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Comments of Advanced Energy United on DSGS workshop

Additional submitted attachment is included below.

February 5, 2024

California Energy Commission
1516 Ninth Street
Sacramento California 95814
Re: Docket 22-RENEW-01 – Demand Side Grid Support

Comments Advanced Energy United on January 23rd Staff Workshop on the Demand Side Grid Support Program

Introduction and Summary

Advanced Energy United ("United") is a national business association representing roughly 100 companies across the advanced energy sector, including many within the DER space including distributed solar and energy storage developers, microgrid developers, energy efficiency and demand response providers, electric vehicle charging hardware and software providers, DER aggregators, and other technology solution providers at the grid edge.

United appreciates the opportunity to provide feedback following the January 23, 2024 workshop on the Demand Side Grid Support ("DSGS"). United commends the California Energy Commission's ("CEC") leadership and staff in seeking stakeholder input into possible modifications to the program Guidelines. This consultation with industry along with other stakeholders is appreciated and useful not only to CEC in designing a better program, but also for providers to prepare and structure their market offerings.

Our members support several of the modifications proposed by staff, and appreciate that stakeholder input has resulted in specific fixes and innovations. Our comments also identify other feasible and impactful modifications we believe can be implemented in the near-term along with staff proposals. Finally we suggest two topics for continued development in 2024.

Most importantly, United urges the Commission to approve updated Guidelines expeditiously. Aggregators and customers need program certainty to move forward with implementing programs and signing contracts in time for summer 2014. Also of critical importance, United urges the CEC to permanently increase the incentive levels in Option 2 and 3 to reflect the value and cost of these resources.

We believe the proposed and additional modifications discussed below can be drafted, approved, and implemented quickly and will provide certainty and incentive for the many aggregators and providers that have been watching the DSGS program, but are not yet participating, to fully commit.

To summarize, United's primary recommendations are:

1) The draft DSGS Guidelines should be approved as soon as possible. United suggests that CEC should try to approve Guidelines by the March 13 Business Meeting, or a late March Special Meeting, if at all possible. If not approved in March, United requests that Final Guidelines be published by March 15, with approval by no later than April 10 Business Meeting.
2) Option 2 and 3 incentive levels must be increased through the program horizon, preferably by increasing base incentive levels by 50% or more, but at the very least by extending the 30% adder through 2027.
3) We urge the CEC to present data and estimates regarding total program funding and budget, committed and encumbered funds, and remaining funds as soon as possible to provide transparency and some level of certainty to program participants.
4) United requests an additional modification to Option 2 to remove a disincentive for industrial customers that cannot participate on Sundays and holidays.
5) United strongly supports and appreciates the proposed modifications to accommodate day-ahead DR resources under Option 2 and to include V2X battery export in Option 3
6) We suggest that the proposed revisions to dispatch requirements in Option 2 and 3 need more consideration and industry dialog before they can be implemented, and should therefore not be part of the package of modifications for 2024.
7) Longer term, United urges the CEC to consider two more complex tasks to unlock substantial additional capacity (both within DSGS and to the benefit of parallel programs):

a) develop another market-informed pathway, modeled on Option 3, for load flexibility resources
b) address the barrier to participation in both Option 2 and Option 3 at the same customer address.

1. CEC should prioritize approval by April Business Meeting

United strongly supports staff's proposal to move draft Modified Guidelines to CEC Business Meeting by April 2024. DER aggregators and service providers need program certainty to recruit and retain customers. This is especially true for new provider entrants into DSGS program, but is also true of existing DSGS participants, especially as the program expands to new market segments or technologies (e.g. EVSE).

In addition to CEC approval, Olivine may need to revise enrollment materials and processes. DR Providers and Aggregators will need to develop and/or revise their internal processes and develop customer-facing materials and programs, followed by customer recruitment, and onboarding. Even with approval at the April 10 Business Meeting, new providers and/or customers are unlikely to be enrolled before June.

United urges the CEC to consider whether it is possible to move Guidelines approval by the March 13 Business Meeting, or in a special Meeting at the end of March. If not, then we would request that the Final Guidelines to be presented to the CEC be publicly posted by March 15. United members have indicated that any significant uncertainty in program parameters after mid-March will negatively affect companies' decision whether to offer DSGS participation in 2024, and customers' decision to participate.

2. CEC must increase incentive levels for Options 2 and 3

United urges the CEC to revisit the incentive levels in both Option 2 and 3 to better reflect the full value of these dispatchable capacity resources and the cost to recruit and retain customers.

First, the Option 2 and 3 incentive levels do not reflect the value these resources provide to the grid, especially as capacity resources in times of greatest grid stress. Several data sources should inform the CEC's re-evaluation:

- The currently elevated Resource Adequacy prices and tight market conditions reflect the scarcity of available resources and the value of DSGS resources to system reliability.[1] RA prices continue to climb to unprecedented levels, with observed prices in excess of $60/kW-month in September 2021 and $40/kW/month in September 2022.[2]
- The CPUC Avoided Cost Calculator provides cost-based, forward looking forecast of comparable capacity costs in 2024 and beyond. The 2024-2027 average of these values is $246/kW-year, equivalent to $20,500 kW/month, with that value derived from non-emergency availability in July, August, and September.[3]
- The opportunity cost of utility bill savings for Net Billing Tariff customers is another indicator of resource cost in the Option 3 context. For these customers, responding to DSGS events should offer a greater economic value than their next best alternative, which in the vast majority of hours is self-consumption to reduce utility bills.[4]

Secondly, the compensation levels do not reflect what is required to recruit and retain these customers and resources. To the extent RA prices are an indicator of resources availability and

[1] In making this comparison, it is important to emphasize that DSGS is not a direct competitor to RA, and so RA prices do not reflect DSGS value as an opportunity cost but rather as an indicator of resource value and availability.
[2] California Community Choice Association, "California Constrained Resource Adequacy Market: Ratepayers Left Standing in a Game of Musical Chairs," Updated September 15, 2023
[3] 2022 ACC Generation Capacity Value. Based on the Real Economic Carrying Charge (RECC) for a battery energy storage facility
[4] Sunrun has calculated this potential lost savings and found the lost savings could range from -$49 to -$470 at maximum DSGS dispatch.

the incentives necessary to entice them into the market, RA prices for summer 2024 and beyond may be a useful indicator of necessary DSGS compensation.

Further, there is potentially an important “program gap” for DR resources that Option 2 would help mitigate. With the DRAM program facing considerable uncertainty as early as 2025, and the likely delay of an incentive-based supply-side DR program in place in 2026, substantial DR resources may be without a prospective home for some time, and DSGS can help sustain the market through this gap.

For these reasons, United urges the CEC to consider significantly increasing incentive levels. United suggests the CEC consider:

a) revising the Program Guidelines with at least 50% higher incentive levels,
b) indexing payments to RA prices, ACC capacity costs, or other indicator, or
c) at a minimum, extending the 30% adder through 2027

3. Transparency regarding available funding

As discussed at the workshop, United asks that the CEC make data available from the 2023 program year as soon as possible so that the CEC and stakeholders may evaluate the remaining program budget. In addition, United requests that the CEC present estimates of how remaining program funds could be encumbered as soon as possible.

Aggregators and other DSGS providers need to have predictability into funding levels and availability going forward in order to invest in market development, customer recruitment, and program setup. Customers need certainty in program length to calculate potential returns to participation.

Further, with considerable uncertainty in programs that affect DR and RA, customers and their resources will be making hard decisions about new investments and possibly retirement or economic re-use of existing assets. Clarity about the size and duration of the DSGS program will have important impacts on these considerations.

4. Option 2: Sunday and Holiday Bid Requirement

Among United's membership are DR aggregators with significant Commercial and Industrial (C&I) customers, capable of providing significant additional capacity under Option 2, but precluded by the requirement to bid and/or be dispatched every day of the week.

These aggregators of C&I customers have much lower portfolio load during Sundays and holidays. Requiring that these resources be bid into the market, and potentially be dispatched, on these days when their performance would of necessity be significantly lower creates the risk that they are credited with a far lower BNLI than they are capable of during the work week. This distortion of the resource's "workday" performance capability is a major disincentive to participation by otherwise substantial and reliable resources.

United recognizes that the CEC intends for the DSGS program to be available and effective every day that a grid emergency may emerge. We believe that an appropriate remedy would be to segregate and compensate resources to designate bids and events falling on Sundays and holidays as optional. Base incentive levels will be available for all resources available Monday-Saturday, with an additional capacity payment available for demonstrated capacity available every day, including Sundays and holidays.

5. Accommodating Day-Ahead DR Resources in Option 2 and Adding V2X to Option 3

United appreciates and supports the CEC's efforts to include long-start DR resources that require a day-ahead notification. The proposed modification to not penalize resources that do not bid into the Real-Time Market if the resources are not committed in the Day-Ahead Market aligns with existing Proxy Demand Resource program requirements. We anticipate that accommodating these resources will result in substantial new resources being available to the program.

United also applauds the proposal to expand Option 3 to include V2X. We see this proposal as a very promising innovation for the revised Guidelines to tap the significant – and rapidly growing – potential of this technology. This modification will create an important incentive signal as EV adoption and EVSE infrastructure and management capability expands.

However, CEC's proposal would only include EVSE as eligible technology under Option 3. In contrast, VGIC proposed that either the EVSE or the EV could be eligible, with the customer/aggregator specifying a single data stream to avoid double-counting. United endorses this approach and requests the CEC consider adding this EV-based discharge data to this pathway under Option 3.

6. Option 2 and 3: Ensuring 2024 Participation Is Not Eroded by New Dispatch Requirements

The workshop proposed a modification to minimum dispatch requirements to target the hottest summer months. However, the modification included the requirement of at least one 3-hour dispatch. This change will negatively impact customers who have already been recruited to the program under the current guidelines with the understanding of 1-hr monthly test events (in addition to market events). The timing and duration of required test hours are a key "cost" that customers weigh when enrolling in DR programs, so this mid-year change just prior to the season will be detrimental to customer experience and may result in loss of available capacity due to de-enrollments. We suggest reducing this requirement back to 1 hour each month for the 2024 program season and taking up the potential revision to a longer-duration minimum test event for implementation in 2025 and beyond. This will provide sufficient opportunity to communicate these changes to all customers between the 2024 and 2025 seasons.

In addition, United is concerned that CEC is proposing including day-of triggers to Option 3, based on Flex Alert, EEA Watch, or EEAx up to 3 p.m. of the event day. United is concerned that this additional requirement could prove difficult to implement in time for the 2024 season. Not only has the CEC not presented how communications would proceed, what event windows would be, and how payment would work, providers and aggregators have not approached these issues with their customers and identified constraints, concerns, and solutions. Such a process would likely take some months, and therefore we would propose that the CEC seek more industry input through 2024 to work out these details for future program years.

7. Areas for future development:

a. Option 4: Non-storage market-informed pathway

As discussed at the workshop, there are additional classes of devices with similar attributes to those currently and prospectively addressed by Option 3, that could bring substantial additional capacity into play. Examples of these technologies with this capability and widespread adoption, allowing for near-term integration and capacity, include EV charging equipment, smart thermostats, and hot water heaters.

These devices have similar device-level telemetry as storage devices included in Option 3, providing for a high level of confidence in device performance. Measurement and verification of savings achieved can be developed using both near-term and long-term methodologies.

In the near term, event performance of smart thermostats can use an estimated savings based on a conservative average of savings from these devices in publicly available Load Impact Protocol reports. Customer eligibility and verification can utilize methods based on those under CPUC's Smart Communicating Thermostat[5] rebate program – leveraging the SCT program can provide verification of customer address, device installation, and dual-enrollment. For hot water heaters, Joint Appendix 13 (JA13) compliant devices include both a minimum event

[5] As authorized by CPUC Decision 21-12-015 Paragraphs 41-48, December 2, 2021

performance for assignment of average performance, as well as actual power demand and cumulative consumption that can be measured against the Power Saver Rewards baseline methodology for longer-term, device-specific performance measurement. Longer term, thermostats and other home device response could be measured using the FLEXmeter methodology[6] approved as tariff-compliant by the California ISO.

United recognizes that creating a market-informed load flexibility pathway in the DSGS program would be a significant undertaking. However, we argue that not only does the size of potential resource support the effort, but that the learning and opportunity to improve pathways within supply-side Resource Adequacy and/or Proxy Demand Response programs are significant and compelling reasons to pilot approaches within DSGS. Specifically, a market-informed load flexibility could significantly improve understanding of the impact of streamlined enrollment (i.e. outside of click-through process) as well as the potential and benefits of device-level measurement. For these reasons, United urges the CEC to move forward this pathway for both its near-term and longer-term benefits.

b. Allowing for Dual Participation in DSGS Option 2 or CAISO Proxy Demand Response (PDR) and DSGS Option 3

United suggests the CEC address another potential barrier to DSGS participation that also poses a potential direct conflict with existing DR and/or RA participation. The conflict arises when a customer is enrolled in the DSGS Option 2 and/or CAISO market with one resource, and is prevented from using another resource at the same address to participate in DSGS.

This situation has negative impacts on the DSGS program because the benefits of Option 3 in leveraging battery and vehicle export capability is lost. United recognizes that the current DSGS Guidelines attempt to address this by allowing the use of the PDR baseline in CAISO

[6] Glass, J., Suffian, S., Scheer, A., and Best, C. (2021). Demand Response Advanced Measurement Methodology: Analysis of Open-Source Baseline and Comparison Group Methods to Enable CAISO Demand Response Resource Performance Evaluation.

Tariff Section 4.13.4,[7] however this baseline methodology is not widely used at present, and the relevant energy storage aggregator may not be the registered Demand Response Provider with CAISO.

Customers should be allowed to participate in DSGS with different eligible assets through different participation options as long as there is no double compensation on the same load reduction or grid export. United requests the CEC engage with stakeholders to find workable solutions to this barrier during 2024.

8. Conclusion

Thank you for the opportunity to submit these comments. Advanced Energy United looks forward to an expeditious approval of modified Guidelines in early 2024 and a successful 2024 program year.

/s/ Brian Turner

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[7] CEC, Demand Side Grid Support Program Guidelines, Second Edition, page 21