



Demand Side Grid Support Program

2024 Season Kickoff: Option 3 Providers

June 18, 2024

Agenda

- 1 Introduction
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- 3 Incentives and Claims
- 4 Events
- 5 Next Steps
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INTRODUCTION

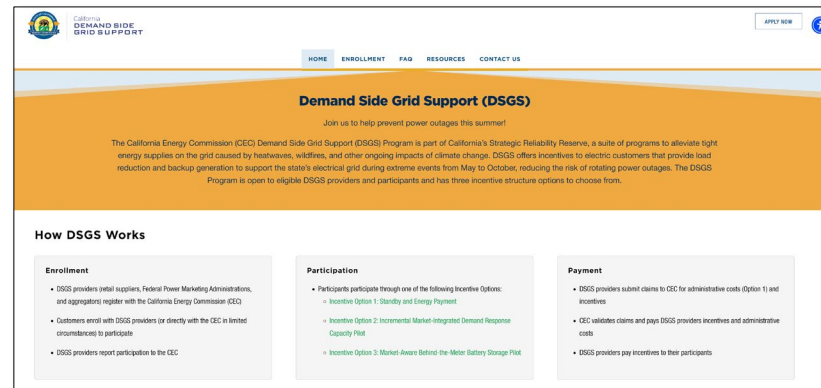
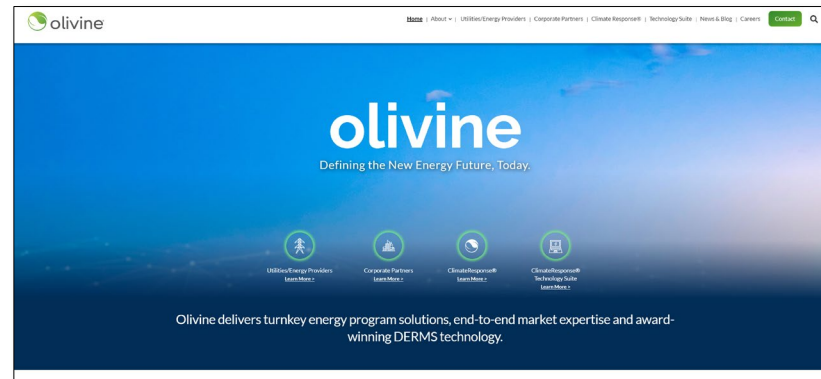
Olivine Introduction & Role in DSGS

About Olivine, Inc.

- California-based company focused on helping the state meet its renewable energy and GHG reduction goals
- Learn more at www.olivineinc.com

Role in DSGS

- Implementing DSGS on behalf of CEC
- Responsible for providing program management and infrastructure to support enrollment, communications, reporting and settlement.



DSGS Program Overview

DSGS provides incentives to reduce customer net-energy load during extreme events with upfront capacity commitments and per-unit reductions in net load.

Program Development:

- **Phase 1 (2022):** Expedited development and launch
- **Phase 2 (2023):** Streamline, simplify, expand eligibility, pilot new approaches
- **Phase 3 (2024):** Scale up

2024 Program Objectives:

- Refine and clarify requirements to improve user experience
- Continue to find solutions for operational complexities across multiple utilities, programs, and balancing authorities
- Scale and grow participation from clean resources

Option 3 Program Parameters

Option 3 Program Parameters	
Availability	May – October, 7 days a week, 4-9 PM
Incentive Rate	2-Hour Annual Total (\$/kW): \$6.75 - \$14.40 3-Hour Annual Total (\$/kW): \$8.10 - \$17.28 4-Hour Annual Total (\$/kW): \$9.00 - \$19.20
Participant Eligibility	Customers of POU, FPMAs, tribal utilities, CCAs, energy service providers and electrical corporations Additional requirements apply for Option 3
Event Triggers	California ISO day-ahead LMPs
Event Notification	Day-Ahead
Event Duration	Minimum 1-hour, maximum depends on resource duration
Event Frequency	Min 1 per month; max 35 per season counted towards demonstrated capacity

Overview of Key Changes to Option 3 Guidelines

Section	Changes for 2024
Eligibility	<ul style="list-style-type: none">• Battery EVs with bidirectional charging capability now eligible participants• Third-party vehicle-to-load (V2x) service providers now eligible Providers• VPP aggregators must have a total minimum nominal power rating of 100 kW across all utility service territories and resource durations.• A customer site with a stationary battery >1,000 kW may participate but will not be compensated for net discharge over 1,000 kW during an event
Participant Enrollment Reports	<ul style="list-style-type: none">• Every site must be included in a Participant Report to receive payment for that month• Aggregators must collect participant details, but not required to submit monthly• SAID and address required when claiming a baseline of zero
Program Availability	<ul style="list-style-type: none">• At least one full-duration event is required each month to demonstrate capacity
Claims	<ul style="list-style-type: none">• Claims due December 31, 2024• 30% bonus on capacity incentives extended through 2026

ELIGIBILITY & ENROLLMENT

Participant Eligibility – General DSGS Requirements

Eligible Participants

- All customers of POU's
- All customers of federal power marketing administrations (e.g., WAPA)
- **[NEW] All customers of tribal utilities**
- The following customers of CCAs, energy service providers, and electrical corporations:
 - Customers participating with backup generators
 - Customers participating through incentive Option 2 or Option 3
 - Water agencies, which include water utilities, wastewater facilities, and irrigation districts.

A participant is *not eligible* if the participant's load reduction resource is:

- Enrolled in the Emergency Load Reduction Program or the Base Interruptible Program
- Receiving payment or accounting for the same reduction in use of electricity, including energy export, through any other utility, CCA, or state program, **[NEW] except critical peak pricing**
- A cogeneration facility with a power purchase agreement
- **[NEW] Sites with a renewables PPA can still participate even if they have a cogeneration facility on-site, as long as the cogeneration facility does not also have a PPA.**

Participant Eligibility – Additional Option 3 Requirements

- Have an operational stationary battery system or EV with bidirectional EVSE capable of discharging at least 1 kW for at least two hours.
- Provide no more than 1,000 kW during any hour of any DSGS program event.*
- Have permission to operate from the host utility (for example, under a Rule 21 tariff) and operate in a manner compliant with existing rules and tariffs applicable to the site. UL 1741-SB listing of bidirectional chargers is not required for participation in a DSGS VPP.
- Not be participating in a California ISO proxy demand resource (PDR) or reliability demand response resource (RDRR) unless the participant's customer energy baseline reflects total gross consumption (that is, consumption independent of any energy produced or consumed by behind-the-meter battery storage) consistent with California ISO tariff Section 4.13.4.
- Participant must be in CAISO territory.**

** A customer site may participate with a stationary battery system capable of discharging greater than or equal to 1,000 kW but any net discharge (discharge minus the baseline) greater than 1,000 kW during a given event hour will not be offered incentives.*

*** If a DSGS Provider wants to offer Option 3 to participants outside CAISO's territory, then reach out to DSGS program support. Ultimately, the applicable POU needs to opt in to DSGS Option 3 and work with the DSGS program team to determine the event trigger design.*



Option 3 Participant Eligibility (Cont.)

- Providers are responsible for verifying eligibility of their participants prior to enrollment.
- The DSGS provider or its partner must have remote control (for example, API control) over each participant battery, must not control the battery for a conflicting program, and must have no knowledge or awareness that each customer is enrolled or participating in a conflicting program, to the best of the provider's knowledge.
- Participants must acknowledge and agree they meet the eligibility requirements of the DSGS Guidelines and are not enrolled or participating in a conflicting program to the best of their knowledge.
- The DSGS program team reserves the right to validate eligibility.
- If a participant is identified as participating in a conflicting program, the participant's DSGS provider will be notified, and the participant shall be suspended from participation indefinitely until the conflict is resolved.

Participant Enrollment Report

Changes for 2024:

- [NEW] Every site must now be included in a Participation Report prior to an event to be included in performance calculations for that event.
- [New Template on Program Website.](#)
- Providers must utilize the new template starting in July.

Reminders:

- Ensure SA numbers match utility format
- Use both Address fields (e.g. Apt #)
- Don't include PII
- SA + address required for no baseline

	A	B	C	D	E	F	G	H	I	J	K	L
	Unique ID	Address 1	Address 2	City	Zip Code	State	Participant UDC	Technology Type	Nominal Power Rating (kW)	Nominal Storage Energy Capacity (kWh)	Nominated Duration (hours)	Customer Identification Number
1												
2												
3												
4												
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6												
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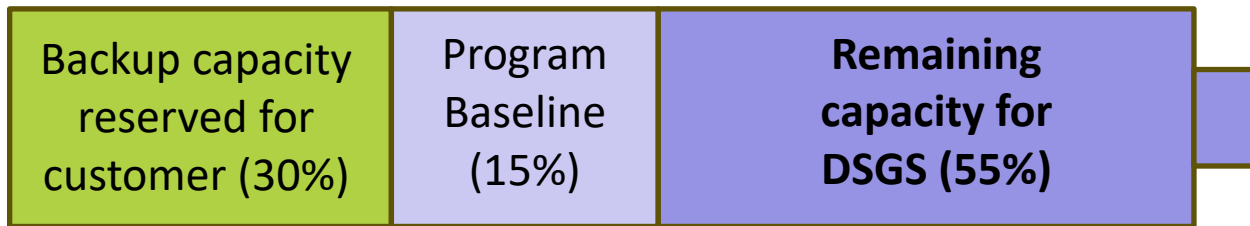
Category	Field	Description
Aggregator Data	Business or Entity Name	(required) The name of the aggregator, CCA, or POU participating in the program
	Utility Distribution Company	(required) The name of the utility distribution company in which all customers in the aggregation reside Possible Values: PG&E, SCE, SDGE, Anaheim, Azusa, Banning, Pasadena, Riverside, Vernon
	Nominated Duration (hours)	(required) VPP nominated duration, in hours Possible values: 2, 3, 4
	Estimated Net Capacity (kW)	(required) Estimated aggregate power output of VPP, net of baseline. Please account for any power reserved for backup or other customer uses. Estimated Net Capacity must be less than or equal to nominal power rating
Participant Data	Unique ID	(required) An identification number that is unique for each customer from the perspective of the VPP aggregator. The ID does not need to be a UDC or LSE identification number (e.g. service agreement ID)
	Service Account Address**	(required) Physical address where the battery storage device is located and takes retail electric service from the relevant UDC
	Service Account Address 2**	(optional) Second line of address where the battery storage device is located and takes retail electric service from the relevant UDC
	Service Account City**	(required) City where the battery storage device is located and takes retail electric service from the relevant UDC
	Service Account Zip Code**	(required) Zip code where the battery storage device is located and takes retail electric service from the relevant UDC
	Service Account State**	(required) State where the battery storage device is located and takes retail electric service from the relevant UDC
	Participant UDC	(required) Utility distribution company of participants in the aggregation
	Technology Type	(required) Technology type Possible values: Battery Energy Storage, EVSE
	Nominal Power Rating (kW)	Nominal power capacity rating of storage device or nominal discharge power rating of EVSE from equipment specification sheet in kW
	Nominal Storage Energy Capacity (kWh)	(required if Technology Type = Battery Energy Storage) Usable Nominal storage energy capacity from specification sheet of storage device in kWh (required) device nominated duration, in hours
	Nominated Duration (hours)	(required) device nominated duration, in hours Possible values: 2, 3, 4
	Customer Identification Number**	(if available) Enter an identifier for the account you are enrolling, such as a utility Service Account Number, Service Agreement ID, or Contract ID

Participant Enrollment Report (Cont.)

- Participation reports must be submitted correctly 3 business days before the first day of each month.
- If a site is not included in a participation report, that site may not be included in performance calculations for that month.
- If Olivine does not receive final approved Participation Report in the specified format by deadline, the aggregation will not be configured in the Olivine platform, **will not receive dispatch notifications, and therefore will not receive compensation for events in that month.**

Estimated Net Capacity (kW)

- Option 3 Providers are required to provide Estimated Net Capacity in monthly participation reports.
- **Reminder:** the Estimated Net Capacity is the estimated aggregate power output of VPP, net of program baseline **and** net of any power reserved for backup or other customer uses.
- Example:
 - Residential customer (2-hour battery) that does not meet requirements for zero baseline
 - $2 \text{ hours} * 0.074 = \sim 15\%$ of total energy storage
 - Customer retains 30% of battery for backup or other uses
 - Remainder of battery ($\sim 55\%$) can be applied to DSGS over nominated duration



Total available for discharge during DSGS event

Aggregation by Partner Companies

Guidelines

e. Enrolled Participation Report for Incentive Option 3

- The utility distribution company (UDC) service territory, nominated duration (hours), and estimated capacity (kW) for each aggregation participating in the DSGS Program. DSGS providers should submit no more than one entry for each combination of UDC and nominated duration.

Clarification

- Sub-aggregation of multiple sites (i.e. service agreements) by partner companies is permitted, but all other VPP requirements must be met (e.g. minimum size requirements).
- Not Acceptable: Sub-aggregation of un-associated customers or sites.

Operational Requirements

- Submit separate Enrollment Application forms for each partner company.
- May submit the same supporting documentation for each if answers are consistent across partner companies.
- Submit separate monthly Participant Enrollment Reports for each partner company.
- Performance & settlements are calculated by sub-aggregation (i.e. partner company).

INCENTIVES AND CLAIMS

Option 3 Incentives

- Incentive amounts vary by month and duration
- Incentive payments are based on monthly demonstrated capacity of an aggregated VPP
- Performance is determined using submetered battery data for each site in the resource
- Additional 30 percent bonus applied to capacity incentives for program years 2024, 2025 and 2026

Monthly BTM Storage Capacity Prices by Month (\$/kW)

Month	4-Hour	3-Hour	2-Hour
May	\$9.00	\$8.10	\$6.75
June	\$9.30	\$8.37	\$6.98
July	\$16.80	\$15.12	\$12.60
August	\$18.00	\$16.20	\$13.50
September	\$19.20	\$17.28	\$14.40
october	\$10.50	\$9.45	\$7.88
Annual Total	\$82.80	\$74.52	\$62.10

Claims Process Overview

1

Submit Sample of Formatted Meter Data for Initial Review

- Option 3 providers submit participant meter data based on Olivine Technical Guide specifications
 - Update meter data based on validation process and feedback (if necessary)
-

2

Gather Documents for Claim Package

- Option 3 Claim form
 - DSGS Attestation and current STD 204
 - Correctly formatted and complete meter data
-

3

Upload Claim Package to Program Website: <https://dsgs.olivineinc.com/upload/>

4

DSGS Program Team Review and Approval

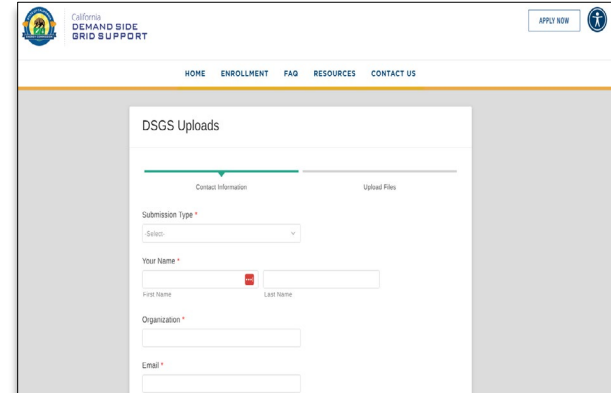
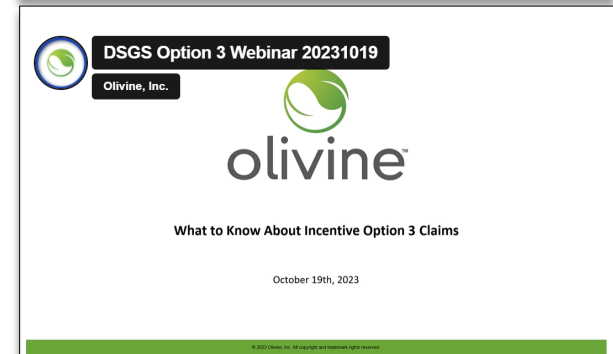
- Checks include completeness of documents, agreement between submeter data and claim form, and agreement between participant reports and claim form.
-

5

Incentive Summary sent to Provider for Approval

Claims (cont.)

- **[NEW] Option 3 Providers must submit Claim Package by December 31, 2024 for all aggregations they have enrolled in DSGS.**
- For support with claim package or performance calculations see program website:
 - [Provider Claim Webinar](#)
 - Example performance calculations available by request
- More information will be provided about claims later in the season.

EVENTS

Option 3 Events

- **Availability:** 7 days a week between 4:00 p.m. and 9:00 p.m. from May 1 to October 31
- **Event Duration:** One hour to the maximum resource duration
- **Event Triggers:** California ISO day-ahead local marginal prices (LMP) for the default load aggregation point (DLAP) of the host UDC (or the Path 15 zone of the host UDC if a DLAP is not available)
- **Max # Events:** 35 per season*
- **Min # Events:** 1 per month
 - If there is not a DSGS Program event called in a given month, the VPP aggregator must call a test event for the full resource duration

** Participation in more than 35 events is optional but may be used to increase demonstrated capacity. If the events called in a month bring the total for a given resource called to more than 35, events for that program year, the events in the month with the highest performance shall be included in the 35-event maximum and used to determine demonstrated capacity.*

Option 3 Event Triggers

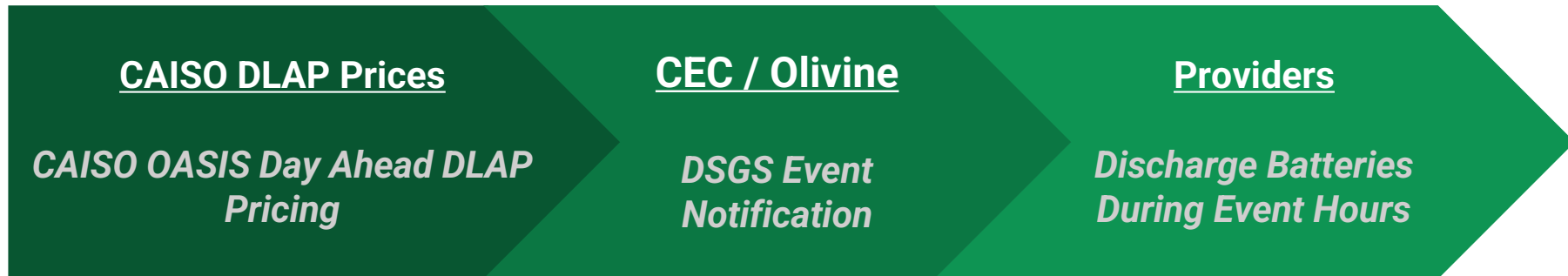
- Option 3 Events are triggered when the day ahead LMP price of the price node associated with the resource meets or exceeds \$200/MWh.
- Events will not necessarily last the full hour duration of a resource but are limited to the max resource duration for each enrollment.
 - Example: 3-hour duration resources can have events from 1-3 hours in length
- Olivine will interpret prices and relay the event parameters to participants.

LMP	Hour
9.08549	4 - 5 pm
26.05292	5 - 6 pm
406.573	6 - 7 pm
50.25186	7 - 8 pm
212.55678	8 - 9 pm

DLAP	DLAP_SCE-APND	
Nomination Type	Event Start Time	Event End Time
2 Hour Nomination	18:00	20:00
3 Hour Nomination	18:00	21:00
4 Hour Nomination	18:00	21:00



Option 3 Event Process



- 1:00 PM CAISO Day-Ahead Market results are published and prices made public.

- Olivine will interpret the DLAP prices and create the correct event for participants based on the price triggers for each enrollment territory.
- Notifications will be sent to key contacts the provider chooses and/or through API integration.

- Providers dispatch their customer's devices according to event dispatch instructions.



Event Notification Email Format

Information contained in event notifications:

Territory

Provider

Resource Duration

Event Parameters

The CAISO day-ahead Locational Marginal Price associated with your Aggregation: **SCE Territory** **TEST** Option 3 Enrollment - 2hr Resource, has met the price-based trigger criteria **between 4 PM - 6 PM on 6/8/2024**. Please discharge your **2-hour resources** during this time.

For more information about Option 3 Dispatch criteria, see the program guidelines and the [FAQ](#). You are receiving this message because you have an aggregation enrolled in the Demand Side Grid Support (DSGS) program Option 3. If you no longer wish to receive these emails, send an email to dsgs-support@olivineinc.com to let us know.

Thank you for all you do to help support California's electrical grid during extreme events to support grid reliability and reduce risk of rotating power outages.

DSGS is implemented and managed by Olivine, Inc., on behalf of the California Energy Commission. To learn more, visit [olivineinc.com](https://www.olivineinc.com).

Test Events

- All aggregations must be dispatched for at least one full-resource duration event per month from May to October.
- In the absence of an event triggered by DLAP pricing, or an event that does not last the full resource duration of the enrollment, providers must call a test event for their aggregation(s).
- Test events may coincide with a real event that does not reach the full resource duration.
- Example: An event from 6-8 PM is called for a 4-hour resource duration. The provider could extend it to 4 hours (exact hours depend on highest prices) to meet the test event requirement.

Test Events Continued

- Test events hours must be determined using the same logic for program events (i.e. align with the highest mean consecutive priced hours) on the chosen test event day.
- Up to one test event per month will count towards the maximum number of DSGS events, in the absence of a full duration event.*
- Providers will communicate test event date/times to DSGS Program Team in claim submission.

** The guidelines contain an apparent contradiction in rules regarding test events counting towards the maximum number of DSGS events. The rule we will apply is stated above.*

OpenADR & Olivine Dispatch API

- Option 3 providers can receive dispatches via OpenADR or via Olivine's Dispatch API.
- If you're interested in either of these options, reach out to DSGS support and we'll provide you the integration documentation.
- Territory and hour duration are communicated in the payload, example aggregation ID: TST-PGE-2HR.
 - TST: 3-letter identifier assigned to the provider
 - PGE: Territory
 - 2HR: Resource Duration
- Reference detailed OpenADR and Olivine Dispatch API documentation for more information.

OpenADR Payload*

```

64         </ei:interval>
65     </strm:intervals>
66     <ei:signalName>SIMPLE</ei:signalName>
67     <ei:signalType>level</ei:signalType>
68     <ei:signalID>SimpleSignal</ei:signalID>
69 </ei:eiEventsSignal>
70 </ei:eiEventSignals>
71 <ei:eiTarget>
72   <ei:resourceID>TST-PGE-2HR</ei:resourceID>
73   <ei:venID>TEST-VEN</ei:venID>
74 </ei:eiTarget>
75 </ei:eiEvent>
76 <oadr:oadrResponseReq>
77 </oadr:oadrEvent>
78 </oadr:oadrDistributeEvent>

```

```

"rootEnrollmentTag": "TST-PGE-2HR",
"rootEnrollmentDescription": "[TEST] Option 3 Enrollment - 2hr Resource",
"members": [
  {
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    "tag": "1301231255"
  }
],
"versionNumber": 0,
"modificationReason": "none",
"canceled": false,
"test": false,
"optState": "none",
"targetDirection": "load_decrease",
"quantities": [
  {
    "name": "Target Direction",
    "quantity": 66,
    "uom": 0,
    "periods": [

```

Olivine Dispatch API Payload*

* Example screenshots do not display the entire payloads



NEXT STEPS

Next Steps

- Begin stakeholder process later this summer for Program Guidelines Fourth Edition (changes for 2025 program season).
- Reminders:
 - July participation reports are due next Wednesday, June 26th in the new format
 - If a real full-duration event does not occur in June, you must call a full-duration test event.

Q&A



For more information,
please contact:

DSGS Support
dsgs-support@olivineinc.com
(866) 208-6352

THANK YOU!