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Comments of Advanced Energy United on draft DSGS Guidelines

Additional submitted attachment is included below.

ADVANCED ENERGY UNITED

May 11, 2023

California Energy Commission
1516 Ninth Street
Sacramento California 95814

Re: Docket 22-RENEW-01 –Demand Side Grid Support Program Draft Guidelines

Introduction and Summary

Advanced Energy United ("United") (formerly Advanced Energy Economy) appreciates the opportunity to provide input on draft Guidelines for the Demand Side Grid Support ("DSGS") program published April 20, 2023. United commends the California Energy Commission's ("CEC") leadership in ensuring the state's electric reliability through the deployment of additional energy efficiency, demand response ("DR"), storage, and clean generation resources. As the state accelerates its transition to a 100% clean electric grid and contends with extreme weather driven by climate change, dispatchable distributed energy resources ("DERs") and DR will become increasingly important for enhancing grid reliability and reducing costs for all customers.

United is a national business association representing over 100 companies across the advanced energy sector, including those within the DER space, including but not limited to 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.

Vice Chair Gunda and CEC staff are to be commended for their engagement and responsiveness to stakeholders and the diligent work that has gone into the draft Guidelines. United recognizes the challenges of meeting multiple objectives: working expeditiously to revise a program in time for Summer 2023, providing certainty and opportunity to demand side resource providers, protecting the integrity of existing resource adequacy and demand response programs, and piloting sustainable solutions that grow demand side resources going forward.

Given these various objectives, United is supportive of the draft Guidelines for Summer 2023 and as a foundation for further revision and expansion as soon as possible, and we make the following specific points:

- The draft DSGS Guidelines should be approved and implemented as soon as possible.
- Important data and experience should be gathered to inform not just DSGS, but also other DR programs and the CPUC's Resource Adequacy (RA) program
- Option 1 provides important flexibility to Publicly Owned Utilities (POUs), water utilities, and clean backup generators to provide energy response in emergencies
- Option 2 will test both the incremental capability of existing DR resources and a new capacity accreditation methodology
- Option 3 is a potentially game-changing model of market-informed demand response by responsive and metered devices that will immediately incent untapped storage resources
- CEC should create an additional market-informed program modeled on Option 3 to include other similarly responsive and metered devices including smart thermostats, water heaters, and electric vehicle service equipment (EVSE).

Detailed Comments

1. Support approval of draft Guidelines, but with urgency for program expansion

Speed is of the essence for mobilizing emergency resources to meet potential extraordinary needs in Summer 2023. The overall program structure and slate of incentives (Options 1-3) put forward in the draft Guidelines are a balanced and workable framework and the CEC should focus on timely approval and implementation so that these resources are ready to contribute to reliability in Summer 2023.

To the extent that delays are experienced in approval and/or implementation, for the capacity payment-based programs (Options 2-3), United believes that the opportunity to only capture a portion of the full summer's revenues will infringe upon the ability of providers to recruit participants for this summer. As such, in order to improve the likelihood of sufficient participation in Summer 2023, United recommends that in the event of significant delay, CEC increase monthly incentive rates proportionately to ensure a full summer's worth of compensation.

United appreciates that the mix of energy and standby incentives and capacity payments will be available to a range of end-use-cases (customer and technology combinations), and will provide important experiential data into whether and how these use cases respond to these incentive types and levels. Advanced Energy United also supports the CEC's commitment to a "phased approach" to DSGS – to use this Phase 2 of DSGS to "test approaches" and "resolve policy tensions and operational complexities" in order to "scale, unlock, and grow cleaner resources" in Phase 3 (2024 and beyond).[1]

[1] DSGS Program Staff Workshop, Draft Demand Side Grid Support (DSGS) Program Guidelines, Second Edition, April 26, 2023, slide 3.

United believes that further revision and expansion of DSGS is warranted as soon as possible, especially to build on the market-informed, device-based program proposed for behind-the-meter ("BTM") storage resources in Option 3. While some expansion may need to wait for 2024, United believes that additional expansion later in Summer 2023 is possible. Specifically, we recommend the CEC proceed expeditiously to create an Option 4, modeled on Option 3, to take advantage of substantial existing capacity that is ready to be deployed this summer (discussed below).

2. Clarify eligibility to ensure a complete and competitive landscape for program success

Advanced Energy United notes two instances where the draft Guidelines may inadvertently restrict the universe of potential customers and providers.

The list of eligible providers in the DSGS program is correctly listed as "retail suppliers as defined in Public Utilities Code (PUC) Section 398.2".[2] However, the draft guidelines only include customers of CCAs and electrical corporation in Subsection 2.a.iii of Chapter 2, excluding an important segment of customers, namely those that take service under the state's Direct Access program from Electric Service Providers (ESPs). This oversight should be corrected so that customers of CCAs, electrical corporations, and ESPs are eligible for the programs listed in this subsection.

In addition, United believes the draft Guidelines err in requiring permission from CCAs for Options 2 and 3. The draft guidelines require third party aggregators to get "written permission from each applicable POU or CCA" in order to be able to participate in the DSGS program. In contrast, third party aggregators must simply "notify" IOUs that they intend to enroll their customers in DSGS. United understands from staff comments at the April 26 workshop that the CEC did not want to disrupt the relationship between POUs and their customers and that staff anticipates 3rd party providers in POU territory would generally be acting as agents of the POUs. But staff did not make any such explanation for the permission requirement from CCAs, and indeed such rationale would not make sense or be appropriate or practicable in that context. Written permission from CCAs is not required for their customers to participate as PDRs, and should not be required for DSGS. Determining which residents or businesses are customers of one of the 24 CCAs in California, and obtaining the CCAs written approval, adds another layer of complexity, expense, and delay. Lastly, as CCAs may be DSGS providers themselves, the draft guidelines would allow them to simply reject any third party aggregators, stifling competition and restricting participation. For these reasons, United urges the CEC to be consistent between CCA and IOU customers and require notification.

[2] Draft Program Guidelines, Chapter 2, Page 2

3. Option 1 is a useful, simple, and complementary framework for emergency energy compensation.

Advanced Energy United appreciates the revision of the previous DSGS program options 1 and 2 into a single energy and standby framework. Moreover, we understand the Option 1 framework as complementary to the CPUC's Emergency Load Reduction Program (ELRP) framework, but with greater flexibility for POUs to design programs meeting their customer needs and capabilities.

United is also strongly supportive of the inclusion of water utilities, districts, and facilities, as these use cases have substantial opportunity to implement advanced energy technologies to make loads responsive to grid conditions. Also, cleaner backup generators are an important emergency resource for which enhanced energy payments are warranted.

As DSGS Option 1 is implemented as a complement to the CPUC's ELRP program, CEC and CPUC should jointly consider stakeholder feedback and program performance data to refine and evolve both programs. In addition to measuring the change in participation and performance across multiple events, it will be instructive to analyze the participation and performance across the multiple variations in use cases and program design across the CPUC-jurisdictional and POU programs.

4. Option 2 is an intriguing test of incremental DR in existing programs under extreme conditions and of a new resource counting methodology applicable to RA

In Option 2, the draft Guidelines propose to kill two birds with one stone. As proposed, Option 2 appears to combine the demonstrated capacity approach recommended in the CEC's Qualifying Capacity of Supply- Side Demand Response Working Group Final Report[3] with the Performance Adder mechanism recommended by Joint Parties in comments to this proceeding.[4] This option will thus test both a novel incentive mechanism for DR performance, and a novel capacity accreditation methodology for DR RA.

United is aware that some Demand Response Providers (DRPs) do have the ability to perform above their supply plan levels under some conditions, especially under extreme weather when grid conditions are most stressed.[5] This suggests that the current Load Impact protocol (LIP)-

[3] Qualifying Capacity of Supply- Side Demand Response Working Group Final Report, December 2022, CEC-200-2022-001-F.

[4] Joint Parties (Environmental Defense Fund, Google Nest, Natural Resources Defense Council, OhmConnect, Voltus); Response to DSGS Guidelines; February 17, 2023, CEC Docket 22-RENEW-01 TN# 248871.

[5] For example, the May 23, 2022, Demand Response Auction Mechanism Evaluation by Nexant reports that between Q3 2020 and Q4 2021, DRPs consistently bid into the Day-Ahead market above their Must Offer Obligation. Further, the Joint Parties in their February 17, 2023, proposal illustrate that many resources such as residential thermostats that have QC values based on 1-in-2 conditions can respond with up to 200% more savings under stressed 1-in-10 conditions.

based qualifying capacity accreditation methodology fails to recognize the capability of some DR resources precisely when the grid would need it the most. Though some of these resources access energy payments in the day-ahead and real-time markets, the lack of capacity payments for this incremental performance may be barrier not just for existing PDRs, but for potential new participants as well.

Further, United understands that the Option 2 approach to incremental DR from existing market-integrated PDRs will pilot the demonstrated capacity approach recommended in the CEC's Qualifying Capacity of Supply-Side Demand Response Working Group Final Report. Though not an objective of the DSGS program, this pilot will likely be an important test of the accuracy and workability of the CEC's recommended assessment framework and will yield important data for potential use in the CPUC's Resource Adequacy proceeding. In addition, Option 1 may provide evidence whether the incentive-based bid-normalized load impact assessment methodology, by dint of its ease of calculation compared to current Load Impact Protocols, can draw new or expanded PDR participation. United urges the CEC to detail specific plans for the collection of data and further analysis to explore this potential and to make such research available to stakeholders, the CPUC, and CAISO for consideration in context of the Resource Adequacy program.

However, the program does not address existing, well-known barriers to participation of potential demand response resources. These resources – including smart thermostats, hot water heaters, electric vehicle service equipment, and other devices with automated response capabilities – remain untapped and locked-up behind the existing PDR signup procedures and historic incentive levels. Though there may be other solutions to these issues, multiple stakeholders have suggested "market-informed" alternatives that would rely on aggregators' customer enrollment processes and device-level or sub-meter data rather than site meter data. Advanced Energy United continues to urge the CEC to develop an alternative, non-market-integrated capacity incentive for aggregators of resources that have historically proven reluctant to participate under current market pathways.

5. **Option 3 is an exciting model for BTM storage, but compensation should be more reflective of resources' capabilities and responsibilities**

Advanced Energy United is pleased that CEC staff have proposed a novel model for BTM storage compensation. United is hopeful that Option 3 presents a workable structure for non-market-integrated emergency resources that can be expanded to other resources with similar characteristics and for which existing PDR requirements pose barriers.

The proposal seems broadly consistent with the model proposed by Sunrun and Leap,[6] and CalSSA,[7] and United appreciates the CEC's willingness to adopt this structure. The proposal has two very important features:

- A "market-aware" trigger that does not require participation in existing CAISO markets nor current PDR signup procedures, and
- Device- or sub-meter level performance measurement that removes the need for complicated counterfactual assessment and allows for BTM storage compensation while respecting both export and non-export capabilities.

These features would allow the proposed Option 3 to attract residential and commercial battery resources that do not currently participate in DR programs or RA markets because of the significant sign-up and baselining requirements and/or lack of export compensation.

However, United is concerned that the proposed level of compensation is not sufficient to realize this potential, as it does not reflect current prices for similar capabilities, nor the responsibilities Option 3 resources would incur. The reliability services that Option 3 resources would provide are currently valued much more highly in California and indeed across the West, where tight RA markets have led to significant price increases. Further, DSGS envisions a dispatch frequency soft cap of 35 events per year, with the opportunity to participate in additional events, much higher than the roughly ten ELRP events that were called last year. This requires a greater availability commitment for participating resources, which has traditionally been incentivized at higher compensation levels in other parts of the country. For example, the residential Connected Solutions programs in Massachusetts, which allows energy storage resources to be dispatched up to 60 times in a summer season, offers incentives of $225 per kW-season[8] – close to three times higher than the effective incentives in Option 3. If DSGS incentives are not set in proportion to its dispatch expectations, it risks hobbling the program by hindering customer enrollment and sustained participation over time.

6. CEC should create an Option 4, structured like Option 3, for DR devices

The market-informed Option 3 is an important model of a non-market-integrated, device-measured DR capacity program. Advanced Energy United joins commenters including Generac[9],

[6] Sunrun Inc. and Leap; Distributed Energy Resource Program Recommendations; Revised Joint Sunrun and Leap Proposal; March 17, 2023; CEC Docket 22-RENEW-01 TN# 249330
[7] California Solar + Storage Association; CALSSA DEBA and DSGS revised program design proposal; March 24, 2023; Docket No. 22-RENEW-01 TN #249422
[8] Mass Save, "Using Your Battery Storage Device to Make the Grid More Sustainable," https://www.masssave.com/residential/rebates-and-incentives/connectedsolutions-batteries
[9] Generac Power Systems; Comments on DSGS and DEBA Workshop; February 17, 2023; CEC Docket 22-RENEW-01 TN# 248870

Sunrun and Leap[10], Joint Parties[11], Vehicle-Grid Integration Council[12], and others in urging the CEC to adopt other market-informed programs to include other devices with similar capability, including thermostats, water heaters, EVSE, and other controllable devices with device-level or sub-meter measurement. These devices have the capability to participate in a substantially similar program as Option 3, and to offer comparable or greater demand response capacity, potentially up to hundreds of megawatts.

Like the BTM storage resources addressed by Option 3, direct load control assets like smart thermostats, water heater controls, and EVSE have well-documented firm capacity value that has historically been "locked up" behind the barriers of market integration and baseline methodology. And like BTM storage, a market-informed, device-measured program has the potential to unlock this significant capacity potential.

United proposes that the CEC propose an Option 4, structured like Option 3, with a capacity payment weighted by Locational Market Price (LMP) and graduated based on the number of hours available. Like BTM storage, devices would be aggregated into Virtual Power Plants and dispatchable in 2- to 4-hour increments with day-ahead notice. Some differences with BTM storage include baselines and perhaps total quantity of dispatches.[13] Advanced Energy United members stand ready to assist the CEC in designing the fine details of this program to access this untapped DR potential along the lines of the program proposed in Option 3.

Lastly, it is important to emphasize the alignment of a market-informed incentive program like Option 3 and our proposed Option 4 with the eventual, sustainable model of the CalFUSE program. The essential foundation of the CalFUSE proposition – and its sister initiatives at the CEC including Load Management Standards – lies in automated, flexible demand responsiveness to non-market-integrated, but market-informed, signals (namely CalFUSE rates). In this regard, the proposed Option 3 and 4 would introduce and acculturate participants to similar market-informed response that will be required for CalFUSE participation. Though the compensation regime differs – payment through a DRP rather than through rates – the familiarity with flexible demand in response to prices is the same and likely helps bridge the gap to a CalFUSE future much more effectively than the current market-integrated PDR model that has proven to be such a significant barrier to participation.

[10] Sunrun Inc. and Leap; Distributed Energy Resource Program Recommendations; Revised Joint Sunrun and Leap Proposal; March 17, 2023; CEC Docket 22-RENEW-01 TN# 249330

[11] Joint Parties (Environmental Defense Fund, Google Nest, Natural Resources Defense Council, OhmConnect, Voltus); Joint Parties Response to DSGS; February 17, 2023; CEC Docket 22-RENEW-01 TN# 248871

[12] Vehicle Grid Integration Council; Comments of the Vehicle Grid Integration Council on DSGS and DEBA Workshop; February 17, 2023; CEC Docket 22-RENEW-01 TN# 248865

[13] Baselines are easily calculable given device-level telemetry against non-event days. Different types of customers or device may be more amenable to different total monthly or annual dispatches. The proposed Option 4 could consider different incentive tiers for different levels of dispatch (e.g. <20, 20-50, and >50)

Conclusion

Advanced Energy United appreciates the hard work that has gone into producing the draft Guidelines and thanks CEC leadership and staff for their responsiveness to stakeholder comments. In these comments, we propose some minor modifications to ensure that eligibility is broad and competitive, and we urge the CEC to build on the important proposal made in Option 3 to harness the potential of a broader array of responsive demand devices and help lay the groundwork for sustainable dynamic demand framework promised by the CalFUSE proposal and Load Management Standards.

Thank you for the opportunity to provide these comments.

/s Brian Turner
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On Behalf of Advanced Energy United