

**DEER Peak Ad Hoc Workshop #1 - Meeting Summary**  
**April 3, 2018**  
**9:45 am – 4:00 pm**  
**Pacific Energy Center, 851 Howard St, San Francisco, CA 94103**  
**Final Meeting Summary**  
**Facilitator: Ellen Zuckerman, Independent Consultant**

## **I. OVERVIEW**

On April 3, 2018, the California Energy Efficiency Coordinating Committee (CAEECC) convened a meeting at the Pacific Energy Center in San Francisco to discuss changes to the Database for Energy Efficiency Resources (DEER) peak period definition. Participants included CAEECC members; parties in R.14-08-013, R.14-10-003, R.15-12-012, R.16-02-007, R.13-11-005; other interested individuals; and the CAEECC facilitation team. Thirty-one individuals participated in-person, and eight attendees participated via webinar. Meeting facilitation was provided by Ellen Zuckerman (Independent Consultant) and Meredith Cowart (CONCUR). Meeting materials, including presentations, are provided on the CAEECC website at: <https://www.caeec.org/4-3-18-adhoc-meeting-deer-park-peak>. A full list of meeting participants is provided in Appendix A.

In this document, the majority of the discussion is captured without attribution. In some cases, the name and/or affiliation of the speaker is identified, because (1) they are presenting on a specific subject or (2) their affiliation is relevant to the comment.

In this document, presentations are summarized only if the presenter's PowerPoint is not available on the CAEECC website (see link above). Following the presentations, any short clarifying questions are listed and *responses to questions* are noted in *italics*. Any longer discussion points are summarized under Key Discussion Themes in sections IV and VI. Section VI. Outcomes and Next Steps, at the end of this document, lists all next steps discussed at the workshop.

## **II. WELCOME AND INTRODUCTIONS**

E. Zuckerman welcomed participants and reviewed the goals of today's meeting: (1) To provide a level set of information on the history and genesis of the proposed DEER peak definitional change; (2) To work to identify common areas of agreement and disagreement on possible changes to the DEER peak definition; and (3) To identify areas for additional exploration at a future workshop. H. Fitzpatrick reviewed housekeeping, safety roles and safety measures.

## **III. PRESENTATIONS: INTRODUCTION AND DEER PEAK HISTORY AND SHIFTING PERIOD**

The meeting began with a series of short presentations introducing the rationale for this meeting, the history of the DEER peak period, the logic of a shift to 4-9 pm, and the likely and potential implications of a shift. All presentations are available on the CAEECC website (see link above).

- *Compliance requirement and objectives, vision, scope, and asks (A. Desai, Southern California Edison [SCE])*
- *Origins of DEER's Peak hours, DEER's current state and methodology (J. Hirsch, Consultant to California Public Utilities Commission [CPUC] Staff and B. Pena, California Public Utilities Commission [CPUC] Staff)*
- *Observations on 4-9 pm DEER Peak hours (D. Hou, California Independent System Operator [CAISO])*
- *Establishing 4-9 pm DEER Peak hours: Experiences from other proceedings (J. Grygier, Pacific Gas and Electric [PG&E])*
- *Establishing 4-9 pm DEER Peak hours: Experiences from other proceedings (H. Hebert, San Diego Gas and Electric Company [SDG&E])*
- *Implementing 4-9 pm in IOU energy efficiency programs: Avoided cost calculator (B. Horii, Energy and Environmental Economics [E3])*
- *Implementing 4-9 pm in IOU energy efficiency programs: Demand savings impacts (S. Dee, SDG&E)*
- *Implementing 4-9 pm in IOU energy efficiency programs: Demand savings impacts (A. Fergadiotti, SCE)*

#### **Clarifying Questions on Presentations:**

Regarding the second presentation on Demand savings impacts by SDG&E - what period of months were used to analyze DEER Peak kW portfolio impacts? The SDG&E analysis relied on 2008 weather data, which gave us a period of September 9-11, and the same three days were used to calculate DEER Peak kW portfolio impacts.

- *Could you clarify what the Investor Owned Utility (IOU) DEER peak proposal is? The IOUs have not developed a proposal; the purpose of this Ad Hoc workshop is to solicit input for our proposal. The purpose of the presentations you have just seen is to give participants a sense of what is happening in terms of high-level trends.*
- *What is the state of dynamic or real time pricing, which would allow for sending the correct signals for some of the more flexible loads? All utilities have experimented with dynamic and semi-dynamic rates - it's complex to get going, and the technology is not quite there, but it is a direction all utilities are eventually going to go.*

#### **IV. KEY DISCUSSION THEMES - SHIFTING DEER PEAK PERIOD**

Following the presentations, meeting participants broke into small groups to discuss answers to the following questions:

(1) Should the current DEER peak period of 2-5 pm be shifted to 4-9 pm, or is there a data driven (or policy driven) alternative that you prefer? Why?

(2) Peak is currently defined as, "The average grid level impact for the measure from 2-5 pm during the three-consecutive weekday period containing the weekday with the hottest

temperature of the year.” Does this current methodology for updating the DEER Peak values continue to make sense, or is there a preferred alternative? Why?

Key discussion themes from the discussion immediately following the presentations, and that occurred during the small group discussions, are summarized below. In most cases, viewpoints within the small groups were diverse, and so conversation is summarized by the viewpoints that emerged across the full range of participants, rather than by small group. In some cases, it is noted that a unanimous opinion or proposal came out of a small group discussion.

***Unanimous Agreement that the Current 2-5 pm Peak Definition Should be Changed.***

All participants agreed that the current DEER peak definition no longer represents the period of time during which the most valuable demand savings occur. As one participant stated, “We all can acknowledge that the current measure is inapplicable.” Participants noted that recent CAISO, IOU, CEC, CPUC actions have acknowledged that the system peak has shifted to later in the day, and that energy reductions now have greater value during the 4-9 pm period than they do during the (currently defined) 2-5 pm DEER Peak.

As noted below, one participant stated that transmission and distribution (T&D) costs are still high during 2-5 pm, however this participant did not feel that this warranted continued use of the 2-5 pm peak period (rather, he supports use of the “no-peak” alternative, discussed below). In addition, some participants stressed that the use of the 2-5 pm peak should be continued in the interim and that existing contracts established to meet 2-5 pm peak goals should be “grandfathered in” when a new definition is established. Again, however, these participants did not think that a 2-5 pm DEER peak provides a useful target and did not advise its use moving forward.

One participant stated that it is critical to consider how a shift away from 2-5 pm will affect existing programs and resource planning, as the demand savings analyses (presented by SDG&E and SCE) show that shifting DEER peak will result broadly in reduced peak savings from the industrial sector measures and increased peak savings from the residential sector measures. Similarly, another participant expressed concern about the impact of a DEER peak shift on custom measures, particularly chillers, which provide important efficiency savings. Another participant noted that these impacts may not be as extreme as those presented, given that the current programs are designed to accomplish both energy savings and peak demand savings for peak as currently defined, and that many of these programs can be adapted to accomplish savings for a later peak period.

***Strong Support for Shifting DEER Peak to 4-9 pm Period.*** While no clear “winner” emerged from the straw poll regarding the favored approach to a DEER peak change (many small groups reported that they were split 50-50 between a shift to 4-9 pm and a “no-peak” alternative, as described below), in the discussion it appeared that just over half of the participants favored shifting DEER peak from 2-5 pm to 4-9 pm. Participants supporting this shift noted that: (1) in previous proceedings the CAISO, CEC, and IOUs have agreed that this is the most valuable time period during which to reduce demand, (2)

a single defined peak period allows for ease of reporting, ease of communication between IOUs and implementers, and for focusing implementers on the opportunities most likely to save demand during system peak, (3) it is consistent with the messages customers are receiving as a result of the 4-9 pm on-peak period approved in recent general rate cases, (4) there will be minimal changes to the system peak over the next 5 years or so, and revisiting the methodology every 5 years or so is not onerous, (5) while the methodology would not capture demand value with as much accuracy as the “no-peak” measure described below, it is far more accurate than the current 2-5 pm peak and may be preferable for the reasons described above.

One participant noted that peak Goals were established specifically to reduce the need for grid capacity, by concentrating efficiency efforts on the relatively few hours during heat storm events in the summer. He stated that, rather than throwing out the idea of peak altogether, the interested parties should work to get the definition right.

***Support for “No-Peak” and Relying Instead on Measure Load Shapes and the Monetary Value of Hourly Avoided Cost Benefits from the E3 Avoided Cost Calculator.*** Again, while no clear winner emerged from the straw poll, in discussion it appeared that just under half of the participants supported the concept of doing away with a DEER peak definition, and shifting to an alternative methodology. This methodology would rely on using existing (and updated) DEER electric savings load shapes and the estimate of hourly benefit from a unit amount of electricity saved from the E3 Avoided Cost Calculator. One participant added that such a methodology would serve as a “single source of proof” that is consistent with other proceedings and allows for both consistency and accuracy.

Proponents of this approach noted that that the time periods in which load is greatest do not necessarily correspond with the time periods in which energy savings provide the most value. A flexible definition that accounts for all of these values “makes more sense than an inflexible measure that attempts to approximate these values.” These participants also noted that by definition, this proposed methodology would include the reduction in need for grid capacity, and so obviates the need for a single period.

A participant stated that load shapes data and the supplemental data needed are already regularly compiled and updated, although they would need to be extracted to calculate the demand value of a given energy savings measure. B. Horii (E3) stated that the Avoided Cost Calculator automatically incorporates the value of demand reduction during peak periods now because it considers updated 8,760 avoided costs which include avoided energy, ancillary services, capacity (distribution, transmission, and generation), and renewable portfolio standard costs.

Participants also stated that a benefit of a “no-peak” solution is that updates to peak (such as the one being proposed) would not be needed, as a more flexible definition would incorporate the full value stream and “change as the values [of the avoided costs] change.” However, it is important that the measure load shapes be updated regularly.

One participant added that while peak and capacity costs have shifted to 4-9 pm, the generation curves from the Avoided Cost Calculator in B. Horii's presentation showed that T&D costs may still coincide with the current 2-5 pm peak, because distributed PV solar still requires T&D. Consequently shifting peak would mean devaluing the commercial and industrial programs that offer reductions during the time when T&D costs may peak (2-5 pm). He noted that it may be more effective to do away with peak and identify an alternative method (such as the Avoided Cost Calculator driven update of peak) that is able to capture the value of these demand reductions.

One participant stated that many measures have greater variation in effectiveness over the course of the 4-9 period than they do over the 2-5 pm period, and that when the effectiveness is averaged over the full time period, they appear less valuable, and so this time period may be less effective in targeting measures that offer demand savings for only a short window of time in the 4-9 range.

A participant asked how, if a "no-peak" alternative is selected, and the demand values are less predictable, this information would be made available to implementers, so as to ensure that they are providing measures that lead to demand reductions at the most valuable times? The NRDC and CPUC representatives responded that the predicted impacts for different measures is available by reviewing the Avoided Cost Calculator, published documents, and the 8,760 DEER load shapes.

***Interest in Developing a Measure to Support a Smooth Transition to a New Methodology.*** Several participants suggested developing an interim measure to allow for a smooth transition between the current peak and the new DEER peak definition or the "no-peak" alternative. Proponents stated that existing programs will have difficulty switching to a 4-9 peak, so having all new programs recognize a 4-9 peak and giving existing programs time to switch to a 4-9 peak would help smooth this transition. In addition, this helps recognize that the transmission or distribution peak may occur at a different time from the generation peak. One suggestion made was to include two peaks, 2-5 pm and 4-9 pm, with different weights for different measures. The "secondary peak" could be broken down by sector rather than by location. The interim solution would be re-evaluated based on a trigger in the future. E. Zuckerman noted that a secondary peak already exists in the current DEER Peak definition, and that this secondary peak definition is meant to target a specific segment (schools), and that this definition or a similar one might fulfill the goal of ensuring a smooth transition to a new methodology.

***Guiding Principles in Determining a DEER Peak Shift.*** Following the small group discussions, M. Chhabra reported that, rather than supporting a "4-9" option or a "no-peak" option, participants in his small group developed 5 guiding principles to determine how a peak period should be chosen:

1. Targets for programs should be set using the same time period as achievements
2. The targets should be easy to apply and directional guidance should be provided to 3<sup>rd</sup> party implementers
3. Targets should be based primarily on DEER and the EE ecosystem

4. The time period selected should use on-average values that are accurately forecasted
5. The time period should consider both CAISO data as well as when energy efficiency is most needed

***Unanimous Agreement That Changes to the Current Definition and Methodology for Updating DEER Peak Values are Needed.*** In a second straw poll on Small Group Discussion Question 2 above (see p. 2), the participants in all five small groups agreed that an update is needed to the current methodology for updating DEER Peak values. Earlier in the discussion, a participant noted that in his analysis of alternative DEER peak definitions and methodologies applied to a single climate zone (the current 3-day period v. June-Sept v. all year; weekdays v. all-days), percentage changes in demand savings for a single HVAC measure saw very different results. He noted that participants should carefully consider which inputs are most appropriate. Several participants noted that weather/temperature data is too approximate, and several noted a preference for using one or more of the following to inform the underlying methodology to define DEER peak: data used by/available in the Avoided Cost Calculator, alignment with the on- and off-peak periods of TOU rates, CAISO data, or critical peak pricing events. Another point raised (as noted above) was that the generation capacity peak may no longer align with the T&D peak, and that this point needs further exploration. Some participants noted that the peak value should not rely on past data, but rather on future projections. Other participants expressed an interest in simplifying the methodology so as to provide high-level guidance that can be used more broadly.

## **V. PRESENTATIONS: SHIFTING PEAK – IMPLEMENTATION ISSUES**

The afternoon session began with three short presentations explaining potential implementation issues with changing the peak definition, from the IOU and implementer perspective. Two of these presentations are available on the CAEECC website (see link above), and the presentation by M. Vigen ([CEDMC]) is summarized below. There were no clarifying questions following the presentations. Key discussion themes on implementation issues of shifting peak are summarized in section VI. Key Discussion Themes: Shifting Peak – Implementation Issues.

### ***Annual DEER + IOU work paper production (C. Cuaresma, SCE)***

Presentation available on CAEECC website (see link above)

### ***A Marketplace Perspective (M. Vigen, CEDMC)***

M. Vigen provided a marketplace perspective on implementation issues regarding shifting peak. She noted that, given the recent CPUC decision to shift to 60% or more third-party implementers (2022 target date), this policy change will impact implementers significantly. She emphasized that the marketplace already deals with a high level of uncertainty, and that shifting schedules and timelines translate into further uncertainty and risk. She outlined three types of transparency that implementers need: (1) A clear timeline and how that timeline interacts with critical milestones (e.g. EM&V bus stops, the work paper production and review process); (2) A predictable process (she emphasized that retroactive application of policy provides significant challenges for implementers and the marketplace as a whole); and (3) A transition plan that allows for

rolling updates (per the Rolling Portfolio process) to the new policy. Allowing for grandfathering of older programs in which contracts already exist, while requiring updates for new contracts, would provide a helpful transition, as the move from 2-5 pm to 4-9 pm will create significant changes to programs and program measure mix.

***Key energy efficiency activities impacted by DEER Peak change (A. Desai, SCE)***

Presentation available on CAEECC website (see link above)

**VI. KEY DISCUSSION THEMES: SHIFTING PEAK – IMPLEMENTATION ISSUES**

Following the presentations, meeting participants broke into small groups to discuss answers to the following questions:

(1) If a peak hour shift takes place, when should the shifted period start date be: January 2019 or January 2020? Why?

(2) How do we ensure third-party implementers are prepared with the information they need (regarding the DEER period and peak savings methodology) so that they can develop and submit well-informed bids?

Key discussion themes from the discussion following the presentations, and that occurred during the small group discussions, are summarized below.

***Need for Alignment of DEER Peak and CPUC Goal Setting.*** Several participants noted that, if a major change to the DEER peak definition is made, it needs to be done in synch with the Potential and Goals updates so that there is alignment. The Potential and Goals study is released in May, and DEER updates should be completed 6-8 months before the Potential and Goals study is released. Inputs to the Potential and Goals study include the most recent evaluation results, the most recent DEER program claims, the most recent DEER, and the most recent work papers. A shift in DEER peak requires recalculating the values for which there are current demand savings, and then working these numbers into the new peak methodology. The consultant to the CPUC noted that many of the existing load profiles are up to date and accurate, while others need to be updated.

***Unanimous Agreement that Adoption of a January 1, 2019 Start Date is not Possible.***

All participants agreed that a January 1, 2019, date for adoption of a new DEER peak (or “no-peak” alternative) definition is not practicable. Most participants agreed that a January 1, 2020, date for the adoption of a new DEER peak (or “no-peak” alternative) definition is feasible and preferable, although a January 1, 2022, date is also acceptable. Several participants (including some IOU representatives) supported a January 1, 2022, date for adoption of the new DEER peak (or “no-peak” alternative) definition. Meeting the January 2020 deadline will require near term updates to goals, budget advice letter, work papers, etc., which will require prioritization and direction from the CPUC.

***Strong Agreement that Preparations for the DEER Peak Shift Should Begin***

***Immediately.*** While all participants agreed that an adoption date is not practical before January 1, 2020, several noted that once the a new DEER peak is agreed upon,

calculations and activity towards the adoption of the new definition should begin immediately. This is both necessary to ensure feasibility of implementation, and also a helpful means to prepare the market for the coming shift. One participant inquired as to whether it is possible for the DEER team to publish two sets of values as the transition occurs to include (1) Values corresponding with the 2-5 pm peak period definition (to be used by the current programs) (which were used to establish the Goals), and (2) Values corresponding with the 4-9 pm peak period definition to be used as an input in the next Potential and Goals study. A CPUC representative responded that this would not be difficult, as the database is regularly updated as standards change, although there is not yet a convenient way to compare these updates side by side. An implementer noted that providing both values would be a helpful way to prepare implementers for upcoming changes, but cautioned that if the timelines or definitions change, this uncertainty will pose significant challenges. Another implementer noted that a change may pose difficulties for multi-year custom projects. Participants noted that the peak measures would not need to be combined, but rather that existing custom measures would be able to use the current values, while new measures would use the new peak values.

***Request for Clarity and Stability for the Peak Definition Changes.*** Some participants stressed that a stable definition, clear timelines, clear values, and communication about these updates are needed to provide direction and reduce risk for implementers.

## **VII. OUTCOMES AND NEXT STEPS**

1. All PowerPoint presentations are available online on the CAEECC website (see link above).
2. The CAEECC Facilitation team will develop a high-level meeting summary of today's meeting, to be posted on the CAEECC website.
3. Participant organizations were asked to complete the Optional Participant Response Sheet, provided on the CAEECC website (see link above) and in the packets handed out to each in-person participant, by the end of the week.
4. SCE and NRDC will develop "strawman proposals" prior to the second DEER peak workshop scheduled for April 16, 2018. These proposals will be based on today's discussion and responses to the Optional Participant Response Sheet. They will include proposals for: (1) A shift to 4-9 pm, including proposed changes to the DEER peak methodology (i.e. the three-day weather window), and (2) An alternate definition of peak driven by the Avoided Cost Calculator. Both proposals should also include a proposed interim solution to support a smooth transition to a new methodology as discussed above).
5. A second DEER peak workshop will be held on April 16, 2018, to provide feedback on the strawman proposals and related matters.



## Appendix A

### ***Participants from CAEECC member organizations present:***

Elizabeth Baires, Southern California Gas and Electric Company (SoCalGas)  
Erin Brooks, Southern California Gas and Electric Company (SoCalGas)  
Henry Burton, California Public Utilities Commission (CPUC), Office of Ratepayer Advocates (ORA)  
Mohit Chhabra, Natural Resources Defense Council (NRDC)  
Sasha Cole, California Public Utilities Commission (CPUC), Office of Ratepayer Advocates (ORA)  
Cody Coeckelenbergh, Lincus, Inc.  
Cassie Cuaresma, Southern California Edison (SCE)  
Shanna Dee, San Diego Gas & Electric (SDG&E)  
Anuj Desai, Southern California Edison (SCE)  
Jesse Feinberg, Southern California Edison (SCE)  
Andres Fergadiotti, Southern California Edison (SCE)  
Halley Fitzpatrick, Pacific Gas & Electric (PG&E)  
Jan Grygier, Pacific Gas & Electric (PG&E)  
Hillary Hebert, San Diego Gas & Electric (SDG&E)  
Chris Kavalec, California Energy Commission (CEC)  
Michael Kenney, California Energy Commission (CEC)  
Lujana Medina, EnergyRSC, participating on behalf of SoCalREN  
Brian Samuelson, California Energy Commission (CEC)  
Kelvin Valenzuela, San Diego Gas & Electric (SDG&E)  
Michelle Vigen, California Efficiency + Demand Management Council (CEDMC)

### ***Participants from CAEECC member organizations joining via webinar:***

Alfredo Gutierrez, ICF International, participating on behalf of SoCalRen  
Scott Higa, Southern California Edison (SCE)  
Luke Nickerman, Pacific Gas & Electric (PG&E)  
Keith Valenzuela, San Diego Gas & Electric (SDG&E)

### ***Other participants joining in person:***

Ayad Al-Shaikh, Future Energy Enterprises  
Claire Broome, 350 Bay Area  
Paula Gruending, California Public Utilities Commission (CPUC)  
James Hirsch, JJ Hirsch & Associates  
Brian Horii, Energy and Environmental Economics (E3)  
Delphine Hou, California Independent System Operator (CAISO)  
Amit Kanungo, Det Norske Veritas Germanischer Lloyd (DNV GL)  
Spencer Lipp, Lockheed Martin  
Joanne O'Neill, CLEAResult

Bryan Pena, California Public Utilities Commission (CPUC)  
Alok Singh, Southern California Edison (SCE)

***Other participants joining via webinar:***

Don Arambula, Don Arambula Consulting  
Marc Costa, The Energy Coalition  
Phil Jordan, CLEAResult  
Bob Ramirez, DNV GL  
Paul Reeves, (affiliation not provided)

***CAEECC facilitation team:***

Meredith Cowart, CAEECC Facilitation Team  
Ellen Zuckerman, CAEECC Facilitation Team