BEFORE THE PUBLIC UTILITIES COMMISSION OF THE
STATE OF CALIFORNIA

Order Instituting Rulemaking to Enhance the
Role of Demand Response in Meeting the State’s
Resource Planning Needs and Operational
Requirements

Rulemaking 13-09-011
(Filed September 19, 2013)

SOUTHERN CALIFORNIA EDISON COMPANY'S (U 338-E) RESPONSES TO
QUESTIONS REGARDING THE PATHWAY TO NEW MODELS OF DEMAND
RESPONSE AND REMAINING BARRIERS TO THE INTEGRATION OF DEMAND
RESPONSE INTO THE CAISO MARKET

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SOUTHERN CALIFORNIA EDISON COMPANY'S (U 338-E) RESPONSES TO QUESTIONS REGARDING THE PATHWAY TO NEW MODELS OF DEMAND RESPONSE AND REMAINING BARRIERS TO THE INTEGRATION OF DEMAND RESPONSE INTO THE CAISO MARKET

I. INTRODUCTION

Pursuant to Administrative Law Judge’s Ruling Requesting Responses to Questions Regarding the Pathway to New Models of Demand Response (DR), Implementation of the Competitive Neutrality Cost Causation Principle, and Remaining Barriers to the Integration of Demand Response Into the CAISO Market (Ruling) and the Email Ruling Extending the Deadline to File Responses to the May 22, 2017 Ruling, Southern California Edison Company (SCE) hereby submits its responses to questions presented in Attachment A of the Ruling.†

† This document contains SCE’s responses to the sets of questions regarding new models of DR and CAISO integration. SCE’s responses to the questions regarding competitive neutrality were filed June 19, 2017.
II.

DISCUSSION

A. Questions Regarding the Remaining Barriers to Integrating Demand Response into the CAISO Market

*Question 1: During the course of the workshop, parties identified seven remaining barriers to integrating current models of demand response into the CAISO market as listed in Section 2 above. Provide an approach for addressing them, e.g., working group, another proceeding, CAISO stakeholder process, etc. If there are other barriers that should be included, please describe them and suggest a potential approach for addressing them.*

The seven issues or barriers identified in Section 2 of the Ruling include: CAISO Settlement; Click-Through Process; Mismatched Supply Plans; Incorporating or Valuing Unintegrated DR Megawatts (MW); Changes to Commission and CAISO Baselines; Resource Adequacy (RA) Issues; and Improved Wholesale Market Participant Education. Although not an exhaustive list, the list provided in Section 2 of the Ruling represents key issues that should be resolved as soon as possible. SCE also introduces one high-priority issue, which is the enablement of additional resource parameters in the CAISO resource data template that would make a positive impact on the ability to bid DR resources into the CAISO market (e.g. maximum run hours, maximum energy limit, maximum dispatch per day). SCE presents its proposed prioritization and approaches for addressing the issues in the table below.

<table>
<thead>
<tr>
<th>Priority</th>
<th>Issue</th>
<th>Proposed approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>CAISO Settlement</td>
<td>CAISO stakeholder process</td>
</tr>
<tr>
<td>High</td>
<td>Resource Adequacy Issues</td>
<td>RA Working Group as part of R.14-10-010</td>
</tr>
<tr>
<td>High</td>
<td>Incorporating or Valuing Unintegrated DR MW</td>
<td>New phase of R.13-09-011. The ALJ should solicit identification of issue and proposals from parties on the best way to address, followed by workshops to formalize approach</td>
</tr>
<tr>
<td>High</td>
<td>Enable additional resource parameters on CAISO Resource Data Template for DR resources</td>
<td>CAISO stakeholder process</td>
</tr>
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### Questions Regarding the Pathway to Implementing New Models of Demand Response

**Question 1: Referring to the activity list in Section 3:**

- **a. Is this a complete list of activities that the Commission must finish or accomplish before new models of demand response can be implemented?**

  Section 3 of the Ruling provides a list of activities that should be performed before new models of DR can be implemented. This list appears to be complete, and SCE does not propose any additional activities.

- **b. What activities are missing? Why should the missing activities be included and how should they be prioritized?**

  SCE does not propose removing any items from the list, although it sees certain activities as low priority and not required to complete before implementing new models of DR. For instance, Activities numbered 7, 8, 11, and 12 are not activities that need to occur prior to implementing new models of DR because devising and implementing new models of DR is not dependent on those activities.

- **c. Are there activities listed above that should be omitted and why?**

  See answer to question b. above.
d. Are the approaches suggested for the activities appropriate? Provide details on more appropriate approaches.

SCE generally agrees with the approach suggested for each activity, but recommends different prioritization, as presented in the table below.

<table>
<thead>
<tr>
<th>Activity #</th>
<th>Activity in Section 3 of the Ruling</th>
<th>Priority</th>
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<tbody>
<tr>
<td>1</td>
<td>The Commission needs to undertake several activities that relate to the resource adequacy including:</td>
<td></td>
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<tr>
<td>1a</td>
<td>Identification of the value of new products and determination of customer appeal (through a joint demand response working group proposal to the resource adequacy proceeding);</td>
<td></td>
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<tr>
<td>1b</td>
<td>Consideration of a policy that pays capacity value for ramping;</td>
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<tr>
<td>1c</td>
<td>Resolution of local resource adequacy requirements for demand response;</td>
<td></td>
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<tr>
<td>1d</td>
<td>Review of qualifying capacity requirement for weather-sensitive demand response (through a working group in the resource adequacy proceeding).</td>
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<tr>
<td>2</td>
<td>Define and develop new products including both load consumption and bi-directional products (through a working group).</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Resolve dual-participation issues including defining and addressing barriers (demand response portfolios).</td>
<td></td>
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<tr>
<td>4</td>
<td>Align retail and wholesale baselines and diversify the baselines by customer and load (through a working group).</td>
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<tr>
<td>5</td>
<td>Coordinate the efforts of CAISO and the Commission to integrate demand response into the CAISO market, including new models of demand response (through a working group driven by the demand response rulemaking with a report also submitted to the resource adequacy proceeding).</td>
<td></td>
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<tr>
<td>6</td>
<td>Create and implement more accurate dynamic price signals tied to wholesale pricing (pilot and test the technology).</td>
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<tr>
<td>7</td>
<td>Define and clarify jurisdiction regarding Community Choice Aggregation (CCA) (in a proposed CCA Order Instituting Rulemaking).</td>
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<tr>
<td>8</td>
<td>Consider and adopt consistent time-of-use periods with demand response and rate design (through workshops in the time of use proceeding and demand response applications).</td>
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<tr>
<td>9</td>
<td>Resolve remaining issues with CAISO integration of Shed demand response (by reopening Integration Working Group).</td>
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<tr>
<td>10</td>
<td>Develop characteristics and values of demand response for distribution system (being done in Integrated Distributed Energy Resources (IDER) proceeding and Distributed Resource Plan (DRP)).</td>
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<tr>
<td>11</td>
<td>Develop and define data access rules to enable new demand response models (Proposed to be done in IDER proceeding but currently in the scope of DRP and not IDER).</td>
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<tr>
<td>12</td>
<td>Consider multi-year procurement demand response contracts (in demand response applications).</td>
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</table>
e. **Is the list of activities appropriately prioritized? Explain why any listed activity should be prioritized ahead of or behind others. In adding and prioritizing activities, focus on New Models for demand response (e.g. system-wide load consuming demand-response.)**

SCE recommends prioritizing Activities 5 and 9 because it is critical to resolve existing integration issues for current models of DR before any new integration issues that may arise for new DR models can be addressed. Failure to do so could restrict the growth of new and existing DR models and exacerbate the “crumbs” issue identified by SCE in its 2018-2022 DR Application, which results in DR MW unable to be integrated into the CAISO market due to the CAISO rules. These non-integrated MWs would not qualify for RA value.  

Activity 10 should also be prioritized higher than it is currently, as locational value may be a significant feature of new models of DR, although this activity will likely need to be examined in a separate proceeding.

SCE views Activity 2 concerning development of a load consumption or bi-directional product as an important step in developing new models of DR. In fact, it is likely that this type of product will be one of the major outcomes from the process of designing new DR models. SCE has categorized this as a Medium priority because development of a load consumption product does not need to be completed before any new model of DR can be implemented, as the Ruling phrases the question. The general principles of a load consumption product can be considered in parallel with implementing other new DR models.

Although Activity 3 concerning dual participation is an important issue that should be resolved, it does not need to be resolved prior to implementing new models of DR, and SCE recommends prioritizing it lower.

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f. Several activities in this list concern load shedding demand response. If these activities need to be resolved before work can begin on New Models (system-wide load consuming demand response), explain why the process needs to be consecutive and not parallel.

The Commission should focus on getting right the integration of legacy Shed programs before beginning work on new models of DR. Activity 9 refers to resolving CAISO integration issues for Shed DR and this work should be prioritized and completed before implementing new models of DR to avoid building the same flaws into new DR models. Specifically, the issues that need to be resolved are: stranded resources (which SCE refers to as “crumbs”) due to CAISO restricting registrations to one load serving entity (LSE); lack of CAISO market constraints for the maximum number of hours of dispatch; simplification of the process to submit resource outages in the CAISO’s Outage Management System; loss of SCE discretion to dispatch or not dispatch a program after the Day Ahead Market; lack of a discrete dispatch option.

As noted above, SCE prioritizes Activity 1 as a high priority item. Specifically, for Activity 1c regarding local RA value, it is important that there is alignment between Commission and CAISO rules before implementing new models of DR. As it currently stands, the Base Interruptible Program (BIP) 30-minute option may not qualify for local RA value, although BIP may be needed in local distribution areas. Failure to resolve this issue before implementing new DR models would potentially extend the problem to more programs and more DR MW.

Question 2: For the activities that could be facilitated through a working group, could some be combined into one working group or should the activities be kept in separate working groups? Explain why certain activities can or cannot be combined in the same working group.

Activities 5 and 9 can likely be combined into one working group, as the topic of both is integration into the CAISO markets. Likewise, Activities 1a and 2 may be able to be combined into one working group as they deal with determining the value of new DR programs and the specifics of a new load consumption DR program. Activities 1d and 4 may be able to be combined into one working group as 1d considers weather-sensitive DR, which will likely need a
different baseline than the current 10-in-10 baseline, as Activity 4 is considering. However, if these activities are combined, care should be taken that all stakeholders are provided the opportunity to participate, as some issues have previously been explored at the CAISO, which may have different stakeholders and processes than the Commission.

**Question 3:** Parties at the workshop recommended that defining and developing new products, including both load consumption and bi-directional products, should be performed through the use of a working group. Do you agree? If so, should the working group be facilitated by the Commission’s Energy Division, the Utilities or another entity or organization? Would the working group need additional expertise to assist them? What kind of additional expertise, e.g. academic, consultant, would the working group require?

SCE agrees that a working group is the best way to define and develop new DR products so that LSE, customer, and grid needs collectively can be taken into account. SCE is indifferent as to which entity facilitates the working group, but the working group should have a clear objective and meet regularly to resolve issues in a timely manner. At this time, SCE does not recommend using a consultant. SCE recommends the working group meet and confer, potentially through workshops, to design new load consumption or bi-directional products that best meet grid and customer needs, and then present proposals to the rest of the R.13-09-011 parties for comment and evaluation. Once the foundations of a load consumption or bi-directional product are established, the expertise of a consultant or academic can be used to refine the product(s), if necessary.

**Question 4:** For Activity 9 listed above, what are the remaining CAISO integration issues related to load shedding demand response that need to be resolved? Do any of the issues require a Commission decision in this proceeding? Which issues require resolution through other venues, e.g., changes with the CAISO tariffs? Please explain.

The following are the remaining CAISO integration issues related to load shedding DR that need to be resolved:

- Resource Adequacy Issues
- Incorporating or Valuing Unintegrated DR MW
- Mismatched Supply Plans
- CAISO Settlements
The Resource Adequacy Issues and Incorporating or Valuing of Unintegrated DR MW require Commission decisions and/or CAISO tariff changes. In addition, the goal of Incorporating or Valuing of Unintegrated DR MW may be able to be resolved with a change to the CAISO rules, particularly as it pertains to the requirement to break up DR resources by LSE. If the CAISO removed that requirement, there would be more integrated DR MW. Mismatched Supply Plans and CAISO Settlement likely do not require Commission decisions, but are issues that can be resolved through the CAISO tariff and/or Business Practice Manual changes. The CAISO also has a set of Must Offer Obligation and RA Availability Incentive Mechanism rules that in their current states are unfavorable for weather-sensitive programs that may not have a constant MW bid to offer to the markets.

**Question 5: Activity 4 recommends aligning retail and wholesale baselines and diversifying the baselines by customer and load. Should this activity be done through a working group? If so, should the working group be established in this proceeding, another Commission proceeding, or through another venue? Why?**

To date, retail baselines have been defined by the Commission and wholesale baselines by the CAISO. Since the purpose of a baseline is to measure performance, it would seem that a single set of baselines, differentiated by customer and program type, can be developed for use by both the CPUC and the CAISO. However, because the use of the baselines for retail and wholesale purposes may differ, any resulting differences in baselines should be benchmarked against each other and the load impact studies to ensure consistency.

The CAISO set up the BAWG to recommend alternative wholesale settlement methodologies by customer type. For SCE, the only programs that utilize baseline methodologies for retail settlements are the Capacity Bidding, Peak Time Rebate and Aggregator Managed Programs. The BAWG performed extensive analyses and found that the current 10-in-10 baseline with day-of adjustment is one of the best performing baselines for commercial and industrial customers. However, this baseline is not appropriate for residential customers, as SCE
described in its Rebuttal Testimony to its 2018-2022 DR Application. The Commission should leverage the analyses done by the BAWG and continue to use the 10-in-10 baseline methodology for retail settlements for non-weather sensitive commercial and industrial customer programs. A separate working group should be convened to discuss an appropriate baseline for residential customers, and potentially also discuss issues relating to weather-sensitive DR, as discussed in SCE’s response to Question 2 above.

**Question 6: With respect to the recommendations in Activity 1:**

a. Some parties at the workshop recommended establishing a working group in the resource adequacy proceeding, some propose a working group in this proceeding. Explain which you prefer and why.

Regarding Activity 1, there may be different venues for different, although related, topics. Activity 1a should be conducted as part of R.13-09-011 because it deals directly with DR products and end-use customer appeal. As discussed in SCE’s response to Question 2 above, this activity can potentially be combined with Activity 2 as they both concern the design of new DR programs. Activity 1c should be considered as part of the RA proceeding because it deals directly with RA requirements. Activity 1d should be considered in the RA proceeding because it directly concerns RA value, although if it is combined with Activity 4, as discussed in SCE’s response to Question 2 above, it may need to be considered in the R.13-09-011 proceeding.

Regardless of the venue in which these working groups occur, care should be taken to align the discussions with the various proceedings and stakeholders that would be affected by the results.

3 A.17-01-012, SCE-02, p. 15.
4 Retail settlements for BIP depend on a Firm Service Level and therefore do not utilize a baseline.
b. What, if any, value streams should the working group consider that are outside the resource adequacy proceeding and what coordination would be needed to address them? (e.g., societal value).

An additional value stream that the working group can consider outside of the RA proceeding is locational value, which will likely be an important feature of new models of DR. This issue can be considered in the Integrated Distributed Energy Resources proceeding, R.14-10-003.

**Question 7:** Activity 6 proposes to test a pilot to create more accurate dynamic price signals tied to wholesale pricing. Provide a recommendation on the proceeding or venue in which this pilot would be tested.

SCE recommends that a pilot to create more accurate dynamic price signals tied to wholesale pricing be proposed in an appropriate rate setting proceeding, such as a General Rate Case (GRC) Phase 2 or Rate Design Window (RDW) application. A Tier 3 advice letter may also be an appropriate venue if significant marginal cost and revenue allocation are not a factor in the proposed pilot programs.

**Question 8:** Activity 8 speaks to making time-of-use rates more consistent. Should there be any effort to address the need for time-of-use rates to accomplish LBNL’s Shift product (e.g. high differential between on-and-off-peak times) as noted in the potential study, and in written comments dated February 28, 2017, from a number of parties? What process should the time-of-use rates work follow considering the time-of-use proceeding is closed and related work is handled currently by general rate cases?

Updated time-of-use (TOU) rates are already being considered by all three Utilities in their respective pending GRC Phase 2 proceedings. In each, the proposed updated TOU rates are consistent with the Lawrence Berkeley National Laboratory (LBNL) Shape product. In SCE’s 2016 RDW, SCE has proposed a base TOU period definition with a super off-peak period aligned with the general conditions of over-supply from 8 am to 4 pm in winter months and corresponding high-cost periods occurring late in the ramp up to the net load peak. In its 2018 GRC Phase 2, SCE is proposing default and optional pricing rates that align with the TOU
periods proposed in the 2016 RDW, in addition to presenting illustrative Shed DR rates, which were filed in SCE’s 2018-2022 DR Funding Application. Both the retail rates and the Shed DR rates have been set with price differentials that have the potential of incentivizing consumption during the low cost periods with a counter measure of shedding consumption during the high cost periods. SCE has made these proposals by analyzing the hourly marginal cost for test years 2021 and 2024, and has taken into consideration the cost allocation between rate groups. SCE’s retail rate proposals align with the LBNL Shape product, which is similar to the Shift product, except with a longer notification time. Because of their similarity, these Shape proposals should be adapted to the Shift product in their current respective proceedings, rather than considering them in a new venue.

Discussions on default TOU periods are occurring in SCE’s 2016 RDW proceeding. The methodologies, criteria, and guidance used to establish the appropriate price differentials for any adopted periods will subsequently be considered as part of the 2018 GRC Phase 2. In the 2018-2022 DR Funding Application, SCE proposed overall incentive valuations for its current Shed programs, and has provisioned for the alignment of DR rate incentive structure with TOU periods and underlying retail rates adopted as part of its 2016 RDW and 2018 GRC Phase 2 proceedings. Maintaining such alignment is critical when operationalizing DR programs suited to allow customers to shift consumption behavior in a manner that reduces their contribution to the IOU’s marginal costs. The introduction of a new proceeding to address Shift and Shed rate structures would only complicate matters further.

**Question 9: Activity 5 speaks to coordinating with the CAISO to integrate demand response into their markets, including New Models of demand response. Are there critical barriers to implementing bi-directional products? If so, what process best addresses the barrier(s)?**

From a CAISO integration standpoint, the main barrier is the lack of a bi-directional DR product in the CAISO market design. Once a bi-directional product is designed, approved and

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implemented in the CAISO tariff and Business Practice Manuals, the product should be able to follow the processes established for traditional DR resources, such as registration, bidding and dispatch procedures. However several product design and market rules issues would have to be worked out, such as baselines and performance calculations. For example, currently when a DR resource is awarded and dispatched, it cannot have “negative” performance, i.e. if a customer is supposed to reduce load by 10 MW, and instead, as calculated with respect to a baseline, they show an increase in load, their performance is treated as 0 MW. While this is the appropriate treatment for current DR resources, it would have to be re-considered if a single resource is managed in both directions. These issues should be primarily addressed through the CAISO’s stakeholder process (e.g. Energy Storage and Distributed Energy Resources (ESDER)), however the CPUC staff should be engaged in this process.

From the customer interaction side, clear messaging and protocols would have to be developed to properly dispatch resources (up or down). Customer messaging is currently focused on reducing consumption, and it would have to carefully evolve as to avoid customer confusion, especially in relation to energy efficiency. Furthermore, the program incentives would have to be appropriately designed to reflect value to the grid. These issues should be addressed at the CPUC in the new program design process.

**Question 10: Activity 2 proposes defining new products including load consuming and bi-directional products.**

a. *Workshop participants proposed using a working group to conduct this activity. Explain why you agree or disagree. If you disagree, what other approach should the Commission use?*

SCE agrees that a working group is appropriate to assist in defining and developing new DR products, including load consumption and bi-directional products. As discussed in SCE’s response to Question 2 above, this working group can also consider Activity 1a to determine the value and customer appeal of new products.
b. **Is it possible to address retail rate and pricing policies that determine the load shape and availability of demand response at the same time as working to design a wholesale load consuming product based on the Potential Study Shift service, but dispatched only occasionally? If yes, please explain a process and whether any specific issues need to be resolved on one front (retail or wholesale) before they can be decided on the other.**

As discussed in SCE’s response to Question 1 above, it is possible to address retail rate and pricing policies at the same time as designing a wholesale load consumption Shift product, to a certain extent. General principles and parameters of a load consuming Shift product can be considered while the rate and pricing policies are being developed, in order to develop a general framework. However, final details and implementation of a program must wait until the rate and pricing policies, specifically the TOU periods, are finalized to have certainty regarding the pricing and requirements of the program and draft and file a tariff.

c. **Should the Commission use the approaches in 10.a to address any policy, cost or technical barriers to the New Models being developed? For instance, parties have raised the issue of demand charges, which are handled currently in general rate cases, as well as costs for automated controls and telemetry. If so, what coordination efforts are needed?**

As described in SCE’s response to Question 8 above, rate and pricing issues that are already being considered in rate design proceedings should continue to be considered there. Demand charges should continue to be considered in GRC proceedings as they impact more than DR rates.

**Question 11: Clarify the following activity items listed in Section Three:**

a. **Activity 3 refers to dual participation. Which dual-participation issues should be considered for this activity, e.g. prohibitions against participating in load-modifying and supply-side demand response, or DRAM and other supply-side programs?**

SCE does not oppose dual participation between utility and non-utility programs or between load-modifying and supply-side programs, but recommends that appropriate safeguards be developed in working groups to prevent double payment for the same load reduction across different demand response providers (DRP), regardless of whether it is through a supply-side or load modifying DR program.
In D.09-08-027, the CPUC ruled in favor of dual DR participation if the appropriate safeguards are in place to prevent double payment for a single service. The Decision allowed customers to participate concurrently in up to two DR programs if one provides energy payments and the other provides capacity payments. These rules prohibited concurrent participation in programs with the same day-ahead or day-of trigger; however, a participant could participate in one day-ahead and one day-of program. In the case of overlapping events called in two programs, a customer enrolled in those two programs received payment only under the capacity program, not for the simultaneous event for the energy payment program.

The utilities developed controls to prevent double payment in instances where the utility is the DRP, as the utility has visibility of participant enrollment, program dispatch, and load reduction information. With direct market participation in DR (Rule 24/32) and the growth of CCA providers, the safeguards that were developed to prevent double payments will no longer be effective for programs that are administered by different DRPs. With non-utility DRPs participating in the wholesale market, Rule 24/32 firewalls prevent the IOUs from managing dual participation using these same controls. The IOUs will not have visibility to which accounts are participating in a DR event where the CAISO has awarded a bid from a third-party DRP. Furthermore, the CAISO has instituted its own rules that safeguard against double payments by preventing the same retail customer account from registering with more than one DRP, regardless of whether a resource is Reliability Demand Response Resource (RDRR), Proxy Demand Resource (PDR), real-time, or day ahead. Unless DRPs look into developing energy or capacity programs of their own, or companion programs that do not participate in the wholesale market, CAISO and Rule 24/32 provisions will limit customer choice and reduce the ability to maximize their DR participation. Likewise, the CAISO’s distributed energy resources (DER) guidelines prevent DER aggregators from including net energy metering (NEM) customers in

their resources to avoid double payments. As more customers pair solar with energy storage, more thought should be given to managing dual participation in a broader arena.

b. **Activity 11 refers to data access rules. What are the specific data access rules needed to enable new demand response models, e.g. the data needed for third parties to recruit customers or to follow up with customers after an event?**

SCE is aware that several parties advocate for increased access to customer data, but it is unclear how this increased access comports with State law and Commission directives. SCE is committed to protecting the privacy of its customers’ data in accordance with State law and Commission rules, while also enabling customers to share their data with parties of their choosing. However, great care should be taken in providing increased access to customer data. For instance, State law makes it impermissible for SCE, an electrical corporation, to “share, disclose, or otherwise make accessible to any third party a customer's electrical or gas consumption data, except as provided in subsection (e)⁷ or upon the consent of the customer.”⁸ The Commission has also outlined a policy of data minimization, in which only data that is necessary to provide a specific purpose should be provided to a third party,⁹ and only with customer consent.¹⁰ In addition, this may not be an issue that needs to be resolved prior to implementing new models of DR and should be considered a low priority, as discussed in SCE’s response to Question 1 above.

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⁷ Subsection (e) explains primary purposes for the utility.
⁸ CAL. PUB. UTIL. CODE § 8380(c).
¹⁰ SCE Rule 25, Section 6.b.
c. Activity 1b refers to capacity value for ramping. Explain whether you agree that demand response should be compensated with capacity payments for providing ramping? Should payments be considered for a load taking New Models products during morning ramp or a load-shedding product during the evening ramp, or both?

SCE agrees that DR should be compensated for providing ramping, and has already incorporated DR’s ramping capability into the value of DR in SCE’s 2018-2022 DR Funding Application. SCE’s proposal includes the value and allocation of ramp capacity in setting incentive levels for its current Shed programs. If a specific DR ramping product were to be considered, the product should target the Primary net load ramp (see figure below); with both load shedding and load consumption (negative DR) products structured to incentivize responses. The load consumption product would be triggered by negative price signals during conditions of oversupply, with the load shedding product being triggered by high positive price signals similar to current Shift and Shed price signals. Pricing should be focused purely on generation need and can be either economic or reliability driven. The incentive and surcharge structure should represent appropriate costs for both products in a relatively proportionate manner.

![Ramping Diagram](image)

d. Activity 5 refers to coordination with CAISO. Which specific CAISO efforts should be considered under this activity?

The CAISO has a number of initiatives such as ESDER and Reliability Services Initiative under which decisions are made that impact DR and DERs. Since new Supply-Side DR models will have to be designed to meet the evolving CAISO requirements, coordination with the
CAISO stakeholder processes is required to ensure that the new models fit into existing and future CAISO market products and rules.

In general, new models of DR will be multi-use products that can potentially serve energy, transmission, and/or distribution needs. The protocols that allow these resources to be shared will have to be developed in coordination with the CAISO. Furthermore, any other DERs that are combined with or interact with DR will impact the operation and performance of DR. Examples include energy storage, electric vehicles, distributed generation, and energy efficiency. Any CAISO activities in those areas need to be coordinated with DR.

III.

CONCLUSION

SCE appreciates the opportunity to provide these responses.

Respectfully submitted,

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Date: July 6, 2017
BEFORE THE PUBLIC UTILITIES COMMISSION OF THE
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Order Instituting Rulemaking to Enhance the
Role of Demand Response in Meeting the State’s
Resource Planning Needs and Operational
Requirements.  

R.13-09-011
(Filed September 19, 2013)

CERTIFICATE OF SERVICE

I hereby certify that, pursuant to the Commission’s Rules of Practice and Procedure, I have this day
served a true copy of SOUTHERN CALIFORNIA EDISON COMPANY’S (U 338-E) RESPONSES
TO QUESTIONS REGARDING THE PATHWAY TO NEW MODELS OF DEMAND
RESPONSE AND REMAINING BARRIERS TO THE INTEGRATION OF DEMAND
RESPONSE INTO THE CAISO MARKET on all parties identified on the attached service list(s) for
R.13-09-011.  Service was effected by one or more means indicated below:

☑ Transmitting the copies via e-mail to all parties who have provided an e-mail address.

☑ Placing the copies in sealed envelopes and causing such envelopes to be delivered by
hand or by overnight courier to the offices of the Assigned ALJ(s) or other addressee(s).

ALJ Kelly A. Hymes  ALJ Nilgun Atamturk
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Executed July 6, 2017, at Rosemead, California.

/s/ Sandra Sedano
Sandra Sedano
Legal Administrative Assistant
SOUTHERN CALIFORNIA EDISON COMPANY
2244 Walnut Grove Avenue
Post Office Box 800
Rosemead, California  91770
### Parties

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Company/Group</th>
<th>Address</th>
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<td>C.C. SONG</td>
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<td>MARIN CLEAN ENERGY</td>
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<td>HOWARD CHOY</td>
<td>GENERAL MGR.</td>
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<td>JOHN W. LESLIE, ESQ</td>
<td>PARTNER</td>
<td>DENTONS US LLP</td>
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<td>LAURIE WIEGAND-JACKSON</td>
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<td>ABRAHAM SILVERMAN</td>
<td>ASSIST. GEN. COUNSEL - REGULATORY</td>
<td>NRG ENERGY, INC.</td>
<td>211 CARNEGIE CENTER DRIVE</td>
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<td>ERIKA DIAMOND</td>
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<td>SUSAN STEVENS-MILLER</td>
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<td>WASHINGTON, DC 20036</td>
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<td>MELISSA A. HOVSEPIAN</td>
<td>SR Counsel</td>
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<td>HOWARD CHOI</td>
<td>General MGR.</td>
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<tr>
<td>DANIEL W. DOUGLASS</td>
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<td>ROBIN Z. MEIDHOF</td>
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<td>DONALD C. LIDDELL</td>
<td>Attorney</td>
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<td>GREG BARNES</td>
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<tr>
<td>SACHU CONSTANTINE</td>
<td>Dir. of Policy</td>
<td>CENTER FOR SUSTAINABLE ENERGY, SAN DIEGO</td>
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<td>MONA TIERNEY-LLOYD</td>
<td>Sr. Dir., Western Regulatory Affairs</td>
<td>ENERNOC, INC., CAYUCOS, CA</td>
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<td>KENNETH SAHM WHITE</td>
<td>Economics &amp; Policy Analysis Dir</td>
<td>CLEAN COALITION, MENLO PARK, CA</td>
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<td>ANTHONY HARRISON</td>
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<td>STEM, INC., MILLBRAE, CA</td>
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<td>SUE MARA</td>
<td>Consultant</td>
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<td>ERIN GRIZARD</td>
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<td>ROSANNE O'HARA</td>
<td>Calif Public Utilities Commissioner</td>
<td>CALIF PUBLIC UTILITIES COMMISSION, THE UTILITY REFORM</td>
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<td>MARCEL HAWIGER</td>
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ALIA SCHOEN  
PUBLIC POLICY MGR.  
BLOOM ENERGY  
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EMAIL ONLY, CA  00000

Information Only
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<td>ANDY SCHWARTZ</td>
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<td>BARBARA R. BARKOVICH</td>
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<td>CEDRIC O. CHRISTENSEN</td>
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<td>DANIEL CHIA</td>
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<td>ERIC CUTTER</td>
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CHAI, INC.  
525 S. HEWITT STREET  

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SOUTHERN CALIFORNIA GAS COMPANY  

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<td>LISA DAVIDSON</td>
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<td>LIYING WANG</td>
<td>DEMAND / RESPONSE MANAGER</td>
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<td>STEVEN LANGO</td>
<td>REGULATORY CASE MGR - II</td>
<td>SAN DIEGO GAS &amp; ELECTRIC COMPANY</td>
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<td>THOMAS C. SAILE</td>
<td>SAN DIEGO GAS &amp; ELECTRIC COMPANY</td>
<td>8315 CENTURY PARK COURT, CP21D</td>
<td>SAN DIEGO, CA 92123-1548</td>
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<td>WILLIAM FULLER</td>
<td>CALIF. REGULATORY AFFAIRS</td>
<td>SAN DIEGO GAS &amp; ELECTRIC COMPANY</td>
<td>8330 CENTURY PARK COURT, 32CH SAN DIEGO, CA 92123-1548</td>
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<td>DAVE HANNA</td>
<td>ITRON INC</td>
<td>11236 EL CAMINO REAL</td>
<td>SAN DIEGO, CA 92130-2650</td>
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<tr>
<td>PAUL MARCONI</td>
<td>BEAR VALLEY ELECTRIC SERVICE</td>
<td>42020 GARSTIN DRIVE, PO BOX 1547</td>
<td>BIG BEAR LAKE, CA 92315</td>
</tr>
<tr>
<td>LOGAN OLDS</td>
<td>VWRA</td>
<td>15776 MAIN STREET, STE. 3</td>
<td>HESPERIA, CA 92345</td>
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<tr>
<td>KEN WILLIAMS</td>
<td>DIRECTOR - CALIFORNIA CLIENT SOLUTIONS</td>
<td>THE FRANKLIN ENERGY GROUP</td>
<td>18865 VISTA PORTOLA TRABUCO CANYON, CA 92579</td>
</tr>
<tr>
<td>DOUGLAS A. AMES</td>
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<td>4971 LOS PATOS AVENUE HUNTINGTON BEACH, CA 92649</td>
</tr>
<tr>
<td>DAVID M. WYLIE, PE</td>
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</tr>
<tr>
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<th>Name</th>
<th>Title</th>
<th>Email Address</th>
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<tr>
<td>DONALD J. BROOKS</td>
<td>LEGAL DIVISION CPUC</td>
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<td>LEUWAM TESFAI</td>
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<td>BRUCE KANESHIRO CALIF PUBLIC UTILITIES COMMISSION</td>
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<td>ELIZABETH DORMAN</td>
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