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on Load Shift Goal Workshop

Additional submitted attachment is included below.

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May 3, 2023

California Energy Commission
Docket Office, MS-4
Re: Docket No. 21-ESR-01
1516 Ninth Street
Sacramento, CA 95814-5512
docket@energy.ca.gov

Re: Southern California Edison Company's Comments on the California Energy Commission's Lead Commissioner Workshop on Senate Bill (SB) 846 Preliminary Load Shift Goal in Docket No. 21-ESR-01

Dear Commissioners:

On April 19, 2023, the California Energy Commission ("CEC") held a workshop ("Workshop") where it provided, among other things, policy recommendations and a proposed load shift goal that focuses on reducing net peak electrical demand ("Load Shift Goal"). Pursuant to SB 846, this load shift goal must be adopted by the CEC, in consultation with the California Public Utilities Commission (CPUC) and the California Independent System Operator (CAISO), by June 1, 2023, and is to be adjusted in each biennial Integrated Energy Policy Report (IEPR) thereafter.

Southern California Edison Company (SCE) appreciates the efforts of the CEC in developing an analytical basis for this initial Load Shift Goal. SCE agrees the demand flexibility interventions identified by the CEC, such as time-of-use (TOU) rates, dynamic pricing, and demand response, are critical to cost-effectively achieving the state's decarbonization goals. SCE also agrees with CEC Vice Chair Siva Gunda's remark that it is "important [the Load Shift Goal] be feasible, not just directional," and "ambitious," but anchored in the reality of what can be achieved.[1] As such, SCE recommends the CEC adopt 6,400 MW (total, including MW from existing load shift measures), which is the low-end of the 6,400 – 8,100 MW range recommended by the CEC in the workshop, as a ***preliminary*** Load Shift Goal, subject to validation and refinement in the biennial IEPR process.

SCE also recommends the 2025 IEPR dedicate a workstream to finalize the Load Shift Goal, which should include a validation of the 2022 baseline and a review of the Lawrence Berkeley National Laboratory (LBNL)'s Phase 4 Demand Response Potential Study (Phase 4) for reasonableness—activities that unfortunately cannot occur by the June 1, 2023 timeline required by SB 846. This workstream should also provide stakeholders with the opportunity to propose a goal that is outside the range currently recommended by the CEC, if appropriate. Once the Load Shift Goal is finalized in the 2025 IEPR, it can then be adjusted in each biennial

[1] Recording at 1:24

IEPR thereafter, as envisioned by SB 846. A robust stakeholder process is needed to ensure the Load Shift Goal is set at a realistic and achievable level that, pursuant to SB 846, does not result in an increase to electric rates.[2] The Workshop, although effective in providing an overview of the goal setting framework and demand flexibility analysis, did not provide stakeholders with the detailed data or time necessary to assess the reasonableness of the proposed Load Shift Goal.[3] Adopting a ***final*** Load Shift Goal without first providing an opportunity for meaningful stakeholder review would be premature and imprudent because future proposals to adjust the goal would effectively be subject to a burden of proof standard that is more onerous than this initial goal-setting process.

As SCE explains below, several of the assumptions used by the CEC to support its proposed load shift goal require additional stakeholder review. First, Phase 4 of the LBNL study, which is a primary input to the load shift potential estimate, is not publicly available yet. Second, the 2022 baseline "estimate" of 3,600 MW of existing load shift capacity has not been validated and appears to be over-stated. Next, additional work needs to occur to ensure the 264 – 414 MW potential[4] from electric vehicle-related enabling technologies is truly achievable given the nascency of technologies and programs. Similarly, additional work is necessary to ensure that the 353-553 MW potential[5] that is expected to come from industrial process load control is not double-counted, given the likelihood that many of those potential customers are already on an existing demand flexibility program. Once the CEC has validated that there is no overlap between existing demand response customers and new load shift potential, it should adopt a preliminary, overall Load Shift Goal without category-specific goals to promote flexibility.

LBNL Study is Not Publicly Available

The CEC relies on the Phase 4 study, which updates the potential study with consumption data from 2019,[6] despite the specific reference to the Phase 3 study in SB 846.[7] While SCE agrees that it is appropriate to use the Phase 4 study, instead of a Phase 3 study that is based on

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2 *See* Public Utilities (PU) Code Section 25302.7.

3 For example, the formal presentation did not provide any quantitative detail on how each of the enabling technologies contributed to the Load Shift Goal; high-level estimates of percentages were provided in response to a question from the dais. SCE has applied those verbal estimates to numbers from the formal presentation to estimate the MW impact and develop positions for these comments.

4 Recording at 1:13 indicates that 15% of the total flexibility category is related to electric-vehicle related interventions. Based on this statement, SCE multiplied the incremental "Load Modifying" goal setting potential (3,000-4,000 MW less 1,237 MW of existing 2022 MW) by 15% to arrive at this estimate.

5 Recording at 1:13 indicates that 20% of the potential in the total flexibility category is related to industrial process load control. Based on this statement, SCE multiplied the incremental "Load Modifying" goal setting potential (3,000-4,000 MW less 1,237 MW of existing 2022 MW) by 20% to arrive at this estimate.

6 Overview of Phase 4 of the California Demand Response Potential Study at p. 4, available at *https://eta-publications.lbl.gov/sites/default/files/8-0613_0868_000357-gerke_0.pdf*

7 *See* PU Code Section 25302.7.

data from 2014,[8] the detailed results of the study have not been made publicly available yet.[9] It is imperative that stakeholders be given an opportunity to meaningfully review the Phase 4 study before the Load Shift Goal is finalized, in light of how heavily dependent it is on assumptions from the Phase 4 study—most notably the load impacts, participation, and adoption by technology type.[10]

2022 Baseline Cannot Be Validated

SCE is unable to confirm the peak load shift totals for 2022 that were provided during the workshop, but observes the estimates for TOU rates and emergency-only programs appear to be too high. First, the 1,200 MWs in demand reduction from TOU rates is likely to be over-stated. There has not been a recent comprehensive study performed to estimate the MW reduction from implemented TOU programs since all non-residential customers were required to take service on a TOU rate in 2015 because there is no control group to test against.

The presentation also estimates 800 MWs of demand reduction from emergency DR programs, with the presenter verbally explaining 240 MWs are from the Demand Side Grid Support Program, 70 MWs are from unspecified DR, and the remainder are from the Emergency Load Reduction Program (ELRP). If those numbers accurately represent the components of the 800 MW emergency DR baseline, that means that baseline assumes that the IOUs' ELRP programs achieved 490 MWs in demand reduction. SCE is unable to validate the CEC's 2022 ELRP estimate because it is unclear what data source was used. Based on SCE's experience in 2022 and the MW achieved according to the Emergency Load Reduction Program (ELRP) Pilot Load Impact Protocol (LIP) evaluation, the amount of ELRP emergency DR achieved in 2022 is less than bid and anticipated amounts.[11]

Potential Assumptions on New Technologies Require Further Review

The CEC indicated that approximately 15% of the "total flexibility" resources' potential, or 353-553 MW,[12] is associated with electric vehicle-related interventions. These interventions include technologies that enable managed charging and vehicle to building/home/grid. SCE agrees these technologies are promising and, when paired with dynamic rates, will help customers shift load away from the net peak. However, further review and analysis are needed to confirm whether the potential identified in the Phase 4 study is reasonable and achievable, given the nascency of these technologies.

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8 Overview of Phase 4 of the California Demand Response Potential Study at p. 4, available at *https://eta-publications.lbl.gov/sites/default/files/8-0613_0868_000357-gerke_0.pdf*

9 *See* March 30, 2023 Administrative Law Judge Ruling in Application (A.)22-05-002, which requested party comment on the public release of the Phase 4 study report and data.

10 *See* Slide 27 of the Presentation.

11 Verdant Associates, LLC, "SCE 2022 ELRP (Emergency Load Reduction Program) Load Impact Report," April 3, 2023, p. 83.

12 *See* footnote 4.

The CEC Should Promote Flexibility and Allow for Multiple Pathways to Achievement by Setting Only an Overall Goal

During the CEC Workshop, the CEC identified three types of demand flexibility categories: Load Modifying (TOU Rates, Dynamic Pricing, Programs Optimizing Load), Resource Adequacy (Economic Supply-Side Demand Response (DR) and Reliability Supply-Side DR), and Emergency & Incremental (Emergency-Only Programs and Back-Up Generators).[13] Flexible demand resources may participate in programs in unpredictable ways as pricing and demand response programs are developed to optimize end-uses and enabling technology combinations. For instance, customers with energy management and/or battery energy storage systems may have the ability to manage their loads to TOU or dynamic pricing rates during system net peak hours and may also be able to provide additional load curtailment during demand response or export energy to the grid during emergency events. It is unclear how customers with multi-use distributed energy resources will be counted across the demand flexibility categories or whether load will be shifted from one category to another.

First, there must be careful review during the goal-setting process to ensure that MW potential in one category is truly incremental and not simply a shift of customers from another category. For example, the CEC verbally indicated in its presentation that 20% of the potential in the total flexibility category is related to industrial process load control-enabled technology—the "single largest player" in the load modifying category.[14] Based on these comments, SCE understands the industrial process load represents approximately 353-553 MW of the new load shift potential. However, many industrial customers who are willing and able to modify their load are already enrolled in existing demand response programs like the investor-owned utilities' (IOU) Base Interruptible Program (BIP). Stakeholders should be given an opportunity to review the Phase 4 study to determine whether there is overlap between the existing and potential customers and recommend a downward adjustment to the Load Shift Goal, if necessary.

Once the CEC has validated that there is no overlap between existing demand response customers and new load shift potential, it should adopt a single overall Load Shift Goal instead of distinct goals for each program category. Resources are likely to shift between categories over time as program rules change and as customers and business models adapt to work with those programs that are most advantageous. Based on SCE's experience, attempting to prevent competition (or cannibalization) between programs typically hinders participation overall rather than promoting growth in new programs while preventing attrition in others. Creating new growth in flexible load resources is challenging, and efforts should be focused toward that goal rather than be too prescriptive about program types and participation models. Therefore, SCE recommends establishing an overall Load Shift Goal which will allow for these unpredictable shifts to take place within subcategories without substantial impacts to the overall MW Load Shift Goal.

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[13] CEC Workshop Slide at 23-24.
[14] Recording at 1:13.

Comments on Select CEC Staff Recommendations

Provide Incentives for Load Shifting Technologies Paired with Dynamic Rates

SCE generally supports the CEC's recommendation to provide incentives for load shifting technologies paired with dynamic rates that would be funded through the clean energy reliability investment program. However, the CEC should take care to design an incentive program only for devices that provide incremental energy savings. SCE encourages coordination with load serving entities (LSEs) that may also be providing incentives to prevent double-dipping (e.g. paid twice for the same device) and paying more than the cost of the actual device. Also, incentives should not be paid out for competing purposes, for instance if a device is being relied on for two competing demand response calls or if the device has only enough load shift potential to fulfill one call.

Reform Availability Rules and Resource Requirements for DR Resources Participating in RA

In the California Public Utilities Commission's (CPUC) Resource Adequacy Order Instituting Rulemaking (R.) 21-10-002, the CPUC is contemplating changes that would qualify demand response resources for resource adequacy credit. Specifically, the CPUC Energy Division (ED) Staff proposed requiring Reliability Demand Response Resources (RDRR) to be dispatched under all Energy Emergency Alert (EEA) conditions issued by the California Independent System Operator (CAISO) as well as expanding the DR resources' RA availability requirements.[15] SCE anticipates that, if adopted, these changes to RA availability rules and operational requirements for DR resources will reduce the available DR MWs in the state by significantly increasing the risk DR participants will be called for more DR events than they had anticipated or are willing to perform to (e.g. customer fatigue). The following graph illustrates how the available MW in SCE's RDRR programs have been steadily decreasing since 2015, the year SCE began integrating its RDRR programs into the CAISO wholesale energy market.[16] If these RA availability rules and resource requirements are adopted, SCE expects the Resource Adequacy Demand Flexibility (DF) category to further decrease and those MW will need to be made up or captured by other DF categories.

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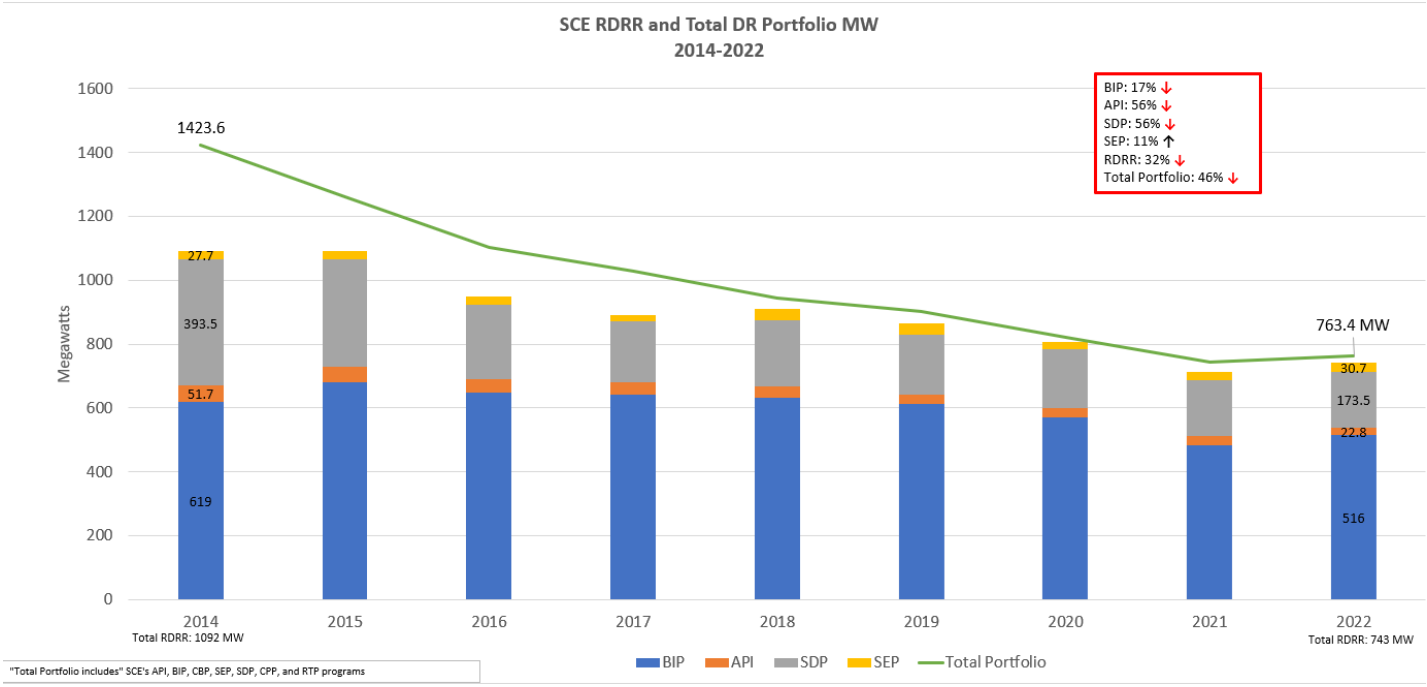
[15] CPUC Maximum Cumulative Capacity (MCC) buckets establishes minimum available requirements for resources under each category. The Demand Response (DR) MCC Bucket requires DR resources, at a minimum, be available Monday through Saturday, 4 consecutive hours between 4pm-9pm, and at least 24 hours per month from May through September. The CPUC is considering expanding these minimum availability requirements to include all days declared as a Governor's state of emergency proclamations and/or all CAISO Flex Alert days in addition to the requirements of the DR MCC Bucket.

[16] *See* Exhibit SCE-03, CPUC Docket A.22-05-002 et al., filed on May 2, 2022, pp. 14, 34. Available at: https://www.sce.com/regulatory/CPUC-Open-Proceedings

Figure 1 – SCE Reliability Demand Response Resource Programs[17]
and Total Demand Response Portfolio



Conclusion

SCE thanks the CEC for consideration of the above comments. Please do not hesitate to contact me at (626) 302-0905 or Dawn.Anaiscourt@sce.com with any questions or concerns you may have. I am available to discuss these matters further at your convenience.

Very truly yours,

/s/

Dawn Anaiscourt

[17] SCE's RDRR programs consist of the Base Interruptible Program (BIP), Agricultural & Pumping Interruptible (AP-I) Program, Summer Discount Plan (SDP) Program, and Smart Energy Program (SEP).