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Witnesses: Dan Sakaguchi
Commissioner: Marybel Batjer
ALJ: Brian Stevens

PREPARED SUPPLEMENTAL TESTIMONY OF DAN SAKAGUCHI, MS, ON BEHALF OF THE CALIFORNIA ENVIRONMENTAL JUSTICE ALLIANCE ON R.20-11-003, THE ORDER INSTITUTING RULEMAKING TO ESTABLISH POLICIES, PROCESSES, AND RULES TO ENSURE RELIABLE ELECTRIC SERVICE IN CALIFORNIA IN THE EVENT OF AN EXTREME WEATHER EVENT IN 2021

The California Environmental Justice Alliance ("CEJA") submits the following supplemental testimony on the Order Instituting Rulemaking to Establish Policies, Processes, and Rules to Ensure Reliable Electric Service in California in the Event of an Extreme Weather Event in 2021, proceeding R.20-11-003. This testimony responds to Administrative Law Judge Stevens' ruling on June 14, 2021, and is timely served pursuant to that Ruling.

SUPPLEMENTAL TESTIMONY OF DAN SAKAGUCHI

I. INTRODUCTION

Q. Please state your name, position and organization.

A. My name is Dan Sakaguchi, and I am a Staff Researcher at Communities for a Better Environment ("CBE") where I have been on staff since August 2018. My CV and qualifications were set out in my January 11, 2021 opening testimony on behalf of the California Environmental Justice Alliance ("CEJA").

Q. What is the purpose of this testimony?

A. The purpose of this testimony is to provide additional information related to CEJA's Just Flex Rewards program in response to ALJ Stevens' June 14, 2021 Ruling. That Ruling requested information on the "general program design, program trigger, eligibility and enrollment, dual participation issues, text notification procedures, outreach and education, measurement and verification, compensation, implementation budget and schedule, load impact, cost recovery, and any additional information [CEJA] believes is necessary for Commission consideration."

Q. Before responding to each aspect of the ALJ Ruling, can you briefly describe the purpose of the Just Flex Rewards program?

A. Yes, this program is designed to target low-income and disadvantaged community households, and allow them to be part of the solution when the Emergency Load Reduction Program is called by empowering them to make decisions to lower their energy consumption when the grid is stressed.

Q. Why is the inclusion of a program like JFR important?

A. The environmental inequities disproportionately borne by disadvantaged communities make it vital that energy solutions to potential extreme weather events focus on demand reduction and other non-emitting resources. CEJA's JFR is the only program that is focused exclusively on rewarding DACs and low-income customers for participating in solutions. Based on their relative energy burden, these are the customers who are likely to respond to straightforward financial incentives by taking action to reduce load in a grid emergency, and they are the customers who could most benefit from this type of program. I believe that these customers should have a program prioritizing them in the suite of programs that the Commission ultimately approves.

Q. Now, let's tackle each aspect of ALJ's Ruling. Can you describe the general program design?

A. Yes, as my initial testimony in this proceeding described, the general program design is based on many successful programs in other states. The basic design of Just Flex Rewards is to pay community members to reduce energy consumption during the specific hours when the ELRP is called using a text alert and self-verification process. If text messaging is not available, other media could be utilized. The JFR would allow customers to decide whether they want to participate for a particular event. The JFR would automatically opt in all eligible households to minimize the need for initial enrollment outreach. Households that are not interested in the program could opt out of future events. Outreach would focus on educating community members about the program through trusted Community Based Organizations (CBOs). The JFR can use existing IOU communication platforms developed for outages and PSPS events and can provide better assurances that reductions will occur than a Flex Alert media campaign would.

This proposal would be a simplified version of the products that Baltimore Gas & Electric offers in Maryland and OhmConnect currently offers in California, and would target disadvantaged communities and low-income households. Other similar programs in other states include the Power Payback program offered by Ambit Energy in Texas,[1] Peak Savings Days by

[1] See https://www.ambitenergy.com/rates-and-plans/ambit-advantages/power-payback

Pepco in Maryland,[2] Peak Time Savings by ComEd in Illinois,[3] and Peak Energy Savings Credit by Delmarva in Delaware.[4] Such programs are often referred to as "Peak Time Rebate" or "Critical Peak Rebate" programs.

Q. Let's break down this general proposal into elements. What is the initial program trigger?

A. This program is designed to be part of the Emergency Load Reduction Program (ELRP). Initially, CEJA proposed that this program be triggered by a Flex Alert, but the trigger for the ELRP has now been clarified to include both day-ahead and day-of triggers. We believe that the trigger for this program should be the same as other programs within the ELRP.

Q. What happens after the program is triggered? What are the text notification procedures?

A. The program should be called when the ELRP is triggered, in the day-ahead time frame, and if not available in the day ahead, the program should be called several hours ahead. The program should utilize text messages in the language spoken by the enrolled households and be written in understandable language.

There are several reasons why text messaging is preferable to other communication methods for this program. An evaluation of the Flex Alert program found that: "[t]ext message alerts have definite merit as a medium to communicate the alerts because… the immediacy of text messages will allow the alerts to reach consumers at the precise time that conservation is needed."[5] Evaluations of other similar programs have found that demand reductions among

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[2] See https://www.pepco.com/WaysToSave/ForYourHome/Pages/MD/PeakEnergySavingsCredit.aspx

[3] See https://www.comed.com/WaysToSave/ForYourHome/pages/peaktimesavings.aspx

[4] See https://www.delmarva.com/WaysToSave/ForYourHome/Pages/DE/PeakEnergySavingsCredit.aspx

[5] 2008 Flex Alert Campaign Evaluation Report, prepared by Summit Blue Consulting LLC, issued December 10, 2008, p. 6. http://www.calmac.org/publications/2008_Flex_Alert_Final_Report_12-18-08.pdf

customers notified by text and phone call are twice that of those notified by emails.[6] Text messaging is also one of the primary media that OhmConnect has successfully used in its similar program.[7]

The initial text message should specify the following type of information:

- the day and hours of the Just Flex Rewards, such as from 4pm to 9pm;
- the actions that will all be required during those hours that day to participate in the Just Flex Rewards, such as: not running major appliances, turning up the temperature on air conditioning units, turning off non-essential lights, etc;
- the payment if the household completes these actions;
- a request to respond by a certain time indicating whether the household intends to participate. For example, the household could response "1" if they will participate, and respond "2" or not respond at all if they will not participate;
- the ability to opt out of the program in the future; and
- a phone number or website to contact with questions and recommendations for energy-saving tips.

The administrator could utilize the data from the text responses to generate an estimate of reductions.

Q. Are other text messages sent after the initial text message?

A. Yes, after this initial text, I recommend that the administrator send another text message to those intending to participate an hour before the window to remind them of their commitment.

Q. What if a utility does not have a telephone number capable of receiving texts for certain customers? Are there barriers to using this method of communication?

[6] An evaluation of SCE's Peak Time Rebate program found an average load impact of 0.11 kW load impact from customers notified by text, 0.14 kW from those notified by phone, and 0.06 kW for those notified by email. See "2014 Load Impact Evaluation of Southern California Edison's Peak Time Rebate Program," issued April 1, 2015, prepared by Nextant, Inc, p. 22. https://www2.nexant.com/2014-SCE-PTR-load-impact-evaluation-research

[7] See https://www.ohmconnect.com/

A. If possible, I recommend the JFR program focus on texting as the primary method for outreach and alerts, particularly for the pilot. Utilities are increasingly developing text messaging capability to communicate with customers in the case of wildfires and PSPS events.

However, some utilities have stated that they do not have text messaging capabilities for all qualifying customers. If text communication is not available for certain customers, the administrator could use other means, including an automated phone call or, less preferably, an email to reach the customer. Utilities can also encourage customers for whom they do not have mobile phone numbers to sign up. This outreach can and should be coordinated with the CBOs that have been working with utilities related to PSPS events. This is discussed further below.

We are also mindful of the utilities' obligations to comply with privacy laws in texting customers, which has been raised in prior testimony.[8] Given the emergency nature of JFR notifications, we encourage the utilities to evaluate whether such text alerts can be considered exempt from privacy law requirements. However, an alternative would be to use Baltimore Gas & Electric's model, in which customers are automatically enrolled and can opt out, and notification preferences already on file can be used for initial outreach. In all email communication for JFR, customers can be encouraged to update their contact information and opt in to receive text alerts.[9] Utilities can leverage existing subscription systems used for programs like PG&E's SmartRate program.[10]

Further discussions with the IOUs are needed regarding limitations on text-based communications. With respect to text messages, SDG&E recommends "further research to better understand ongoing administrative costs and channel management to ensure that reliance on such channels does not create customer confusion or opt-outs."[11] I agree with this recommendation and think that this consideration should be in the outreach I recommended for the program.

Q. What households are eligible to enroll within the JFR?

A. Our initial testimony recommended that residential customers in DACs and low-income households be eligible. Like the SmartEnergy Rewards (SER) program offered by Baltimore Gas

[8] E.g. PG&E states that it requires customer consent to send text messages. See PG&E Opening Testimony, pp. 1-17 to 1-18.
[9] See https://www.bge.com/WaystoSave/ForYourHome/Pages/EnergySavingsDays.aspx
[10] See https://www.pge.com/en_US/residential/rate-plans/rate-plan-options/smart-rate-add-on/discover-smart-rate/smart-rate-faq.page
[11] SDG&E Opening Flex-Alert-CPP Testimony, pp. 2-3.

& Electric,[12] JFR would automatically enroll households into the program. I recommend that the program initially enroll residential customers in disadvantaged communities and low-income customers. Ideally both bundled and unbundled customers would be eligible. Notably other DR programs, such as PG&E's proposed residential rewards pilot proposal would include both bundled and unbundled CCA customers.[13] PG&E, SCE and SDG&E have already identified the residential customers located in DACs, and have records of all CARE-enrolled customers. These customers are likely to be responsive to bill savings, given the utility burden carried by low-income customers. I propose that this initial phase of the program be led by the IOUs, and later phases could be led by other Load Serving Entities or third party providers. I recommend that IOUs use existing tools to administer this program, including their existing text messaging platforms for alerting customers to PSPS events, to minimize administration costs.

While I continue to believe that both households in disadvantaged communities and low-income communities should be targeted, I further recommend that the initial pilot program prioritize low-income households.[14] This will ensure that the targeting for this program is reaching the households that need the bill reduction the most and that are most likely to respond to the ELRP trigger.

Q. Can households participate in other demand response programs?

A. No. This program is intended to be additive to current demand response programs, and not duplicative. Therefore, if the customer enrolls in other demand response programs, including IOU and 3rd party programs, they will not be eligible for this program.

Given that this is a pilot program, for simplicity I recommend that only customers not already participating in existing DR programs be eligible. I believe low-income customers and residential customers in DACs who are not already enrolled in an existing DR program should be enrolled automatically in JFR, and not participate in other new programs that may exist unless they affirmatively opt out of JFR.

[12] See https://bgesmartenergy.com/

[13] PG&E Opening Testimony, pp. 4-12.

[14] This is consistent with the recommendation made by The Utility Reform Network in the proceeding.

Q. How can households find out about this program? Do you have an outreach and education proposal?

A. For outreach and education, I propose several steps. First, I propose that the IOUs receive feedback from the Disadvantaged Communities Advisory Group about their materials describing the program to ensure that the materials are accessible and transparent to low-income and disadvantaged communities. Second, I propose that the IOUs work with the CBOs that they are currently working with related to wildfire and PSPS outreach. These CBOs have experience reaching out to communities regarding outages and energy usage. They can help ensure both that the materials are accessible, and that the information is included in media that community members understand. I further propose that the utilities include information about the program in existing public meetings for CBOs, local governments, and interested community members describing the program. I also recommend that the utilities follow the guidance in the Commission's decision in R.18-10-007, ensure that the materials are available in prevalent languages, and utilize the outreach findings that have been shown to be most effective in outreach surveys.

The goal of this outreach and education should be to describe the program, how to opt-out, and how to earn money by participating in the program. For example, this outreach should give examples of what might need to be done to be paid, i.e. explaining pre-cooling or turning up the temperature on an air conditioning unit, and not running major appliances during the applicable timeframe.

Q. If a household participates in JFR, how should the energy reductions be verified?

A. There are two potential methods for verifying the energy reduction. The first way, and the one that I recommend, is that households participating in this program self-certify that they have reduced their energy usage by completing all the recommended actions. A post-event text message should be sent, asking the customer to press 1 to certify if they implemented all load-reduction actions. This per-event affirmative certification should address the free loader problem identified by many voluntary reduction programs, in which customers reduce or increase load with no awareness of the flex program to which their load impact is being credited.

The accuracy of self-certification can be further verified using spot-checked SmartMeter data. As part of self-certification, IOUs could require permission for, and inform participants

they may conduct, spot-checks of SmartMeter data to ensure that reductions in fact occurred. Where spot-checking shows no change (or increase) in usage where a customer self-certified compared to a historical baseline, that customer would be excluded from the program going forward. This type of self-certification is important to give predictability to the program as well as empower customers over their energy decisions. The Commission has allowed utilities to rely on self-certification for other low-income programs. The program's administration would be streamlined by self-certification with potential spot-checks as necessary.

Thus, I recommended the self-certification method from my initial testimony in this proceeding and continue to recommend this.

While self-certification is still the preferred method, SmartMeter data could be used instead of self-certification, given that we are now designing a program for implementation in 2022, which allows for more time for development. As stated in my initial testimony, JFR could calculate energy reductions per customer by using SmartMeter load data during the ELRP event compared to a historical baseline, as is commonly conducted in the SER and other similar programs. As discussed later, compensation would then be provided on a per-kWh basis, rather than as a flat payment.

Whether for spot-checking the veracity of demand reduction commitments, or for calculating payments, I recommend that the methodology for calculating baselines be suitable for extreme weather events. The program should be based on a similar baseline as the one for Baltimore Gas & Electric, which is based on comparing the household's typical usage on days with similar weather.[15] For example, a 3-in-10 or 5-in-10 baseline with a 100% day-of-adjustment may be reasonable, to ensure that participants are not penalized for dramatic temperature increases on the day of an ELRP event. I also recommend that the IOUs implement best practices for customer engagement learned through other similar programs, such as alerting customers of JFR savings as soon as possible after ELRP events.[16]

Q. How would customers be rewarded for participation?

A. If the Commission relies on my recommended method, once a customer has completed a self-certification in response to the third, post-event text message, their account will be credited

[15] https://www.bge.com/WaysToSave/ForYourHome/Pages/SER_FAQs.aspx

[16] See, e.g., https://www.greentechmedia.com/squared/dispatches-from-the-grid-edge/the-inside-story-on-baltimores-behavioral-based-demand-response

the flat amount, which will appear as a bill credit on the next bill. If an issue is later discovered in a spot-check, the IOUs can unenroll the household from future program participation until the issue is resolved. If the Commission chooses to rely on SmartMeter data, the load during the event hours would be compared to the household's baseline energy usage as described above.

Q. How much could a program like this reduce energy loads?

A. Results from other Demand Reduction programs can help estimate potential load reductions from this program. In the table below, I have included ex post load impact estimates for the BG&E program (given the close similarity to the program design proposed here) and for several California IOU programs. I have split these between critical peak rebate programs (where the customer is compensated for reducing load during certain hours) and other types.

While there are differences in program design, there are substantial similarities that allow for comparison. For example, Baltimore Gas & Electric called these Energy Saving Days on the hottest days of the year, which is comparable to the limited times when CAISO generally calls Flex Alerts. Similar to Baltimore Gas and Electric, CAISO generally only calls Flex Alerts on the hottest days of the year, and in past years, has only called Flex Alerts on around 1 to 4 days a year. Baltimore Gas & Electric, however, did not have a self-verification process like JFR so the numbers likely include households that did not intentionally lower energy usage.

Peak Rebate Programs

Name	Compensation Rate ($/kWh)	Average Power Reduction Per Customer (kW)
Baltimore Gas & Electric	$1.25	0.30[17]
OhmConnect	$1.50[18]	0.47 - 0.66[19]
SCE PTR	$0.75 / kWh	0.08[20]

[17] This value was calculated from the AEE Institute Case Study entitled "Maryland's Behavioral Demand Response Program" which was attached to Opening Prepared Testimony of Dan Sakaguchi, CEJA-001. There, we interpreted the table as reflecting reductions per event. Further review suggests a more conservative interpretation.

[18] See "Identifying Effective Demand Response Program Designs for Residential Customers," prepared by UCLA Luskin Center for Innovation, issued November 2020, p. 28. https://www.energy.ca.gov/sites/default/files/2021-05/CEC-500-2020-072.pdf

[19] Range shown is the per-participant impact between June and October. See "2016 Load Impact Evaluation for OhmConnect's DR Resources," prepared by Convergence Data Analytics, LLC, issued 10/21/19, p. 43. http://calmac.org/publications/OhmConnect_PY2018_Report_FINAL.pdf

[20] See "2014 Load Impact Evaluation of Southern California Edison's Peak Time Rebate Program," p. 2

Smart Thermostat / Peak Pricing Programs

Name	Program Type	Average Power Reduction Per Customer (kW)
PG&E SmartRate	Peak Pricing	0.2[21]
SCE Smart Energy Program	Smart Thermostat	0.50 - 0.66[22]
PG&E SmartAC	Smart Thermostat	0.52 - 0.62[23]

Demand reduction evaluations from the peak rebate programs suggest that higher compensation rates can significantly increase demand reduction. This was further confirmed in a CEC study, which found that on hot days, an incentive greater than $2/kWh led to significantly higher demand reductions than lower incentives.[24]

As a result, I recommend a higher compensation rate, discussed below, both to ensure that low-income customers are adequately compensated for the energy reductions they take on, and to ensure substantial load reductions across the state. With a higher compensation rate, I conservatively estimate that customers will reduce demand by 0.5 kW during JFR events. This estimate seems reasonable given the higher compensation rate than BGE and prior California CPR programs, in addition to the required per-event opt-in for participating residents. As described below, with a budget for 700,000 households participating in each event on average, this could result in potential reductions of around 350 MW.

Q. What should the compensation level be for the Just Flex Rewards?

A. In the initial phase of the program, we recommend a flat payment for all customers that perform all the recommended actions. This will streamline the process for the utilities and avoid penalizing customers who reduce their usage on other days or have low loads. This will add simplicity and accessibility to the program. In particular, I recommend a flat credit of **$1** per hour

[21] PG&E Reply Brief p. 4
[22] *Ibid.*
[23] *Ibid.*
[24] A study of financial incentives using customers of Chai Energy found that incentives higher than $2/kWh led to a 0.11 kWh reduction in energy use, compared to a 0.08 kWh reduction on average for lower incentives. See "Identifying Effective Demand Response Program Designs for Residential Customers," p. 57. https://ww2.energy.ca.gov/2020publications/CEC-500-2020-072/CEC-500-2020-072.pdf

for each ELRP event. Assuming an average 0.5 kW reduction per customer, this yields a $2 per kWh rate. In other words, for a 5-hour event, JFR would compensate each participating household $5. For emergency events that are called the day of or hours before the event, I recommend a rate of $2/hour, which translates into a $4/kWh rate assuming a 0.5kW reduction per customer. This higher rate should only be utilized when events are called hours before rather than in the day-ahead timeframe.

If, instead, SmartMeter data is used to calculate load reductions per customer, I recommend that customers be compensated at **$2 per kWh** of load decreased below the baseline during ELRP events. This level, which is slightly above the $1.25 per kWh that Baltimore Gas and Electric pays for its program, accounts for the difference in electricity rates and costs between Maryland and California. This is also significantly higher than the SCE program that showed limited results.

Q. Did SCE have a program similar to this that was not successful? Do you think this program would be any different?

A. As noted above, SCE did have a program targeting residential load that provided significantly lower demand reductions. There are several key differences between the JFR and SCE's prior program that I think make the design of JFR more likely to be successful. First, the compensation rate for JFR is significantly higher than that of SCE, which in turn was lower than that of both BGE and OhmConnect. Second, JFR requires an affirmative response on a text-based platform for each ERLP event. This type of engagement has been shown to work in other programs like the one that I have highlighted from Baltimore Gas & Electric. I think these key differences make it likely that JFR will be far more successful than SCE's program.

Q. What should be the duration of this program?

A. I recommend that the program be evaluated by a working group after the Fall of 2022 to look at ways to improve effectiveness and make potential changes to the program. I suggest that the IOUs initiate a working group that includes demand response providers such as OhmConnect, CCAs, CBOs, and other stakeholders. This working group could help further refine and potentially expand the program based on data from the first year of implementation.

While it could grow into a permanent component of statewide ELRP, the current proposal is for a two-year program. Because it has a short time frame, is limited to residential customers who are either low-income or reside in DACs, and is designed to test a new framework, it is correctly characterized as a pilot program.

Q. What should be the budget of this program?

A. I recommend that the initial budget of this program be at least $20 million. This budget would allow JFR to target up to around 700,000 households with a payment of $5 each for up to four ELRP events and have over $4 million for initial outreach and administration costs. Given that this program will utilize existing utility infrastructure, we expect that outreach and administration costs will be low.

Q. Was this material prepared by you or under your supervision?

A. Yes, it was.

Q. Insofar as this material is factual in nature, do you believe it to be correct?

A. Yes, I do.

Q. Insofar as this material is in the nature of opinion or judgment, does it represent your best judgment?

A. Yes, it does.

Q. Do you adopt this testimony as your sworn testimony in this proceeding?

A. Yes, I do.

Q. Does that conclude your testimony?

A. Yes.