

Docket No.: R.20-11-003
Exhibit No.: GRD-01
Date: 9/1/2021
Witnesses: Steve Campbell
Commissioner: Marybel Batjer
ALJ: Brian Stevens

**PREPARED PHASE II TESTIMONY OF STEPHEN CAMPBELL ON BEHALF OF GRID
ALTERNATIVES**

1 GRID Alternatives (“GRID”) submits the following testimony on the Order Instituting
2 Rulemaking to Establish Policies, Processes, and Rules to Ensure Reliable Electric Service in
3 California in the Event of an Extreme Weather Event in 2021, proceeding R.20-11-003. This
4 testimony responds to the 10 August 2021 Assigned Commissioner’s Scoping Memo and Ruling
5 for Phase 2 and Administrative Law Judge Stevens’ 11 August 2021 E-mail Ruling (“Email
6 Ruling”) providing guidance on proposals, and is timely served.

7
8 **TESTIMONY OF STEPHEN CAMPBELL**

9
10 **I. INTRODUCTION**

11 **Q. Please state your name, position and organization.**

12 **A.** My name is Stephen Campbell, and I am a senior manager, policy and business
13 development where I have been on staff since November 2018. I have attached my CV at the end
14 of my testimony.

15
16 **Q. What is the purpose of this testimony?**

17 **A.** The purpose of my testimony is to help the Commission identify implementable demand
18 reduction (“DR”) programs and strategies to reduce the net demand before summer 2022 and
19 2023. I will offer feedback on the 16 August 2021 staff proposal (“Staff Proposal”), where
20 appropriate.

21
22 **Q. Which communities are you suggesting the commission should focus on to ensure
23 fair participation in the ELRP?**

24 **A.** I recommend the Commission target, prioritize, and incentivize flexible demand
25 reduction (“DR”) and solar-paired-storage capacity deployment in communities¹ that
26 have the greatest ability to 1) avoid a power generator exceeding its ability to continually
27 supply electricity for the total system benefit, and 2) avoid the run time of diesel
28 generators if a local power generator goes offline. The Commission should prioritize
29 maintaining total system reliability; however, in the event of an imminent power outage,

¹ Communities in this context means households located in distribution planning areas that have the greatest ability to mitigate the run times of diesel generators.

1 the Commission could incentivize distributed energy resources (including residential
2 smart thermostat/smart-plug deployment and residential solar-paired-storage deployment)
3 in low-income and disadvantaged communities, especially when these geographic
4 locations are most impacted by diesel generator operation. In essence, the majority of
5 incentive and household compensation should be earmarked for disadvantaged and low-
6 income communities across the state, which turns an emergency issue into a recovery
7 opportunity. As the Commission ensures total system reliability with a broad resource
8 procurement strategy, the Commission also has the opportunity to develop a mass
9 deployment campaign to strengthen the ability of disadvantaged and low-income
10 communities to anticipate (by using smart technology adjusting to day-ahead and hour-
11 ahead data), adapt (by modifying behavior), withstand (by maintaining power during
12 outages), and recover from future climate change induced impacts.

13

14 **Q. Do you support the Just Flex Rewards (“JFR”) program as proposed by the**
15 **California Environmental Justice Alliance (“CEJA”)?**

16 **A.** Yes, I support the JFR program and believe this pilot should be implemented,
17 based on the recommendations CEJA provides in opening testimony, as soon as possible.
18 It is a smart and implementable strategy that comports very well with the Emergency
19 Load Reduction Program (“ELRP”) goals. As referenced in the Email Ruling, “IOUs and
20 third-party DR Providers are still permitted to target Residential ELRP customers to
21 enroll them into their respective supply-side DR program, in which case the customer is
22 removed from the ELRP.”² The ability to concurrently operate different strategies to
23 continually improve the ability to maintain total system reliability is prudent.

24

25 **Q. Do you support additional strategies to include in the ELRP?**

26 **A.** Yes, I support two additional DR strategies that can be incorporated into the ELRP. First,
27 I support adding scope to the Disadvantaged Communities – Single Family Affordable Solar
28 (DAC-SASH) program in order to leverage the existing human infrastructure, trust-based
29 community relationships, and knowledge and expertise to incorporate smart thermostats and

² Email Ruling, p.9, A,1d,iv, available at
<https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M399/K449/399449984.PDF>.

1 smart plugs onto existing scope. I also support enabling battery energy storage (“storage”)
2 systems to be attached to customer-sited solar systems. The strength of both these strategies is
3 that they rely on reputable and active clean energy programs to help the Commission unlock
4 flexible DR capacity located in low-income and disadvantaged communities across the state.
5

6 **Q. Please describe your first proposed DR strategy.**

7 A. I’m going to refer to the first strategy as the Smart Controlled Thermostat – Low-
8 Income Deployment (“SCT-LID”) pilot for the purpose of incorporating this framework
9 into the ELRP. I base the following framework on the Bringing Rapid Innovation
10 Development to Green Energy (“BRIDGE”) project that the California Energy
11 Commission (“CEC”) recently awarded to Packetized Energy titled “Increasing Access to
12 Smart and Affordable Energy for Customers and Resource Adequacy for the California
13 Grid.”³ The project will be called “Get Nimble, California” and aims to deploy 7,000 new
14 and existing load-management devices (e.g., smart thermostats, EV chargers, and smart
15 plugs) in disadvantaged communities located in PG&E and SCE territories, with a
16 projected goal to achieve 4MW of incremental flexible capacity. This program (named
17 “Get Nimble, Cali”) is launching this fall and expects to deploy a large portion of this
18 new flexible capacity by summer of 2022. The program will use creative incentive
19 mechanisms to reduce carbon emissions, improve grid reliability and lower energy costs,
20 particularly for households in disadvantaged communities. ELRP and a coordinated
21 incentive program for smart thermostat installation could provide the long-term incentive
22 structures needed for this program to scale beyond the initial 4MW, greatly expanding the
23 benefits of the project. As such, I recommend the Commission incorporate and
24 dramatically scale up an effort to deploy load-management devices without cost to low-
25 income customers in disadvantaged communities through the ELRP. Given that the
26 BRIDGE project was awarded in an extremely competitive grant/market environment,
27 the Commission should have reasonable assurance that there is substantial untapped
28 flexible capacity available.

³ <https://www.energy.ca.gov/media/4931>

1 **Q. What programmatic actions would be needed to make the SCT-LID pilot**
2 **effective?**

3 A. One foundational action necessary to unlock available flexible capacity is known:
4 streamlined implementation, including adequately resourcing administration and
5 marketing, education, and outreach (ME&O) activities. The need to procure flexible
6 capacity and DR before the summer of 2022 is a high priority at the Commission. As
7 such, I recommend limiting implementation complexity by leveraging existing low-
8 income clean energy programs (e.g., Energy Savings Assistance, SASH and DAC-SASH,
9 SOMAH, etc.) to incorporate and significantly increase the scale. For example, the ELRP
10 could fully incentivize 70,000 additional smart thermostats, in addition to the already
11 funded 7,000 smart thermostats provided through BRIDGE.

12 The SOMAH and DAC-SASH program both already target and prioritize households
13 with low-income incomes. The existing human infrastructure in these programs can be
14 leveraged so that each time an outreach professional is in the home of a potential
15 participant (an activity many community-based organizations (“CBOs”) are already
16 expert at doing), educational information, technical assistance, and smart thermostats
17 and/or smart plug units can be directly installed at the time of initial consultation.

18 However, if the Commission opts to leverage any existing low-income program to deploy
19 the SCT-LID pilot, additional funding to support this will be needed 1) to properly serve
20 potential participants, and 2) to ensure potential participants understand the clear
21 economic benefit of their participation in exchange for helping the total system benefit.

22

23 **Q. Can you describe how implementation efficiencies are gained by including smart**
24 **thermostats into existing low-income clean energy programs?**

25 A. Yes. I believe that existing clean energy programs that exclusively provide expert service to
26 low-income and disadvantaged communities are well-suited to include additional clean
27 technologies that can benefit low-income and disadvantaged communities as well as contribute
28 to total system reliability. For example, existing low-income clean energy programs, if
29 adequately resourced, are capable of properly educating clients, providing expert technical
30 assistance, and providing direct installation of smart thermostats during the time of initial
31 outreach and in-home consultation.

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Q. Can you elaborate on the services that would be rendered in the SCT-LID pilot?

A. I propose that the SCT-LID pilot provide direct installation of and set up clean energy technology. The ability to immediately confirm the full registration of each device, and provide specific instructions on how to manage the software applications, settings and performance of the devices installed, is of particular value. Leveraging existing clean energy programs will greatly reduce the number of unused, unregistered or mismanaged devices after installation, which is otherwise a major barrier to maximizing customer participation and unlocking the full demand reduction capacity in a given device, household or program.

Q. Can you explain how the value of the SCT-LID might be explained to customers?

A. To unlock residential DR resources, potential DR participants need to clearly understand the benefit they will receive in exchange for adopting a clean energy technology. In the case of smart thermostats in low-income households, the household members will need to be aware and fully understand that their smart thermostat, and in essence their experience cooling their home, potentially for multiple hours during Flex Alerts, will be impacted in exchange for payment. The household members must always have the authority to control their participation (e.g., the ability to opt-out of a DR response event and lose incentive) and to adjust the level of their participation (e.g., manually adjusting the thermostat to the lower acceptable temperature bound). Educating potential participants about the impact(s) of their decision(s) will be critical to ensuring sustained and continued success of low-income household participation.

Q. Do you have any recommendations regarding outreach and education for the SCT-LID pilot?

A. I recommend that the Commission require Investor-Owned-Utilities (IOUs) to resource CBOs to provide outreach and education for this program so that their community-level expertise can be adequately funded to accelerate participation in this program before the summer of 2022 and 2023. The easiest pathway to unlock CBO potential is to provide additional funding to existing low-income clean energy programs so they have the ability to meet the moment and reach more low-income households. One of the most effective methods to reach low-income

1 households is through co-branded mailers with the IOUs. In the case of the ELRP, the ability for
2 the IOUs to mail low-income households' information about new service offerings (e.g., smart
3 thermostats or solar-paired-storage systems) that existing low-income programs can provide will
4 increase the likelihood of low-income household participation in the ELRP. Lastly, the IOUs
5 should also work with the Disadvantaged Communities Advisory Group (DACAG) to help
6 develop targeted and accessible messaging for DACs and low-income households.

7
8 **Q. How do you recommend that participants be compensated?**

9 A. I recommend that the residential ELRP program compensate residential low-income
10 households for their contribution to demand reduction. I will elaborate in reply testimony on the
11 appropriate level of compensation necessary to assure the Commission that low-income
12 households will participate and benefit from their participation in the ELRP.

13

14 **Q. How much program funding do you recommend for the SCT-LID?**

15 A. Based on the cost per MW of the BRIDGE program (\$2,000,000 award and 4MW DR),
16 the addition of 70,000 additional smart thermostats funded by the ELRP could procure upwards
17 of 50MW for \$20,000,00 due to the cost efficiencies earned through economies of scale.

18

19 **Q. How do you recommend that the SCT-LID pilot be evaluated?**

20 A. I recommend that Staff's residential ELRP program is reviewed 30 to 60 days after the
21 last Flex Alert is conducted during the 2022 calendar year. I specifically recommend the
22 Commission ensure that any ELRP evaluation, measurement, and verification (EM&V) report
23 that is conducted includes income and geographic breakdowns of participation. If low-income
24 household participation is lagging behind non-low-income household participation, then I
25 recommend the Commission increase the incentive amount available to further attract low-
26 income household participation.

27

28 **Q. What metrics do you propose be used to evaluate the performance of this program?**

29 A. There are a multitude of metrics that can be evaluated to ensure a positive experience is
30 gained through participation in the ELRP. However, if the Commission wants to help ensure
31 sustained and increased low-income household participation in the ELRP, I recommend that the

1 Commission maintain at least five years of policy support for this program. For example, if the
2 incentive that is adopted in the forthcoming Decision is set at \$2/kWh for smart-thermostat or
3 solar-paired-storage resource participation in the ELRP, then that incentive amount should not
4 decrease for at least five years. Of course, if that amount is not attracting enough low-income
5 household participation in the ELRP, then the \$/kWh value could be increased, but establishing a
6 minimum incentive floor over a defined period of time provides the policy assurance necessary
7 to attract participation as well as private financing to deploy these technologies. Furthermore,
8 longer-term policy support helps a) potential participants feel more confident about their
9 potential participation, 2) sustain a positive experience for participants, and 3) signal to the
10 private capital community that there will not be a stop-start sequence of unnecessary program
11 complexity that inserts too much risk into their potential involvement.
12

13 **Q. What is the second strategy you recommend to incorporate into the ELRP?**

14 A. I recommend the Commission enable existing low-income clean energy programs to
15 incorporate storage into their service offerings. The ability to attach storage systems to already
16 existing (and new) low-income solar adopters can quickly contribute to reducing customers'
17 coincident net peak demand or deliver valuable energy to the grid hours before a Flex Alert is
18 triggered. This could directly help avoid rolling blackouts and diesel run times. As I discuss
19 above, the Commission can add storage deployment to existing clean energy programs and
20 ensure adequate funding is available to properly outreach, educate, install, and manage low-
21 income client relationships to ensure a sustained positive experience.
22

23 **Q. What other benefits can solar-paired-storage assets provide to the participant and
24 to overall grid reliability?**

25 A. Solar-paired-storage assets, similar to smart thermostat deployment, can be aggregated to
26 optimize the benefit for both the participant and total system reliability. The key to enabling both
27 strategies is trust and verification that bill savings are achieved. I am confident that virtual power
28 plants ("VPPs") will become increasingly valuable tools to meet multiple critical clean energy
29 and statewide economic development objectives and as such, it will be important for the
30 Commission to ensure low-income households have an ability to participate in rapidly evolving
31 and promising technology advancements. Specifically and intentionally incentivizing low-

1 income and disadvantaged households to participate in a VPP will undoubtedly bring positive
2 economic benefits to more participants while simultaneously significantly contributing to total
3 system reliability. I will elaborate in reply testimony if necessary.

4

5 **Q. How do you recommend this program be funded?**

6 A. Annual program funding should be allocated to primary program functions based on
7 percentage. For example, 85% of the total annual funding for DAC-SASH is restricted for
8 incentives, 10% for Administration, 4% for ME&O, and 1% for Evaluation.⁴ This same funding
9 breakdown should apply to any additional ELRP funding that adds more scope.

10

11 **Q. Does that conclude your testimony?**

12 A. Yes.

⁴ Disadvantaged Communities Single-Family Solar Homes (DAC-SASH) Program Handbook, approved September 12, 2019, p.2., https://gridalternatives.org/sites/default/files/DACSASH%20Handbook_Final_Approved%20via%20Resolution%20E5020_9.12.19.pdf

ATTACHMENTS

1. Resume of Stephen Campbell

STEPHEN CAMPBELL

EXPERIENCE

SENIOR MANAGER, POLICY & BUSINESS DEVELOPMENT

2020 - Present

GRID ALTERNATIVES – OAKLAND, CA

Policy lead on multiple CPUC Proceedings, including:

- Net Energy Metering-Successor Tariff (R.20-08-020)
- Self-Generation Incentive Program (R.20-05-012)
- Microgrids & Resiliency Services (R.19-09-009)
- Climate Change Adaptation (R.18-04-019)
- Utility Affordability and Disconnections (R.18-07-006 and R.18-07-005)

POLICY & BUSINESS DEVELOPMENT PROJECT MANAGER

2018 – 2020

GRID ALTERNATIVES – OAKLAND, CA

- Research, analyze, and coordinate stakeholders to ideate and help draft California policy to remove barriers to distributed energy resources

ASSOCIATE PROGRAM MANAGER, ENERGY EFFICIENCY AND CLIMATE ACTION

2017 – 2018

ASSOCIATION OF MONTEREY BAY AREA GOVERNMENTS - MONTEREY, CA

- Program manager in charge of implementing California Energy Commission grants funded by the Clean Energy Jobs Act (Prop 39). Worked with over 50 public school districts to implement \$30 million+ in renewable energy and energy efficiency projects.
- Responsible for grant writing and business development of energy efficiency and clean energy projects for the 21 jurisdictions in AMBAG's service territory.

SPECIAL PROJECT ASSOCIATE, ENERGY EFFICIENCY AND CLIMATE ACTION

2014 – 2017

ASSOCIATION OF MONTEREY BAY AREA GOVERNMENTS - MONTEREY, CA

- Lead team member in charge of site auditing, energy measure identification, energy and cost savings analysis, and management of grant applications.

ELECTRIC VEHICLE PROJECT COORDINATOR

2013

UNIVERSITY OF HAWAII MAUI - KAHULUI, HA

- Strategically delivered project requirements of the US Dept. of Energy Clean Cities EV Readiness Grant program.
- Established and maintained collaborative relationships with Maui County businesses and non-profits to advance electric vehicle knowledge and program participation.
- Professional speaking engagements to Maui County and State Energy Office

WORKSHOP SPECIALIST

2010 – 2013

CENTER FOR SUSTAINABLE ENERGY – SAN DIEGO, CA

- Researched and coordinated a diverse range of sustainability topics to deliver over 50 public workshops per year as part of the Energy Resource Center joint-partnership program with SDG&E.