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**CA Efficiency + Demand Response Council Comments re 4 19 2023
CEC Load Shift Goal Workshop_5 3 2023**

Additional submitted attachment is included below.

May 3, 2023

California Energy Commission
Docket No. 21-ESR-01

Delivered via email

Re: Response to April 19, 2023 SB 846 Load Shift Goal - Lead Commissioner Workshop

The California Efficiency + Demand Management Council (“Council”) appreciates the opportunity to respond to the California Energy Commission’s (“Energy Commission”) April 19, 2023 Lead Commissioner Workshop: SB 846 Load Shift Goal¹ (“Workshop”) and the discussions and questions raised therein.

The Council is a statewide trade association of non-utility businesses that provide energy efficiency (“EE”), demand response (“DR”), and data analytics services and products in California. Our member companies include EE, DR, and distributed energy resources (“DER”) service providers, implementation and evaluation experts, energy service companies, engineering and architecture firms, contractors, financing experts, workforce training entities, and EE product manufacturers.

The Council remains supportive of Sec. 4 of SB 846 (Dodd, 2022) which established the process to build the nation’s first Load Shift Goal (“LSG”). The Council also supports the Energy Commission’s thoughtful and thorough proposals regarding the LSG. Load shifting, demand flexibility, and DERs in general are of significant importance to lower energy bills, cleaner energy, reliable power, and equitable access to the energy transition - all of which are critical to achieving California’s ambitious energy and climate goals.

The Council agrees with the comments made by energy leaders in the Workshop’s opening comments from the dais. Those comments include and are not limited to: Energy Commission Vice Chair Gunda’s comment that this effort is “an additional opportunity where we can think about: what can demand side resources do to support our overall system planning and an overall system adequacy?”;² California Public Utilities Commission (“PUC”) President Reynolds’s comment that the work regarding the LSG is “part of our larger climate change strategy...”;³ and California Independent System Operator (“CAISO”) Vice President of Market Policy & Performance, Anna McKenna: “demand response [is] an important part of the resource mix for maintaining reliability.”⁴

The Council finds several current efforts to advance the role of load shifting to be promising, such as the PUC’s rulemakings R.22-07-005 (Advance Load Flexibility Through Electric Rates⁵) and R.22-11-013 (to Consider Distributed Energy Resource Program Cost-Effectiveness Issues, Data Access and Use, and Equipment Performance Standards⁶), and the Energy Commission’s recent filing of the Clean Energy

¹ <https://www.energy.ca.gov/event/workshop/2023-04/lead-commissioner-workshop-sb-846-preliminary-load-shift-goal>

² (Load Shift Goal Workshop, 2023, 00:04:24)

https://energy.zoom.us/rec/play/3ysW0G1R5e8dXQqKUwhcYXvjLxg25ANyippiErUDPDCi7MRQpsR2PG_bvXszMZKLRR5ghOd-36LwHAMB.Pfd2YunR3PDpl3ut?canPlayFromShare=true&from=share_recording_detail&continueMode=true&componentName=rec-play&originRequestUri=https%3A%2F%2Fenergy.zoom.us%2Frec%2Fshare%2FFFiXozhY_p_Nb2EUBI3FxNtrhhAqKbJcthcPqrFy0ngqLIUM-9Cyu7WupvIrAHM4.YA_iTzDYq1wvusFk

³ Load Shift Goal Workshop, 2023, 00:06:03

⁴ Load Shift Goal Workshop, 2023, 00:12:33

⁵ https://apps.cpuc.ca.gov/apex/f?p=401:56:::RP,57,RIR:P5_PROCEEDING_SELECT:R2207005

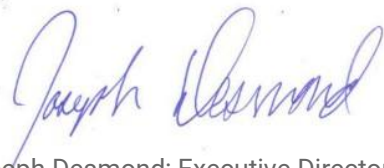
⁶ https://apps.cpuc.ca.gov/apex/f?p=401:56:::RP,57,RIR:P5_PROCEEDING_SELECT:R2211013

Reliability Investment Plan⁷ in addition to establishing the LSG. The Council would like to also acknowledge the CAISO's observation of market DR and non-market resources called on September 6, 2023 at 1,267 MW and 1,216 MW, respectively.⁸

There are also current parallel policy efforts that both contradict and undermine the promise of load shifting. For example, the proposals in response to the PUC's process to establish an Income Graduated Fixed Charge (required by Sec. 10 of AB 205 (Committee on Budget, Energy, 2022)) are of particular concern and contradict the success of the promising efforts noted above.

The Council wishes to underscore our support for the Energy Commission's efforts in building the LSG thus far and offer productive suggestions. The Council also wishes to outline several policy areas to expand upon and others to mitigate in order to better deploy and leverage distributed energy resources generally and load shifting specifically as an important resource in the state's efforts to achieve its climate goals.

Sincerely



Joseph Desmond; Executive Director
California Efficiency + Demand Management Council



Clark McIsaac; Director, Policy & Strategy

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<https://www.energy.ca.gov/publications/2023/clean-energy-reliability-investment-plan#:~:text=The%20Clean%20Energy%20Reliability%20Investment,plan%20for%20clean%20energy%20resources.>

⁸ <http://www.aiso.com/Documents/SummerMarketPerformanceReportforSeptember2022.pdf>

Questions & Discussion Raised During the Workshop

Throughout the April 19 Workshop, several important questions and comments were raised, generally by energy agency leaders. In this section, the Council generally responds to and explores some of those questions and comments in this section.

How do we make Demand Flexibility a fungible resource that can be considered anywhere?

During the Workshop's session: opening comments from the dais, Energy Commission Vice Chair Gunda raised two important questions: "How do we 1) Make demand flexibility... a fungible resource that can be considered anywhere. And... [2]) what does that require us to do?"⁹ Those questions parallel the comment made by President Reynolds highlighted earlier in this document.

Establishing and ensuring demand flexibility resources are incentivized and leveraged (relatively) in parallel with other clean energy resources will help advance load shifting resources and technologies. However, there are several policy and funding barriers to furthering those resources, including opaque energy service evaluations (including evaluating load shifting), inadequate accountability due to irregular reporting requirements, a lack of clear and measurable metrics, and a (generally) under-engaged stakeholder base. The Council further addresses these challenges later in this document.

Demand Flexibility needs to be affordable and equitable

Also during the Workshop's opening comments from the dais, President Reynolds stated "Demand flexibility needs to be affordable and equitable." The Council believes the state and participating stakeholders must deliberately establish, improve upon, and deploy benefits to historically disadvantaged communities and low-income customers among the changing energy landscape. Advancing energy equity must be a part of achieving the state's climate and clean energy goals. Achieving energy equity requires intentionally designing systems, technology, procedures, and policies that lead to the fair and just distribution of benefits in the energy system.

Energy affordability is important to advancing energy equity as well as achieving California's clean energy and climate goals. Access to and deployment of new load shifting-capable technologies and resources must be expanded to help accelerate statewide decarbonization, bolster instate innovation, and mitigate rising energy costs. Properly valuing demand side resource costs and benefits as well as measuring those resources' performance to improve programs and policies are key elements to countering increasing energy costs.

Proposed Load Shift Goal

The Energy Commission's proposed LSG potential range is 6,400 - 8,100 MW by 2030. The Council agrees with the Energy Commission that the potential range is both ambitious and

⁹ Load Shift Goal Workshop, 2023, 00:04:40

achievable. It is important the Energy Commission's LSG strikes a balance between ambition and achievability in order to help advance load shifting technologies while ensuring its own ambition does not undermine the resource's potential and future successes.

Suggested improvement Re: Transportation Electrification Adoption Rates

The Energy Commission modeled different scenarios in order to forecast load shifting needs and potential. Two of those scenarios modeled high electrification of existing energy end uses. Unfortunately, as noted by the Energy Commission, the high electrification scenarios did not capture appropriately high penetration rates of electric vehicles. California is leading the nation in transportation electrification policies, including the requirement that all new vehicles sold in California after 2035 must be zero-emission vehicles (which includes electric vehicles). Though the LSG captures a 2030 outlook at this point (not including 2050 forecasts and scenarios), the Council believes that the state should closely monitor electric vehicle adoption rates for consumer and commercial fleets relative to today's assumptions and track deployment of V2G services leading up to the 2035 requirement.

The Council is supportive of the resources the Energy Commission used to model its scenarios. However, the Council suggests the Energy Commission ensure appropriate forecasts for transportation electrification are incorporated into upcoming and future modeling exercises.

Load Shift Goal Policy Recommendations: Load Modifying

“Support hourly and other dynamic pricing “

The Council agrees with the Energy Commission's assessment of the importance of the PUC's Energy Division Staff proposal regarding the California Flexible Unified Signal for Energy (“CalFUSE”) methodology. CalFUSE and other policies under PUC consideration in R.22-07-005 hold potential to accelerate or stifle load shifting and other demand management resource progress depending on its buildout and implementation.

As proposed, the Council finds the CalFUSE methodology to be comprehensive, thoughtful, and ambitious. However, the Council also believes the CalFUSE methodology is complex and consequential in nature. Because of its complexity and potential, the Council anticipates the CalFUSE methodology (or another resulting transactive energy concept) will take years to establish and implement. Due to that expansive timeline, the Council urges the Energy Commission to leverage its other two load modifying policy recommendations (Encourage alternative rate and program designs that incentivize load shifting; and Provide incentives for load shifting technologies paired with dynamic rates) to help the state advance towards its LSG in the interim and ultimately achieve those goals.

The Council echoes its previous recommendation to the Energy Commission from our March 2023 Integrated Energy Policy Report comments¹⁰ for the Energy Commission to:

Include in the IEPR process how the Energy Commission intends to incorporate biennial updates to the yet-to-be established load shifting goals. In particular, the Council urges the Energy Commission discuss:

- The necessary resources to adequately measure and update the load flexibility targets; and
- The benefits meter data provide towards load flexibility (and establishing/updating load flexibility targets), such as:
 - Understanding and improving performance,
 - Verifying contract performance,
 - Evaluating cost-effectiveness,
 - Supporting electricity system planning,
 - Validating demand flexibility value, and
 - Support energy policies and programs.

“Encourage alternative rate and program designs that incentivize load shifting”

As noted in the previous section, the Council urges the Energy Commission, as well as the PUC where appropriate, to leverage alternative rate and program designs that incentivize load shifting. Those alternative rate and program designs may be available in the interim before the PUC’s CalFUSE methodology is finalized, adopted, and implemented. The Final Report of the California Public Utilities Commission’s Working Group on Load Shift may serve as a useful resource in this effort.¹¹

There are a myriad of challenges and barriers to properly implementing alternative rate and program designs that incentivize load shifting. The Council urges the Energy Commission to coordinate among the appropriate energy agencies to address the following policy areas to expand load shifting (and DERs in general) across the state to improve energy and grid reliability, expand energy equity, ease bill impacts, and reduce GHG emissions:

- **Transparency:** Enable customers, companies, utilities, and the State to better understand and analyze how to improve the state’s energy reliability, quality of service, costs, and carbon reduction. This can be achieved through spotlighting consistency in value and evaluation of energy services.
- **Accountability:** Ensure energy services continue to grow more efficient, affordable, and reliable as the state reduces emissions from the energy sector. Require regular reporting requirements on key performance metrics via dashboards and reports.
- **Metrics:** Establish clear and measurable metrics to track and ensure progress towards achieving goals that can be applied at state, regional, and local levels.

¹⁰

https://cedmc.org/wp-content/uploads/2023/03/TN249347_20230317T152507_California-Efficiency-DemCA-Efficiency-Demand-Management-Council-Respon.pdf

¹¹ https://gridworks.org/wp-content/uploads/2019/02/LoadShiftWorkingGroup_report.pdf

- **Engagement:** Drive solutions through stakeholder engagement and education and community-led insight. The CEC's IEPR is ideally suited for educating industry, policy, and regulatory stakeholders throughout the transition to the modern grid. Active engagement is critical for stakeholders to stay up to speed on rapidly changing opportunities and to understand how policies and regulations will affect utility operations.

Another (and recent) challenge to advancing load shifting policies, programs, and technologies has arisen in the early stages of implementing Section 10 of AB 205 (Committee on Budget, Energy and climate change, 2022).¹² Section 10, in part, requires the Investor-Owned Utilities ("IOUs") to establish at least a three-tiered income graduated fixed charge ("IGFC"). As the CPUC begins implementing Section 10, three IOUs and other stakeholders have submitted IGFC proposals, to date.

Unfortunately, those proposals advocate for a near-total overhaul of existing rate structures through tiered and excessive fixed charges and undervalued volumetric rates. The proposals could place energy saving and emissions reducing efforts (current and upcoming) at risk. Most of the proposals, were they implemented as-is, would diminish existing and future incentives regarding energy efficiency, conservation, and demand management. In fact, the proposals appear to directly contradict with the existing statute which AB 205 amended: "The commission shall ensure that any approved charges do all of the following... (2) Not unreasonably impair incentives for conservation, energy efficiency, and beneficial electrification and greenhouse gas emissions reduction."

Though the IGFC proposals are under the purview of the PUC, they directly impact several facets of the Energy Commission's work, including and in particular its efforts to establish, update, and advance the LSG. The Council raises this issue as a contextual warning.

"Provide incentives for load shifting technologies paired with dynamic rates"

The Council agrees with the Energy Commission that the Clean Energy Reliability Investment Plan's ("CERIP") recommendations and the Legislature's yet-to-be appropriated funding for those recommendations would be a suitable funding source for advancing the LSG. If first-year CERIP funds are used to invest in the Demand Side Grid Support and Distributed Electricity Backup Assets programs they should still benefit from the deployment of load shifting and demand management technologies. The Council continues to advocate to the Legislature that substantial portions of future year CERIP funding should invest in demand side resources and equipment, particularly if they have load shifting or demand management capabilities. Where there are opportunities to stack or incorporate additional funding through federal resources (such as the Inflation Reduction Act) the Council urges the Energy Commission to pursue those as well.

It is worth noting that those funding sources are temporary and much of the potential state-sourced funds have not yet been appropriated. As the state projects over \$20 billion in lost

¹² https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220AB205

revenues,¹³ the Council is interested in securing non-financial incentives, which can include resolving program/policy barriers and challenges as addressed above. These non-financial incentives should be considered across the state agencies where and as appropriate, regardless if financial incentives (such as CERIP appropriations) are secured.

“Deploy information infrastructure to support load shifting”

The Council recommends the Energy Commission leverage its recently granted authority¹⁴ to co-implement the California’s Analysis Tool for Locational Energy Assessment (“CATALENA”) and expand the database to include DER programs. In its Decision, the PUC made clear that IOUs are required to provide program participation data to the CEC. Further, in recognition of the value of this tool to facilitate high DER analyses, the Commission and CEC may choose to expand the use of CATALENA to include data for other DER programs, including but not limited to, building decarbonization, transportation electrification, demand response, and energy storage. The IOUs must provide customer-level DER program data, as specified by the CPUC staff, and submit program participation data for DER programs to the CEC within 120 days of the issuance of this decision, to facilitate implementation of the tool.

Complete deployment of advanced metering infrastructure (AMI) to support load shifting

The Council believes AMI is critical to supporting load shifting and the Energy Commission’s LSG. However, some of the already deployed AMI is nearing two-decades¹⁵ old and there are substantial gaps in AMI adoption/deployment, particularly in publicly-owned utility service territory. Taking those challenges into account, it is important that AMI continue to be deployed and the infrastructure’s capabilities are leveraged by the customer’s load serving entity in order to support broad adoption and implementation of load shifting programs and policies.

Load Shift Goal Policy Recommendations: Resource Adequacy

Adopt an incentive-based capacity valuation approach for supply-side DR

The Council suggests reviewing our previous comments in other Energy Commission dockets on issues related to this matter.

Explore a centralized, competitive DR procurement process

The Council acknowledges the Energy Commission’s stated interest to take “the most successful parts of each” the Demand Response Auction Mechanism (“DRAM”) and the Capacity Bidding Program (“CBP”). The Energy Commission believes that will mean a “strong

¹³ <https://lao.ca.gov/Publications/Report/4646>

¹⁴ <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M501/K931/501931085.PDF>

¹⁵ https://docs.cpuc.ca.gov/PUBLISHED/FINAL_DECISION/58362.htm

centralized procurement mechanism is possible.”¹⁶ The Council is interested in exploring, in-depth, with Energy Commission staff what those strengths and weaknesses of the DRAM and CBP are.

Include an adder on wholesale market revenue for supplyside DR

The Council supports the Energy Commission’s stated concern that though “DR is a clean resource... it has never benefited from public support in the same way that renewables have.”¹⁷ The Council is interested in including an adder on wholesale market revenue for supply-side DR as stated by the Energy Commission as DR and load shifting are generally undervalued as a resource. For example, the Council recently submitted opening comments¹⁸ to an Administrative Law Judge’s Ruling in R.22-11-013 regarding applying the Societal Cost Test to DERs. The Council explicitly stated that load shifting benefits should be incorporated into cost-effectiveness considerations of DERs.

Under the right market structure, load shifting enables a flattening of the load curve by incentivizing customers to meet their electricity needs (“take”) during periods of surplus generation, lower energy prices, and lower emissions (due to higher renewables production), while reducing their consumption (“shed”) during periods of relative scarcity and higher emissions. In addition to flattening the load curve, load shifting capability can provide system-wide benefits including, but not limited to: avoided renewable generator curtailment; energy cost reductions; emission reductions; system resilience; transmission capacity; distribution system services; and customer bill savings.

Conduct an evaluation, measurement, & verification study of supply-side DR load impacts

As stated previously in our “transparency” and “accountability” recommendation earlier in this document, the Council finds substantial importance in the proper evaluation, measurement, and verification of supply-side DR load impacts. The Council looks forward to continuing the discussion further on this matter.

¹⁶ Load Shift Goal Workshop, 2023, 01:51:33

¹⁷ Load Shift Goal Workshop, 2023, 01:52:14

¹⁸ <https://cedmc.org/wp-content/uploads/2023/05/R.22-11-013-Customer-DER-Council-Opening-Comments-on-ALJ-Ruling-4.28.2023.pdf>

Load Shift Goal Policy Recommendations: Emergency & Incremental

Pilot a pathway for behind-the-meter energy storage to support decarbonization and reliability of the electric grid in emergency & incremental programs

The Council has identified opportunity and expressed interest in pursuing a pilot pathway for behind-the-meter energy storage. The following is an excerpt from the Council's initial recommendations regarding potential investments under the CERIP:¹⁹

With the possibility of PUC-mandated reductions to current net energy metering (NEM) incentives, commercial and residential customers with existing rooftop solar systems but with no energy storage (battery) capability may have limited incentive to respond during grid-related emergencies. However, if those customers were enabled with battery storage systems, along with customers without solar, they could be connected through a virtual aggregator and in effect be "islanded" during peak load emergencies by only relying on their battery to supply their electricity needs.

A program that allows third-party ownership and control of storage technologies subject to certain performance obligations and sited on private property – with or without solar PV – could offer new market opportunities. Storage could be managed in support of the grid generally, with a share of the savings and/or monthly rental costs associated with storage space rental. This may represent an attractive value proposition for certain homeowners who would benefit from additional grid stability with protection from occasional local outages. This model is compatible with the proposed CalFUSE approach currently being piloted by Southern California Electric.

The Council finds substantial opportunities and benefits with the Energy Commission's proposed LSG ranges and policies as outlined in the Workshop. The Council also believes there are opportunities to continue improving upon and accelerating deployment of load shifting technologies through the process established by the Legislature to biennially update the LSG in the Energy Commission's IEPR update.

¹⁹

https://cedmc.org/wp-content/uploads/2022/12/CA-Efficiency-Demand-Management-Council-Response-to-CEC-RFI-re-CERIP-DEB-A_21.ESR_01_11.30.2022.pdf