergency Load Flexibility Virtual Power Plant (VPP) Pilot
Eligible Resources	Any load reduction resource	Market-integrated demand response	Storage (batteries + V2X)	<ul style="list-style-type: none"> Smart thermostats, electric water heaters, EVSE, batteries, and residential smart electrical panels PG&E service area excluded
Event Trigger	Energy Emergency Alert (EEA)	CAISO market bidding & scheduling	CAISO day-ahead energy market locational marginal price threshold and EEA	Energy Emergency Alert (EEA)
Incentive Structure	<ul style="list-style-type: none"> Energy and standby payment 	<ul style="list-style-type: none"> Capacity payment based on DR resource’s demonstrated capacity incremental to Resource Adequacy commitments Incentive rate varies by month, nominated duration 	<ul style="list-style-type: none"> Capacity payment based on VPP’s demonstrated capacity Incentive rate varies by month, nominated duration Energy payment for day-of EEA 	<ul style="list-style-type: none"> Capacity payment based on VPP’s demonstrated capacity Performance-adjusted incentive payment Incentive rate varies by month
Launched	Summer 2022	August 2023	August 2023	May 2025



Growth of DSGS Over Three Program Seasons

*Estimated Capacity Enrolled (MW)**



*Based on provider-reported estimates (ex-post performance data provided later in this presentation)



DSGS Program Funding

DSGS Funding Available for 2026 Program Season

Total Funding Appropriated	\$109.5 million
Expenditures* Subtracted	<ul style="list-style-type: none">• 2022 Expenditures: \$8.0 million• 2023 Expenditures: \$3.2 million• 2024 Expenditures: \$14.3 million• 2025 Expenditures: ~\$50.0 million (projected)
Remaining DSGS Funding	~\$34 million [^]

*Expenditures include administrative costs and program payments

[^]Estimate; subject to change



DSGS Goals for 2026



1. Clarify program requirements



2. Incorporate lessons learned



3. Align with program's goals and current funding level



Next Steps for DSGS

Target Dates (Subject to Change)	Milestone
March 16, 2026	<ul style="list-style-type: none">Public comments due by 5:00 p.m.
April 2026	<ul style="list-style-type: none">Staff consideration of public commentsPost final proposed modified guidelinesCEC consideration of modified guidelines at Business Meeting
Spring 2026	<ul style="list-style-type: none">Operationalize DSGS Program Guidelines, 5th Edition, for 2026 Program Season



Proposed Modifications to DSGS Program Guidelines

Aligning with Program Funding



Enrollment/Compensation Limits for 2026

Proposed Modifications to Align with Available Funding

Participation Option	2026 Budget Currently Available (\$M)	MW*	2026 Budget With TBL Jul 1/2026 (\$M)	MW*	Allocation Process
Option 1: Emergency Dispatch	Suspended	0	Suspended	0	N/A
Option 2: Market-Integrated Demand Response	\$1	~9 MW	\$3.0	~27 MW	Based on pro-rata share of the total uncapped compensation in 2026
Option 3: Market-Aware Storage VPP	\$21.05	~260 MW	\$42.7	~530 MW	Based on pro-rata share of Oct 2025 compensation (no new entrants)
Option 4: Emergency Load Flexibility VPP	~\$5.45*	75 MW	~\$7.3*	100 MW	Divided equally among all providers (up to their nominated capacity commitment)
Total	\$26.5	~334 MW	\$53.0	~657 MW	

*Estimated capacity associated with proposed 2026 funding allocations or proposed capacity limit. Listed MW capacity are incremental relative to the applicable measured baseline.



Suspend Option 1: Emergency Dispatch

Proposed Modifications to Align with Available Funding

Considerations:

1. High uncertainty in amount of load reduction expected during an event
2. High uncertainty in required funding due to dependency on Energy Emergency Alerts (EEA)
 - Significant uncertainties in available budget for other DSGS participation options
3. Very high cost associated with required mitigation for backup generator (BUG) emissions



Option 2: Total \$1 Million Available for 2026

Proposed Modifications to Align with Available Funding

- **Compensation Allocation Method**

- Based on CEC-validated cumulative performance-based capacity compensation
- Up to pro-rata share of total uncapped compensation across all Option 2 providers in the **2026 season**
- Remove mid-season settlement option
- Any unused funds allocated to Option 3

- **Example:**

Provider	Uncapped Compensation	Pro-Rata Share	Capped Compensation
P1	\$564,000	47%	\$470,000
P2	\$336,000	28%	\$280,000
P3	\$192,000	16%	\$160,000
P4	\$108,000	9%	\$90,000
Total	\$1,200,000	100%	\$1,000,000

- **Considerations:**

- 2025 performance unknown until March/April 2026
- Limited data on historical performance



Option 3: Total \$21.05 Million Available for 2026

Proposed Modifications to Align with Available Funding

- **Compensation Allocation Method**

- Limited to providers that participated in Oct 2025
- Subdivided between residential and non-residential aggregations
 - Based on share of Oct 2025 total compensation paid out
- Round 1: Allocated up to pro-rata share of Oct 2025 total compensation
 - Oct 2025 total compensation: sum of what providers would have earned based on a measured baseline
- Round 2: If any provider earns less than pro-rata share, remaining funding is pooled and reallocated to providers with uncapped 2026 performance exceeding Oct 2025 pro-rata share
 - Reallocated based on revised pro-rata share of Oct 2025 compensation for “Round 2” providers

- **Considerations:**

- Robust existing portfolio – maintaining status quo enrollment with cap for funding certainty



Option 3: Funding Allocation Example

Allocation Round 1

- Assumptions:
 - 5 residential providers
 - Total \$19M available for residential aggregations

Provider	October 2025 Pro-Rata Share (Residential)	Round 1: 2026 Max Payment (\$M)	Uncapped 2026 Performance/ Compensation	Round 1: 2026 Payment Allocation	Round 2 Available \$: (Max Pay - Allocation)
Provider 1	35%	\$6.65	\$8.00	\$6.65	0
Provider 2	25%	\$4.75	\$5.00	\$4.75	0
Provider 3	15%	\$2.85	\$2.85	\$2.85	0
Provider 4	15%	\$2.85	\$1.50	\$1.50	\$1.35
Provider 5	10%	\$1.90	\$2.50	\$1.90	0
Total	100%	\$19.00	\$19.85	\$17.65	\$1.35

- Three providers (1, 2, 5) uncapped performance exceeds Round 1 allocation



Option 3: Funding Allocation Example

Allocation Round 2

- Assumptions:
 - \$1.35 million remains after Round 1
 - 3 residential providers eligible for Round 2 funds (Providers 1, 2, and 5)

Provider	October 2025 Revised Pro-Rata Share (Residential)	Max 2026 Payment (\$M) After Round 1	Remaining Uncapped 2026 Performance Payment (\$M)	Round 2 Payment Allocation (\$M)
Provider 1	50%	\$0.68	\$1.35	\$0.68
Provider 2	36%	\$0.49	\$0.50	\$0.49
Provider 5	14%	\$0.19	\$0.60	\$0.19
Total	100%	\$1.35	\$2.45	\$1.35



Option 3: Funding Allocation Example

Total Allocation after Round 1 and Round 2

- Assumptions:
 - 5 residential providers
 - Total \$19M available for residential aggregations

Provider	Uncapped 2026 Performance Payment (\$M)	Round 1 Payment Allocation (\$M)	Round 2 Payment Allocation (\$M)	Total Payment (\$M)
Provider 1	\$8.00	\$6.65	\$0.68	\$7.33
Provider 2	\$5.25	\$4.75	\$0.49	\$5.24
Provider 3	\$2.85	\$2.85	\$0.00	\$2.85
Provider 4	\$1.50	\$1.50	\$0.00	\$1.50
Provider 5	\$2.50	\$1.90	\$0.19	\$2.09
Total	\$20.10	\$17.65	\$1.35	\$19.00



Option 4: 75 MW Cap on Monthly Capacity Commitments

Proposed Modifications to Align with Available Funding

- **Program limited to 75 MW total nominated capacity commitment across all providers each month**
- **Capacity Allocation Method (if total nominated capacity commitment exceeds program limit)**
 - Round 1: If total nominated capacity commitment exceeds program limit, then all providers receive an initial equal capacity allocation (equal to program limit divided by number of providers), up to their offered capacity commitment
 - Round 2: If any “unused” capacity allocation below program limit remains, then providers with larger offers than Round 1 allocations receive an additional equal capacity allocation (equal to the unused capacity allocation divided by number of Round 2 providers), up to their offered capacity commitment
 - Above process is continued until the entire program limit is allocated
- **Any unused funds at the end of program season allocated to Option 3**
- **Considerations:**
 - New, evolving option – allow for competition and opportunity (up to cap)

*Method described here differs slightly from draft guidelines but arrive at the same conclusion.



Option 4: 75 MW Cap on Monthly Capacity Commitments

Capacity Allocation Example

Round 1: 75 MW available for 3 providers

Provider	Offered Capacity Commitment (MW)	Available Capacity Per Provider (MW)	Round 1 Capacity Allocation (MW)
Provider 1	20	25	20
Provider 2	30	25	25
Provider 3	40	25	25
Total	90	75	70

Round 2: 5 MW (= 75 MW – 70 MW) “unused” capacity allocation available for 2 providers

Provider	Remaining Offered Capacity Commit. (MW)	Available Capacity Per Provider (MW)	Round 2 Capacity Allocation (MW)	Cumulative Capacity Allocation (MW)
Provider 1	n/a	n/a	n/a	20.0
Provider 2	5	2.5	2.5	27.5
Provider 3	15	2.5	2.5	27.5
Total	20	5.0	5.0	75.0



Q & A



Zoom

- Enter question using Q&A box
- Use the “raise hand” feature to ask questions



Telephone

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- *6 to mute/unmute your phone line. You may also use the mute feature on your phone



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Clarify Requirements and Incorporate Lessons Learned



Option 3: Market Aware Storage VPP Pilot

Proposed Modifications

1. Clarify aggregations must consist of the same customer class, device type, UDC, and nominated duration.
2. Update minimum aggregation size to 300kW for stationary storage (50kW for EVSE).
3. Replace prescriptive baseline used to determine aggregator compensation with day-matching, non-event day, measured baseline
4. Set the maximum number of event hours (60 hours) (not including test events)
5. Optionally stagger test events for large aggregations, in consultation with California ISO
6. Require test events on three consecutive days in August



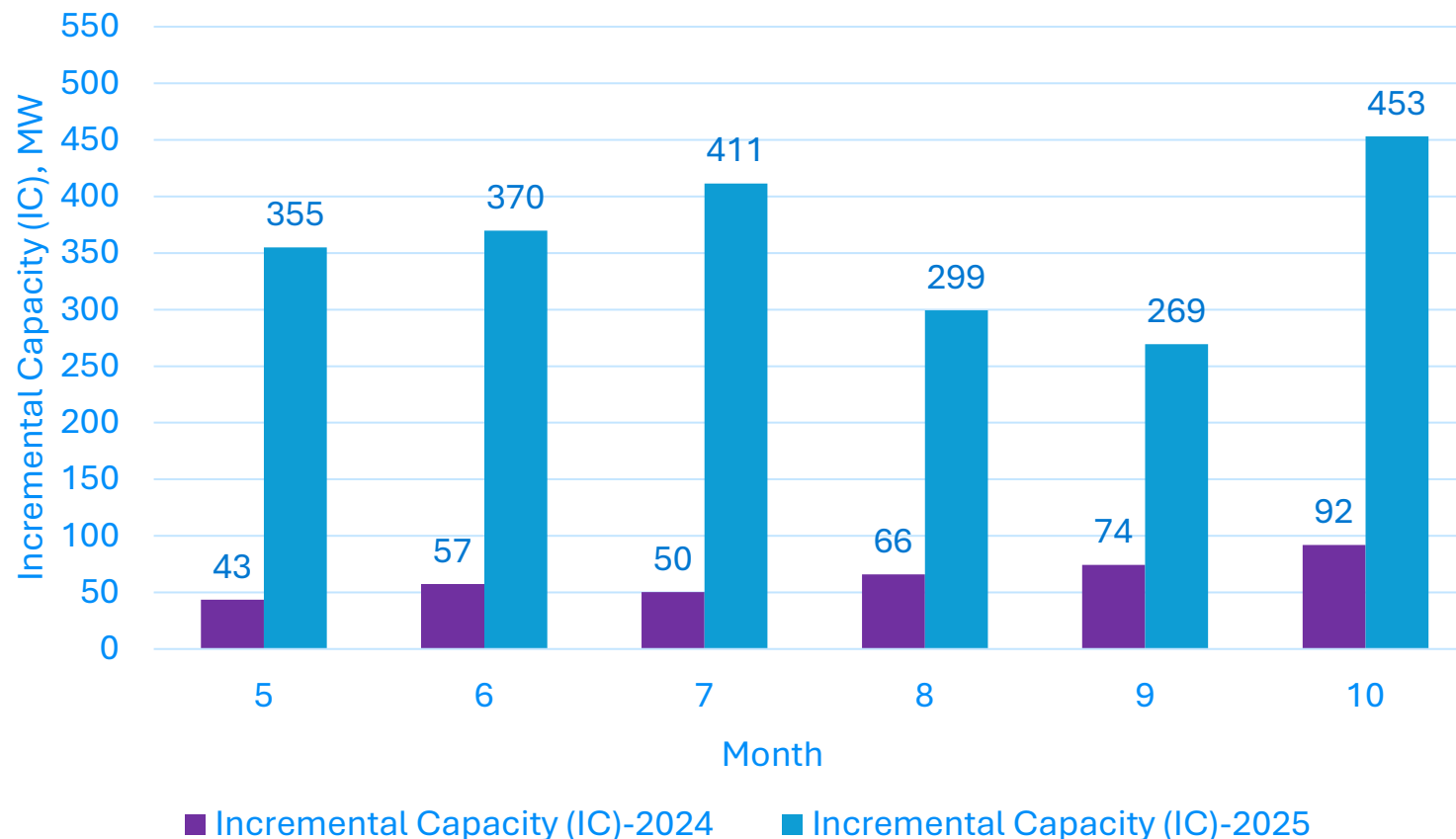
Option 3: Performance Analysis

Residential VPP (2024 and 2025)

- Monthly residential VPP incremental capacities (IC)* increased substantially in 2025, compared to 2024
- In 2025, Residential VPP's incremental capacity declined more than 100 MW in August/September and then recovered in October

*LMP-weighted average of hourly incremental discharge relative to measured baselines

Monthly Average Incremental Capacities (2024 and 2025)



Source: California Energy Commission

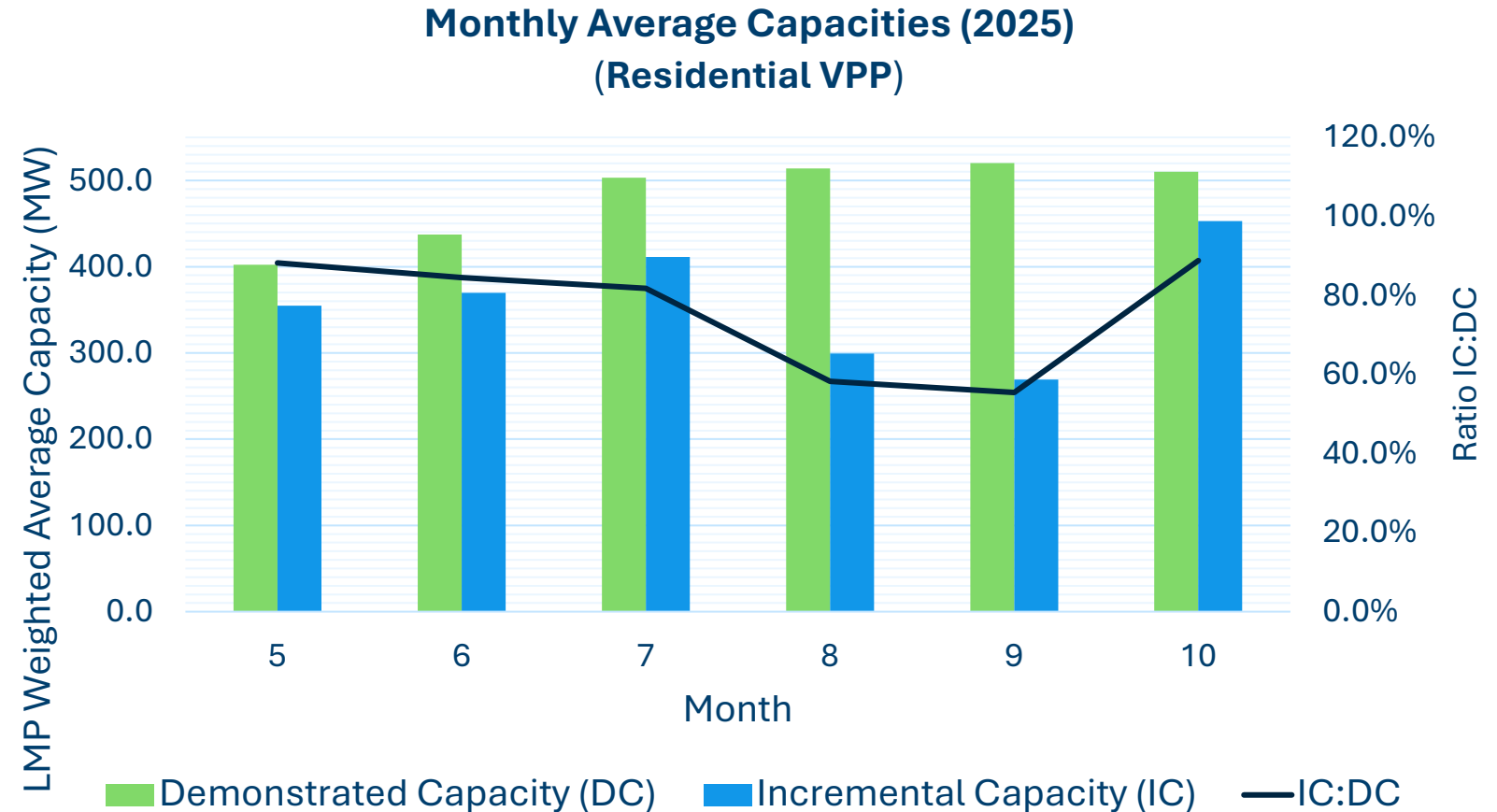
TOverall VPP Incremental Capacity (including non-residential and longer duration storage) increased from 106 MW (Oct 2024) to 484 MW (Oct 2025).

Option 3: 2025 Monthly Average Capacities

Residential VPP



- Monthly **Demonstrated Capacity (DC)** appears to be generally higher than monthly **Incremental Capacity (IC)**
- Ratio of IC to DC drops to around 50% in Aug & Sept 2025



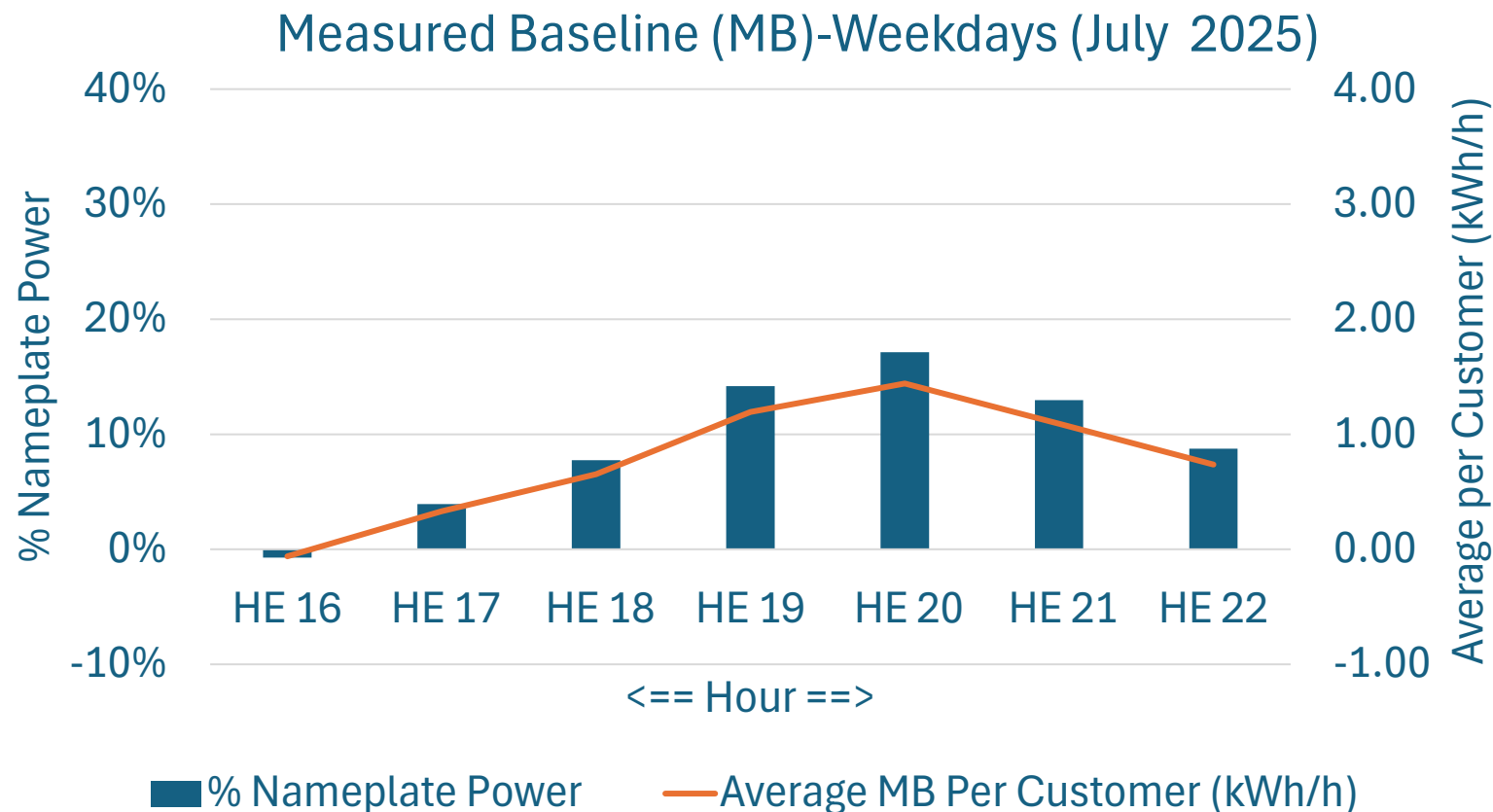
Source: California Energy Commission



Option 3: July 2025 Measured Baseline

Residential VPP

- Measured Baseline (MB) represents average hourly discharge by the battery on non-event days.
- Significant hourly variations observed in MB
- Highest hourly average MB was ~17 % of nameplate power or 1.44 KW per customer site at HE 20



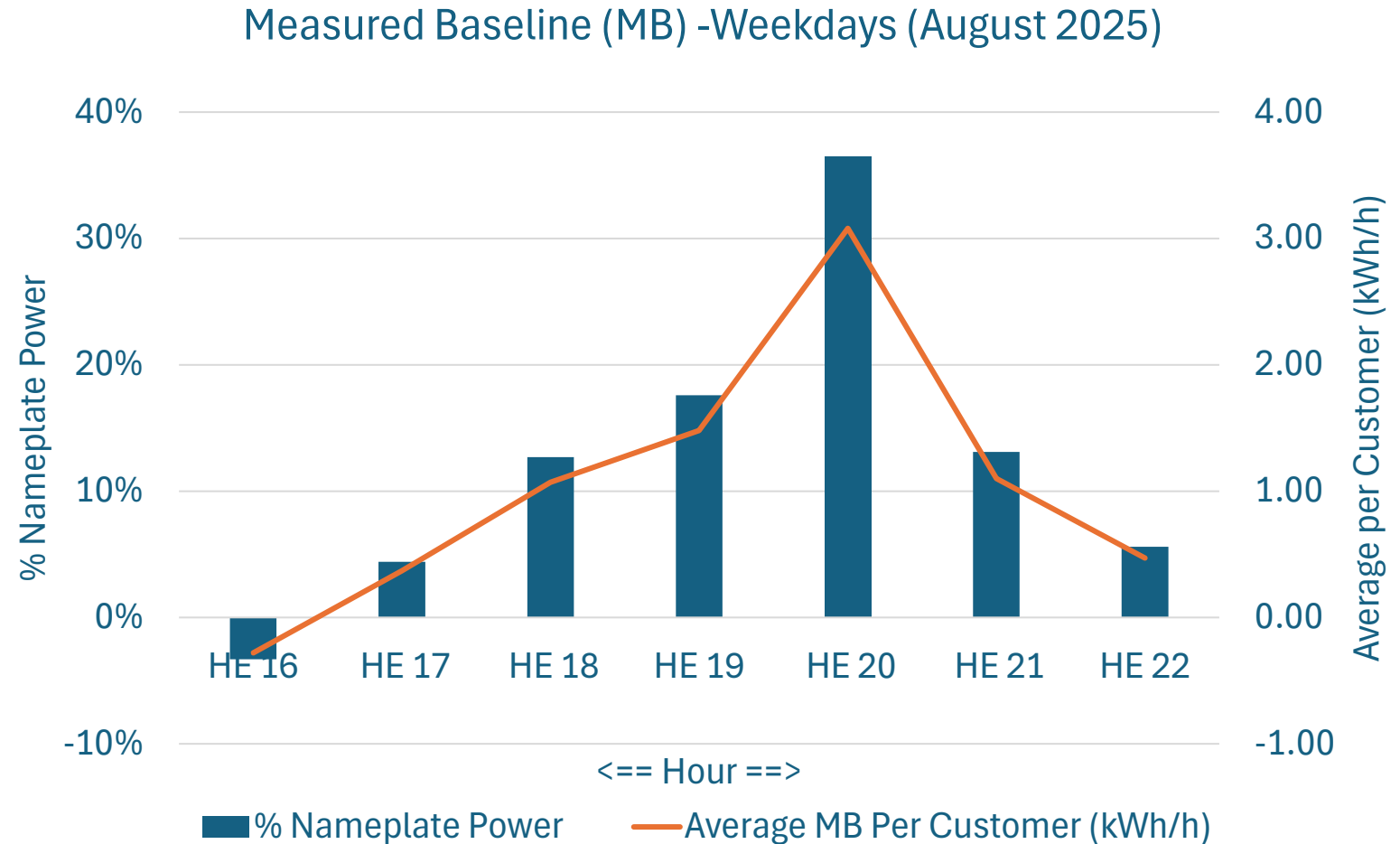
Source: California Energy Commission

Option 3: August 2025 Measured Baseline

Residential VPP



- Highest hourly average MB was ~36 % of nameplate power or 3.08 KW per customer site at HE 20



Source: California Energy Commission



Option 3: Market Aware Storage VPP Pilot

Proposed Baseline Modifications

Existing Guidelines (2025)	Proposed Modification for 2026
<ul style="list-style-type: none">• For default and VNEM 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.• For all other batteries, including EVs and stationary export-only, the baseline is defined as zero kWh per hour.	<ul style="list-style-type: none">• 10-in-10 weekday and 5-in-5 weekend/holiday non-event-day measured baseline<ul style="list-style-type: none">○ Bi-directional EVSEs baseline = zero kWh per hour• Must submit submeter data for month prior to first participation month• CEC may audit integrity of baseline by comparing using other similar days<ul style="list-style-type: none">○ If alternative measured baseline exceeds by $\geq 10\%$, aggregation excluded from compensation that month• Before the season begins, providers may opt for shorter baseline (5-in-10 weekday and 3-in-5 weekend/holiday), but with CEC-called test events.



Q & A



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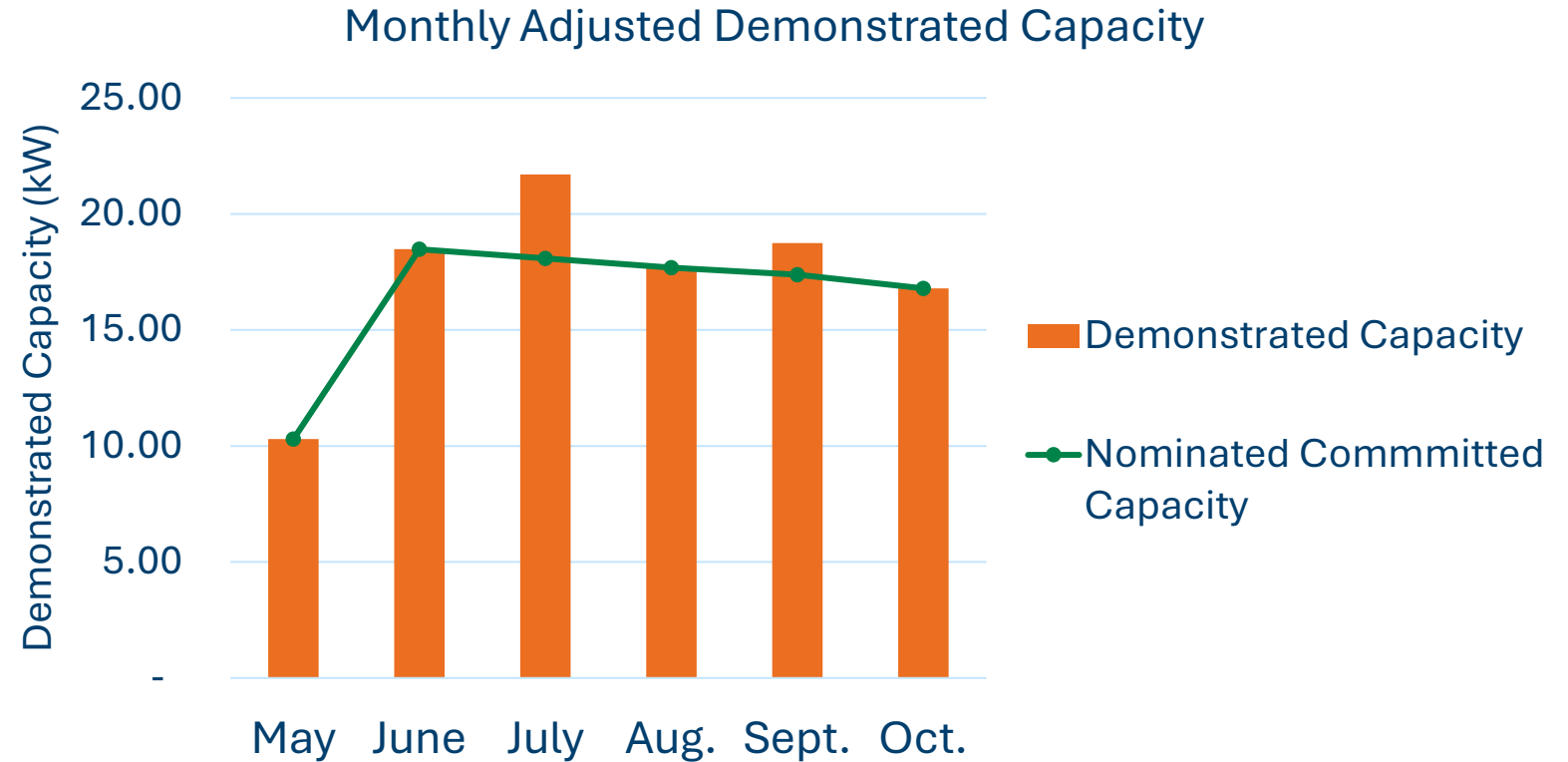
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Option 4: 2025 Performance Analysis

- No EEAs issued in 2025
- CEC called test events in July and September
- July Demonstrated Capacity: 21.7 MW
- September Demonstrated Capacity: 18.8 MW



Source: California Energy Commission



Option 4: Emergency Load Flexibility VPP Pilot

Proposed Modifications

1. Update minimum aggregation size to 100 kW of load reduction per aggregation (50 kW for EVSEs)
2. Include process for submitting proposals to qualify other load flexibility resources in Option 4
3. Providers must enroll and begin participation by May 1 for Q1 or by August 1 for Q2
4. Add clarifying language and clear definitions related to performance measurement calculations
5. Align the UDC-wide daily average composite temperatures with high and low temperatures across program event window 4-10pm (instead of daily high and low)



Other Proposed Changes

1. Update language to “Participation Options” and terminology around the types of program payments
2. Clarify requirement of incrementality and prohibition on dual-compensation (Chapter 2.A)
3. Require company officers to sign claim forms (Chapter 7.2)
4. Require participating battery storage systems to have a permission to operate date on or before December 31, 2025
5. Clarify process for designating information as confidential according to CEC regulations for confidential designation, Title 20, California Code of Regulations, Section 2505 (Chapter 8.F)



Next Steps for DSGS

Target Dates (Subject to Change)	Milestone
March 16, 2026	<ul style="list-style-type: none">Public comments due by 5:00 p.m.
April 2026	<ul style="list-style-type: none">Staff consideration of public commentsPost final proposed modified guidelinesCEC consideration of modified guidelines at Business Meeting
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Public Comment Period



Public Comment



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- 1 speaker per entity

2-MINUTE TIMER





Thank You!

- **Additional Questions:** DSGS@energy.ca.gov
- **Public Comment:** Docket No. 22-RENEW-01
 - **Comment Period:** Until 5:00 p.m. on Friday, March 22, 2024
- **CEC webpage for comments:**
<https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=22-RENEW-01>
- **DSGS webpage and email subscription enrollment:**
<https://www.energy.ca.gov/programs-and-topics/programs/demand-side-grid-support-program>