

DOCKETED

Docket Number:	22-RENEW-01
Project Title:	Reliability Reserve Incentive Programs
TN #:	248883
Document Title:	Southern California Gas Company Comments - SoCalGas Comments on CEC Commissioner Workshop on DSGS and DEBA
Description:	N/A
Filer:	System
Organization:	Southern California Gas Company
Submitter Role:	Public
Submission Date:	2/17/2023 4:46:46 PM
Docketed Date:	2/17/2023

*Comment Received From: Southern California Gas Company
Submitted On: 2/17/2023
Docket Number: 22-RENEW-01*

**SoCalGas Comments on CEC Commissioner Workshop on DSGS
and DEBA**

Additional submitted attachment is included below.



Kevin Barker
Senior Manager
Energy and Environmental Policy
555 West 5th Street
Los Angeles, CA 90013
Tel: (916) 492-4252
KBarker@socalgas.com

February 17, 2023

Vice Chair Siva Gunda
California Energy Commission
Docket Unit, MS-4
Docket No. 22-RENEW-01
715 P Street
Sacramento, CA 95814-5512

Subject: Comments on the Lead Commissioner Workshop on the Demand Side Grid Support Program and Distributed Electricity Backup Assets Program

Dear Vice Chair Gunda,

SoCalGas appreciates the steps the California Energy Commission (CEC) has taken toward increasing electric system reliability beyond the existing planning standards. The existing standards safely preserve reliability of 1 in 10 weather conditions. Unfortunately, recent weather events, such as the extreme heat event of September 2022 are not contemplated within the existing standards and the reliability of the electric grid is more likely to be compromised during these events. Programs like the Demand Side Grid Support (DSGS) and Distributed Electricity Backup Assets (DEBA) programs, if designed properly, could become the backstop of our energy system during extreme events. The state needs a sustainable energy backstop and to accomplish this it will be necessary to optimize the operational requirements of the participating technologies. SoCalGas has extensive experience in supporting behind the meter (BTM) projects and can offer insight on how to maximize the use of BTM distributed energy resource (DER) projects to support the grid.

DSGS has already proven to be an effective backstop to avoid power outages, but more can be done to allow for broader participation. For example, the information shared at the DSGS workshop on January 27th shows that during the heat wave in September 2022, over 200 MWs of load reduction came from the use of backup generators (BUGs); this represents over 80% of the total capacity.¹ Based on this information, an assumption can be made that DSGS is effective at activating BUGs. However, to create a sustainable backstop, a diverse portfolio of technologies that can be optimized to their full potential will be necessary and will provide benefits to the state through cleaner,

¹ See CEC Presentation on Lead Commissioner Workshop on the Demand Side Grid Support Program and Distributed Electricity Backup Assets Program held on January 27, 2023, available at: <https://efiling.energy.ca.gov/GetDocument.aspx?tn=248608>.

enhanced reliability. SoCalGas believes that it is important to create programs that allow system operators the flexibility to address reliability issues by optimizing technologies. Gas fueled generation technologies can operate to follow the load demand, or as steady baseload. Having access to technologies with different operational characteristics may allow for broader technology participation. More importantly, creating value propositions to help transform clean DER markets can be an incremental benefit of DSGS and DEBA. Especially because the ambitious environmental and energy goals of the State will be better supported with clean fuels and power generation technologies that use clean fuels (such as renewable gas, hydrogen), or blends of these clean fuels with natural gas.

With this in mind, SoCalGas offers the following comments:

Demand Side Grid Support (DSGS)

- 1. What structure or provisions would best support cost-effective Resource Adequacy procurement while also enabling the development and growth of the Strategic Reliability Reserve to respond to extreme events?*

As suggested by CEC staff during the workshop, it may be beneficial to engage BTM resources to dispatch earlier in the Energy Emergency Alert (EEA) process to allow enough time for these participants to adjust their loads. SoCalGas supports the recommendation to allow resources to dispatch at an earlier EEA stage, specifically, to change combustion resources dispatch from an EEA 2 period to an EEA 1 period. These resources have the ability to generate electricity for many hours to ride through long heat waves and would allow other shorter-term technologies like battery storage resource capacity for the extreme 2 to 4-hour peaks on the system to be utilized. As an example, during the September 2022 heat wave battery storage started discharging electricity between 2:00 pm and 3:00 pm when there was still a lot of solar capacity on the system and was thus drained when the system peak occurred between 8:00 pm and 9:00 pm.

- 2. How best can the Program unlock untapped DR or other stranded resources under its statutory constraints?*

SoCalGas does not have a response to this question at this time.

- 3. As aggregators and others participate in DSGS directly: What is the most effective approach for host utilities to have visibility? What would be an effective method to ensure customers are not participating in multiple programs?*

SoCalGas does not have a response to this question at this time.

- 4. Should DSGS be provided to other use-cases in IOU territories? If so, what use-cases and how?*

Expanding DSGS eligibility to include all customers (while ensuring customers who receive incentives through ELRP do not also receive DSGS incentives) will enhance the opportunity to balance participating resources. The DSGS currently precludes investor-owned utility (IOU) customers from participating. Instead, they require IOU customers to participate in a similar program but with more restrictive requirements under ELRP. Broadening participation to IOU customers may

allow for increased participation of non-BUG technologies, such as fuel cells, combined heat and power (CHP) and linear generators.

5. *What other program modifications should be considered?*

SoCalGas does not have further recommendations at this time.

Distributed Electricity Backup Assets (DEBA)

The DEBA Program provides a unique opportunity to fund projects that can lead to clean and more efficient resources to support emergency load reduction and supply. Historically, customers make investments in DERs and BUGs for their own financial or resiliency needs. However, leveraging these assets as a means of grid support, through load reduction or emergency supply, allows these systems to be optimized. BUGs connected to the natural gas network or a clean fuels network are well poised to provide reliability and resiliency while decarbonizing and reducing air quality impacts from diesel BUGs. These systems can be available for a customer’s resiliency needs when called upon, similar to that of a diesel generator, but have a much cleaner emission profile than that of diesel, especially when clean fuels are introduced. These technologies are clean fuel ready, and can be easily transitioned to cleaner fuels, whether that be renewable natural gas (RNG) delivered through the natural gas pipeline system, onsite biogas, blended hydrogen, or pure hydrogen. Also, generation systems connected to the gas pipeline system have a reliable, continuous fuel supply and do not have duration operational constraints that are usually seen in conventional energy storage technologies, diesel generators with limited onsite fuel storage, or technologies requiring fuel to be trucked in.

Though the focus of this program is to provide a reserve that can be relied upon during grid emergencies, the program should also consider projects that can be optimized for load reduction or supply beyond just for an emergency event. For example, baseload generation technologies, load following generation technologies, and microgrids with gas-fueled generation technologies can reduce load from the electric grid throughout the year, particularly those periods when it is most constrained, and provides cost and resiliency benefits to the end user. “Baseload generation” reduces load in an “always-on manner”, in which the generator operates 24/7, permanently reducing load from the system. Baseload technologies could also be coupled with load management technologies to increase demand reduction during grid events. Because baseload generators already reduce demand 24/7, when an event is called, the incremental amount of load reduced may be negligible. The permanent load reduction is still contributing to reduction of system peak. Therefore, it would be counterproductive to disqualify or penalize these projects because they provide benefits throughout the year, as well as during grid events.

Load following or “dispatchable generation” can ramp up or down based on the facility’s energy needs. This type of generation can be called upon to increase power output during an emergency event to help support the grid if it is not already operating at full load to support the facility. Lastly, microgrids have the ability to island from the larger electric system if necessary through a combination of generator dispatch, load reduction, or storage discharge, allowing the microgrid to reduce all of its load if necessary. All of these generation types and scenarios can help support the

electric system through reduced demand or extra supply, but may not be able to maximize their full “potential” when called on through programs such as DSGS or ELRP.

1. *How best can DEBA invest in assets for emergency load reduction without interfering in the Resource Adequacy Program or creating clean stranded assets? How can it best do both?*

SoCalGas does not have a response to this question at this time.

2. *Are the proposed program frameworks reasonable? What modifications could unlock additional resources for emergency events?*

While the framework seems reasonable, requiring that DEBA participants also be enrolled in DSGS or ELRP may unintentionally restrict the number of projects available that provide the necessary electrical load reduction and grid relief during an emergency event. AB 205 (Statutes of 2022) requires that “[a]ll funding recipients under the program shall participate as an on-call emergency resource for the state during extreme events.”² The CEC’s proposed interpretation of this section limits participation to only projects enrolled in either the DSGS or ELRP, when in fact there may be projects that do not meet the program eligibility requirements for, or do not have the resources to participate in, the DSGS or ELRP programs. If such a project can effectively serve as an “on-call emergency resource” for the State without participating in DSGS or ELRP, it should not be precluded from participating in the DEBA program.

Further, and as discussed above, baseload generation technologies, load following generation technologies, and microgrids with gas-fueled generation technologies can reduce load from the electric grid throughout the year, particularly those periods when it is most constrained. This consistent load reduction is still contributing to reduction of system peak, but is providing benefits throughout the year, as well as during grid events. Therefore, it would be counterproductive to disqualify these projects because they are not showing an incremental load change when a DSGS or ELRP event is called, yet still providing crucial demand reduction from the grid in an emergency event.

Also, modifying the DSGS program to allow for participation of IOU customers that are not enrolled in the ELRP might provide access to a broader suite of resources to support emergency events. Specifically, many gas generation technologies do not have the ability to participate in ELRP because they are unable to immediately use renewable fuels. A modification to the DSGS program to allow for IOU customer participation with natural gas-fueled technologies, with the intent to utilize clean fuel blends or renewable gases at some designated time, would be in the public interest of deploying the technologies as fast as possible. Such a change would ensure that potentially viable projects would not be unintentionally left out simply because of their location and the utility that serves them.

3. *Are there additional criteria that the CEC should consider when evaluating projects? How should the CEC rank or weight the evaluation criteria?*

² California Public Resources Code Section 25791, Subsection F (as adopted via AB 205): [Codes Display Text \(ca.gov\)](#).

Additionally, the CEC could consider including kW of load reduction, duration of ability to provide support, implementation timeline, and availability factor. Many of these criteria are key contributors for generators to provide resiliency or reliability to end users, and thus, are good indicators of the benefits they can provide if incentivized.

4. What are reasonable exceptions to non-performance in an emergency event?

For DEBA, performance specifically during the emergency event should be treated carefully. Baseload generation is consistently reducing load from the electric system, and therefore may not see incremental reductions during the load event, however, the resource is reducing significant load that would otherwise have been on the system. Therefore, non-performance should only be considered if performance does not occur, or in the case of baseload generation, the expected load reduction from the generation does not occur during the event.

5. What level of funding is needed to spur the development of a project?

SoCalGas is not in a position to opine on the appropriate funding level to help spur the development of a project. However, based on the experience in supporting BTM DER deployment, it is logical that funding should appropriately compensate for the benefits and performance of each project. For example, customers deploying a project simply for the participation in DSGS or similar programs would need to have access to opportunities that would allow them to fully recuperate their investment and provide incremental value for doing so. For instance, at \$2.00/kWh a 1 MW project would have only recuperated \$18,000 during the September 2022 extreme weather event.³ This same customer would need to participate in hundreds of similar events just to recuperate their capital investment.⁴ Since extreme weather events are unpredictable, deploying a project without the certainty to recuperate their investment may result in low participation. In this scenario, BUGs would likely become the primary participating resource in DSGS. Alternatively, allowing DEBA customers to value stack as long as they can guarantee incremental or permanent load reduction between May to October, will likely increase participation. In summary, the DEBA program should fund the installation of resources that can yield benefits during the specified months. To the extent possible, projects that are able to participate in multiple energy markets without double-dipping should be allowed to seek other funding opportunities incrementally to DEBA. This will help spur or transform the market without overcompensating for one single benefit.

Respectfully,

/s/ Kevin Barker

Kevin Barker
Senior Manager
Energy and Environmental Policy

³ Assumed 3 hours of participation during September 4 to September 9, 2022.

⁴ Assumed project cost of approximately \$4,000,000 for 1 MW system (\$4,000/kW average project cost).