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

PREPARED PHASE 2 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 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 the August 10, 2021 Assigned Commissioner's Scoping Memo and Ruling for Phase 2 and Administrative Law Judge Stevens' August 11, 2021 e-mail guidance on proposals, and is timely served.

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 my testimony is to respond to ALJ Stevens's instruction that "the California Environmental Justice Alliance …need not resubmit their July 2021 proposals, but should indicate in opening testimony whether they still advocate the proposals and provide modifications, if any, that they now support." In addition, I will offer feedback on the August 16, 2021 staff proposal ("Staff Proposal").

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 CEJA continue to advocate for the Just Flex Rewards ("JFR") program?

A. Yes, CEJA continues to advocate for the JFR program, as discussed in my testimony submitted July 7, 2021 and July 21, 2021, and a few refinements further explained below ("one-click" unenrollment and an advice letter process to determine the operational details.) That said, CEJA was pleased to see core aspects of the JFR proposal reflected in the residential piece of the Staff Proposal. With the specific refinements to the residential Staff Proposal that I discuss below, I believe adoption of the residential Staff Proposal could obviate the need for the JFR.

Q. **Do you envision further refining the JFR program?**

A. Yes, but my refinements are limited to two minor changes. First, I recommend ensuring that customers are disenrolled automatically from JFR when enrolling in other demand response programs. Second, I recommend that utilities present the details of their proposed text messaging platform in an Advice Letter process to work through operationalizing JFR. As further discussed below, I continue to recommend that the basic aspects of the JFR program remain as described in my previous testimony.

Q. What are the concerns that other parties raised about the JFR?

A. In response to supplemental testimony, parties raise four primary concerns with the JFR program: 1) my estimate of the load reduction, 2) the compensation rate, 3) the opt-in/opt out processes, and 4) the text message platform.

Q. Let's take each of those in turn. Do you continue to advocate for your estimate of the load reduction?

A. Yes, as I described in my July 21, 2021 testimony, PG&E's disadvantaged community pilot confirmed that my estimate of average load reduction of 0.5kW per participating household

was reasonable because that pilot achieved an even greater reduction.[1] It is important to note that while JFR is a behavioral demand response program, it requires each participating household to opt-in for each event, as well as post-event confirmation that participation occurred. These aspects will help ensure the level of reductions that I have estimated. In addition, I continue to recommend that the JFR program be reviewed after a year to provide data on the reasonableness of this estimate. After the first year of the program, load reduction estimates should be based on evaluated program performance.

Q. Do you recommend any changes to the rate of compensation for JFR?

A. Yes. The intent of the JFR is to provide customers with simple, predictable bill savings that adequately compensate low-income and disadvantaged communities for the burden they take on to reduce demand during ELRP events. In my prior testimony, I recommended that participating households be compensated at a flat rate of $1 per hour of ELRP event (e.g. an event called from 3 to 8 PM would yield a $5 bill credit). If the compensation is based on measured consumption relative to a per-household baseline, I recommended a rate of $2/kWh, increasing to $4/kWh for events called on the day-of.

However, I now recommend a hybrid approach, using measured demand reductions relative to a calculated baseline, yet still providing flat payments. This would obviate the need for self-verification and make the program easier to administer. In particular, I recommend that customers who demonstrate demand reductions less than an average of 0.5 kW during an ELRP event (i.e., 2.5 kWh for a 5-hour event) receive a **$1 per hour** bill credit, while those that exceed 0.5 kW receive **$2 per hour** bill credit. As before, for events called on the day-of, I recommend these rates be doubled. This model ensures that payments remain simple and customers are compensated for participation at any level to encourage future participation, while still incentivizing deeper demand reductions.

Q. Do you continue to advocate for the same opt-in/opt-out process?

[1] *See* PG&E, "Serving the Underserved: Lessons learned from Behavioral Demand Response Implementation", presentation delivered at the 43rd PLMA Conference on May 12th, 2021. https://www.peakload.org/43rd-conference-agenda.

A. I would like to make one minor, but crucial, refinement to the opt-in and opt-out process in response to concerns raised in the July 21, 2021 testimony. As an initial matter, while there were concerns raised about automatically opting in customers to a residential ELRP program, PG&E's proposed residential behavioral DR program appears automatically to opt in their customers receiving Home Energy Reports.[2] The Staff Proposal also opts customers into its proposed residential program.[3] Based on the evidence in this record, I continue to believe that automatically enrolling low-income and DACs residential customers so they are given the option to participate by reducing energy demand during an energy emergency is both feasible and critical.

Of greater concern is the persistent difficulty third-party residential demand response ("DR") providers report in disenrolling customers from an existing program.[4] Customers should not be made to wait or navigate cumbersome customer service processes in order to enroll in an alternative DR program. Automatically enrolling customers will require the Commission to streamline disenrollment. The disenrollment problem apparently predates this proceeding, but this proceeding must not adopt an auto-enroll program that deprives more comprehensive DR programs of customers.

In particular, I no longer believe that the JFR should require an affirmative opt-out from customers in order for them to enroll in a different DR program, as I originally stated in my July 7, 2021, testimony. Instead, I support the recommendations from OhmConnect reply testimony, namely that JFR "should allow for automatic disenrollment as soon as (a) the customer authorizes data access to another DRP, or (b) the DRP moves to add the customer to CAISO's Demand Response Registration System ("DRRS")."[5] To the extent possible, I propose that the Commission order a "one click" disenrollment process that allows any customer who chooses to join a different DR program to opt-in to the new program and out of the old program with a single confirmation click. This will require prompt action and close coordination between the IOUs and CAISO.

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[2] *See* PG&E Supplemental Testimony, at pp. 4-5, "all PG&E customers who receive Home Energy Reports (HER) … will receive alerts in advance of peak and near peak day".
[3] *See* Energy Division Staff Concept Paper, p. 9, "All residential customers would be automatically enrolled in ELRP (except customers currently enrolled in supply-side DR programs). There would be no required sign-up or acknowledgment process."
[4] *See, e.g.* ,the July 21, 2021 Reply Testimony of OhmConnect.
[5] OhmConnect Reply Testimony, p. 6.

Q. Do you continue to advocate for the same type of text message platform for JFR?

A. I believe that the platform could be modified to work with the vendors' capabilities and feedback that the utilities receive through the Disadvantaged Communities Advisory Group. Several utilities have expressed concerns about the functionality of their text message system, whether it could be used in the way that I've recommended, and potential concerns about privacy and consumer protection laws. Although I believe that the technical capability should exist because it exists in a number of different platforms, I think it makes sense to allow utilities more flexibility to develop the optimal platform. While texting is likely the most effective way to communicate timely information to customers, if a customer has opted out from receiving text notifications from the IOU, that decision should naturally be respected. For such customers, I recommend that the IOUs reach out to customers via other communication channels with details on JFR and providing instructions on how to change their notification preferences. I further recommend that utilities submit details of the platform they intend to use in an advice letter process after presenting their recommendations to the Disadvantaged Communities Advisory Group.

Q. **Do you have any feedback on the Staff Proposal?**

A. Yes, I have feedback on three aspects of the Staff Proposal. First, I support the Staff Proposal's proposed residential ELRP program with a few modifications to ensure that it benefits low-income and disadvantaged communities. Second, the increased deployment of smart thermostats should include a program that targets and prioritizes lower income households. Third, the compensation in the CPUC's ELRP and other demand-side programs should take into account the impact of industrial resources on local air quality.

Q. Let's take each aspect of your feedback in order. You referred to a Staff Proposal related to a residential ELRP program. What is the Staff recommending?

A. The Staff is recommending a program that would allow all residential customers to be considered eligible to participate in the ELRP by default (except for customers participating in existing supply-side DR programs.) The Staff recommends that residential ELRP be triggered by a Flex Alert or Grid Alert in the day ahead. The Staff further recommends that the Flex Alert

marketing material be modified to promote this residential ELRP, that the program be administered by IOUs, while allowing DR providers to enroll participants from Staff's program, at which point those customers would be disenrolled from the Staff's program.

Q. Did the Staff explain why they are recommending this residential program?

A. Yes, the Staff correctly observed that while CAISO depends on load reductions from residential customers during Flex Alerts, those customers are not paid. The Staff noted the equity and effectiveness issues raised by the Flex Alert framework, given that non-residential customers are compensated for load reduction and the voluntary program may be losing its effectiveness due to customer fatigue. I pointed out the same issues in my initial testimony in this proceeding. As I described, past evaluations of the Flex Alert program led me to question whether and by how much Flex Alert campaigns can reduce energy usage.[6] Based on this, I recommended that the money for the Flex Alert program "be spent on a targeted campaign that pays community members to reduce their energy usage."[7] This was part of my initial basis for recommending the Just Flex Rewards program.

Q. Do you support Staff's residential ELRP program?

A. Yes, I do support the general concept of the Staff's residential ELRP program with some refinement. As I describe above, the Staff's reasoning is the same as mine was when I proposed JFR. I agree that residential households should be compensated for reductions and that a program that compensates residential customers will be more effective than a voluntary program. Similar to the Staff's proposal, the basic design of JFR is to pay community members to reduce energy during specific hours on Flex Alert days.

Q. You mentioned that you would refine Staff's residential ELRP proposal. Please explain your recommendations for refining the Staff's proposal.

A. To ensure that the Staff's proposed program benefits low-income households, I recommend refinements related to outreach and education, compensation, program evaluation,

[6] CEJA-001, p. 7 (citing a study that of the Flex Alert program that found it could increase load rather than decrease load.)
[7] CEJA-001, p. 8.

program communication, targeting, baseline, and opt-out mechanism. If the Staff Proposal includes these refinements, I would support implementing the Staff's proposal instead of JFR. Specifically, I recommend that the residential ELRP program include the following:

- Outreach and Education: IOUs should work with the Disadvantaged Communities Advisory Group to develop targeted and accessible messaging for DACs and low-income households. IOUs should also work with community-based organizations ("CBOs") for outreach and education of DACs and low-income households related to the program. I recommend that this program incorporate the outreach recommended by PG&E as part of its residential rewards programs in its July 2021 testimony.[8]
- Compensation: I recommend that the residential ELRP program compensate low-income households using the model presented earlier in this testimony for the JFR program. Namely, I recommend using measured reductions and flat payment of $1 per event hour for reductions less than 0.5 kW or $2 per event hour for greater reductions, doubled for events called day-of. However, if payments were to be proportional to demand reductions, I recommend a payment of $2/kWh, increasing to $4/kWh for events called day-of. This is the same level that I recommended for the JFR based upon a CEC analysis and other similar programs as described in my July 21 testimony,[9] and is the same rate Staff proposes for the ELRP non-residential customers and BIP aggregators.[10] In addition, this is the same compensation level in the Governor's ELRP program.
- Program Evaluation: Just as I recommended for the JFR program, I recommend that the Staff's residential ELRP program be reviewed after a year to assess the data and possible refinements for the next year. This program evaluation should analyze, among other things, whether the program is reaching and meaningfully benefiting low-income and disadvantaged communities.
- Program Communication: I recommend that steps be taken to ensure that low-income households are aware when the ELRP is activated. Although the CPUC's program will include alerts through the Flex Alert program, general alerts do not always reach low-income and disadvantaged communities. To better ensure that information about day-

[8] See PG&E Supplemental Testimony pp. 8-10.
[9] CEJA-04 at p. 3.
[10] Staff Concept Paper p. 7.

ahead alerts reach low-income and disadvantaged communities, I recommend that the IOUs allow low-income households that are automatically enrolled have the option to sign up for text messages that specify the timeframe the ELRP will be called, measures that can be taken to achieve reductions, and estimated bill credit if all measures are taken. I further recommend that the utilities work with local CBOs to ensure that their members have information related to the ELRP being called. After the ELRP is called, I recommend that the utilities take additional steps to communicate the bill reductions to low-income households. This can be through text messages for households that sign up for text messages, or it can be through phone calls, the mail, or email communications.

- Targeting: The Staff's proposal targets all customers and households. If funding is limited, I recommend first targeting the program to low-income households.
- Baseline: As stated in my July 7, 2021 testimony, I support setting a simple baseline that ensures customers are not penalized for dramatic temperature increases on the day of an ELRP event. For example, a 3-in-10 or 5-in-10 baseline with same-day adjustments may be reasonable.
- Opt-out Mechanism: As described above with relation to the JFR, households must be automatically opted out of the program when they opt-in to another DR program. I recommend a one-click disenrollment process that is both transparent and accessible for this program. A benefit of this type of program is the increased customer engagement. That increased engagement can help empower customers to participate in other demand-side programs, which can provide system and local benefits far beyond emergency situations. Customer migration from an ELRP to a different DR program should be encouraged, and not limited in any way by participating in the ELRP.

With the inclusion of these recommended refinements, I believe the Staff's proposed residential ELRP program represents a critical step the state can take for lowering demand on highest demand days of the year.

Q. Do you have an estimate of the cost and magnitude reduction for a residential ELRP program with your refinements?

A. Given that the residential ELRP program would not require per-event opt-in from customers, we anticipate lower demand reductions of approximately 0.25 kW across all customers. This would yield 250 MW of load reduction per one million enrolled customers.

If the recommended flat bill credits are used (assuming for the sake of simplicity a day-ahead five-hour event, that a third of customers show no demand reductions, a third show reductions of 0.25 kW, and a third reduce by 0.5 kW), this would cost $5 million per one million enrolled customers per event. If the $2/kWh rate were used (assuming a 5-hour day ahead event), this would cost $2.5 million per one million enrolled customers per event.

However, given the novelty of this program, demand reductions should be evaluated after the first year of the pilot for future years.

Q. You also mentioned that you have comments on the Staff's Smart Thermostat proposal. Can you explain your comments and recommendations?

A. Yes, I support the deployment of smart thermostats to reduce demand, but I believe that there should be a targeted program for low-income households to ensure these households can participate in this opportunity. Other utilities have deployed smart thermostats to effectively reduce demand. For example, I am aware of Minnesota Valley Electric Cooperative's Energy Wise program. That program provides a free smart thermostat that can automatically control cooling and heating during peak energy events. Participating customers receive a direct discount on electricity during summer months in exchange for pre-cooling the house by two degrees in the morning and allowing temperatures to rise by up to 4 degrees in the afternoon and evening. Minnesota Valley Electric Cooperative's demand response, smart thermostat and other programs have reduced peak demand by 31 percent.[11] Although smart thermostats can effectively reduce demand, low-income households face barriers to adopting smart thermostats.

Q. What type of barriers do low-income households face that can prevent adoption of smart technology?

A. Low-income households and communities of color can face a number of barriers. An initial barrier for many low-income households and communities of color is that many of these

[11] https://cdn.ilsr.org/wp-content/uploads/2020/09/Demand-Response-Report-2020.pdf

community members do not have the internet access necessary for a smart thermostat.[12] In addition to lacking internet, many residents in low-income communities of color lack the capital needed to invest in smart thermostats, especially since the pandemic.

Q. Given these barriers, do you have a recommendation related to smart thermostats?

A. Yes, I recommend that deployment prioritize low-income households in several ways. I recommend targeted outreach to low-income households and that the incentives pay for the capital cost of the smart thermostats. This means that the incentive for low-income households should be at least $200. I further recommend that the deployment be based on the successful model from Minnesota Valley Electric Cooperative in which the utilities provide the smart thermostat and offer bill rebates for their usage during the summer. Given the high energy burden that many low-income households face, this connection of usage to bill rebates is essential to reward households for the steps taken to reduce peak demand. This can be facilitated either through the IOU programs or third-party DR programs. Low-income households should be provided accessible information to decide which program they want to participate in. I further recommend clear communication related to the smart thermostat so that community members understand how it will be used and at what time.

Q. You also mentioned that you have comments on the Staff's proposed levels of compensation for the non-residential ELRP and demand response programs. Can you describe your comments?

A. Yes, the compensation in the CPUC's non-residential ELRP and other demand-side programs should take into account the impact of industrial resources on local air quality. We continue to recommend that all use and reliance on prohibited resources should be eliminated due to the significant health impact of these sources on local communities. I described the risks associated with these polluting sources in my initial testimony in this proceeding, which was submitted in January 2021. In addition, we further recommend that industrial sources that lower their demand in response to an ELRP and also lower pollution from their facility should be rewarded for the reduction in pollution.

[12] *See, e.g.*, https://www.ppic.org/publication/californias-digital-divide/

Q. Why do you believe that a connection should be made between reduction in pollution and the compensation level for ELRP and demand-response programs?

A. California communities breathe some of the worst air in the country. Several areas in the state are failing to meet the levels set by the United States Environmental Protection Agency for ambient air, and industrial sources are a major contributor to this pollution burden. Pollution reduction has a number of health-related benefits to communities. These significant benefits should be taken into account, particularly when combined with the health impacts from extreme heat days, when the ELRP is most likely to be triggered. Multiple studies have found increased morbidity and mortality risk from air pollution during extreme heat days,[13] underscoring the need to reduce air pollution, particularly in disadvantaged communities, during such events. Further, ELRP events are often called on or around days with some of the year's worst air quality, due to ozone created during hot days and, increasingly, wildfire smoke. For example, the Bay Area Air Quality Management District's Spare the Air program issues alerts during days exceeding an Air Quality Index (AQI) of 100.[14] Four of the six called Flex Alert events in 2021, and four of the five such events in 2020 have also been Spare the Air Days.[15] Similarly, the San Joaquin Valley Air Pollution Control District issues Health Cautions during wildfire smoke days and other air pollution events. This year three of the Flex Alert events were within one day of a Health Caution, and last year three of the five Flex Alerts overlapped with a Health Caution.[16] This strong overlap between Flex Alert events and bad air quality days warrants a mechanism to reduce air pollution through the ELRP.

Q. Are you proposing a separate program or just changing an aspect of current programs?

A. My proposal would only change the compensation structure for non-residential ELRP and demand response programs. I am not proposing a new separate program.

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[13] *See, e.g.*, Pascal et al. (2021) "Extreme heat and acute air pollution episodes: A need for joint public health warnings?", Hansel et al. (2015); "The Effects of Air Pollution and Temperature on COPD", and Scortichini et al. (2018); "Short-Term Effects of Heat on Mortality and Effect Modification by Air Pollution in 25 Italian Cities".

[14] https://www.sparetheair.org/understanding-air-quality/air-quality-forecast

[15] *See* Spare the Air called events at https://www.facebook.com/sparetheair/

[16] *See* https://www.valleyair.org/recent_news/recent_district_news.htm

Q. How would the compensation structure work?

A. I recommend that all industrial sources receive a higher payment of $2.50/kWh for the non-residential ELRP upon confirmation of a pollution reduction from the facility during the day. I propose this as a pilot program that should be reviewed after a year to determine if this type of incentive payment can be applied to other DR programs. A 50-cent adder for pollution reductions on top of the $2/kWh proposed in the Staff Concepts paper is a reasonable incentive, given the substantial public health benefits of emission reductions.[17]

Industrial sources that have been verified not to use prohibited resources or combustion-based back-up generation during the ELRP event would be eligible for this increased compensation rate. In order to receive the higher rate, customers must submit to the enforcement division of their regional air district and to the IOU copies of emissions records that verify a substantial reduction in pollution emissions on the day of the ELRP. Either the air district or the IOU can request additional records or on-site inspections to verify the emission reductions, and both the air district and the IOU must validate the emissions reductions prior to the facility receiving a bill credit. Permissible emission records should be specific to the day of the ELRP and may include records from Continuous Emission Monitoring Systems or from emission source throughputs.

Q. Does that conclude your testimony?

A. Yes.

[17] *See, e.g.* cost per ton benefits of key criteria pollutants estimated under the EPA BenMap model. https://www.epa.gov/benmap/sector-based-pm25-benefit-ton-estimates