

**DOCKETED**

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|-------------------------|--|
| <b>Docket Number:</b>   | 22-RENEW-01  |
| <b>Project Title:</b>   | Reliability Reserve Incentive Programs   |
| <b>TN #:</b>            | 259585   |
| <b>Document Title:</b>  | Demand Side Grid Support Program Staff Workshop<br>Presentation Slides 2024-10-18  |
| <b>Description:</b>     | Presentation slides for DSGS Program Staff Workshop held on<br>October 18, 2024. Purpose of Workshop: review proposed<br>modifications to DSGS Program Draft Guidelines. |
| <b>Filer:</b>           | Brian Vollbrecht   |
| <b>Organization:</b>    | California Energy Commission   |
| <b>Submitter Role:</b>  | Commission Staff   |
| <b>Submission Date:</b> | 10/17/2024 3:48:23 PM  |
| <b>Docketed Date:</b>   | 10/17/2024   |



# **DSGS Program Staff Workshop**

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



October 18, 2024



# Introduction and Agenda

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- **Program Background**
- **Proposed Modifications to Program Guidelines**
- **Next steps**
- **Public Comment**

**\*Note this workshop is being recorded**



# CEC Reliability Reserve Incentive Programs

|                         | Demand Side Grid Support (DSGS)  | Distributed Electricity Backup Assets (DEBA)  |
|-------------------------|--|---|
| Incentivized Activities | <ul style="list-style-type: none"><li>• Use of existing load reduction resources during extreme events</li><li>• Pilot new approaches to develop demand flex resources as Strategic Reliability Reserves</li></ul> | Purchase of cleaner and more efficient distributed energy assets that would serve as on-call emergency supply or load reduction |
| Eligibility             | Statewide  | Statewide   |
| Funding                 | Current: \$127.5 million<br>Total: \$202.5 million   | Current: \$152 million<br>Total: \$532 million  |



# DSGS Development Roadmap





# DSGS: How Does It Work?



## Enrollment

- DSGS providers (retail suppliers and aggregators) enroll with CEC
- Customers enroll with DSGS providers (or CEC in limited circumstances)
- DSGS providers report participation to CEC

## Participation

- **Incentive Option 1:** Emergency dispatch
- **Incentive Option 2:** Market-integrated demand response
- **Incentive Option 3:** Market-aware storage VPP

## Payment

- DSGS provider pays incentives to customers
- CEC pays DSGS providers incentives and administrative costs



# Current DSGS Participation Options

|                            | Option 1 – Emergency Dispatch  | Option 2 – Market Integrated Demand Response (DR)  | Option 3 – Market Aware Storage Virtual Power Plant (VPP)   |
|----------------------------|--|--|---|
| <b>Eligible Resources</b>  | Any load reduction resource  | Market-integrated demand response  | Storage (batteries + V2X)   |
| <b>Event Trigger</b>       | Energy Emergency Alert (EEA)   | CAISO market bidding & scheduling  | CAISO day-ahead energy market locational marginal price threshold   |
| <b>Incentive Structure</b> | <ul style="list-style-type: none"> <li>Energy payment: \$2 per kWh</li> <li>Standby payment: \$0.25 per kWh</li> </ul> | <ul style="list-style-type: none"> <li>Capacity payment based on DR resource's demonstrated capacity incremental to Resource Adequacy commitments</li> <li>Incentive rate varies by month, nominated duration</li> </ul> | <ul style="list-style-type: none"> <li>Capacity payment based on VPP's demonstrated capacity</li> <li>Incentive rate varies by month, nominated duration</li> </ul> |
| <b>Year Launched</b>       | Summer 2022  | August 2023  | August 2023   |



# Summer 2023 Activity

## Option 1 Events:

- July 20, 2023: EEA 1
- July 25, 2023: EEA Watch
- July 26, 2023: EEA Watch

**Guideline expansion adopted July 26<sup>th</sup>**

## Option 3 Events:

- 26 event hours over 12 days (Aug – Oct)

|                       | Option #1                         | Option #2                    | Option #3                           |
|-----------------------|-----------------------------------|------------------------------|-------------------------------------|
| Enrolled Providers    | 8                                 | 4                            | 10                                  |
| Enrolled Participants | 27                                | N/A                          | 1,296                               |
| Performance           | 2.2 MWh non-combustion dispatched | 0.2 MW demonstrated capacity | 3.2 MW demonstrated capacity in Oct |

~\$296,000 incentives and eligible administrative costs paid





# Summer 2024 Activity

## Option 1 Events:

- July 24, 2024: EEA Watch

## Option 3 Events:

- 26 hours over 16 days

|                                | Option #1 | Option #2 | Option #3 |
|--------------------------------|-----------|-----------|-----------|
| Enrolled Providers             | 8         | 5         | 14        |
| Enrolled Participants          | 33        | 230,220   | 35,492    |
| Capacity Enrolled <sup>^</sup> | 144 MW    | 132 MW    | 240 MW    |

<sup>^</sup>Estimates by Providers  
Information as of 10/03/2024

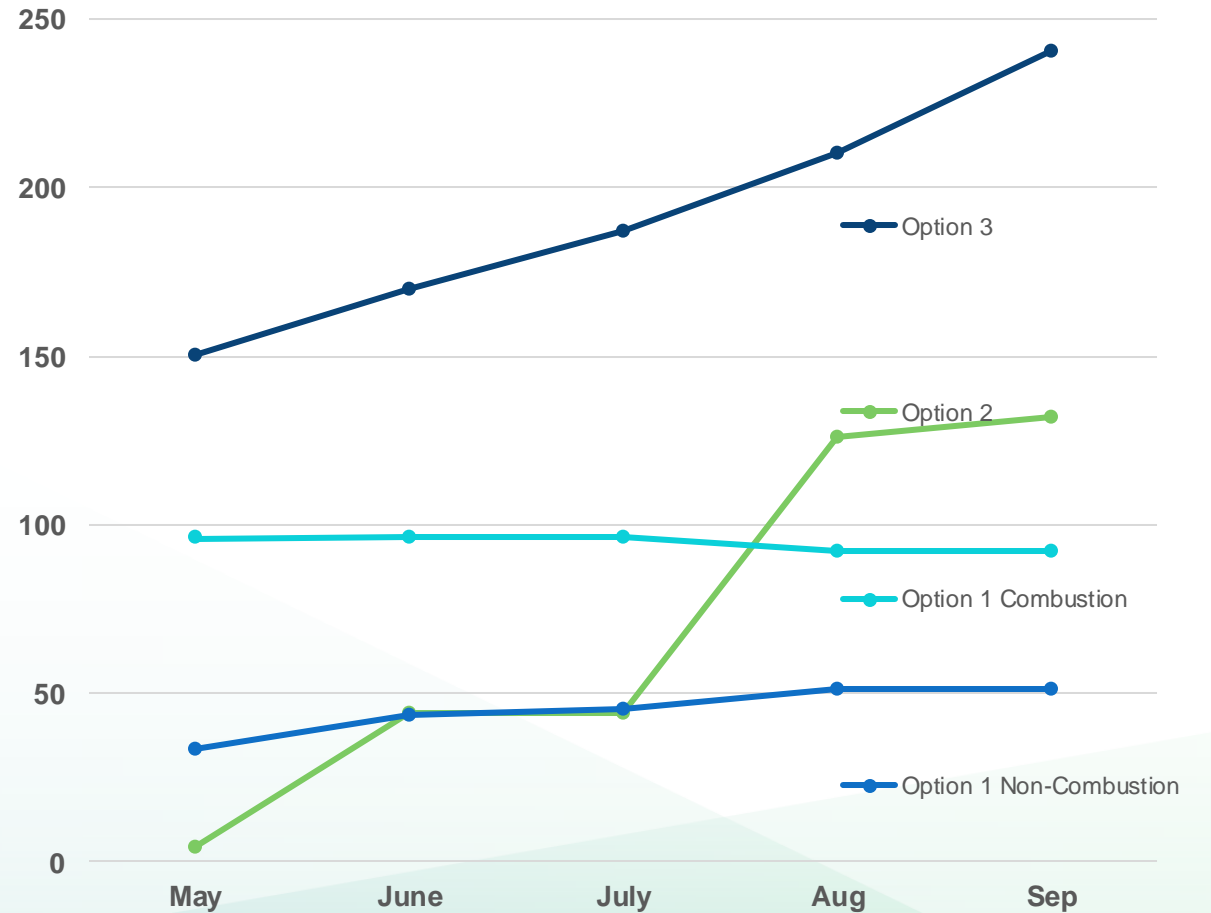


# Summer 2024 Enrollment Growth

DSGS Enrollment  
(Provider Estimated MW)\*

| Incentive Option                    | Oct 2023   | Oct 2024   |
|-------------------------------------|------------|------------|
| Option 1 – Noncombustion            | 23         | 51         |
| Option 1 – Combustion               | 106        | 93         |
| Option 2 - Market Integrated DR     | ~          | 132        |
| Option 3 - Market Aware Storage VPP | 10         | 240        |
| <b>Total</b>                        | <b>140</b> | <b>516</b> |

\*As of 10/3/24





# DSGS Program Budget

**Total Budget: \$202.5 M**

- Currently appropriated: \$127.5 M
- Pending future appropriation: \$75 M (FY 25-26)

**Total Estimated Spend as of Oct 2024: \$13.4 M**

- Program Incentives
- CEC administrative costs to date
- Third-party administration contract costs
- Does not include 2024 incentives (available in Q1 2025)

**Total Estimated Funds Remaining: \$189.1 M**

- \$114.1 M remaining from current appropriation



# **Proposed Modifications to DSGS Program Guidelines for 2025**



# Goals for 2025 and Beyond

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Based on lessons learned and stakeholder feedback, staff is looking to:

- Scale and grow participation from clean resources
- Continue streamlining program administration
- Refine and clarify requirements to improve user experience



# Option 3: Market-Aware Storage VPP

| Chapter/Section | Current Guidelines   | Proposed Modification   |
|-----------------|--|---|
| 5.A             | 100 kW minimum nominal power rating per VPP provider       | Increase minimum nominal power rating to 500 kW   |
| 5.E             | No dual enrollment with market-integrated DR               | Allow dual participation with market-integrated DR for exports only                                 |
| 5.E             | Zero baseline for new batteries                            | Apply non-zero baseline to all batteries  |
| 5.E             | Different residential and commercial prescriptive baseline | Apply “residential” baseline to all batteries   |
| 5.A             | Sub-aggregators not mentioned                              | Allow providers serving as VPP aggregator consider partner companies’ aggregations as separate VPPs |
| 5.D             | Provider calls test event if no event in a month (May-Oct) | CEC to initiate test events for Aug, Sept, Oct (Provider calls test event in May-July)              |
| 5.D             | Events triggered based on day-ahead CAISO LMP              | Add EEA trigger for bonus compensation  |



# Option 3: New EEA Trigger

Example: EEA 1 announced at 3pm

- **EEA or EEA Watch** will trigger events
  - Even if no day-ahead LMPs exceed price trigger
  - Trigger full-duration events based on highest LMPs within program availability window
    - May be shorter if called in real time
- **10% EEA Bonus** compensation
  - If any event hour was triggered by EEA but *not* by LMP for an aggregation

| Duration | Hour  | LMP   | Price Only | With EEA | EEA Bonus |
|----------|-------|-------|------------|----------|-----------|
| 2        | 4–5pm | \$150 | ✗          | ✗        | ✗         |
|          | 5–6pm | \$190 | ✗          | ✗        |           |
|          | 6–7pm | \$210 | ✓          | ✓        |           |
|          | 7–8pm | \$250 | ✓          | ✓        |           |
|          | 8–9pm | \$160 | ✗          | ✗        |           |
| 4        | 4–5pm | \$150 | ✗          | ✗        | ✓         |
|          | 5–6pm | \$190 | ✗          | ✓        |           |
|          | 6–7pm | \$210 | ✓          | ✓        |           |
|          | 7–8pm | \$250 | ✓          | ✓        |           |
|          | 8–9pm | \$160 | ✗          | ✓        |           |



# Q & A



## Zoom

- Use the “raise hand” feature to ask questions



## Telephone

- Dial \*9 to raise your hand
- \*6 to mute/unmute your phone line. You may also use the mute feature on your phone



## When called upon

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# New Incentive Option 4: Emergency Load Flex VPP (Chapter 6)

## Eligible Resource Types:

- Smart Thermostats & Electric Water Heaters

## Program design:

- Up-front monthly capacity commitment
- Performance and compensation assessed monthly

## M&V Approach:

- AC load: estimated connected load x runtime
- Water heater load: device-specific metered data

## Events:

- Trigger: EEA Watch+
- 2 core event hours + 2 “shoulder” hours
- Limit: 60 hours
- Minimum events: 2 events per season (test events called by CEC in absence of EEA events)

| Month                     | Demonstrated Capacity |
|---------------------------|-----------------------|
| May                       | \$4.50                |
| June                      | \$4.65                |
| July                      | \$8.40                |
| August                    | \$9.00                |
| Sept                      | \$9.60                |
| October                   | \$5.25                |
| <b>Total (\$/kW-year)</b> | <b>\$41.40</b>        |



# Option 4: Load Flex VPP Compensation

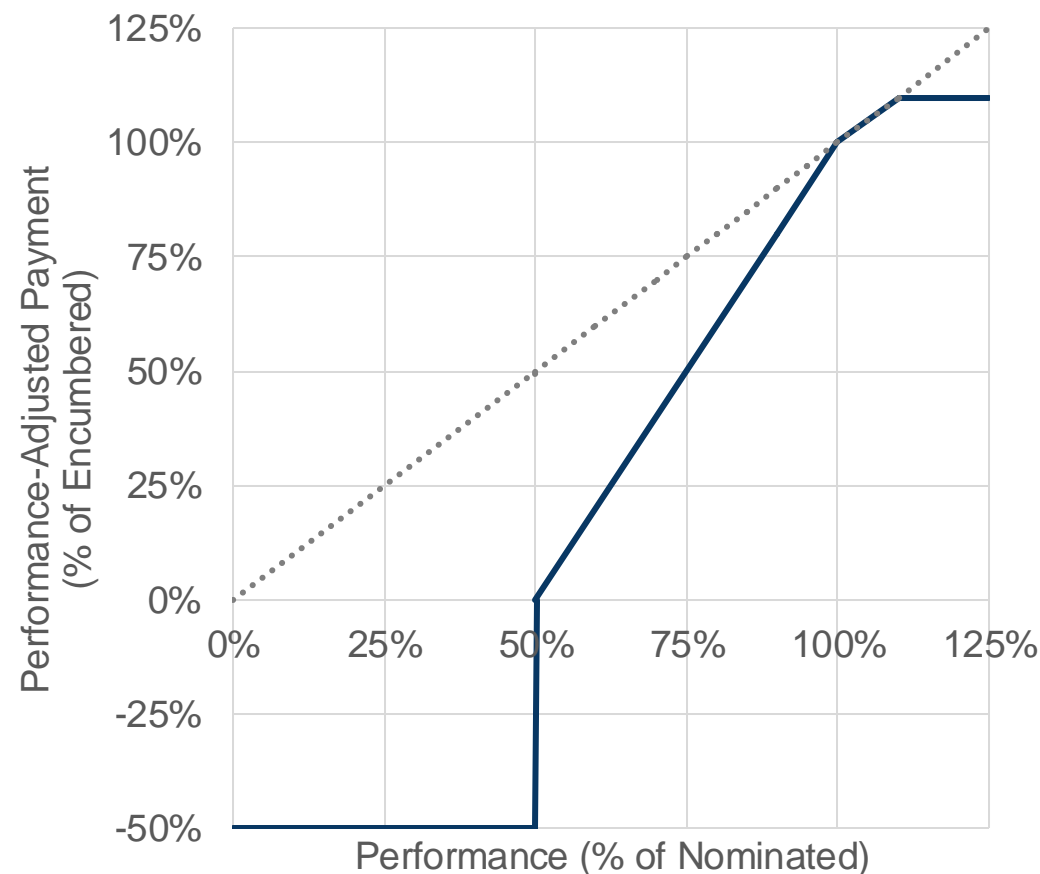
## Months with no events:

- Full incentive for assumed 100% performance

## Months with events:

- Incentive increased up to 10% if performance exceeds committed capacity
- Incentive reduced 2-to-1 for performance below committed capacity
- Incentive claw back at 50% of committed capacity if performance falls below 50% of committed capacity

Incentive Structure





# Q & A



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# Updates in DSGS Program Reporting

## (Ch. 2.D)

- Enrolled participation reports must be correctly formatted and error-free by the submission deadlines
- Option 1:
  - Participant reports due at the beginning of each program season
  - For customers enrolled through an aggregator, enrolled participation reports must include utility distribution company, load serving entities, customer ID number, etc.
  - All participants must provide notice and ramp time needed to respond to a DSGS event



# Updates in DSGS Program Reporting, Cont'd

## (Ch. 2.D)

- Option 3:
  - Provider, not participant, is responsible for indicating that provider has remote control over batteries
  - Clarified definition of “estimated capacity” for enrolled participation reports
- Option 2, 3, and 4 providers must submit regular dispatch/performance reports.
  - CEC may also request ad hoc performance report following an Option 3 event



# Other Updates

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- (Ch. 2.B) Clarify that POUs outside of CAISO may submit a custom proposal at any time.
  - POU does not need to be the provider.
- (Ch. 3) Option 1 Emergency Dispatch:
  - Residential customers not eligible to participate
  - Multiple clarifications of terminology and guidelines
- (Ch. 4) Option 2: Multiple clarifications of terminology and guidelines
- (Ch. 7.B) Introduce \$7,500 cost cap for program seasons when no events occurred



# Q & A



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# Next Steps for DSGS

| Target Dates<br>(Subject to Change) | Milestone   |
|-------------------------------------|---|
| October 30, 2024                    | <ul style="list-style-type: none"><li>Public comments due by 5:00 p.m.</li></ul>  |
| Q4 2024                             | <ul style="list-style-type: none"><li>Staff consideration of public comments</li><li>Post final proposed DSGS Program Guidelines, 4<sup>th</sup> Edition (for 2025)</li></ul> |
| Feb or March, 2025                  | <ul style="list-style-type: none"><li>CEC consideration of proposed DSGS Program Guidelines, 4<sup>th</sup> Edition, at Business Meeting</li></ul>                            |
| Spring 2025                         | <ul style="list-style-type: none"><li>Operationalize DSGS Program Guidelines, 4<sup>th</sup> Edition for 2025 Program Season</li></ul>  |





# Questions for Consideration

1. What additional program modifications should be considered? Why?
2. This season's experience with Option 3 indicates VPPs appear to include a variety of storage use cases with different discharge patterns. Should we switch from prescriptive to measured baseline for a more accurate determination of demonstrated capacity?
3. In the context of leveraging existing resources, how could we better understand what is an appropriate level of compensation for Option 3 that corresponds to the reliability value provided and stacks on top of the bill savings realized under customer's retail tariff (such as, net billing tariff, demand charges), while avoiding double compensation concerns?
4. Should there be an emergency-only construct similar to Option 4 for storage VPP, separate from current Option 3 design?
5. Are there modifications we should consider to the design of Option 2 to maximize its value as a strategic reliability reserve?
6. Should Option 4 capacity commitments be made on a monthly or annual basis?
7. Are there sufficient safeguards in place to help prevent dual enrollment issues under the proposed Option 4? If not, what other measures should the CEC consider?



# Public Comment





# Public Comment



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# Written Comments

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- **Comment Period:** Until 5:00 p.m. on Wednesday, October 30, 2024

- **Docket 22-RENEW-01**

- CEC webpage for comments:

<https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=22-RENEW-01>



# Thank You!

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**Additional Questions:** [DSGS@energy.ca.gov](mailto:DSGS@energy.ca.gov)

**Public Comment:** Docket No. 22-RENEW-01

**DSGS webpage and email subscription enrollment:** <https://www.energy.ca.gov/programs-and-topics/programs/demand-side-grid-support-program>